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The Question: Could a multi-sensory approach to design facilitate a re-enchantment of the food industry in Britain?

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Abstract

This thesis explores the potential of design industries ability to re-enchant the food industry in Britain in 2007. My research is informed by the increasing evidence of the negative impact on human and biosphere wellbeing and industrialization practice in food production and marketing. I highlight the connection between design's promotion of the hegemony of visuality and the marginalization of opportunities to construct connections between food source and its quality through multi-sensory engagement.

I have adapted Webber's (2000) idea of disenchantment to describe a condition in which the deterioration of quality of food experience. I argue that industrialization has created a loss of intangible qualities and traditions that have a clear potential to provide deep sources of pleasure and meaning to participants.

I have focused on the relationship between design and food in order to evidence how design has become a tool of instrumental rationality by primarily servicing the short-term economic agendas of corporate business.

I argue that design's focus on the role of seduction has led to the marginalization of a latent ability to connect consumers and producers to value through their non-visual senses. I propose that a multi-sensory form of design is capable of informing the restoration/creation of a deeper and more reflective relationship with the food chain.

I argue that the route to this outcome is through the re-evaluation and re-education of the role that multi-sensory aesthetics play in the construction of promoting more benign rituals of production and consumption.

I use evidence of multi-sensory practice in the non-industrialized and ethical food sector as an analogy and source that could sensory awareness to the designer's portfolio. I draw on a wide range of evidence to inform and support my explanation of the origins and character of the syndrome of industrialized production, marketing and consumption. My goal is informed by a concern to demonstrate that multi-sensory design could support the viability of alternative production and consumption strategies

Preface April 2007

During the three years that I have researched and writing up my thesis the theoretical landscape of sensory design and marketing has changed significantly. At the point at which I started much of the significant work in identifying the opportunities for multi-sensory engagement with experience through design derived from following main sources.

- Designers who rejected the dominance of the rational and modular aesthetics that dominated late twentieth century design: Branzi (1997) is an example of a passionate denial of this tradition
- Designers and theorists who advocated the ethical dimension of design and advocated or tried to create prototypical examples that explored a aesthetics that did not always start and conclude with visual style but attempted to incorporate alternative sensory discourse opportunity: Papanek (1996) offers an instructive example of this tendency
- Theorists who drew attention to the role of the senses in the creation of anaesthetic discourse that added to the significance of experience: Dewey (2000) offers significant evidence of this direction
- Theorists and practitioners who drew attention to the relationship between use and value that acknowledged the non-visual senses in the construction of pleasure and usability. Jordan (2002) offers a useful example of this
- Historians who have identified the significance of the non visual senses in other forms of creativity, ritual practices and life-style: Ackermann (1991) offers an example
- Anthropologists who have identified evidence of the relationship between vernacular design and cultural ritual. Seremetakis (1996) provides a useful example
- Sociologists who have identified and analysed evidence of the relationship between sensory culture and meaning. Classens (1993) exemplifies this strand of research
- Sensory discourse (as an adjunct of the theme of 'Experiential Marketing') has been covered in varying degree of depth by Pine (1997), Schmidt (1997), Underhill (1999)
- Emotional branding has also encouraged greater receptivity to sensory discourse in the retail and product sector led by Gobe (2001)
- Sensory design became a book title with a publication by Malnar and Vodvarka (2005). Their book concentrated on Architecture and brought together sociological theory with histories and theories of aesthetics and architectural experiments in acoustics and colour. It appeared to offer no original conclusions
- Architecture has also encouraged work specifically on acoustics notably Blesser offers a comprehensive roundup of theory and practice in this sector

My research draws on all of the sources identified above and more its differs from them in four main ways:

- My research has consulted a wider range of source material
- I have developed more complex triangulations between like and unlike
- My narrative is concerned to demonstrate a process of evolution that informs our contemporary response to the non-visual senses

- My research focuses on the relationship between design and food
- My research is concerned to provide designers and the food sector insight into the significant relationship between multi-sensory access and the ethics of food production, promotion and consumption

Contents List

Page	
1	Title Page
2	Signed Declaration
3	Abstract
4-5	Preface
6	Contents List
7-10	Chapter One: The Introduction
11-21	Glossary: An Introduction to Terms and Concepts
22-23	Chapter outline
24-30	Chapter Two: The Methodology
31-42	Chapter Three: Deeper Needs
43-59	Chapter Four: Sensory Denial
60-80	Chapter Five: Sensory Potential
81-100	Chapter Six: The Economic Context of Multi-Sensory Marginalization
101-114	Chapter Seven: The Production Context of Multi-Sensory Marginalization
115-127	Chapter Eight: The Food Processing Context of Multi-Sensory Marginalization
128-138	Chapter Nine: Marketing or Design?
139-148	Chapter Ten: The Mainstream
149-163	Chapter Eleven: The Supermarket Formula: Design as Business and Business by Design
164-177	Chapter Twelve: Alternatives as Corporate Strategy Whole Foods Markets
178-192	Chapter Thirteen: Innovations in Wellbeing and Luxury
193-200	Chapter Fourteen: Conclusions
201-202	**Appendix A:** Selective but Indicative Evolutionary Steps that Link Aristotle to the Present
203-211	**Appendix B:** A Brief History of Progressive Learning
212-216	**Appendix C:** Bernard Mathews: A Bird in a Cage
217-222	**Appendix D:** Wedgwood and Cream Crackers: Two Case Studies in the Relationship Between Design, the Economy and Sensory Opportunity
223-225	**Appendix E:** Sliced Bread
226-228	**Appendix F:** TV Dinners
229-232	**Appendix G:** The Iconography of Modernity
233-235	**Appendix H:** Cargill
236-241	**Appendix I:** Unilever
242-247	**Appendix J:** Non-products
248-250	**Appendix K:** The Machine Syndrome
251-278	**Appendix L:** Shopping and the Supermarket: The History of Access
279-287	**Appendix M:** The Culture of Supermarket Management
288-347	**Bibliography**

The Question: Could a multi-sensory approach to design facilitate a re-enchantment of the food industry in Britain?

Chapter One: Introduction

This chapter identifies the challenges and opportunities that my thesis will explore. My thesis seeks to demonstrate how design professionals might utilize multi-sensory skills to resolve the need for new solutions to design that promote more ethical food value. I argue that multi-sensory design could help to remedy the adverse health and environmental issues that emanate from mainstream food industry practises in the UK by enabling consumers and their suppliers to extend the ways that they define value. I propose a potential for design professionals to learn how to adopt a much broader, more responsible and multi-sensory approach to their practice (as opposed to a primarily visual approach). For example I suggest design could build on some of the ethically informed innovations that have evolved in the food-marketing sector.

I have focused my arguments on the relationships between food, design and business because food is a basic need that has tangible connections with human and biosphere wellbeing and sustainability. I propose that incorporating the non-visual senses into its practises could re-embody design. I argue re-embodied design would support a re-enchantment of food experience by connecting consumers to the provenance and implications of the food that they consume.

In the opening chapters (3, 4, 5) I deal (respectively) with deeper human emotional needs, the context of sensory denial and sensory potential. I illustrate ways in which our sensory capacity has been marginalized by ideas that evolved in the classical period. In chapter (4) I demonstrate how the tendency to deny the non-visual senses was accelerated by the promotion of scientific method. I confirm ways in which visually mediated evidence was fore grounded as the most reliable confirmation of value during the Enlightenment. I identify examples of how design and marketing have contributed to the continuing acceptance of a mind-body schism. In chapter (5) I offer evidence of human multi-sensory potential to comprehend and communicate.

In chapters (6, 7 and 8) I deal with the economic, production and processing context of food I focus on the culture of sensory denial in the food industries. I consider the relationship between the economic theories that inform their business practises and their values.

In chapter (9) I look specifically at the contribution of marketing and design to the reinforcement of the culture of sensory denial. The role of design and marketing is explored in more specific detail in chapters (10, 11 and 12). These chapters deal with mainstream food design and marketing and the specific retail case studies of Tesco and Whole Foods Markets.

In my penultimate chapter (13) I present the La Fromagerie (LF) case study. I demonstrate how embodied practise could inform ethical standards. I focus on ways in La Fromagerie creates and promotes an alternative strategy of multi-sensory design predicated on staff knowledge and skill. I confirms how LF's marketing strategy differs from conventional design techniques.

I also reveal how the combination of staff knowledge and a multi-sensory invitation to reflect and learn encourages customers to question and change their dietary habits. I demonstrate how access to the food values of new varieties and an introduction to some of the

contextual issues encourages consumers to understand that smaller portions of healthy food creates a healthier lifestyle.

I conclude that the normalization of disembodied intelligence encourages and allows business and its consumers to avoid the ethical issues that inform the production and consumption of food. I adopt Ritzer's (2003) argument that mechanization of experience disenchants our food experience as well as disconnecting it from its provenance.

I argue that alternative multi sensory practice could challenge the dominance of the mechanistic solutions that currently encourage the normalization of indifference and exploitation. I propose that multi-sensory engagement could open up opportunities for connecting with the food chain and its implications for health and sustainability.

I argue that the introduction of multi-sensory awareness into the design industry and design education can make a substantial contribution to the problems that it has helped to create. I believe that the re-sensing of design is not a simple project of refocusing design energy and expertise but requires a fundamental programme of reappraisal and re-education of all of the key players who determine the mechanistic practises that dominate the food chain. (e.g. the politicians and corporate businesses who determine and maintain the mechanistic character of the mainstream solution to production and consumption)

Although I do not reach substantial conclusions on the deeper economic implications of embodying practise in the design and food industries I confirm that it would require wider acceptance of a different form of capitalism from the one that currently motivates mainstream practices. The case study of La Fromagerie demonstrates the potential of ethical and embodied practice and hints of economic thinking and doing that reflect the 'small is beautiful,' 'think and act local' theories of Schumacher, Nattrass and the New Economics foundation. (See Chapter Six: The Economic Context of Multi-Sensory Marginalization)

My research shows that, in Britain, industrialization, and other factors, led by American precedents and influence has caused some de-sensitisation of the consumer's appreciation for food. This is because in the last half of the twentieth century and beyond new processes of food production, distribution and marketing for the average consumer were driven by a quest for production increases, economic gain and efficiency. Issues such as the speed of access, convenience, price, and profit over ethics have dominated supply and demand. (e.g.Honore, 2004) This has led to factory farming methods, supermarket retailing, globalization, and food processing strategies that emphasise visual appearance and low price. Purchase prices primarily reflect the cost of marketing, processing, and distribution and return little profit for re-investment to the producers. The food industry is primarily interested in bulk produce rather than health it disguises the nature and quality of its raw materials by inducing chemical flavours, colours and textures to its products. Many food products are 'designed' to create customer addiction and extend their shelf life. These tendencies have led to a deterioration of the conditions of production, consumption, and a reduction in food quality. It has caused malnutrition, obesity, and even illness and death in livestock and humans. For historical reasons, the challenge this represents for producers and retailers appears to be beyond their current mindset. However, my work suggests that a greater emphasis on design that incorporates senses other than the visual sense (see glossary) might be helpful to conventional design practices. This would enable new design approaches to assist the food industry in this quest.

One of the main difficulties in making this case stems also from a belief system that is long-established in Western societies. The thesis therefore takes some key ideas and traces them back to certain formative changes in classical Greece. It shows how the design industry serviced its agendas using a variety of techniques. These include the development of 'efficient' building types (e.g. big sheds), grid layouts and racking, and product and packaging design strategies that place the emphasis of choice on the package. Although individual designers are, generally speaking, taught that design practice is a benign activity, in practice, the design industry has achieved its current prominence largely by helping business to focus on profits, rather than by prioritising the creation of a better quality of life for everyone. This has led to a culture of what I call 'disembodiment' (see Glossary). This is an aspect of alienation (see Glossary) that is experienced, in different ways, by workers and consumers alike. Industrialization has caused environmental damage and created what Weber (2001) calls 'disenchantment'. The thesis argues that the development of a 'multi-sensory' modes of design will enhance the richness of customer experience and lead, thereby, to a greater wellbeing (c.f. Whybrow 2006, Haidt, 2005, Finlayson 2005, Howes 2005, Cooke 1994, Pallasmaa, 1996).

At present, new market opportunities are growing, partly because of a greater public appetite for more ethical approaches to sourcing, treatment, and handling. This trend combines, in a convenient way, with the opportunities for a richer and more meaningful range of sensations, tastes, and experiences that better quality food can offer that have been promoted by movements like Slow Food (see Glossary) and my case study La Fromagerie. I will demonstrate how what I call 'embodied design' can embrace both aspects. 'Short-termism' in business has contributed, indirectly, to the narrowing of the possible range of specialist design skills that are taught and practised. In order for these designers to address the agenda outlined in this thesis, it will be necessary to develop their 'sensory intelligence' (see Glossary) (also c.f. Dewey 2005, Malnar 2004, Varela 1992). I will show how industrialization, and the dominance of visually led practices and conventions of design and business have limited the average customer's opportunity and ability to characterize value directly via senses such as smell, touch, taste and hear (Michelson 2006, Jordan 2002, Seremetakis 1996, Ackerman 1991).

The Next Step

What my thesis points to (i.e. post-doctoral work) is that imaginative designers (as exemplified by Jordan, Eissermann, Heatherwick) would learn from food experts (e.g. Pollan, Nestle, Petrini, Waters, Michelson) and from producers and retailers to find innovation and connection opportunity for SME's (like Whole Foods Markets, La Fromagerie, etc.) and these will influence mass production-consumption models (Like Tesco, Sainsbury, Asda, Morrisons, Safeway, Waitrose) to co-opt more sensory dimension to their methods and outcomes. This might help to break the grid mentality and lead to the re-enchantment of experience at all levels of the food chain. These alternative values benefit from the consumers and producer's ability to access the multi-sensory dimensions of food so that they can verify and engage in discourses of provenance, flavour, aroma, tactility, acoustic ambience, etc.

Structure of the Thesis

The thesis is divided into two parts. The first part introduces the reader to the histories, theories, beliefs, cultural prejudices and business practices that have and are continuing to determine the syndrome of multi-sensory marginalization. The second part explores evidence

and theory that suggests that access to a wider spectrum of sensory engagement could enhance the relationship between design and the ways that we produce, source, market and consume and value food in Britain.

I will reveal sources and types of embodied knowledge that can enable the development of more effective design solutions to the problems of the techno-rationalist agenda for progress. Because of the need to consult a wide range of sources I have created a form of hybrid knowledge in which conventionally discrete sources have been brought together. These new relationships are intended to provide new insights into the interconnected reality of our 'fragmented' experience. (Bohm, 1980)

Glossary: An Introduction to Terms and Concepts

The Design Industry: The term 'design industry' refers to the role of design in business and its growing status as a profession. The term 'design industry' is used here to include a wide range of design disciplines, especially including packaging, product, display, promotion, graphic design, architecture and landscape design. Although each discipline has its own distinct and discrete characteristics they also share a set of common agendas that are located by the term the design industry.

Disenchantment: Derives from Weber's (2002) thesis on the negative impact of corporate style business efficiencies on the quality of life. (See instrumental rationality) Weber's analysis was framed against early twentieth century modernity but revealed many of the conditions of the loss of intangible and tangible opportunities for emotional meaning that currently prevail in our industrialized world. Ritzer (2003) has more recently extended Weber's concerns into a thesis of 'non-things' and 'non-places' that reflects the awareness of Bohm (1980) and others of the fragmentation of experience and meaning.

The Visual Sense: Pallasmaa (1996) and others have demonstrated that the classical promotion of written language and images as proof of truth and skill has become embedded in the mediation and value system that informs Western professional, business creative and consumption means and values. This has created what Pallasmaa call the hegemony of visuality and has helped to ensure that production and consumption norms have marginalized opportunity for meaningful engagement with and through the non-visual senses of touch, taste, smell and sound.

Disembodiment: My use of the concept of disembodiment draws on Varela's ideas of 'embodied philosophy.' (Varela, 1992; c.f. Smith, 2006: 24) Attention is now being paid to disembodiment in fields of inquiry like archaeology, aesthetics, sociology and anthropology. This represents an attempt to compensate for the tendency for academic tradition to dismiss embodied practice in favour of the mind-eye hegemony that has informed scientific method post Descartes. (Pallasmaa, 1996)

Embodiment: The development of digital technologies that simulate reality (virtual) has encouraged various investigations into the relationship between simulated realities and the senses (Wood 1999). This is paralleled by attempts by programmers, engineers and others to create sensory interaction with technology (feedback) (Wood 2005) My use of the term derives from concern to identify the significance of forms of intelligence that are not dependent on the classical tradition. Anthropologists spearheaded a way of identifying and giving status to rituals of multi-sensory discourse that service complex communication needs through multi-sensory means without the conventional Western dependencies on word and image and restrictive eye-mind concepts of intelligence. (Seremetakis, 1996)

Instrumental Rationality: This term is derived from the critical analysis of industrialization centred around the work of Adorno and Horkheimer: 'By the 18th century instrumental rationality, namely the calculation of the most efficient means for achieving a given end or desire became the dominant form of knowledge' (Finlayson, 2005: 6)

Mass marketing-Mass consumption: Mass market represented by the supermarket/fast food model targeted at low to mid-income consumers led by early adopters, e.g. cultural creatives who prioritize health, ethics and other agendas that relate to human and biosphere well being.

Commodity Fetishism: Marx described the 'fetishism, which attaches itself to the products of labour, as soon as they are produced as commodities' (Marx, 1999: 35) He was referring to a process in which the industrialization process separated people from nature and replaced natural values (aesthetics) with synthetic and manufactured ones

Alienation: Marx and others saw capitalism as a system of economics that separated workers and consumers form their communities and their correspondence with natural locations in ways that created a syndrome of alienation

Cultural Creatives: This is one of many terms that include LOHAS (Lifestyles of Health and Sustainability) 'early adopters' and 'influence formers' that are used by marketing and trend forecasters to identify the existence and influence of relatively small numbers of consumers who adopt new priorities which then influence consumer demand and mainstream design and business practices and priorities. Cultural creatives represent the tendency to challenge the logic of efficiency driven progress (Ray, 2000)

Multi-Sensory: This term is used to refer to opportunities for utilizing more than one, or all of the five main senses: Touch, taste, smell, sound and vision. Given the hegemony of visuality multi-sensory is typically used to draw attention for opportunities to use the non-visual senses. Dewey who was suspicious of the hegemony of the visual, arguing that we must, 'put ourselves on guard against depending upon the vague term 'seems,' 'appears.' We must specify the respect in which it appears, to eye, ear, touch, smell.' (Dewey, 1998: 192)

Sensory Intelligence: Post the Enlightenment the non-visual senses have been progressively excluded from the Western definition of intelligence, effectively disembodying intelligence. Various theorists including Dewey (1998), and Gardener (1983) have argued against definitions of intelligence that do not include embodied skills and multi-sensory engagement.

Sensual: Sensual tends to be used interchangeably with sensory. Books like The Sensual Home (Crawford, 1997) employ the word sensual to refer to multi-sensory interaction with experience for the purpose of creating a sense of place and therapeutic calm for participants.

Pleasurability: Jordan (2002) demonstrates the potential for a multi-sensory approach to designing objects and interfaces to offer users greater opportunities for experiencing emotional pleasure through their interaction with design

Slow Food: Carl Petrini a left-wing food journalist founded The Slow Food Movement in Italy in 1986 to challenge the perceived negative influences of the globalization of fast food. The movement is now international and represents the interest of a broad cross section of individuals and organizations who are interested in preserving biodiversity and promoting ethical

values in order to re-establish and protect local values and knowledge. The belief that food is a primary source of sensory pleasure plays an important part in the thesis that informs the slow-food movement.

Fair Trade: The 'fair trade' concept is intended to remind consumers and corporate business of the need to protect bio-diversity and sustainability by offering produced a fair price for their crops that acknowledges the need to invest in the future. This helps to link the consumer to the source and conditions of production in ways that reflect Habermas's concept of discourse (Finlayson, 2005)

Food Miles: Food miles is intended to make consumers aware of the carbon footprint of the food that they buy and while it offers a challenge to some of the aspirations of fair trade it provides support for the localist model below.

The Localist Community Orientated Ownership Model: This is one of a number of new economic theories that are emerging in response to the problems of the essential inequality of the capitalist system. 'Localist' theory challenges the logic of scale and globalization by arguing for local business-consumer relationships rather than imports. Similar principles inform 'Food Miles' theory and practice. (Smith, 2000)

Voluntary Simplicity: Underpinning the development of new ways of thinking about business and consumption is a move to reduce dependency on material tokens of success and achievement called 'voluntary simplicity' (Elgin, 1998)

Back to Nature: The scope of 'back to nature' includes 'urban farming', a classless way of rethinking the city "an emerging worldwide trend...almost a billion city dwellers around the world, a third of the total spend some time each week tending plants to help feed their families or to sell in local markets.' (Pearce, 2006: 39)

Cocooning: The collapse of belief in the 'neo-liberal' economic and global policies (1980s) created a much wider enfranchisement of the search for meaning and security that was reflected in a proliferation of home and garden, and 'me' centered products and services. (e.g. candles, aroma therapy, cookery books, fresh organic food) Embracing the spiritual dimension as well as the materialist cocooning helps to explain a rise of sensory interest from consumers and business: 'Adding sensory value-taste, texture, sound, smell, colour makes any product more 'sensational' (Popcorn 1992: 37)

Loss of Sensory Opportunity: There is substantial evidence that the adoption of capitalism helped to eradicate, or undermine a pattern of life that had much greater opportunity for multi-sensory engagement than the consumerist lifestyle of today affords. Perelman confirms pre-industrial lifestyle was informed by a considerable emphasis on leisure (about one third), much of which was taken up with the creation and participation of sensory rituals designed to celebrate the peasant's respect and understanding of nature. (Perelman 2000: 17) These traditions of celebration and the lifestyle were eroded because industry saw the opportunity and need to organize a disciplined workforce and develop consumer needs. Both priorities required

the suppression of traditional and natural diversions. This was largely achieved by scientific methods of management and marketing. Industrialized senses of time, discipline and efficiency changed people's perception of values and lifestyle habits. 'The disorientating introduction of the market cut people off from their traditional networks and created a senses of dehumanization (yet) writers of every persuasion...invoking the need to civilize workers or stamp out sloth and indolence.' (Perelman, 2000: 15) Leisure patterns were ruthlessly compromised, as the number of wage earners increased the business opportunities for making profit from leisure expanded. 'Industrial capitalism not only created work, it also created leisure in the modern sense...creating distinct holiday periods...because it was better to do this than have work disrupted by the casual taking of days off.' (Fulcher, 2004: 8)

Efficiency: Capitalist theory added a dimension of urgency to life that reinforced the Protestant suspicion of 'idleness.' 'The classical economists (Smith, Ricardo, Steuart) joined in the chorus of those condemning the sloth and indolence of the poor...they applauded the leisure activities of the rich, they denounced all behavior...of the less fortunate that did not yield a maximum of work effort.' (Perelman, 2000: 16) But Steuart in particular recognized how industrialization 'would lead to the destruction of the self-sufficient household.' (Perelman, 2000: 158) Despite the obvious hardships, and the financial and psychological pain of the displacements caused by the move from batch production to the factory system, significant changes in lifestyle were relatively rapidly evident: 'Mass consumption was a feature of the Industrial revolution from the beginning: it is not, contrary to popular myth, some sort of new condition of the 1950's.' (Rothbard, 2004: 973-974) The immediate impacts of capitalism led to a series of lifestyle changes that are summarized below:

- Regularized and diminished, or commercialized leisure time and the extension of working hours
- The redefinition of need, value, and reward in monetary and material terms
- The limitation/eradication of direct contact with the means of production. Supply becomes something other people do
- The promotion of visual design values that exclude sensory characteristics that do not suit the means of mass production
- The promotion of science and commercially driven modernity as a signifier of progress

Design played a pivotal role in shaping the values, strategies and motivations of the twentieth century, enabling modernity to appear desirable by giving it a range of tangible and intangible benefits. The passion of the pioneers who developed the aesthetics of the machine age was imbued, in some cases by spiritual, and social objectives. However naïve they linked the machine to a transcendent perception of a better quality of life.

Utopian Ambition: There was clearly a strong element of romanticism in the modernist vision, but this was not the full of sentimental longing for a land that was free of 'dark satanic mills' but a new, 'Futurist'-like' belief in the power of the machine age to overcome the obstacles that had traditionally stood in the way of rethinking culture. Modernism was essentially evolved out of a rich dialectic that drew on an eclectic range of intellectual and emotional tendencies including mysticism, romanticism, exoticism, anarchy geometry and physics and extreme rationalism. Its

attempt to juggle and synthesize the inherent oppositions that were represented in its sources of inspiration gave its founding moment a complexity and dimensionality that has arguably been lost by those designers who simply appropriated the modernism as fashion idiom.[1]

Benton argues that the modernist designers wrestled with the question of style and concludes that. 'Modernists clung to the idea of style because it could be seen as more permanent and serious than fashion and yet more spiritual than utilitarianism or functionalism.' Benton quotes Walter Behrendt's contemporary summation: 'The efforts to renew architecture examined here concerns a spiritual movement, not a fleeting artistic fashion or some new 'ism.' The originality of this movement and its intimate connection with the spiritual life of our time is well attested by its international character – the fact that it has arisen in various countries simultaneously and with similar goals...There can be no better evidence for the living relevance of the ideas that support this movement.' (Behrendt 1927, quoted: Wilk, 2006: 163)

Benton argues, 'Modernism in architecture and design has often been represented as the triumph of the machine over the hand, of the artificial over the natural, or reason over feeling and of geometry over free form, any reference to nature might appear to challenge its fundamental principles. And yet it is clear that, even at the heart of high Modernism, reference to nature was never far away.' (Benton, in Wilk, 2006: 3i2) But there is evidence to suggest that not everyone shared Benton's views. Jenks explains how 'Modernism failed as mass-housing and city building partly because it failed to communicate with its inhabitants and users who might not have liked the style, understood what it meant or even known how to use it. Thus, those left out of the dream could neither benefit from it, nor fully escape from its effects.' (Jencks 1996:475) Modernist architecture fits Benjamin's thesis that machine/mechanistic conditions of reproduction brought about a loss of 'aura.'

Modernism as History: Because Corbusier,[2] and others, were so busy in engaging in self-aggrandising polemical competitiveness it is easy to forget that Corbusier, at least, saw modernism as a beginning rather than as an end. As Corbusier put it (the architect) 'confuses the superficial appearance of technical solutions with progress. Geometrical fundamentalism is not an enlightened advance, as the modernists imagined, but a reactionary embrace of the simple geometrical abstractions of Euclid, Pythagoras, and the ancient Egyptians.' (Corbusier 1985: 30) Modernism was supposed to represent a process of continuing innovation, which linked past to present and on to the future as perpetual Zeitgeist.[3] There is evidence that the

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1 'Scholars like Boris Groys investigating the relationship between the avant-garde and the dictators not as one of opposites, but of similarity...The mutual purpose was a planned world, infatuated with technology and responsive to elites that promised a new world and a new social order, invented either on the architects drawing board or in the political corridors of power" (Hvattum, 2004: 49)

2 Le Corbusier's description of the house as the 'house machine' is used a a metaphor for industrialized, efficiency driven concepts of living and retail solutions like supermarkets that resemble 'machines for shopping in: If we eliminate from our hearts and minds all dead concepts in regard to the house, and look at the question from a critical and objective point of view, we shall arrive at the 'House-Machine,' the mass-production house, healthy (and morally so too) and beautiful in the same way that the working tools and instruments which accompany our existence are beautiful. Beautiful also with all the animation that the artist's sensibility can add to severe and pure functioning elements.' (Le Corbusier, 1985: 6-12)

3 As Hvattum puts it '...the attempt to create meaning in the medium of the aesthetic does not lead to a new symbolic order that transcends modernity, but...to the creation of an illusion (Scheingebilde) or...an extension of economic-technical rationalism...an application of its 'rules for the manipulation of matter' onto those areas that had hitherto been outside its sphere of influence. The realms of 'Innerlichkeit', the psyche, soul and Culture...are appropriated in the attempted creation of unified whole and thus in fusion with instrumental reason subjected to manipulation...It means that such formulations as the Bauhaus motto of 1923 'Art and Technology: A New Unity' appears less of a conceptual break than it might at first appear' (Hvattum, 2004: 77-78)

spirit of renewal of finding forms that, 'we feel to be in accordance with our world' quickly descended into a cheap fix that is well illustrated by the 'big sheds' that supermarkets inhabit.' (Wilk, 2006: 27) By the end of the twentieth century critics were beginning to look for more evidence of Mies van der Rohe's claim that: 'god is in the details,' and 'less is more' by raising questions of more of what, and less of what? (Pearman, 2001)

Modern Food: The industrialization of need occurred gradually but food production and retailing became an important location for normalizing desire for mass produced typologies and experiences that was devoid of multi-sensory opportunity. Industrialization helped to inspire the iconography and rhythms, of modernism. It also provided the commissions, briefs and finance that enabled designers and architects to realize and promote an expression of industrial and economic rationality through buildings and products that promoted the iconography of technological control as in ways that made modernism the style of progress. Modernism became embedded in our cultural values in a variety of ways that had direct and indirect impact on business and consumer definition of food values and needs.

Modernism came to represent a form of modernity that marginalized multi-sensory engagement in a range of ways including urbanization and the application of the scientific management to all aspects of life. The city became the major location for new industry, retail, and service encouraging urbanization and transport and communication systems that isolated people from natural experience.[4] The greater profit potential of food types that suited industrialized processes encouraged techno/chemical investment in industrialized farming and retail strategy. As the machine became a source and definition of aesthetic needs and values food types that were largely devoid of multi-sensory opportunity began to be developed and heavily promoted through marketing led concepts like 'convenience' that served to isolate the consumer from the sensory opportunities involved in growing, processing and consuming food. Health concerns that grew out of scientific definitions of progress began to influence a perception of texture and aroma as source, location, or evidence of germs, and worse. Business responded by creating and marketing cleaning products and fixture and fitting that reinforced consumer paranoia's about surfaces and smells that were not smooth and/or natural.

Fordism: Ford exemplified the paradigm shift from the pre-nineteenth century emphasis on small scale and local thinking to large scale. Ford was also significant because his contribution to a big is better approach to business was based on the production of branded goods rather than raw materials. What separated Ford from his predecessors was the scale of his enterprise and his approach to planning. Ford achieved his ambition by the translation of management and marketing theory into practice. By 1910 Henry Ford had opened a new, purpose designed factory and hired 3000 workers to staff it The organization and division of labour extended beyond the unskilled workers to include whole new job typologies that were constructed to facilitate administration of labour and services. Ford is credited with revolutionizing factory

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4 'The food industry not only encourages us to eat more meals away from home but also puts more distance between us and our food. Globalization means that much of what we eat has traveled thousands of miles to our plates, but even the space between cooking and eating is being stretched. Just as we bring warm roasted chickens home from the supermarket, some big chains prepare their food at a central location, then send it out to what we think of as conventional restaurants but are really just tables and chairs.' (Gallagher, 2006: 87)

production with a series of innovations ranging from the introduction of an assembly line process at the purpose built and designed Highland Park Ford factory In Detroit in 1913 to the use of standardized parts in the same year. Ford adopted Taylor's ideas to plan and manage production efficiency including the use of financial incentives and regular working hours for his workers.

Taylorism: Taylorism has become a generic for total quality management strategies designed to maximize efficiency. Taylor advocated a 'complete revolution in the mental attitudes and the habits of all those engaged in the management as well as the work force' (Taylor, 1998: 131) Ford was the first to systematically apply Taylor's theories on a large scale. Fordism and Taylorism have become indelibly associated with the concept of efficiency. While Kanigel and others argue Taylor 'bequeathed a clockwork world of tasks timed to a hundredth of a minute, of standardized factories, machines, women and work...he quickened the tempo of our lives, left us more nervous, speedy, irritable...all concur that if we...jealously guard (time) and contrive to use it efficiently we must look to Taylor for the reasons why.' It is arguable that the Gilbreths brought the concept of time-and motion improvement to the domestic environment and retail services. (Kanigel, 1997: 7) Frank Gilbreth collaborated with Taylor, he promoted the benefits of efficiency for the domestic, retail and office environments with his wife Lillian. They achieved considerable notoriety through well-publicised studies of their own home, which included their attempts to make their own children more efficient. Lillian helped to promote T & M in the retail through her consultancy to the Macys the New York department store. (Rybczynski 1986, Gilbreth 1928)

The Raw and Uncooked: America has always maintained a tradition of what could be called 'raw and uncooked-engineering.' [5]Referring to the literal exposure of the nuts and bolts that were used to construct many of Americas most significant structures ranging from The New York subway to the Brooklyn Bridge that has been rediscovered and exported as the dominant aesthetic of loft living. This engineering aesthetic played as important a role as above the line design in determining the structural iconography that made the United States a leading influence on architectural and interior design around the world. It was also a major factor in product design, as Forty explains relating to typewriters: 'In practice, there were two possible approaches to marketing portable typewriters. One was to produce the cheapest possible machine, however ugly it might be, and sell it as at a low price. The more common alternative

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5 The use of the term raw and uncooked draws on the interpretive theories of Claude Levi-Strauss while at the same time setting up a critique of his definitions based on my belief that he significantly underestimated the sophistication and status of the uncooked. Levi-Strauss set out to 'show how empirical categories – such as the categories of the raw and the cooked, the fresh and the decayed, the moistened and the burned (can) be used as conceptual tools with which to elaborate abstract idea and combine them in the form of propositions.' (Levi-Strauss: 1983: 1) 'Food presents itself to man in three mains stages: It may be raw, cooked or rotten. In relationship to culinary operations, the raw state constitutes the unmarked pole, whereas the other two are strongly marked, though in opposite directions: the cooked becomes a cultural transformation of the raw, and the rotten its natural transformation. Underlying the main triangle, there is, then a double opposition between processed/non –processed on the other hand, and culture/nature, on the other. Considered in themselves these categories are no more than empty forms which tell us nothing about the cooking method of any particular society....The recent increase in the number of Italian restaurants in France has given French people a taste for raw food in a much 'rawer' state than was traditional for us: the vegetables are simply washed and cut up, without being prepared with an oil and vinegar, according to the usual French custom...Through the Italian influence we have significantly extended our category of the raw...It follows that the triangle formed by the raw, the cooked, and the rotten defines a semantic field, but only from the outside..' (Levi-Strauss, 1990: 478)

was to produce an attractive object, which cost very little more especially as the manufacturers were aiming at a very large volume of sales.' (Forty, 1986: 135) The 'raw and uncooked' style of engineering was itself an important influence on the first generation of modernist architects and designers: 'The Engineer's Aesthetic and Architecture are two things that march together and follow one from the other: the one being now at its full height, the other in an unhappy state of retrogression ... The Engineer, inspired by the law of Economy and governed by mathematical calculation, puts us in accord with universal law. He achieves harmony...Thus we have the American grain elevators and factories, the magnificent first fruits of the new age. the American engineers overwhelm with their calculations our expiring architecture.' (Le Corbusier, 1996: 31)

Styling: The more self-conscious contributions of the industrial designer and the architects tended to disguise this 'raw and uncooked' state through the addition of cladding, or 'packaging,' as Hine suggests. Hine confirms that 'the first generation of (American) industrial designers came form backgrounds in advertising illustration, retail display and theatre design. They were communicators not engineers...In contrast to the European functionalists, mostly architects, who were their contemporaries they understood that their primary goal was to move the product.' (Hine 1997: 113) When designers like Raymond Lowey and Norman Bell Geddes began to eradicate the tradition of 'ugly but efficient' in 1930's product and transport design it was because of the government's encouragement to industry to find forms that would encourage consumers to buy.[6] The level of investment that manufacturers put into product, or brand styling was rarely available to the entrepreneurs who established the first supermarkets. They opted for the tradition of 'cheap and ugly but efficient' that typified product design before the depression ushered in styling as purchase/branding incentive. Leach confirms the relatively rapid sophistication of advertising, marketing, merchandising and branding in the early twentieth century. Leach identifies the shift in understanding of the power of advertising: 'Before the late 1880s visual advertising was looked down upon as linked to Circuses and PT Barnum hokum...after 1885 as merchandise flowed out of factories national manufacturers and large retailers began to transform advertising's character and scope. In 1880 a total of $30 million dollars was invested in advertising; by 1910, new big business such as oil, food, electricity, and rubber were spending more than $600 million or 4 percent of the national income, a percentage that remained unchanged for the next sixty years...By 1910 mass market businessman, with the aid of men like Baum, Parrish, Ogden, and Hubbard,[7] were seeking to occupy visual space through the onslaught of pictures. Together they helped change not only the way many people saw and understood goods but also how they lived in their society.' He cites Hubbard as a pioneer of PR and the 'one-liner': 'his promotional one-liners – the sound bites of his generation – shaped the way a generation or more of Americans thought about business and commodities.' (Leach, 1994: 40-41)

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6 This encouragement actually came from Herbert Hoover's investigations into what drove commerce in the 1920's.

7 Frank Baum, pioneer of window display and merchandising, Maxfield Parrish, an influential commercial artist whose images were generally used to create romantic symbolism for mass produced goods, Robert Ogden, store manager of Wannamaker's Department Store New York who became a leading theorist of 'big is better' for retail, and Elbert Hubbard, a pioneer of advertising spin and the one-liner. (Leach, 1994)

Access: The supermarket changed the rules of retailing by putting the consumer in control. Instead of having to ask permission, or wait for assistance they simply had to pick from a comparatively abundant harvest of brands. All the retailer had to do was to make sure that they kept their shelves well stocked: 'When there are three or four cans of an item on the shelf, they just won't move. People don't want the last package. A test by the Progressive Grocer showed that customers buy twenty-two percent more if the shelves are kept full.' (Packard, 1981: 96)

Efficiency: Speed was a watchword of American production from the 18th century onwards. Rapid transportation, including lifts and escalators, wireless and telephone services and the utopian fictions set in a modernist future in which machines performed the boring bits that they inspired all helped to encourage an expectation that everything was better if it could be done faster. After Ford's well publicized success in car mass production Fordism and Taylorism became benchmark standards and methods in the early twentieth century. Efficiency entered the psyche of everyday life to become a measure of the time/cost factors involved in everyday activities like cooking, eating and shopping. This phenomenon was substantially influenced by the increase in the amount and sophistication of advertising and marketing. 'An economy organized for efficient production though economies of scale, rationalization of the working place, functional specialization and a rapid and integrated flow of materials and communications also needed a 'high velocity of flow' in the purchase of goods by consumers. Advertisement creators were becoming the highly specialized facilitators of that process. At the same time business leaders in the nineteen twenties began to worry about the dangers of over production advertising agencies gained increasing respect for their role as guardians of an uninterrupted process' (Marchant, 1986)

Time: 'Within traditional agrarian societies, people's senses of time related to the tasks to be done each day, or to the sea, seasonal variations that announced a time fro planting, or for the harvest. Ones place, or activity at any given moment was understood in relation to the whole of life...with the rise of wage labour and factory production, the natural cycles gave way to the rhythms of the machine. Where factory production disciplined the day the clock emerged as a mechanical tool for dividing and measuring time.' Arbeiter Kontroll-Uhen quoted (Ewen, 1990: 207) Aided and abetted by machines that did not sleep, electric light, and transport systems capitalist enterprise broke centuries of accord with the rhythm of nature as the determination of when to start and when to finish a given activity.

The implications of the relationship between time and the supermarket has a number of implications that can be summarized as:

- Time saved through efficiency and convenience
- Time as determined by opening and closing times
- Time as a continuum of 24 hour neon lit availability in which the strategies pioneered by Las Vegas casinos are now used by supermarkets to distort time in order to encourage permanent participation
- Time as availability in terms of unnatural production cycles and world wide sourcing
- Time as shelf life: 'sell by' or 'best before'
- Time as 'bag a bargain' before the offer expires marketing
- Time is money connotations
- Time as virtual slippage between mediated images and physical participation

Cheapness: Ford in particular associated 'efficiency' and 'progress' with cheaper prices. As the consuming public clamored for the bargains that spewed from the factory system even the church began to reappraise its views of wants and needs: 'many came to believe that rather than representing moral peril, such abundance might be a key to social progress. Certainly it seemed that cheaper and more accessible goods meant that an ever greater number of people could enjoy a higher standard of living.' (Matt, 2003: 40-41)

Value: Towards the end of the twentieth century the British supermarket Tesco began to use the world 'value' to differentiate its offer that were targeted at the less well off from the luxury brands that it began to stock and develop in order to attract and service more prosperous customers

Luxury: Luxury has acquired a particular connotation in the mass food market through the development of brands that are pitched as 'affordable luxury.' This strategy exemplifies the ways in which design is used to simulate real values of time consuming craft and other conditions of production that inform the luxury status of the original food type

Abundance: 'More of everything was the big pay-off, affordable abundance was the promise of science, industry and government and increasingly became the expectation of consumers. In the United States, it was not until the early twentieth century that the rise of corporate advertising brought a disembodiment of abundance imagery, as the carnivalesque celebration of fleshly excess was streamlined into an exaltation of industrial efficiency, and the process of production became a model for the organization of everyday life (and) redefined the source of abundance from the fecund earth to the efficient factory.' (Lears, 1995:18) Hine argues that the Piggly-Wiggly Stores 'that pioneered self-service depended on constricting the customer. In contrast, the pioneering supermarkets...provided a feeling of freedom and, above all abundance.' (Hine, 1997: 136) Abundance associated other need concepts like bigger and more perfect. The stress of visual evidence of abundance became a potent force in driving out multi-sensory definition and evaluation of quality. [8]

USA led Aspirations and Values: Britain began to adopt American food types and the values associated with them once it became possible for them to do so through a process of technological (e.g. fridges) and economic enfranchisement. The cycles of relative economic prosperity and lower income level enhancement that have characterized the British economy since 1945 were immediately followed by the launch and acceptance of new food types and new ways of consuming them.

Mediation: Ewen argues 'Part of the promise of style is that it will lift us out of the dreariness of necessity...style today is an incongruous cacophony of images, strewn across the social

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8 'Once food production is dominated by mass production and distribution, the balance of power shifts against the consumer. When the consumer no longer has a personal relationship with the producer or at least the peddler of the food products, then the consumer can no longer rely on trust as a guide to making good purchases. When a product is canned, bottled, or simply pre-packaged, the consumer has no way of monitoring its quality at purchase. The only way a consumer might ever know of a product's poor quality is if they become ill from using it.' (Moore, 2006)

landscape. Style may be borrowed from any source and turn up in place where it is least expected' (Ewen, 1990: 14) What Ewen calls the 'technological discourse' now insists upon the largely visual nature of our culture and clearly encourages a tendency to superficially quote rather than comprehend. The blurring of digital fictions with the physical presence makes for the sense of an art directed world in which choice is down to a selection of style/styles that constructs the life-style of the consumer. Style and life become about surface meanings because the visual does not encourage participation beyond the gaze. The prevailing reference point of art, or at least the way that it is exhibited encourages the distancing from multi-sensorial engagement with the construction of meaning. The conditioned reliance on the visual is a problem that encompasses not only what we consume but why and how we consume it. The style of authenticity for example becomes a bricolage of historical and ethnic clichés that merely reinterpret political, class, industrial and colonial and economic histories in ways that leaves them stripped of meaning while simultaneously embellishing them with new connotations of authenticity.

Organic: The term organic is open to considerable debate and has the potential for misuse, particularly in America where the responsibility of confirming organic status is in the hands of a number of different agencies, including business. In Britain organic status is mainly left to the charity, 'The Soil Association' which was an outcome of the pioneering work of Lady Eve Balfour (The Living Soil, 1943) (www.soilassociation.org/web/sa/saweb.nsf/Aboutus/History.html) The term organic is also used to describe design principles that draw on the asymmetry of nature as a source of aesthetics and materials. (Pye, 1995)

Chapter outline:

Chapter One: The Introduction

The opening chapter will introduce the main issues that are likely to inhibit multi-sensory innovation.

Chapter Two: The Methodology

An introduction to the methodologies applied to gathering, evaluating and synthesizing the evidence of sensory marginalization and sensory opportunity

Chapter Three: Deeper Needs

This chapter provides a brief introduction to some of the ideas and reactions that are shaping demonstrable challenges to the more and cheaper mass production and mass consumption model that still forms the basis of corporate food business.

Chapter Four: Sensory Denial

This chapter will introduce the historical and theoretical perspectives that explain the rise of a culture that tends to limit multi-sensory user awareness of food. Exploring how this has led to a culture of multi-sensory denial will be achieved by reviewing the development and influence of philosophical and scientific theory, and method, and the bias and impact of mainstream education.

Chapter Five: Sensory Potential

This chapter will introduce the potentials for multi-sensory engagement with food and how this might contribute to better health, ethics, and the environment.

Chapter Six: The Economic Context of Multi-Sensory Marginalization

The development of a capitalist economy and its impact on multi-sensory opportunity

Chapter Seven: The Production Context of Multi-Sensory Marginalization

This chapter will introduce the historical practices that led to a predominance of unhealthy food, produced in conditions that display a lack of ethical concern about workers, consumers, and the environment.

Chapter Eight: The Food Processing Context of Multi-Sensory Marginalization

This chapter will argue that the design industry has fostered, and continues to facilitate, the culture of multi-sensory denial.

Chapter Nine: Marketing or Design?

This chapter consider the theories, practices and impact of design and marketing strategy in the corporate food sector

Chapter Ten: The Mainstream

This chapter considers the relationship of marketing theory to the mainstream business and design strategies of the UK supermarket

Chapter Eleven: The Supermarket Formula: Design as Business and Business by Design

This chapter cites Tesco as a case study of a UK supermarket and traces its machine aesthetic and mass marketing strategy

Chapter Twelve: Alternatives as Corporate Strategy Whole Foods Markets

This chapter considers the business and design strategy of Whole Foods Markets and considers the legitimacy of the ethical, environmental and health promotion

Chapter Thirteen: Innovations in Wellbeing and Luxury

This chapter presents and analyses the La Fromagerie case study

Chapter Fourteen: Conclusions

The conclusion will review and explore strategies and precedents that could enable designers to develop a wider sensory understanding of food experience. This will include an analysis of the opportunities for knowledge transfer between the food sector and the design industry.

Appendices

Appendix A: Selective but Indicative Evolutionary Steps that Link Aristotle to the Present

Appendix B: A Brief History of Progressive Learning

Appendix C: Bernard Mathews: A Bird in a Cage

Appendix D: Wedgwood and Cream Crackers: Two Case Studies in the Relationship Between Design, the Economy and Sensory Opportunity

Appendix E: Sliced Bread

Appendix F: TV Dinners

Appendix G: The Iconography of Modernity

Appendix H: Cargill

Appendix I: Unilever

Appendix J: Non-products

Appendix K: The Machine Syndrome

Appendix L: Shopping and the Supermarket: The History of Access

Appendix M: The Culture of Supermarket Management

Chapter Two: Research methodology

Who, What, Where, How, Why?

Tellis points out that there are a series of "who", "what", "where", "how", and "why" questions that need to be established. My research has been designed to test the usefulness of sensory design for an ethically orientated designer and their clients so these questions will include the following concerns:

- Who? = A contemporary designer and/or a 'slow retailer' who is committed to moving beyond traditional visual design means to achieve ethical outcomes
- What? = The re-embodiment of design theory and practice
- Where? = In collaboration with food producers and retailers who aspire to ethical practice
- How? = How can the design of a sensory approach affect the wider brand image?
  How might ethics be accommodated in ways that do not impede commercial competitiveness?
  How do producers, retailers and their customers come to terms with the untried and untested?

Why? = The whys are informed by evidence of the problems and potential that contemporary design and business strategy is creating and/or failing to address and include:
Human and environmental health and wellbeing
Lack of reflective multi-sensory opportunity in the food chain
Lack of opportunity to evaluate the potential of multi-sensory engagement

Stakeholders

I believe that there are five principle stakeholders or groups who will reap immediate benefits from the application of the sensory design principles that this research project sets out to define. They are:

- 'Slow' and other types of SME food retailers who have an interest in promoting naturally produced food.
- Consumers who are seeking out better and more healthy food sources
- Organic and ethical food producers who need to achieve more reliable demands for their produce at a realistic price
- Designers and members of the design industry who wish to move beyond the traditions of design predicated on visual seduction and short-term profit
- The mainstream corporate production, processing, promotion and retail sector who need to develop alternatives to their conventional strategies to attract 'alternative' shoppers, avoiding legislation and save money

The project intends to demonstrate that sensory design can enhance the opportunities for the frontline stakeholders. Although the wider benefits of a sensory approach to design fall outside of the scope of this project it is assumed that will sensory design will provide benefits to a range of interest groups who need to encourage the education and availability of better food values in the UK. These interest groups include:

- Consumer Interest Groups
- Healthcare

Education

Design as Methodology

In order to evaluate whether a multi-sensory approach to the design and marketing can work to reconcile the tension between ethics and profit my methodology adopts ways of gathering, assembling, interpreting and proposing that attempt to move beyond the dominant culture of fragmentation as identified by Bohm. (1980) [9]

While I am critical of many aspects of conventional design practice I utilize design as a form of research. Design has the advantage for a study of this nature that requires the hybridization of many different spheres of knowledge that it is a relatively open process: "Design ideas come from every conceivable source" (Juracek, 1996:12). The characteristics identified in the section that explores the nature and particular qualities of design will be utilized as part of the design methodology. The concept of reflective practice, most associated with Schon, but pioneered by Dewey, offers insight into the implicit and explicit resistances that design methodology offers to the mechanistic methods and results of the techno-rationalist tradition that has marginalized opportunity to evolve the non-visual senses. (Usher, 1997)

Play

While design is a victim and perpetrator of the dominant culture of 'technical rationality' that Schon suggests "is an epistemology of practice derived from positivist philosophy, built into the very foundations of the modern research university...Rigorous professional practitioners solve well-formed instrumental problems by applying theory and technique derived from systematic, preferable scientific knowledge." (Schon, 1990: 3-4) it is also the source of possible antidotes.

Design is increasingly accepted for its contribution to business precisely for those aspects of its methodology that appear to be at odds with the techno-rationalist tradition (Peters 2005) The increasing tendency to describe design as 'Play' highlights the recognition of the value of design as a form of relatively open exploration in which ideas become a crucial component of the methodology. This form of design method is essentially a form of action research and involves what IDEO, one of the world's largest and most successful design businesses, describes as: "failing often to succeed sooner" (Thomke, 2003: 3)

It is reasoned that when design is in play mode it moderates conventional cultural resistance to change by encouraging a more open-minded engagement with the exploration of possibility. (Simon 1997, Schrage M 1999, Thomke, 2003, Christensen 2003, Boland 2004, Thackara 2005

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9 Bohm has provided useful clarification of the fragmented nature of discipline expertise and the knowledge's that they produce. He argues 'art, science, technology, and human work in general, are divided up into specialities, each considered to be separate in essence from the others. Becoming dissatisfied with this state of affairs, men have set up further interdisciplinary subjects, which were intended to unites these specialities but these new subjects have ultimately served mainly to add further separate fragments...society as a whole has developed in such a way that it is broken up into separate nations and different religions, political, economic, racial groups, etc. Man's natural environment has correspondingly been seen as an aggregate of separately existent parts, to be exploited by different groups of people.' (Bohm, 1980)

The Open Portfolio

Design has the advantage of being able to incorporate a range of precedents and methodologies into its 'portfolio' that could, under the right conditions open up new awareness and possibilities. (Handy, 1997) This ability is illustrated by Blesser in his description of the way in which a wide range of sources were brought together and constructed into an original thesis that forms the basis of his book on aural architecture: "In one respect the concept of aural architecture is nothing more than an intellectual edifice built from bricks of knowledge, borrowed from dozens of disciplinary subcultures and thousands of scholars and researchers. I did not create any of these bricks, all of which appear in published papers. When fused together into a single concept, however, the marriage of aural architecture and auditory spatial awareness provides a way to explore our connection to the aural spaces built by humans and to those provided to us by nature." (Blesser, 2007: 8)

Lawson proposes that "Designers, like artists, are expected not just to solve problems but to bring their issues and concerns into the process to...In this sense designers are assumed by their clients to be artistic and their role is at least partly interpretative...unlike scientists who describe how the world is, designers suggest how it might be...their job is to create the future, or at least some features of it." (Lawson, 1997:113) He agues that this is necessary in order to balance the relationship between the need for "precise and vague ideas...systematic and chaotic thinking...imaginative thought and mechanical calculation." (Lawson, 1997: 4)

My Use of Design Methodology

Buchanan suggests design can be better understood as a discipline with a constantly changing subject, unlike science the subject is not already there but "is created through the activities of invention and planning, or through whatever methodology or procedures a designer finds helpful in characterizing his, or her work."(Buchanan, 1995: 24)

Because design is inclined to be outcome-led, rather than veridical and proof-centred it has proved to be relevant to my task. Some of the most useful aspects of design methodology that I have applied to locate, review and assemble my sources of evidence have been usefully summarised by Lawson:

- Borrowing from other disciplines to form analogies in order to open up the point of view of the investigator
- Identifying problems
- Engaging in an argumentative process in which a senses of problems and solutions emerge together
- Contributing problems as well as solutions
- Contributing creative rather than logical thinking
- Making subjective value judgments
- Rather than dealing with the 'what is, how and why questions of science design is concerned with what might be, could be and should be'
- Design is not an end in itself but a catalyst for change
- An ability to "become fascinated by problems previously unheard of"
- An ability "to prescribe and to create the future"

(Lawson, 1997: 125- 127)

Design and Market Research

Design research has much in common with market research both sectors often use an exploratory approach. As McQuarrie suggests: "Any particular market research study can be categorized as exploratory or confirmatory in intent. The goal of exploratory research is *discovery*. Creative designers tend generally to mistrust quantitative research because of there belief that you cannot test something that your consumers have not had time to acclimatize to." (McQuarrie, 2005: 6) As Bernbach (1989) put it: "Research can trap you in the past."

There are underlying questions that link design to market research including: "what's new?" And "what are we missing?" According to McQuarrie you conduct exploratory market research to open your eyes and broaden your vision. You conduct confirmatory research to narrow your options and concentrate your efforts on the optimal path. He argues "all the factors that make a market research technique useful in an exploratory context tend to render it highly suspect in a confirmatory context." (McQuarrie, 2005: 6)

Qualitative Research

- "First look around
- Second, explore in depth
- Third, identify the best option
- Forth, measure the results of your decision" (McQuarrie, 2005:195)

The design based methodology of combining and contrasting relatively disparate and discrete spheres of knowledge opens up relatively original and unprecedented questions that cannot be answered by the quantitative data gathering techniques Compared with the overwhelming dominance of the visual in food retail communication strategy a sensorial approach represents a challenging level of innovation and as McQuarrie suggests: "The more radical the innovation the greater the pertinence of qualitative market research" (McQuarrie, 2005: 13)

Creswell has identified five traditions of qualitative research and six phases of research design that have relevance to constructing a research strategy: "inquiry, biography, phenomenology, grounded theory, ethnography and case studies..." Research design includes "philosophical or theoretical perspectives; the introduction to a study, including the formation of the purpose and research questions; data collection; report writing; and standards of quality and verification." (Creswell, 1997: 2)

While McQuarrie differentiates between observation and evaluation he does not attempt to identify a protocol that will support the need for objective rigour. Creswell has identified five traditions of qualitative research and six phases of research design that have relevance to constructing a research strategy: "inquiry, biography, phenomenology, grounded theory, ethnography and case studies..." Research design includes "philosophical or theoretical perspectives; the introduction to a study, including the formation of the purpose and research questions; data collection; report writing; and standards of quality and verification." (Creswell, 1997: 2)

Using Creswell's outline the decision has been made to focus on case studies. My case study: La Fromagerie was selected it allowed the research response to focus on the retailer rather than the customer and it is proposed that this will bring significant advantages which are outlined below:

- In depth knowledge of the sector
- Regular access over a prolonged period of time
- Interest in innovation strategy from the commercial as well as the ethical standpoint
- Sympathetic expertise
- A fixed location

The case study was monitored following the four-stage model proposed by Yin (1994):

1) Design the case study
2) Conduct the case study
3) Analyze the case study evidence
4) Develop the conclusions, recommendations and implications.

Yin (1994) suggestion that case studies should be made up of five components was also adopted:

- A study's questions
- Its propositions (if any)
- Its unit(s) of analysis
- The logic linking the data to the propositions
- The criteria for interpreting the findings

My criteria drew on design and embodied practice and began with asking the questions?

- What does this smell of?
- What does this sound like?
- What does this feel like?
- What does this taste like?

Once the sensory characteristics and their intention, or otherwise was identified it was possible to review in relation to a final sensory question:

- What does this look like?

The reversal of conventional design appraisal helped to identify the relationship between and the application of the five senses that were used to verify sensory presence, absence and potential.

Stake (1995) and Yin (1994) provide useful arguments that I adopted in support of a pluralistic approach in which sources of data of different kinds is compared and contrasted in order to develop a triangulation of evidence. Yin (1994) suggestion of some typical sources of evidence provided a useful framework:

- Documentation: This was achieved through access to correspondence relating to La Fromagerie's branding strategy

- Archival records: Access to a comprehensive archive of design proposals for the Branding strategy

- Interviews: Interviews with the owner and the manager of La Fromagerie and designers, design managers and marketing strategists who specialize in food retail

- Direct observation: Detailed and length analysis of mainstream and alternative food retail and design practice

My use of triangulation was informed by Tellis's recommendation: "The need for triangulation arises from the ethical need to confirm the validity of the processes." Tellis (1997) This study developed triangulation from the comparison of perceptions and other forms of evidence derived from the following sources:

- Interviews
- Direct observation
- Participant Observation
- Theories of Marketing
- Design Practice
- Theories of Sensory Communication
- Physical Artefacts (These will not be in the form that Yin is familiar with but artefacts that have been created specifically for the purpose of illustrating hypotheses)
- Intangible Artefacts (artefacts that have been created specifically for the purpose of illustrating hypotheses)

These sources were used in the following way:

- A combination of direct and participant observation and interview was used to confirm the current objectives and methodologies of the retailers marketing and design strategy
- Theories of marketing and sensory communication informed the construction of a limited number of design and marketing hypotheses that offered evidence of alternative design and marketing strategies
- The hypotheses were communicated, where appropriate in order to provide the retailer with more understanding of form, function and intent
- Interviews were used to establish reaction

The evidence produced through the application of this protocol will be analyzed "Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study" (Yin, 1994). Drawing on Trochim (1989) the data will be analyzed to confirm the potential of 'pattern-matching' in order to achieve "explanation building." The protocol and methodology cited above is intended to confirm the opportunities for design to engage with sensory design innovation in the sector of UK food retailing. The "closed box" nature of the case study is informed by two separate sources of knowledge:

The Retailer was selected against the following criteria:

- Significant awareness of the philosophies and practices of Slow Food
- Significant experience of Food retailing
- Awareness of the tension between competitive business and ethics
- Clearly established contemporary marketing strategies
- Evidence of investment in rethinking marketing strategy through design

The writer introduced a significant degree of empirical experience to the research process informed by practical and theoretical knowledge of the following:

- Retail design
- Marketing consultancy
- Sensory consultancy
- Slow Food
- Demographic targeting
- Prototyping concepts

Ultimately the priority will be 'to establish meaning rather than location.' Tellis (1997)

Sources

My research has drawn on wide range of discipline sources in published form that include, anthropology, archaeology, sociology, science, psychology, geography, philosophy, ecology, communication theory and design, agricultural, trade, business, food production and retailing histories. Many of these sources have reflected a critical viewpoint and as far as possible I have tried to balance my review by a non-partisan inclusion of supportive arguments that reflect the position of advocates of the orthodoxy that my research sets out to question.

The same strategy was taken with the selection of interview and case study candidates who represent a broad cross section of knowledge, experience and ideological orientation.

Chapter Three: Deeper Needs

Introduction

Where chapter (1) introduced the broader themes of my thesis this chapter offers evidence that multi-sensory engagement is a primary human need. I explore a potential for design and the business that it serves to embody their practices and outcomes. I argue that unlocking latent sensory potential could enable consumers to apprehend, evaluate and revel in their experience at a much deeper and more discerning level.

Locating multi-sensory experience in the context of our deeper needs helps to demonstrate the potential for design and business to make more of the non-visual senses. I argue that multi-sensory aesthetics can forge connections between value, provenance and designed representation (Dewey, 1998). I suggest the potential for the non-visual senses to become a conduit for wider and more effective definitions of value and 'pleasurability' (Jordan, 2002). I provide evidence that multi-sensory engagement can serve to re-enchant the world for consumers, designers and business (Ritzer, 2003).

Consideration of multi-sensory opportunity raises the more troubling question of whether humans can be persuaded to engage with and benefit from sensory experience. Science, psychology, sociology and anthropology and history are beginning to offer partial answers. How we define need is substantially influenced by cultural conditioning but there is convincing evidence that all human life share the same biological emotional/sensorial needs for opportunities for reward and engagement that leads to levels of satisfaction over and above survival. (Evans, 2001) It follows that needs can be learnt and potentially unlearnt, the definition of need is therefore determined by instinctual, embodied needs and their suppression of development by the rational mind. (Whybrow, 2005) The criteria that we and/or our culture brings to experience will not only determine need according to cultural norms but will also allow the evolution according to the frames of reference we use to define our needs. For the ecologically and health minded the need to develop a form of food supply and demand that does not damage the health of anyone, or anything that lies in the footprint of the food business is a paramount need. Making progress on the achievement of this need is loaded with resistance from corporate business and consumers because it involves the need to supply qualities and quantities that do not comply with the mainstream model of more for less that has dominated food supply and demand for the past fifty years. Does more mean better? This question is central to my concern to redefine contemporary need but the answer requires careful unpacking of conventional wisdom and the education of new priorities that can enable business to supply needs that are beyond conventional commodity/service definition.

Fortunately, for the sake of my argument, there is a wealth of evidence to support the case of a need for greater opportunity to access multi-sensory and alternative non-visual amodal sensory experience that does not typically emanate from the activities that capitalism encourages. This is informed by a crisis of identity that Tarnas captures: 'Western man enacting an extraordinary dialectic in the course of the modern era – moved from a near boundless confidence in his own powers, his spiritual potential, his capacity for certain knowledge, his mastery over nature, and his progressive destiny, to what often appears to be a sharply opposite condition: a debilitating sense of metaphysical insignificance and personal futility, spiritual loss of faith, uncertainty in knowledge, a mutually destructive relationship with nature, and an intense insecurity concerning the human future. In four centuries of modern mans existence, Bacon and Descartes have become Kafka and Beckett.' (Tarnas, 2000: 393-394)

Maslow influentially proposed that our definition of needs should accommodate a whole range of tangible and intangible aspirations from the unarguable and general sustenance needs of food and shelter to the more psychological and emotionally driven desires for, what Maslow called self-actualization needs. (Maslow, 1968) In capitalist society needs typically emanate from the promotion of commodity, or service opportunity for business led by:

- The replacement of natural sources with synthetic ones, for example meals with 'snacks'
- The eradication of any natural features that made manufacturing, distribution, marketing, and consumption less efficient and less profitable
- The use of marketing to encourage the development of new and additional needs

What Maslow referred to as self-actualization needs related to the potential of human to become self-reflective, marketing's appropriation of Maslow's theories has switched the emphasis from internal, and potentially embodied enrichment, to external materialism with a corresponding emphasis on visual evidence. Over the course of the past two centuries business manufacturing and marketing has created and encouraged a greater dependency on manufactured commodities and services as the sole source of need provision and definition. While the creation of the new system brought immense hardship to many it has facilitated greater social, cultural and economic democracy. Focusing on Britain as an example of the progress of a capitalist economy over the past fifty years there is clear evidence of a wide range of social and economic improvements in the lifestyle enjoyed by the average person. (www.statistics.gov.uk, Floud 2004) An exponential enhancement of access to income and material prosperity can be tracked generation by generation. (Horrell, 2000: 62)

Materialism can thus be argued to substantially improve the quality of life, based on the premise that greater access to more things for everyone has potential to bring satisfaction and happiness to more people. Marx, Webber Benjamin, and others have pointed to a problem with this conclusion: Focus on artificial objects, impressions and material aspirations that are mainly based on economic values leads people away from natural/original sources of pleasure and satisfaction. Quality of life is defined by the ability of an individual to keep pace with standards that are deliberately promoted by the mass production/consumption agenda.[10]

For the rationally orientated fulfilment can be derived from rational organization and the fulfilment of predictable goals. (McMahon 2006, Tarnas 2000) Multi-sensory engagement introduces time needs that fall outside of the efficiencies that dominate the techno-rationalist canon in which any delay in access falls foul of the temporal emphasis inherent in the contemporary concept of convenience.[11] As Visser confirms speed denies opportunity to savour:

"In a modern metropolitan where there is 'no time' and people feel rushed, where there are so many commitments, demands, pleasures and choices to respond to, the popularity of fast food, of spending as little time as possible eating." (Visser, p.353)

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10 In much the same way that western approaches to health care have been struggling to cope with keeping up with diseases, caused by industrialization because their strategy is predicated on trying to treat the symptoms, rather than the cause consumers have been encouraged to live life looking for the next fix.

11 For example our attitude to efficiency is informed by the capitalist-led cooption of time and the manifestation of time through designed interfaces and environments that lead us to regard sensory experience as potentially time-wasting.

Marx identified that the sensory loss that accrued from the push and pull of mass production and mass consumption was experienced by producer and consumer: "A commodity appears at first sight an extremely obvious, trivial thing...So far as it is a use value, there is nothing mysterious about...it satisfies human needs (but) man changes the forms of the materials of nature in such a way as to make them useful to him...wood, for instance, is altered if a table is made out of it...as soon as it emerges as a commodity, it changes into a thing which transcends sensuousness...the fantastic form of a relation between things." (Marx, 1999: 35) Marx criticized the dehumanization of industrialized labour while believing non-industrial labour was a source of satisfaction and meaning. (Cameron, 2002) Marx described the "fetishism, which attaches itself to the products of labour, as soon as they are produced as commodities." (Marx, 1999: 35)

Marx's concerns are given useful explanation by Dewey who was suspicious of the hegemony of the visual, arguing that we must, "put ourselves on guard against depending upon the vague term 'seems,' 'appears.' We must specify the respect in which it appears, to eye, ear, touch, smell." (Dewey, 1998: 192) Dewey develops his explanation of the value of sensory perception by using the analogy of craftsman's relationship with planning a board. "He says, "It looks straight." This is simply a statement of fact, of the same kind as when he says "it is a board"...Distrusting the adequacy of this appearance as sign or evidence, one then resorts to the production of another appearance, the process being identical with any physical experiment where conditions are intentionally varied. One runs a finger over the edge and says, "it feels uneven here and there." The implication is not that that a tactile appearance is more real than a visual, but that for certain purposes it affords a better sign of sort for object...it is often necessary in the interest of control of inference to state the causal conditions of that appearing thing which is used as a sign. In this operation, organic conditions of touch, sight, hearing, smell and taste are specified and 'appears' is specified into feels, looks, sounds, smells, tastes thus and so. The process is no different from when a scientist specifies the physical apparatus which he employed in producing the phenomenon which are used as evidence in drawing an inference." (Dewey, 1998: 193) [12]

Benjamin's reflections on and extensions to Marx's insights offer further support for the intangible but vital dimensions of multi-sensory engagement through the concept of the aura: "In the case of the art object, a most sensitive nucleus – namely, its authenticity – is interfered with whereas no natural object is vulnerable on that score. The authenticity of a thing is the essence of all that is transmissible from its beginning, ranging from its substantive duration to its testimony to the history which it has experienced." (Benjamin, 2002) Benjamin draws

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12 Sennett suggest that 'meritocracy (has transformed) the spirit of craftsmanship into an invidious, highly personal comparison (which due to the beauracratic machinery used to control it) has created an iron cage for ability... a cell of solitary confinement.' (Sennett, 2006: 112) Sennett quotes Sharon Zukin framing 'of the practical dimension of shopping': 'The consumer lacks the production knowledge that earlier generations commanded...Americans no longer know how to milk a cow, make a bagel, or build a car out of a soapbox, or packing crate.' He cites Zukins suggestion that 'the person trying to buy intelligently needs a new understanding of physical things...'craft knowledge,' instead of production knowledge meaning "a sensory appreciation of a products qualities, a modest understanding of different production techniques, and the imagination to construct a product's 'back story' – a social narrative of the cultural tradition from which the product comes.' Sennett argues that marketing seeks, 'to prevent consumers from thinking like a craftsman about a products utility. Instead, branding seeks to make a basic product sold globally seem distinctive, seeks to obscure homogeneity' he points out that 'Today manufacturing deploys on a global scale the 'platform construction' of goods...The platform consists of a basic object on which minor, surface changes are imposed.' (Sennett, 2006: 142-144)

attention to the ability of an extrasensory dimension to provide useful evidence of provenance that is central to the opportunities that sensory design can open for the food chain.

Benjamin explores the concept of the intangible aspect of sensory presence further through his analysis of the flanuer: "the commodity whispers to a poor wretch who passes a shop window containing beautiful and expensive things. These objects are not interested in this person; they do not empathize with him. In the sentences of the significant prose poem 'Les Foules' there speaks, with other words, the fetish itself with which Baudelaire's sensitive nature resonated so powerfully; that empathy with inorganic things which was one of his sources of inspiration." (Benjamin, 1969) While he seems to be moving away from Marx's resistance to false consciousness Benjamin points to the complex and resonating potential of sensory denial and access in the first phases of retail and design modernity and makes points that are still relevant today.

Underpinning many of the beliefs and values that have permeated Western culture over the centuries is a concern first recorded by Aristotle: "the purpose of economic action is to use things that are necessary for life (i.e., survival) and for the Good Life (i.e., flourishing). The Good Life is the moral life of virtue through which human beings attain happiness." (Younkins, 2005) Aristotle anticipates the moral dilemma and the spiritual vacuum that informs contemporary concerns about the failure of capitalism to deliver lasting value. While subterfuge played a role in Aristotle's time we now live in an age where the task of separating the 'real' from the 'artificial' is further complicated by the heritage and contemporary practice of advertising, which have spun a web of myth and metaphor that informs and can be used to distort western values and beliefs. (Tye 2002, Marchand 1986)[13] The search for different definitions of value is central to the challenge to the industrialization of experience. As Freidman suggests: "Value, at least in how economists use the term, is observed in choice. If we look at how real people behave with regard to their own lives, we find they make trade-offs between life and value...My desire for pounds of food is already satiated...but my desire for quality of food...would remain even at a much higher income...value is value to us, revealed not by words but by actions. Economists call this the principle of revealed preference." (Freidman, 1997: 14-16)

Back to Nature

There is compelling evidence to suggest that pre-industrial life offered more opportunities for leisure and pleasure. Societies that enjoyed a closer relationship with the multi-sensory qualities of nature had slower and more reflective rhythms. (Cameron 2002, Schama 1997, Hazlitt 1988) Nostalgia for the past seems to be informed by memories of tangible advantages. (Whybrow, 2005) Douglas highlights how community knowledge has been eroded: "the farmer's knowledge of his soils and seasons, the hygienic proportions and the amount of food taken (in which) material possessions provide food and covering...and make and maintain social

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13 Corporations use advertising and PR as damage limitations strategies, exploiting expert witnesses is a typical example: '1992 the food industries International Food Information Council' (IFIC) retained Dr G Clotaire Rapaille, 'an international market research expert" to research 'how Americans relate to food biotechnology and genetic engineering." IFIC, a PR lobby for the use of biotechnology in agriculture, wanted to know how it could overcome consumer apprehensions about the new technology...The goal of the research team was to "develop actionable strategies, messages, and language that will express information positively about the process and products – without stirring fears or negative connotations' (Rampton, 2002: 54-55)

relationships...is a long-tried and fruitful approach to the material side of existence which yields a much richer idea of social meanings than mere individual competitiveness." (Douglas, 1996: 39) Douglas argues "Industrialization has complicated life for the consumer. Regarding material goods there are, indeed, more of many things...to keep up with the exchange of marking services necessary to happiness and necessary to a coherent, intelligible culture, he has to run harder to keep in the same place. Industrial growth means nothing more or less than extending the scale of operations..." (Douglas, 1996: 74)

This has led to backlash that some label as escapism and others see as re-embodiment and re-enchantment. Tuan provides a helpful introduction into the complex set of motives and definitions involved in defining what he and other have labeled as the 'back-to-nature movement. Tuan points to "a critical and even alarmist attitude toward technological accomplishment' and suggest we are now asking 'just how far can this conquest go?" (Tuan, 2000: 74-75)

Tuan identifies four key aspects of the history of the 'back to nature' movement:

1) "The antiquity of the sentiment: a yearning for the natural and the wild goes almost back to the beginning of city building in ancient Summer"
2) The universal nature of the "warm sentiment for nature"
3) "Back-to-nature varies enormously in scale (from) the weekend camping trip (to the) the European settlement of North America..."
4) "Back-to-nature movements at all scales...have seldom resulted in the abandonment (of) the major cities...which...have continued to gain inhabitants and to further distance themselves from nature."

He concludes: "escape to nature is a cultural undertaking," and suggests that it may indeed be "a covered up attempt to 'escape from nature." (Tuan, 2000: 18-19) Tuan argues that "a long history of subservience to nature has made the freedom granted by science disorientating." (Tuan, 2000: 165-166) Tuan concludes while "we cannot know the real in itself, we can know more of its facets...In contrast to science, such growth comes about by a habit of mind that is more synthetic than analytic; it leads a person toward a richer, more evocative reality." (Tuan, 2000: 165-166)

The growth of the contemporary urban garden movement offers evidence of the search for the real and a:

- Concern about segregation from nature
- A desire to verify production integrity
- Lack of choice and availability of natural food
- Belief in the therapeutic benefits of gardening and participation in the growth cycle
- Search for socialization and community bonding opportunities and benefits (Hassler 1998, Malakoff 1995)

Socialization and community bonding opportunities and benefits are a major theme of contemporary lifestyle and reflect the wider concern about the Cartesian legacy of a self-centered disembodied relationship with experience that has led to isolationism and alienation. According to Ray the attempt to seek out deeper meaning informs the evolution in the mid

1990s of the broad demographic he labels 'Cultural Creatives' that he depicts as "a subculture that has gained a place among the two other major U.S. subcultures, the Traditionals and the Moderns." He proposes that "The heartland-values-bound Traditionals tend to believe in a nostalgic image of small towns and conservative churches.' (While) the more materialist-consumerist Moderns...tend to see the world through the same filters as Time magazine" (Ray, March/April, 2000) Ray argues that Cultural Creatives were reacting against "the logic of the machine based system..." (Ray, 2000:227) Ray suggests that Cultural Creatives combine "environmental responsibility and the spiritual and personal development path" with early adoption[14] and thus have the potential to encourage business to acknowledge a different set of values. (Ray, March/April, 2000)

Sensory Values

The spiritual needs of humans have been an important aspect of life, community and orientation since the earliest evidence of worship in the settlements of early man. Sensory engagement offers opportunities to interact with the abstract and the invisible dimensions of experience, because smelling, touching, listening and tasting allow participant to embody the intangible in ways that allows it to take on a cathartic dimension.[15] The lingering need to make contact with the intangible dimensions of life and its meaning and purpose is becoming increasingly important as more people notice that capitalism has little interest, or ability to support needs that are not easy to commercialize. The need to "look without seeing, listen without hearing, touch without feeling, eat without tasting, and inhale without awareness of odour or fragrance" has become an increasingly significant as a wide range of religious and non-religious groups and individuals grapple with the lack of spiritual dimension to life. (Leonardo da Vinci's, quoted: Gelb, 2004)

Searching for evidence of the spiritual dimensions of life through the compartments of opportunity that the corporate food businesses have created to manage supply and demand it become clear that there is little opportunity to engage with what Webber described as "enchantment." Ritzer's development of Weber's enchantment/disenchantment concept into his thesis of non-things and non-places takes us to the heart of the loss of spiritual/sensory opportunity that industrialized food practice has created. In order to stem the erosion of this need Ritzer argues: "What is needed is the defence and further creation of places, things, people, and other services that are unique and one of a kind; have local geographic ties; are specific to the times; involve human relations; and are enchanted...this means support for those places, things, people, and services that have an aura of permanency, are locales, offer people a source of identity, and are authentic." Ritzer breaks down his thesis into a series of polarities that reveal the oppositions that demonstrate the difference between 'something' and 'nothing'

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14 'Early adopters are the group of people after innovators who are early to buy a new product or service. Part of the product lifecycle that can be applied to products and markets for new products.' (http://www.sticky-marketing.net/glossary/early_adopters.htm, 2007)

15 'Our sense of smell has the power to trigger emotions and memories. That's not just good science. That's good theology. Proverbs 27:9 says, 'Perfume and incense bring joy to the heart." Studies have found that our minds are physiologically altered by the presence of incense. Different scents have different effects. Peppermint and rosemary are energizers. Lavender and frankincense are relaxants. Aromatherapy is used to treat everything from anxiety and insomnia to weight loss and pain management. What does that have to do with worship? Because we can't 'smell Scripture' we underestimate the affect of incense on Old Testament worshippers. They were greeted by the same scent every time they went to worship. The incense evoked emotions and memories. It was an olfactory reminder that they were entering the presence of God. It helped transport them into "worship mode.' (Batterson, 2002)

Something	Nothing
Unique (One-of-a-Kind)	Generic (Interchangeable)
Local Geographic Ties	Lack of Local ties
Specific to the Times	Time-less
Humanized	Dehumanized
Enchanted	Disenchanted

(Ritzer, 2003: 20)

Opportunities

Ritzer's thesis was underlined in a recent conference (November 2006). Andrew Zoli, futurist in-residence for Popular Science and American Demographics magazines offered evidence of the need for change in the food production and retailing sectors. His list highlighted the gaps and opportunities for the mainstream food business to re-enchant and re-embody food:

'Choice, Commoditization & Experience

- Supermarkets are a sea of sameness, offering the 'tyranny of choice' - 40,000 + SKU's (of which many are near-duplicates) while consumers can pay attention to only 160.
- Individual product choices and innovations often do not offer enough benefit to offset the time and trouble it takes consumers to figure out what the benefits are.
- The older a consumer is, the more satisfied they are with fewer choices.
- Companies need a chief "no" officer to simplify things, edit product choices, etc.
- Staples is an example of a retailer addressing these changes by reducing SKUs, developing an "Easy Rebate" program, and conducting an annual competition for best consumer innovations.

Green Goes Mainstream

- Environmental trends are moving from conservation to sustainability to 'ecovation.'
- LOHAS (Lifestyles of Health and Sustainability) products will sell a lot more in the future as older consumers embrace 'green' and as they think about their legacy. Young people will embrace the trend, as well.
- LOHAS consumers are willing to pay a 20 percent premium.' (Ref: National Grocers Association (NGA) (Mclain, 2006)

Marketing Enchantment

In the supermarket the efficiency logics that are enshrined in forms and contents of modernity have been reduced to a kind of aesthetic tyranny in which rationalization has begun to control all aspects of decision-making. Rationalization operates by a process of exclusion that but as contemporary marketing research and theory begins to identify sensorial experience needs there is growing evidence of attempts to manufacture substitutions for what has been removed. (Peters 2005, Pine 1997, Schmidt 1997) What may appear to be an absurd reversal of logic is central to the capitalist concern to take ownership of every resource so that it can profit from it and exclude competitors from sharing that opportunity. The market wisdom on sensory opportunity offered by marketing theorists like Lindstrom advocates restoring missing sense back by artificial means: "I work with a model called the Authenticity Model...It is essential that the consumer perceive the sensory signals sent from a brand as being authentic. If not, the consumer will be turned off. If the smell seems real, relevant, can form a ritual (when using or

consuming the product), and is part of a story, then you're on track." (Lindstrom, quoted Anderson, 2006)[16]

Ritual provides another location of market opportunity to fulfill/create need, Douglas quotes Merton's (Merton, 1957: 131) use of the term "ritualist, for one who performs external gesture without inner commitment to the ideas and values being expressed.' Douglas argue 'in small–scale, face-to-face society the gulf between personal meanings and public meanings can develop; rituals are not fixed; discrepancy between the situation being enacted and the form of expression is immediately reduced by change in the latter." (Douglas, 2003: 1) Reflecting upon the roles that design might play in a context of multi-sensory awareness it becomes clear that facilitating ritual is a fundamental aspect of the role that design is capable of. Douglas saw the "lack of commitment to common symbols as one of the 'gravest problems of our day." She argues: "Ritual has become a bad word signifying empty conformity." While our mediated world is clearly overflowing with symbols this point needs some clarification, Douglas is not referring to the quantity of symbols but their quality.

Influenced by the short-term needs of their clients designers tend to work to continually renew demand through the promotion of the fashion cycle and the creation a culture of empty symbolism. Digital access has accelerated the appropriation of symbols from other cultures and histories in much the way that the first machine age drew on the eclectic potential of pattern books to concoct the kind of empty assemblages that Morris and Ruskin were so critical of. (Forty, 1986) In the contemporary context symbols rarely have time to establish themselves through the process of bricolage that Levi-Strauss described as a tribal act. They are simply used to communicate and feed consumer insecurities of what's new. (Hebdidge, 1979)

Re-Designing Need

Multi-sensory engagement brings with it demands for a greater level of involvement that challenges the predominant 'seen-it-done-it' aspect of consumer engagement. Margolin calls for greater opportunity for the construction of deeper levels of experience, arguing that design could and should be come capable of creating and marketing these: "Dewey employs the term 'interaction' to characterize the relationship between the individual and the environment that results in experience. He says that this relationship is composed of both objective and internal conditions. The objective conditions are those of the environment, while the internal ones are within the individual. Dewey calls the interplay of these two sets of conditions a situation. We live, he says, in a series of situations." (Margolin, 2002: 41)

Margolin's point is supported by some of the conclusions that Patrick Jordan has reached in his study of the pleasure potential of product design. Many of the points that Jordan makes have a potential to be applied to design's relationship with the food sector and vice versa. For example when he quotes the OED for a definition of pleasure: "the condition of consciousness or sensation induced by the enjoyment or anticipation of what is felt or viewed as good or desirable; enjoyment, delight, gratification, The opposite of pain," and concludes that pleasure in relation to products is the "emotional, hedonic and practical benefits associated with

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16 Anderson goes on to identify that, 'Retailers are increasingly turning to enjoyable scents, pumped into stores, to make shoppers comfortable and more willing to spend. Alan Hirsch, neurological director of the Smell & Taste Treatment & Research Foundation, told Forbes.com, 'Smell has a greater impact on purchasing than everything else combined. If something smells good, the product is perceived as good.' (Anderson, 2006)

products," providing a useful frame of evaluation for all aspects of design. (Jordan 1999) Jordan suggests that practical benefits 'are those that accrue from the outcomes of tasks for which the product is used' Emotional benefits: "are those pertaining to how a product affects a person's mood..." and hedonic benefits "are those pertaining to the sensory and aesthetic pleasures associated with products. For example a person might recognize a product as an object of beauty or may enjoy the physical sensation of touching or holding a particular product..." He argues that "pleasure based approaches to product design can be seen as approaches that consider all the potential benefits that a product can deliver' but notes that 'pleasurability...is not simply a property of a product but of the interaction between a product and person." (Jordan, 2002: 12)

The absence that Jordan hints at can be extended into the lack of sensory dimension that accrues from the relationship between design and food. Asking the apparently simple questions below can expose absence:

- What does it smell like – and why?
- What does it feel like – and why?
- What does it taste like – and why?
- What does it sound like – and why?
- Concluding with the question of what does it look like – and why?

These questions could be used to provide greater opportunity to address the superficiality of the briefing and evaluation stages of the design process.[17] These questions can help to remind us that the relationship between design and business has created a void in people's lives that was once filled by participation in a range of relatively unsophisticated pleasures.

McConnell clarifies this process of obscuration in the relationship between design and food: "Its the needs that have been determined by and industrialized mechanism, which currently create a plastic box full of sludge, which looks god awful, and it is then up to the designer to dress it up and put back some of the flavours and excitement that you would associate with, say, a chicken curry, on the outside of the box, covering up the fact that it probably looks pretty nasty inside." (McConnell, 2006) McConnell's admission that "it could be a lot more inventive" (McConnell, 2006) raises the question of how? It is at this point that the opportunity of the

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17 To reinforce this crucial point it is worth extending the consideration of Jordan's proposals to include his co-option of Tiger's 'The Pursuit of Pleasure' (1992), which offers a "framework, which models four conceptually distinct types of pleasure-physical, social, psychological and ideological. He summarizes them as:

- 'Physio-Pleasure: This is to do with the body and pleasures from the sensory organs (including) pleasures connected with touch, taste and smell as well as feelings of sensual pleasure...'
- "Socio-Pleasure: Enjoyment derived from relationships with others...products can facilitate social interaction in a number of ways. For example a coffee-maker provides service that can act as a focal point for a little social gathering...Association with types of product may indicate belonging to a social group..."
- "Psycho-Pleasure: pertains to peoples cognitive and emotional reactions...this might include issues relating to the cognitive demands of using the products...quick and easy accomplishment (may) be more emotionally satisfying."
- "Ideo-Pleasure: refers to the pleasures derived from 'theoretical' entities such as books music and art. In the context of products it would relate to, for example, the aesthetics of a product and the values that the product embodies. For example, a product made from bio-degradable materials might be seen as embodying environmental responsibility...' (Jordan, 2002: 14)

intangible seems to provide the possibility of a connection between deeper needs and the thrill of the new.

The widespread lack of multi-sensory awareness, knowledge and skill is a source of opportunity as well as potential guilt for design. The bias towards the industrialization and the visually led machine aesthetic has eradicated many craft skills form the design process and its education either because they are not regarded as essential, or are not considered. A reconsideration of designs roles and functions is an urgent priority, as Margolin suggests, "Design understood in a deeper sense, is a human service, it generates the products that we require for productive living.' (Margolin, 2002: 119) He argues, 'once we acknowledge the inextricable relationship between the quality of products and the way that we experience the world, we realize how much there is to learn about the ways that products influence our lives (and) the technological determinism that closes out choices for users and frequently obliges them to interacts with extremely inhospitable systems of service delivery or product access." (Margolin, 2002: 50)

Dewey offers a useful clarification of the intangible dimensions of sense: "'Sense' covers a wide range of contents: the sensory, the sensational, the sensitive, the sensible, and the sentimental, along with the sensuous. It includes everything from bare physical and emotional shock to the sense itself – that is, the meaning of things present in immediate experience. Each term refers to some real phase and aspect of life of an organic creature as life occurs through sense organs. But sense, as meaning so directly embodied in experience as to be its own embodied meaning, is the only signification that expresses the function of the sense organs...through which the live creature participates directly in the on goings of the world about him. In this participation the varied wonder and splendour of this world are made actual to him in the qualities he experiences...participation is rendered fruitful through sense; by which meaning and values are extracted, retained, and put to further service in the intercourse of the live creature with his surroundings...the continuity of the organs, needs and basic impulses of the human creature with his animal forbears, implies no necessary reduction of man to the level of the brutes. On the contrary, it makes possible the drawing of a ground plan of human experience upon which is erected the superstructure of man's marvellous and distinguishing experience." (Dewey, 1980: 22)

The void determined by the lack of dimensionality typifies the majority of designed experiences and encounters. The prevailing obsession with visual novelty encourages the instinctive mind to seek out novelty at the expense of depth leaving a void of meaning and significance which can be occasionally comprehended the momentary respites from the feeding frenzy that typifies the mode of industrialized consumption. This cuts the consumer off from finding an answer to their deeper needs for locating themselves in the cosmos and shuts down a number of increasingly important questions that relate to responsibility. As Margolin argues, "a meta-narrative of spirituality can help designers resist techno-rhetoric that sanctions the continuous colonization of nature." (Margolin, 2002: 119)

In the context of my exploration of opportunities for synergy between food and design I have concluded that the dialectical potential of bringing together distinct points of view to provide a starting point is loaded with opportunity. The need to challenge and redefine purpose, method and aesthetics is something that neither sector seems capable of achieving without the aid of the other. Both spheres have histories, which demonstrate a worrying potential to create a negative impact on the world but both bring a distinct perspectives and set of skills which are

full of potential for sensory change. Just as modernism recoiled and evolved as a result of the encounter with the horrors of the First-World-War, food and design also have a motive and a need to confront the horrors that have evolved in our time. Fortunately both sectors are imbued with enough creative energy, imagination and business awareness to imagine and manifest alternative create paradigms and avoid compromise through nostalgia for mythical pasts or utopian futures, thus avoiding the urgent need for a better now.

Perhaps Dewey provides the best source of wisdom that points to a different way of understanding that could enable both sectors to move beyond their perpetuation of various definitions of 'taste' that continue to inhibit the creation of a better now: "When criticism and the critical attitude are legitimately distinguished from appreciation and taste, we are in their presence of one case of the constant rhythm of 'perchings and flights' (to borrow James's terms), characteristic of alternative emphasis upon the immediate and mediate, the consummatory and instrumental, phase of conscious experience. If we are misled into ignoring the omnipresence in all observations and the ideas of this rhythm, it is largely because, under the influence of formal theories we attach too elaborate and too remote a signification to 'appreciation' and 'criticism.' Values of some sort or other are not traits of rare or festive occasions; they occur when ever any object is welcomed and lingered over; whenever it arouses aversion and protest; even though the lingering be but momentary and the aversion a passing glance towards something else." (Dewey, 1998: 86) Thankfully both design and food have an ability to engage in the kind of passionate immersion that is required to evolve the kind of informed reflective capacity that Dewy regarded as an essentially prerequisite to positive evolution: "Cultivated taste alone is capable of prolonged appreciation of the same object; and it is capable of it because it has been trained to a discriminating procedure, which constantly uncovers in the object new meanings to be perceived and enjoyed." (Dewey, 1998: 86)

It is clear that two centuries of industrial and post-industrial capitalism have created a pattern of learnt behavior, values, and ways of perceiving the world that would be difficult to break with completely. As Elgin argues "By breaking the cultural hypnosis of consumerism, developing ways of living building more conscious and engaging democracies, using the mass media as a potent tool for active social learning, and developing grass roots organizations. Industrialized nations move beyond the historic agenda of self-serving material progress to a new, life serving agenda of promoting the well being of the entire human family" (Elgin, 1998: 189)

There is evidence of alternatives that do not require a revolutionary overthrow. These challenges evidence opportunity for change to a more balanced economy that is healthier for its consumers and the biosphere in general. Hope may lie in the development of parallel economies that provide opportunity for disseminating and the trickle assimilation of healthier products and practices. A strategy of growing alternative economies does not challenge the theory of capitalism but it does threaten the corporate tendency of gigantism that has come to represent it in the twentieth-first century.[18]

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18 Exploring some definitions of value in more detail some intriguing hints of design awareness can be determined. For example Hicks defines the determinants of neoclassical theory as:

1) Tastes
2) Technology
3) Endowments

(Hicks, 1939)

Compared to classical (and Smiths theory in particular) which could be said to base a measure on:

Some of the leading examples of opportunities for sustainable growth are represented by Organic Food, 'Fair Trade,' 'Food Miles,' The 'Localist Community Orientated Ownership Model,' 'Voluntary Simplicity,' 'Back to Nature,' 'Cocooning,' 'Slow Food' and 'Food as Therapy' (See Glossary)

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1) The level of outputs at the level of demand
2) Technology
3) Wages.

While neoclassical theory claims that it is human centric and makes the following assumptions about people it resists any kind of analysis of how those 'tastes' are formed through design:

1) People have rational preferences among outcomes that can be identified and associated with a value.
2) Individuals maximize utility and firms maximize profits.
3) People act independently on the basis of full and relevant information.

(Weintraub, 2002)

Chapter Four: Multi-Sensory Denial

"Cartesian dualism is by now so deeply embedded in our culture that we no longer even realize that we see the world through Descartes eyes." (Wallach, 2005: 89)

Introduction

Building on the evidence and arguments presented in chapter 3 that identified humans deeper emotional and physical needs this chapter provides some historical and political reasons why these needs and potentials came to be overlooked, or marginalized by business and the design professions. Rather than engaging immediately with the negative outcomes of corporate food theory and practice[19] I am concerned to demonstrate that commercial design's emphasis on the visual (at the expense of a more multi-sensory approach) is not new, but reflects a wider and deeper process of resistance to and mistrust of multi-sensory experience. I offer evidence of how ideas that evolved in the 4th century BC have been reinforced and evolved through the centuries to determine many of the key values of our own times. I argue that the realignment of classical ideals during the Enlightenment project welded scientific method to economic strategy. I suggest the concept of progress that emerged at this time still provides a rationale for business and design's focus on efficiency through the visually led management of consumer needs and multi-sensory marginalization. In order to ensure that the history of the evolution of multi sensory denial is balanced I have drawn on a wide range of sources that reflect a variety of discipline perspectives. (Cupchic, 2004, MacMahon 2001, Greene 2000, Geisler 1999, Csikszentmihalyi 1997, Taussig 1992, Tarnas 1990, Forty 1986, Rorty 1981, Dewey 1934)

For the purpose of brevity I have included what I believe to be the most relevant sources of influence and restricted, and omitted others. In order to provide an introduction to the belief systems that informed the sensorially restricted culture of practice I offer generalizations about its underlying ideologies. I also compare its range with that of science and psychology, which now offers an increasingly rich and diverse body of relevant knowledge about the way humans experience the world. Further, relevant information (e.g. the negative outcomes of corporate food theory and practices contribution to sensory denial can be found in chapters (7, 8, 9, 10, 11 and 12).

The Evolution of Multi-Sensory Denial

Contemporary science can trace its roots to ancient Greek philosophy, which Pollitt argues was reflected a wider culture that had a, "deep seated need to discover an order in, or superimpose an order on, the flux of physical and psychological experience (that was) a continuing feature of all Greek artistic and philosophical expression." (Pollitt, 1972: 1) History suggests that sensory marginalization broadly follows a linear evolution that began to be formalized with Aristotle's theories and methodologies and evolved into an increasingly mechanistic outcome. The association of the senses with concepts of 'primitive' and their marginalization through the concept of progress are two examples of the ways in which multi-sensory negativity has become embedded in Western culture.

Aristotle's influence was partly determined because of his concern to investigate his conclusions empirically. Plato offered a different priority that reinforced the visual. (Drobnick,

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19 Like packaging that limits sensorial engagement, fruit and vegetables that are bred for yield, not flavor and food types that encourage consumers to think of food as a fast track means to an end rather than an end in itself.

1998: 10)[20] It is clear that relatively early in the history of philosophy evidence of scientific rigour helped to reinforce cultural prejudice against embodied intelligence: "The tradition that ranks the sense of taste as among the lowlier attributes of human beings has roots that run deep into the history of philosophy. Plato and Aristotle...are a good place to begin, not only because of their remarkable influence on subsequent philosophy but also because both left fully developed philosophies of value that underwrite the hierarchical ranking of the senses...it has helped to select the standard content of philosophy altogether, leaving taste and its bodily kin largely out of range of the philosopher's eye." (Korsmeyer, 2002: 11) This view has become embedded in a variety of ideological contexts.[21] Stoller quotes Feldman in support of this theory: "Since the time of Plato and Aristotle the senses, which have long been specialized and stratified, have been used by the Republic to legitimate the authority of the few." [22] (Stoller, 1997: 81)

Despite his contribution to the evolution of scientific method detailed analysis of Aristotle's legacy reveals that a combination of the vagueness of original record keeping[23], re-editing, and selective appropriation across has resulted in a number of competing versions of his beliefs that emphasize the rational over magical[24]. My own review of his conclusions suggests that Aristotle does marginalize the non audio-visual senses. (Bynum, 1993: 7)[25] The breadth of Aristotle's interests possibly made it difficult for him to propose the radical disembodiment that began to typify post enlightenment conclusions about the status of the senses. It could be argued that he was opposed to the concept of dualism on the basis that he believed in, "non material entities or properties," that Descartes proposed were impossible. (Magee, 2003: 1)[26] Evidence suggests that during the Classical period key philosophers maintained a relatively open mind and that the

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20 Tarnas attributes modern science's concern with logic to Plato: 'Above all modern science implicitly based itself upon Plato's fundamental hierarchy of reality in which a diverse and ever changing material universe was viewed as being ultimately obedient to certain unifying laws and principles that transcend the phenomenon they govern.' (Tarnas, 1993: 292) This implicitly and explicitly encouraged science's sensory prejudice: 'Senses can only give you information about the ever-changing and imperfect world of phenomena, and so can only provide you with implications about ultimate reality, not reality itself. Reason goes straight to the idea.' (Boeree, 2006)

21 Aristotle fits Steven's definition of science: 'science seeks to generate confirmable propositions by fitting a formal system of symbols (language, mathematics, logic) to empirical observations' (Stevens, 1951: 22)

22 Feldman argues the embedding of these concepts in media forms has significantly altered the way that that we relate to the world: 'By the exponential stratification and specialization of the senses in modernity becomes especially poignant when we consider the potency of cinematic and other visual images and the power of the media and the State to sanitize them. In this way the state contours memory through the physiognomic manipulation of the body.' (Stoller, 1997: 81)

23 Aristotle left no written records but his lectures, experiments, and views were recorded by his students, this seems to have informed the contradictory nature of his legacy. "The fragmentary and lapidary style of the 'Poetics' in 1966 enticed George Steiner to wager that 'the young man who took notes on Aristotle's lectures was sitting very near the door on a very noisy day' (Andersen, 2002: 3)

24 Aristotle also promoted 'folk-medicine' and magic associated with of traditional practices and recorded a wealth of empirical knowledge about the medicinal properties of plants and maintained links with the Pythagoreans interest in the occult power of calculation.

25 This view is balanced to a certain extent by knowledge that Aristotle also clearly informed the development of religious and secular spirituality, providing a source for a highly sensual approach to experience.[25] 'In 'De sensu' Aristotle says of smelling, hearing and seeing that their cause is preservation (salus), since those possessing these senses are able to pursue their food and flee things harmful, and corrupt. They have an additional function in animals possessing intelligence, for through them information is collected which generates understanding in the soul. Seeing is said to be superior...but hearing, as it makes possible rational discourse, serves greater purpose in developing intelligence.' (Bynum, 1993: 24)

26 Aristotle did propose a 'weak separation' and an 'unmixed' relationship between the senses and intellect 'imagination is a sense power that requires a bodily organ.' (Magee, 2003: 37)

marginalization of the non-visual senses began to happen in earnest with their rediscovery and reinterpretation during the Enlightenment.

Rorty argues the, "Aristotle's conception of intellect is not a mirror inspected by the inner eye. It is both mirror and eye in one. The retinal image is itself the model for the 'intellect which becomes all things,' whereas in the Cartesian model, the intellect inspects entities modeled on retinal images. The substantial forms of 'frogness' and 'starness' get right into the Aristotelian intellect, and are there in just the same way in which frogs and stars are reflected in mirrors. In Descartes conception – the one which became the basis for 'modern' epistemology – it is representations that are in the 'mind.'" (Rorty, 1981: 45)

The Enlightenment

The Enlightenment was predicated on the rediscovery of Classical ideas and their critique: Bacon exemplified the new culture of serious applied and academic engagement "There be therefore chiefly three vanities in studies, whereby learning hath been most traduced'...the three 'distempers' of learning...'fantastical learning,' 'contentious learning,' and 'delicate learning," Bacon, quoted in (Simpson, 2006)

Porter confirms, "Re formers in the age of reason set about criticising beliefs and institutions considered unreasonable, or irrational. The progress of Science and technology, the development of the professions and bureaucracy, the expansion of the market economy with its laws of supply and demand, and the spread of literacy and education all contributed to the privileging of 'rationality', as understood by the right thinking elite in the eighteenth century. Capitalist economies and centralizing states needed order, regularity, predictability, and self discipline: Abnormality provoked anxiety." (Porter, 2001: 283)

While Locke and others challenge their reductive instrumentalism Bacon and Descartes, (despite their leanings to alchemy), play a pivotal role in the development of a post Enlightenment view of progress that was characterized by a new sense of purpose informed by a new suspicion of the senses. They informed the emerging culture of secular ambition and their ideas and methods helped to provide framework for the development of new methods and purposes for business and commercial competitiveness in the name of progress.[27]

Descartes categorically disembodied the senses and Bacon highlighted their disruptive potential. Bacon believed that the negative inheritance of Aristotle ('Aristotelianism') 'was concerned with hair splitting (not) things of use and practice for man's life.' (Wallach, 2005: 87) According to Babbage "the aim of Platonic philosophy was to raise us far above our vulgar wants. The aims of Baconian philosophy was to supply our vulgar wants" (Kauffman, 1996: 90) Macaulay argues that Bacon provided the catalyst for new world order in which societies were 'built around the importance of the individual" (Macaulay's 1837, quoted, Wallach, 2005: 87)

Bacon represented the development of a new and unprecedented interest in the use of science and philosophy towards the achievement of capital accumulation and materialism. With Bacon it is possible to identify the application of discipline and rational order to all aspects of life. For example through Bacon's influence time was given primacy as an organizational and

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27 A combination of factors made seventeenth century England the perfect location for the development of industrial science, including access to the emerging literature of science and philosophy, challenges to the authority of the Church and monarchy, relative isolation from Europe, a well-established University sector that supported the emergence of indigenous secular scholarship, and the development of a new level of business mindedness among the privileged and the poor. Many of the initiatives that are credited to England were duplicated, or anticipated in Europe but England suffered less from the restrictions that inhibited its foreign competitors.

rationalization tool and was also used to promote a focus on the future as the outcome of progress. (Henyen 2000, Boorstin 1983) Bacon's concern to inform the development of a culture of practical inquiry was informed by the growth of interest in entrepreneurial activity that extended from voyages of colonial intention to embrace "The three great elements of modern civilization, Gun powder, Printing, and the Protestant religion." (Carlyle, quoted Rice 1994) This was facilitated by the relative lack of religious censorship that prevailed in Britain in the seventeenth century.

The formation of the Royal Society in 1663 demonstrates how institutions helped to evolve and promote Enlightenment ideas to a broader community. Drawing on Bacon's ideas of useful science The Royal Society provided an important catalyst for developing and promoting interest in the relationship between science and industry opportunity: "The origins of the Royal Society lie in an 'invisible college' of natural philosophers who began to meeting in the mid-1640's...The Royal Charter of 1663 confirms its intent as 'The Royal Society of London for Improving Natural Knowledge.' (http://www.royalsoc.ac.uk/page.asp?id=2176) The initial fellowship, that were a combination, of 'working scientists and wealthy amateurs who might become their patrons' demonstrates how synergy between amateurs, investors, and 'scientists' helped to shape the first phase of the industrial revolution, without the particular encouragement of parliament, or monarch. The R. S. also enabled Newton to develop Bacon's lead: 'Newton...unleashed on the Western Mind a clockwork universe. Before Newton, a scholastic philosopher, certain that an arrow arched towards its target because, as Aristotle taught, it was constantly acted upon by some mysterious force, or impetus, could easily believe in God." (Kauffman, 1996: 4)

Descartes

Despite apparent lack of interest in the applied outcomes that Bacon advocated [28] Descartes (1596-1650) probably did more than any other philosopher to launch the machine age, particularly its conceptual dimension through a combination of visual method (perspective), and a clear articulation of the schism between mind and body. Descartes helped to codify the human condition as one where logic and its mathematical articulation was the ultimate reality.[29]. Boorstin explains how: "according to Descartes mechanistic view of the world, there was no difference, except in intricacy, between the operation of the human body, of a tree, or of a clock." (Boorstin, 1983: 432)

Descartes reduced the senses to a level of causality, "Whatever I have to now accepted as most true I have acquired either from the senses or through the senses. But from time to time I have found that the senses deceive, and it is prudent never to trust those who deceive us more than once." Descartes relegated sense perception to a mechanistic response to stimuli that have very little to do with the intellect. So when Descartes asserts that we gain out knowledge of the world – "either from the senses, or through the senses," he is simply recording and testing an observable fact. (Cottingham, 1985: 12)

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28 Descartes stated that the intention of his work was to prove the existence of God through the application of logic and mathematics, although this may have been informed by a fear of suffering the fate of Galileo or Pico della Mirandola..

29 **'I Think Therefore I Am':** 'The thesis of the incorporeality of the mind seems, from first to last, a fixed point in Descartes ' thinking. Indeed the now widespread adoption of the label 'Cartesian dualism' to refer to the incorporeality thesis has had the effect of making that thesis the very hallmark of Descartes" (Cottingham, 1992: 236)

The Grid: 'Descartes...hit upon a method to label or specify a point anywhere in space...His invention was the coordinate grid and its system of coordinates...At one stroke Descartes was able to link two great fields of mathematics. A line becomes the solution of two simultaneous equations. Theorems in geometry and manipulations in space become transformations in within algebra (creating) the basic notions of continuity and infinite divisibility.' (Peat, 1992: 22-24)

By reducing the multi-dimensional character of the natural world into a mechanistic grid that could facilitate the cold logic of business he initiated a mode of thinking and seeing that has helped to disenchant the world of experience. "The carving out and partitioning of separate domains of perceptual experience also authorizes the sheer literality of sensory experience...Each episode of consumption is relatively absolute and quickly totalizing because it never lingers long enough in the senses as social memory to be stitched into a historical fable with the others that it has displaced." (Seremetakis, 1996: 10)

The adoption of the rational tradition by industry and politics and its embedding in cultural and economic thought is due in large part to very selective process of adoption and adaptation. The push and pull between the mechanistic and the interpretative has continued to lay an important role in the maintenance of alternative perspectives. For example as Rorty argues "A certain picture of man's higher faculties, common to Descartes and Locke has gradually been erased by the work of such writers as Dewey, Ryle, Austin, Wittgenstein, Sellars, and Quine. However this picture – the one that gave rise to the seventeenth-century notion of the 'veil-of-ideas,' and thus to epistemological skepticism – has not been replaced by a new and clearer picture." (Rorty, 1981: 213)

A short list of the values and beliefs that emerged out of the Enlightenment, which shape our contemporary attitude towards the more obviously embodied senses:

1) A broadly shared belief that rationally achieved progress leads to greater efficiency in task completion
2) A broadly shared consensus that progress is a good thing
3) A broadly shared belief that the achievement of progress requires the overcoming, substitution, or eradication of primitive beliefs, practices and perceived needs
4) A broadly shared belief that knowledge is primarily defined as the insight gained from the application of the intellect to data gathered through rational research methodology and the proving of theories
5) A broadly shared belief that rational propositions need to be able to be proposed, recorded, tested and proved by the use of scientific method and mathematical calculation that substitutes symbols for real and abstract entities
6) A, largely unquestioning inheritance of the division and classifications of the senses laid down by Aristotle in the third century BC, which postulated that there are five senses
7) A broadly shared belief that the visual sense is the most reliable source of rational verification
8) A broadly shared belief that the human ability to smell, touch and taste are simple neuron response mechanisms and do not contribute to rational intelligence without a process of post rationalization
9) A broadly shared belief that greater efficiency is a primary source of human convenience
10) A broadly shared belief that convenience is a primary source of greater leisure
11) A broadly shared that embodied experience creates emotional distraction and is there works against the interests of efficiency and convenience

My research shows that the mainstream food and design industries are not yet prepared to fully engage with the creation of multi-sensory opportunity. (Ayres, 2005, Givechi, 2004,

Cupchic, 2004, Bogdashina, 2003, Fisk, 1997) There is evidence that this attitude is broadly reinforced through the indifference and/or ignorance of the consumers who support these business sectors and the design profession that services them. (McConnell 2006, Blythman 2005, Lindstrom 2005, Langford, 2003, Nestle 2002, Underhill 1999)[30]

There is evidence to suggest that business reflects a deeper tradition of scientific and religious belief and/or practice in Western culture, which informs a commonality of opinion, shared beliefs, and the use methodologies that determine the marginalization of full sensory engagement that link some of the most pervasive agendas of philosophy, science and business. (Tarnas 1990, Forty 1986, Rorty 1981) Closer inspection of these traits suggests that they emanate from the same roots and are reinforced by educational policies and traditions that are almost entirely unsympathetic to multi-sensory engagement as a route to learning. (MacMahon 2001, Gardener 2001, Greene 2000) Rorty argues: "The senses have been effectively disembodied by a dominant emphasis on mind-eye verification that bi-passes common sense. In favour of the 'philosophical' urge." (Rorty, 1981: 179)

Sensory Science

The last fifteen years have seen a shift of priority and advances in knowledge about the non-visual senses but business and design still operate within a very narrow and conventional spectrum of sensory communication that mirrors the scientific establishment's tendency to cling to the rational legacy of Descartes disembodiment of the intellect. (Lindstrom 2006, Malnar 2005, Cupchic 2004, Hawkins 2004, Cabanac, 1992) Many of the research techniques used by science seem to be designed to limit rather than facilitate knowledge. For example the quest for knowledge about the human senses has been answered on the whole by learning "from observing the results of head injuries and tumours, as well as by dissecting post-mortem brains and the brains of animals...The visual system, which involves roughly a quarter of the human cerebral cortex, has attracted more research than all the other sensory systems combined. It is also the most accessible of our senses." (Pines, 1995: 10-11) This has been reinforced by the tendency to isolate the senses as discrete sources of data rather than as different sources that might contribute to a sensory gestalt that scientists and engineers have for the most part been ignorant of, or have chosen to ignore.

Hawkins argues that this limitation results from "a poverty of tools for studying how information flows within the six-layered cortex. The tools we have operate on a grosser level and are generally aimed at locating where in the cortex, as opposed to when and how, various capabilities arise." (Hawkins, 2004: 43-44)

It is generally agreed that we form our personal metaphysical sense from four sources: the physical, the metal, the emotional, and the spiritual (Badley 1996, Cardwell 1998, Berger 1999) "we never see or otherwise perceive (or sense), or...perceive or sense material objects (or material things), but only sense-data (or your own ideas, impressions, sensa, senses perceptions, percepts, etc." (Austin, 1962: 2) But, as Howard Gardener confirms, there are built in prejudices that limit interest in the embodied senses: "Nearly all developmentalists assumed that scientific thought and the career of science represented the pinnacle or end states of human cognitive development....scholars looked into the mirror and saw their own reflections. In fact, it is the this kind of egocentric thinking that led to the creation of the items on current

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30 The tendency for business and design to actively restrict access to the non-audio visual senses will be dealt with in more detail in the chapter on 'Business by Design'.

intelligence tests" (Gardener, 2000: 28) This limits much research to 'the immediate experience...of the scientist himself" (Spence, 1948) quoted (Cabanac, 1992)

Historically science and psychology have helped to develop a culture in which sensory engagement was perceived as a reflection of dysfunctional and irrational behavior: "In the West, we often treat the domain of sensation and perception as definitely pre cultural and eminently natural, one of the most basic of the psychobiological systems...Research in these disciplines usually compares human sensory perception to the sensory systems of other mammals or...reptiles and birds, such research assumes that all humans possess identical sensory capabilities and that any cultural difference we may find would be inconsequential." (Geurts, 2003: 4)

Well into the twentieth century "scientists believed that the brain had a strict hierarchical organization." (Pines, 1995: 12)[31] Lakoff and Johnson argue that philosophers depend on "basic-level categories" (e.g. 'cat', 'mat') for their proof as "basic level categories" generally and unarguably fit the general perception of human reality: "Basic-level categories are the source of our most stable knowledge, and the technological capacity to extend them allows us to extend our stable knowledge." (Lakoff, 1999: 29) Cognitive science and neurology has inherited an ideological position that favours sight as the source of the rational potential of the brain. Neuroscience has revealed[32], "Each of the five senses activates a separate area of the cerebral cortex." (Pines, 1995: 6) Treichler's estimation of the way people in the twentieth century gain their knowledge exemplifies a fairly widely held view among researchers in science:

"1.0% through taste
1.5% through touch
3.5% through smell
11% through hearing
83% through sight
People generally remember:
10% of what they read
20% of what they hear
30% of what they see
50% of what they see & hear
70% of what they say as they talk
90% of what they say as they do a thing!"
(Treichler, 1967: 14)

While I have chosen to focus on the five senses it is surprising that so much of scientific research is still limiting its inquiry to this demonstrably narrow definition of sensory potential.

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31 'Each relay station was supposed to send increasingly complex information to a higher level until it reached the very top, where everything would somehow be put together (but) 'we are now witnessing a paradigm shift...instead of viewing the cortex as rigid machine.' Scientists see it as 'a dynamic pattern processor and categoriser' that recognizes which categories go together with a particular stimulus, as best it can every step of the way.' (Terence Sejenowski, Director of the Computational Neurobiology Centre at thee Sal Institute, California) (Pines, 1995: 12)

32 'The sensory map in humans was originally charted by the Canadian neurosurgeon Wilder Penfield in the 1930's. Before operating on patients who suffered from epilepsy. Penfield stimulated different parts of their brains with electrodes to locate the cells that set off their attacks...Penfield soon learned exactly where each part of the body that was touched or moved was represented in the brain...' (Pines, 1995: 9)

This may well be explained by the fragmentation that Bohm has confirmed and was certainly challenged by the resistance to Newtonian 'atomism' expressed by Goethe and Helmholz's concept of 'qualia.' Bohm also points to a whole separate history of belief that can be located in the East. (Tarnas 2000, Bohm 1980) The impact of the atomistic approach can be witnessed in the tendency to break explanation into fragments while failing to identify gestalt potential revealed below. "The human brain holds about 100 billion nerve cells, or neurons. Each neuron forms contacts with a thousand others, on average, making for a system with at least 100 trillion interconnections." (Kolb: 12)

Such divisions are reinforced by the reductionism of explanations: "A sense is a system that translates outside information into activity in the nervous system. Messages from the senses are called sensations." (Bernstein, 1999: 72) This might evolve into a slightly more elaborate explanation: "senses gather information about the world by detecting forms of energy, such as sound, light, heat and physical pressure. Specifically, your eyes detect light energy, your ears detect the energy of sound, and your skin detects the energy of heat and pressure. Humans depend primarily on vision, hearing and the skin senses to gain information about the world. Bernstein and Nash, argue all of these senses must detect stimuli, encode them into neural activity, and transfer this coded information to the brain.' These kinds of explanations leave the senses as a largely mechanical facility with a mainly localised and specific function to perform." (Bernstein, 1999: 73)

Research suggests that neuroscience continues to operate within the wider cultural bias towards the visual: "Studying vision has several advantages over studying other senses, at least when it comes to understanding consciousness...humans are visual creatures...reflected in the large amount of brain tissue dedicated to the analysis of images, and in the importance of seeing in daily life....you may lose your sense of smell, but this impairs you only mildly. A transient loss of vision...devastates you...visual precepts are vivid and rich in information. Pictures and movies are highly structured, yet easy to manipulate using computer generated graphics...vision is more easily deceived than any of the other senses...Last and most important, the neuronal basis of many visual phenomenon and illusions has been investigated throughout the animal kingdom." (Koch, 2004; 14)

Science continues to inform a cultural norm in which the non-visual senses are left in isolation. With very little potential for the recognition of a sensory gestalt, the senses had very little defence against the prevailing culture of marginalization and the legacy of behaviourism: "One can argue that in the 'Action' mode, feeling is the shadow of cognition. When the pattern of ideas is coherent, then there is feeling of clam or pleasure. When the ideas do not fit together harmoniously, there is an experience of tension." (Cupchic, 2004, in McDonagh, 2004: 3-4)

It is clear that advances in multi-sensory comprehension and method depend on an ability to disentangle the legacy of classical and enlightenment theory and re-embody the intellect and the emotions.

The Reinforcement of Multi-Sensory Denial

Geurts argues "In the West, we often treat the domain of sensation and perception as definitely pre cultural...one of the most basic of the psychobiological systems...such research assumes that all humans possess identical sensory capabilities and that any cultural difference we may find would be inconsequential." (Geurts, 2003: 4)

There are a number of ways in which the dominant ideas of science and philosophy shaped the mainstream of Western education but I intend to concentrate on three that I consider to be particularly influential:

1) The heritage of the 'classic's and classical method
2) The concern to make education 'useful'
3) The development, application, and impact of psychological theory

The Classics

Lascarides argues "The goals of education from antiquity on was to develop competent citizens who were able participate and act intelligently." (Lascarides, 2000: 624) Gardener argues that the classical tradition has tended to insist on a model of intelligence that has emphasized a scientific approach to making sense of the world. Skills in mathematics, or language, and their use to define and express rational concepts, are thus regarded as more significant measures of intelligence than olfactory, gustatory, tactile kinaesthetic sensitivity. Gardener recognizes that this model of intelligence (that dominates Western, and increasingly global education) is only one of many. (Thurstone 1960, Guilford 1967)

The liberation and rediscovery of classical texts during the Crusades and their dissemination and increasing secularization during the renaissance informed the Enlightenment's attitudes to education. Tarnas suggests publishing played an important role in reinforcing and promoting the rational, and damming the irrational. (Tarnas, 1993) Aune points out "Descartes...was educated in a Jesuit College...where he studied mathematics and classics, absorbing a great deal of scholastic philosophy in the process...To obtain philosophical and scientific certainty he thought we must now employ what is known as the axiomatic method – the method used in mathematical sciences such as arithmetic and geometry...in which substantive principles (theorems) are deduced from axioms and definitions...When Descartes spoke of knowledge he meant rational certainty of a special kind." (Aune, 1991: 1)

Useful Education

Science and capitalism provided a major spur to the development of secular educational strategies in Britain. After becoming president of the Royal Society in 1703 Isaac Newton (1642 1727) worked deliberately to bring science into a useful relationship with the Nation's progress. Boorstin quotes his support of the decision by Charles 11 to set up a mathematics course for forty pupils at Christ's Hospital. His overview: "The mathematical children, being the flower of the Hospitall, are capable of much better learning, and when well instructed and bound out to skilful Masters may in time furnish the Nation with a more skilful sort of sailors, builders of Ships, Architects, Engineers and Mathematical Artists of all sorts, by Sea and Land, than France can at present boast of" (quoted Boorstin, 1983: 49) While Newton reflected the culture of humanism in his broad range of interests, and knowledge, he was also anticipating the age of the specialist. It is already possible to witness a more mechanistic way of thinking and doing in which Descartes disembodied and dislocated experience by separating it from the organic character of a sensed relationship with nature reducing it to the calculable domain of the grid. At roughly the same time the atomism of Newton reduced the world to plans, strategies, and predictable outcomes. Nature became something to be overcome by science rather than the senses.

The shift from religion to secularism, coupled with the experience of a materialist paradigm in science involved the enfranchisement of education as a commodity. (Machin, 2005: 3-4) The widespread concern about idleness as threat to economic progress and civilization shaped the future and purpose of education: "The combined critique of luxury and idleness was the philosophy behind the law-enforcing moral regulation of popular culture that was pursued on the borders of modernity." (Arcangeli, 2004: 88) Morality figured highly in the formative debates, not just because of the religious concerns in that area but also because of the combination of philosophical concern about the nature and 'rights' of man and 'consequentialists' and 'nonconsequentialists' so that "ethical issues are thus brought into the equation of the actions to be taken, the intent of the actor, and the resulting outcome." (Geisler, 1999: 7) These debates were also informed by fear of civil revolt and lawlessness and tended to lock into language metaphors that associated words like 'rabble' with primitive emotional behaviour.

Industrialization offered a major spur to the rethinking of politics, economics and status and education played a major role in this process. "Until the nineteenth century, the small scale enterprises which provided the bulk of formal education were, typically private concerns...With the rise of nation-state and the development of an industrial society, all this changed. Education came to be viewed as a core responsibility of the state, and came more and more under tight state control." (Wolf, 2003: 8)

This inheritance informed the dominance of a culture of 'technical rationality' that Schon suggests "is an epistemology of practice derived from positivist philosophy, built into the very foundations of the modern research university...Rigorous professional practitioners solve well-formed instrumental problems by applying theory and technique derived from systematic, preferable scientific knowledge." (Schon, 1990: 3-4)

In a more general sense education reinforces the status quo and this remains a construct that is deeply linked to Classical method and theory. "The question of what we take to be real and the question of how we reason are inextricably linked...In order to function realistically in the world, our categories and other forms of reason must 'work' very well together; our concepts must characterize the structure of our categories sufficiently well for us to function."[33] (Lakoff, 1999: 21) In the nineteenth century, as Fieldman points out, "realism presupposed an omniscient observer who visualized reality through his narrations. In such a space, time becomes linear, regular, homogenized, and the subject becomes just one more aspect of representation – the obliteration of difference." (Stoller, 1997: 81) This closed attitude fosters prejudices, which still influence our perception and militate against the cultural differences that favor sensory indulgence over conventional Western concepts of efficiency. Lakoff and Johnson point how "Western business men seeking to set factories in Third World countries often see indigenous peoples who do not conceptualize time as a resource as being lazy." (Lakoff, 1999: 165)

Psychological Theory

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33 Mainstream Western philosophy added to a growing concern for a rational model of metaphysics. For example 'Reality comes divided up into categories that exist independent of the specific properties of human minds, brains, or bodies. The world has a rational structure. The relationship among categories in the world are characterized by a 'transcendent' or 'universal' reason, which is independent of any peculiarities of human minds, brains, and bodies...What makes us essentially human is our capacity for disembodied reason.'

Austin proposes "the question, do we perceive material things or sense data...is entirely misleading...One of the most important things to grasp is that these two terms, 'sense-data' and 'material things,' live by taking in each other's washing – what is spurious is not one term of the pair, but the antithesis itself. There is no one kind of thing that we 'perceive' but many different kinds, the number being reducible if at all by scientific investigation and not by philosophy...What we have above all to do is, negatively, rid ourselves of such illusions as 'the argument from illusion..." (Ref. Berkley, Hume, Russell, Ayer) (Austin, 1962: 4)

The nineteenth century formalized the speculations of earlier generations on the nature of reality by setting up laboratories and other institutions where the senses could be evaluated and largely dismissed as mere motor neuron capabilities. Much of this research was funded directly or indirectly by business and it would be used to inform every aspect of the business machine from worker organization to customer stimulation.[34] The work of the empiricists who followed Descartes was broadly dismissed in this new culture of instrumentalism. Rorty outlines T H Green's belief that empiricist philosophy was deeply flawed because it failed to marginalize the sensory data. (Rorty, 1981: 140-141) In fact empirical method produced some influential results: "Wundt essentially redefined psychological studies as studies of the brain and nervous system, and redefined man as an animal without a soul..." (Keith, 1998)

Lasting distinctions were drawn between day-to-day encounter and the evidence of the lab were drawn: "independently of how natural and evident my uneducated experience is, it may be incompatible with scientific knowledge. It is evident; therefore, that suspicion about primary experience is a salutary attitude. Inflexible realism is an obstacle to the advancement of science." (Refinetti, 2005: 45) Or as Giesler puts it: 'Issues of elegance and economy that are basic criteria in mathematical explorations are thus transported into the unruly and 'messy' realm of human and social interactions' (Geisler, 1999: 10) Even ethnological evidence (Stoller, 1997 was reduced to the status of rational proof: "Out of the 'curiosity to know' science is born. Men look out upon the world, and see that it is full of objects which call for investigation...laws are discovered." (Titchener, 2005: 1)

Sensation was categorized as a motor neuron impulse that lacked any capacity to inform the intellect beyond pre-programmed response mechanisms. This trend eventually culminated in the theory of 'classical conditioning' that has become associated with Pavlov (1849-1936)[35]

The proliferation of Psychological theory and practice, towards the end of the 19th century helped to embed implicit assumptions by formalising the notion of abnormality. Not to be normal means, in essence not to comprehend, as well as to choose not to engage with the rules and regulations that codify normality. As the imperative to use education to fulfil the needs of business and political expansion psychological testing was employed to label and box personality and potential. Psychology reinforced the kind of normality that favours a mechanistic view of the human senses mainly because, however benign its motives, it is predicated on understanding how the mind works and correcting, or controlling what it saw as a mechanistic organ.

The development of modern psychology was profoundly influenced by the growth of interest in sensory research during the late eighteenth and nineteenth centuries. The nature – nurture debate was to play a pivotal role in the development of psychology and its relationship

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34 Theses aspects of applied behaviourism will be discussed in more detail in the chapter that deals with marketing and design. Staddon argues that as 'experiential work progressed in the twentieth century, it became increasingly obvious that Pavlovian or classical conditioning is in fact a rather poor model for what humans and animals do.' (Staddon, 2000: 8)

with the human senses. Staddon suggests that it was anticipated by William James attempt to 'sort out the divisions within psychology" which led to him dividing the profession into 'tough' and 'tender minded' "before the advent of behaviourism." (Staddon, 2000: 2) Staddon distinguishes between the ideas of Gustav Fechner (1801-1887) who "believed in a mental realm with concepts and measurements quite separate from biology and physics" and Charles Darwin (1809-1892) whose 'Theory of Evolution' encouraged "Biological psychologists (to) believe that the behaviour of people and nonhuman animals has common roots and must therefore share important properties." (Staddon, 2000: 3)

Rorty confirms the role of psychology in updating and extending the Cartesian tendency to disembody the mind: "Discussion in the philosophy of mind usually starts off by assuming that everybody has always known how to divide the world into the mental and the physical...We seem to have no doubt that pains, moods, images, and sentences which 'Flash before the mind'...all count as 'mental' whereas the contradictions of the stomach which cause the pain, the neural processes which accompany it and everything else which can be given a firm location in the body count as non-mental." (Rorty, 1981: 17) Obviously psychology was a form of science with an obvious capacity for eliciting subjective values. (Greenspan 2005, Hergenhahn 2004)

Managing Hearts and Minds

Managing the relationship between supply and demand became a crucial agenda in the late 19th century and the new sciences of management and marketing played a major role in promoting new business strategy that was based on economies of scale. Food was developed into food types that did not encourage sensorial engagement and these were sold in retail scenarios that did not support sensorial enquiry. Persuading consumers to trust food based on pack and promotional visuals became a major priority for business and design. Psychological theory offered a potential cure-all to the new priorities of mass visual persuasion. Lunt reveals how advertising theory in the early twentieth century helped to cement classic prejudice against the senses into the wider cultural consciousness through quotation of Walter Dill Scott's classification of emotional response:

1. The Grosser emotions, including anger, fear, joy, grief, and the like, in their violent forms
2. The feelings, which constantly colour objects and events, so that we like or dislike them
3. The aesthetic attitudes, concerned with beauty and ugliness, with matters of taste, form, and style.

Scott recommended avoiding operating "in the realm of feelings, avoiding the grosser emotions and avoiding poor taste...'savages' laugh louder than 'civilised' people." (Lunt, 2004)

Some of the key examples of the perceived potential of psychology in the early twentieth century are summarized below:

- Worker control
- Worker efficiency
- Understanding demand
- Categorizing consumer typology
- Stimulating demand
- Regularizing demand
- Manipulating opinion

Tarnas confirms by the early twentieth century there were two particular schools of thought and practice: behaviourism and psychoanalysis. He argues it is possible to depict this competitive challenge between two different approaches to psychology by comparing Watson's belief in programming with Sigmund Freud's psychoanalytic approach and its assumptions about unconscious systems of ideas in which "an unconscious part of the psyche exerts decisive influence over human perception, cognition, and behaviour was an idea long developing in Western thought, but it was Freud who brought it into the foreground of modern intellectual concern." (Tarnas, 1993: 422)

These new ideas were influencing how business, marketing, management and consumers understood, or responded to manipulations of the nature of the mind. Tarnas proposes Freud as a Romantic (Tarnas, 1993: 384-385)[36] It is possible to tell the story of psychoanalysis from a Romantic perspective. "Sigmund Freud...developing radically new methods of inquiry by returning to ancient wisdom." (Gay, 1999: 165) But its use was primarily put to use to reinforce the notions of conventional behaviour that romantics like Bryon rebelled against. The perception of nature as an unruly force that needed control was substantially influenced by business and marketing's adoption of behaviourism.[37] It is reasonable to argue that the roots of behaviourism are simply those of science and its quest for proof through empirical testing and mathematical verification. One of the major critiques of psychoanalytic practice relates to the subjective nature of much of its theory.

Psychoanalysis and behaviourism were quickly perceived as sources of opportunity for business to influence the hearts and minds of consumers. With its application in warfare psychology became drawn into the mind control associated with the secret service on the basis of its instrumental approach. The battle for heart or minds, emotion and passion versus rational conclusions and logical actions was a battle that business was determined to win, with substantial influence from design, and vice versa. Scott was one of the first generation of what might be called applied psychologists and helped to promote the value of psychology in the context of business: "it can be stated, without fear of contradiction that no advertisement that defies the established laws of psychology can hope to be successful." (Scott, 1902: 2)[38] Scott laid the ground for Watson and Bernays by offering an introduction to Psychology as tool that could be used to both comprehend and regulate the complexities of the human psyche. "...consumers were problematized as complex entities and the task of marketing was understood as a complex mapping of psychological experiences, the characteristics of commodities and the routines of everyday life." (Miller & Rose, 1997: 32) John Broadus Watson (1878-1958) probably did more that anyone else to promote behaviourism in the early twentieth century; his goal was "the prediction and control of behaviour." (Watson, 1913: 158) Watson "went to New York to work for J Walter Thompson...he was extremely successful there (in) spreading the gospel of behaviourism through talks on radio shows and through a number of articles in popular magazines such as Harpers, McCall's, Cosmopolitan, and Colliers." (Benjamin, 2006: 155)

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36 Tarnas distinguishes between Freud and Jung mainly on the basis of their tendency to internalize or externalize their Romantic orientation: (Tarnas, 1993: 384-385)

37 Staddon argues that the Pavlov[37] was arguing in favour of 'conditional,' rather than 'conditioned' reflexes and that therefore part of his legacy is based on poor translation. (Staddon, 2000)

38 Scott (1869-1955) provided one the first books that linked advertising to psychology: The Psychology of Advertising (1902).

Freud's unwitting contribution to advertising was almost certainly more complex and evolved in a variety of ways. The publication and rapid translation of his early works, 'The Interpretation of Dreams' (Freud, 1899) and 'The Psychopathology of Everyday Life' (Freud, 1901) helped promote a belief within business that it was possible to diagnose the most personal of motivations as well as shape them. Edward Bernays created what was perhaps the most influential promotion of Freud's psychoanalytic theory. Bernays, who was Freud's nephew capitalized the association and has a reasonable claim to be the inventor of P.R. (Public Relations). Bernays promoted his views on the relationship between understanding the psyche and influencing consumer response in a book ('Propaganda' (1928). "The group mind does not think in the strict sense of the word. In place of thoughts it has impulses, habits, emotions." (Bernays, 1928: 139)[39]

Long before McLuhan and the post modernists Walter Benjamin proposed a connection between multi-sensory opportunity and the rise of electronic media. This impact of the dominant "mode of existence" was identified by Benjamin (c1930) who argued "During long periods of history, the mode of human sense perception changes with humanity's entire mode of existence. The manner in which human sense perception is organized, the medium in which it is accomplished, is determined not only by nature but by historical circumstances as well." (Benjamin, 1969: 222) Anticipated the capacity of technology to substitute and short-circuit Benjamin anticipated post modern sensibility: "The technology of contemporary society is therefore mesmerizing and fascinating not so much in its own right but because it seems to offer some privileged representational shorthand for grasping a network of power and control even more difficult for our minds and imaginations to gasp: the whole new decentred global network of the third stage of capital itself." (Jameson, 1992: 38)

The creation of a mediated reality that connects intellect to visual verification has been a major sight of the loss of sensory opportunity. "It can be argued that the eye has been used as a signifier and tool of civilisation since Classical art and philosophy primatised vision as the dominant sense...The association of visual perception with heightened sensibility has had a marginalising impact on western attitudes to the other senses." (Pallasmaa, 2005) Leach uses the term "saturation," to identify the extent to which marketing has exploited the visual domain to create a dislocation of appraisal in which the reproduction, the synthetic, the artificial, has become the 'real thing': "It's the 'real thing,' a Coca-Cola world of industrially manufactured 'natural' ingredients, a dream world of commodities seemingly conjured up from nowhere and paid for with computerized invisible credit.' He argues 'In a world where the imaginary becomes the 'real,' there is no longer a place for the real" (Leach, 1999: 3)

Various writers have identified that the one-size-fits-all of mass production excludes various communities ranging from the physically and age impaired through children and various ethnic communities, all of whom potentially need greater opportunities for multi-sensory engagement. Berger confirms that: "Motor skills – everything from grasping a rattle to driving a

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39 Bernays promoted his family connection to Freud and deliberately courted publicity with his adaptation of Freud's (then) controversial theories on female equality (sexually at least) to promote cigarette smoking among women for the American Tobacco Corporation. 'The Torches of Freedom' campaign was an early (1929) example of guerrilla marketing. Bernays (with the aid of an American psychoanalyst A A Brill) orchestrated a protest by a woman that he had hired to represent smoking as an expression of Feminism. The stunt involved a woman lighting up in the name of sexual equality during the annual Easter Day Parade. The campaign confirmed how business could recuperate counter culture for its own ends. In this instance by 'using sexual liberation as a form of control.' (Jones, 1999)

car – are also part of the biosocial domain (and) social and cultural factors…affect these areas" (Berger, 2000, p. 3). The recognition of 'special needs' reflects a wider re-evaluation of intelligence "Whatever we know about reality has been mediated not only by the organs of sense but by complex systems which interpret and re-interpret sensory information…The term 'cognition' refers to all the processes by which the sensory input is transformed, reduced, elaborated, stored, recovered and used." (Neisser U (1967) (quoted in: Kandel, 2000: 20)

Normalizing Disembodied Intelligence

By the 1930s "the idea…was to build a grand system by which people's actions and behaviours—eventually even their thoughts—could be predicted and controlled. To cure society's ills was the goal…With CIA encouragement, and using drugs and psychosurgery, scientists turned to brainwashing, interrogation techniques, and remote-control behaviour." (Lemov, 2006: Introduction)

The 'Intelligence Quota' test, demonstrates how the relationship between psychology, education and business evolved, it quickly became a dominant measure of intelligence that denies embodied sensory intelligence. Gardener, confirms the influence of Darwin's distinction of the intellectual prowess of the species and suggests that it influenced subsequent generations. He confirms that Francis Galton, (Darwin's cousin) pioneered the development of psychological measurement in the late nineteenth century: "in 1921 the German Psychologist Wilhelm Stern came up with he name and measure of the 'intelligence quotient…" (Gardener, 2000: 12) The popularity of the test accelerated the tendency stereotype ethnic and other typologies in terms of their intelligence. It also led to the labeling non-rational intelligences as examples of 'lower-than-average' ability. (Gardener, 2000)

Dewy commented on the "Failure to take into account adaptation to the needs and capacities of individuals was the source of the idea that certain subjects and certain methods are intrinsically good for mental discipline…reduced the material of education to a diet of pre-digested materials. According to this notion it was enough to regulate the quantity and difficulty of the material provided, in a scheme of qualitative grading, from month to month and from year to year." (Dewey, 1997: 86) Gardener confirms how "Over the past few centuries, particularly in Western societies, a certain ideal has become pervasive: that of an intelligent person…In traditional schools, the intelligent person could master classical languages and mathematics, particularly geometry…In a business setting the intelligent person could anticipate commercial opportunities, take measured risks, build up an organization, and keep the books balanced and the stockholders satisfied. At the beginning of the twentieth century, the intelligent person was one who could be dispatched to the far corners of an empire and who could execute orders competently. Such notions remain important to many people.' He argues 'As the turn of this millennium approaches, however a premium has been placed on two new intellectual virtuosos: the 'symbol analyst' and the 'master of change' A symbol analyst can sit for hours in front of a string of numbers and words, usually displayed on a computer screen, and readily discern meaning in the thicket of symbols. This person can then make reliable, useful projections. A master of change readily acquires new information, solves problems, forms 'weak ties': with mobile and highly dispersed people, and adjusts easily to changing circumstance." (Gardener, 2000: 1-2) What is implicit is what gardener is recoding is a history of sensory marginalization in the name of rational progress.

Managing Progress

Management science co-opted and extended the normalizing process that is endemic in the school system. Inevitably those individuals that gravitate towards management roles believe and value the aspects of the curricular that prioritize predictable and quantifiable factors. Through the education and research norms of management the issues of sensory marginalization become explicit. Management appears to offer an extreme version of the tendencies that secondary education proposes by reducing the reality that they confront to a set of equations. For example Geisler identifies that: "management and organization scientists...define propositions on stated relationships between two or more concepts...Propositions may be (1) reversible-irreversible; (2) deterministic-stochastic; (3) sequential-coextensive; (4) sufficient-contingent; (5) necessary-substitutable." (Geisler, 1999: 9)

Conclusions

Centuries of rationalism have led to a situation where, the "only safe generalization that can be made is that none of the women and men emerging from our schools in the next decade should expect to lead to purely mechanical, conforming, robotic lives." (Greene, 2000: 35) Yet science, education and psychology still attempt to normalize and homogenize culture by the use of labels like 'simple' to describe the behaviour of people who do not fit the corporate mould. Sacks asks "What is the quality of mind, this disposition, which characterises the simple, and gives their poignant innocence, transparency, completeness and dignity? If we are to use a single word here it would have to be 'concreteness'- their world is vivid intense, detailed, yet simple, precisely because it concrete: neither complicated, diluted, not unified by abstraction. By a sort of inversion, or subversion, of the natural order of things, concreteness is often seen by neurologists as wretched thing, beneath consideration, incoherent, regressed...If a man loses the 'abstract-categorical attitude' (Goldstein), or 'propositional thought' (Hughlings Jackson), what remains is subhuman, of no moment or interest." (Sacks, 1998: 174)

Science and the economic systems that support it has typically, but not exclusively, ignored these, and other spheres of understanding, to concentrate on proving a thesis that implies not so much that they are implausible but more that they do not matter because they are either subjective, and/or non-scientific. As the twentieth century blended into the twenty-first it became increasingly clear that ignoring and excluding the sensory dimensionality of human potential in order to promote efficiency savings was a false economy. It is also clear that design and education has a major role to play in reconfiguring the culture of rational dependency. Conventional management strategy was creating a crisis that managers were ill equipped to resolve because it involved non-rational inputs and outcomes.

Stoller argues a focus on the embodied senses "has much to teach us, about the nature of epistemology in the contemporary world." And could enable us to "retune" theory to include the "lower" senses "by way of the body." (Stoller, 1997: 3) This could extend the opportunities for education to encourage non-rational innovation and support the need to produce knowledge workers. The British government of the last decade has made much of its 'creative economy'. [40]

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[40] That has begun to be reframed as creative workers in the twenty-first. Wolf provides evidence of the British Labour Government's concern to embrace the new agendas in employment in the late twentieth and early twenty-first century: 'The graduate is taken to possess a far higher level of human capital in the forms of knowledge, skills or values which, like other forms of capital, yield income and other useful outputs over long periods of time.' (Wolf, 2003: 25 Wolf illustrates how the rush to create 'Knowledge' workers led

Yet the same government was busy escalating the role of the kind of rationally led teaching, testing and accountability that excludes multi-sensory development and its potential to facilitate creative enquiry and innovation.

Schon argues fear is involved when moving from a trusted model to one that is regarded as being untried and untested that may account for the tendency to respond to change by reinforcing the old system: "In the varied topography of professional practice, there is a high, hard ground overlooking a swamp. On the high ground, manageable problems lend themselves to solution through the application of research-based theory and technique. In the swampy lowland, messy, confusing problems defy technical solution." (Schon, 1990: 3) He confirms "the problems of the high ground tend to be relatively unimportant to individual or society at large...while in the swamp lie the problems of greatest human concern. The practitioner must choose (to) relatively unimportant problems according to prevailing standards of rigor (or) descend to the swamp of important problems and non-rigorous inquiry?" (Schon, 1990: 3) Gardener along side their ability to learn rational skills students have "a five year old 'unschooled' mind struggling to get out and express itself...' One of Gardener's examples highlights the conflict between taught knowledge and instinctual appreciation: 'In the domain of literature, the appeal of modern poetry resides in its powerful images, its unsettling themes, and the way in which the poet plays with traditional formal features. Yet this appeal will remain obscure to someone who continues to feel deep down that all poetry worthy of the name must rhyme, have a regular meter, and portray lovely scenes and exemplary characters.' (Gardener, 1993: 5) For Gardener this is the essential difference between "Intuitive understanding" and "Rote ritualized, and conventional understanding" or "disciplinary understanding." (Gardener, 1993: 14)

Kuhn has highlighted how long it takes for a paradigm shift to occur: "Effective research scarcely begins before a scientific community thinks it has acquired firm answers to questions like the following: what are the fundamental entities of which the universe is composed? How do theses interact with each other and with the senses? What questions may be legitimately asked about such entities and what techniques involved in seeking solutions." (Kuhn, 1996: 4-5)

The problem of shift is further complicated by the fact that "from an evolutionary perspective, the chemical senses – particularly olfaction – are deemed the "oldest' sensory systems, nevertheless, they remain the least understood of the sensory modalities." (Purves, 2004: 337

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governments around the world to rethink their educational priorities to include computer literacy, electronics and programming among their priorities: 'If we are to face the challenge of creating high-tech, high-added-value and high-wage economy, we can only do so by skilling our people' (Labour Party, 'The Skills Revolution', 1996 (Quoted: (Wolf, 2003: 13)

Chapter Five: Sensory Potential

Over a century ago Bain concluded that: "The intellectual sensations of touch…our discrimination of distinct properties becomes knowledge…" (Bain, 2000 (1868)

Introduction

In the two previous chapters I demonstrated that the adoption of a strategy of rational instrumentalism encouraged society and business to repress some of the deeper needs, and therefore, the potential of human beings to interact with their experience and fully evaluate it. This reflects certain assumptions behind Western thought, that are exemplified in the dominant myths, theories, motivations and methodologies that inform our actions. This chapter seeks to show how contemporary culture might be enriched, by drawing upon new, or otherwise somewhat neglected research that indicates the latent potential and variety of the senses. This is offered as evidence of the wealth of scientific and philosophical insights that could inform my ambition to connect consumers and business to their multi-sensory potential by design. I show that access to more detailed evidence of the complexity of multi-sensory capability may need to include emerging understanding of human potential[41]. This is used as part of my case for the need to re-evaluate our sensory potential. I propose that re-sensing will depend on the rationales that access contemporary scientific research. As Geurts argues, " 'sensing' (bodily ways of gathering information) informs a 'societies' epistemology, the development of its cultural identify, and its forms of being-in-the-world." (Geurts, 2003: 4)

Emerging Sensory Theory

The late twentieth century changed what we now know about the senses. The re-emergence of a greater interest in Holistic medicine in the latter part of the Twentieth Century points to the rediscovery of a lost route in the West. (Tarnas, 2000, Bohm 1980) Interest in what used to be regarded as esoteric quackery, parallels numerous other examples of the re-emergence of approaches to the development of understanding via sensory exploration. An example is offered by the re-emergence of interest in the sensory classifications offered by Steiner, that were developed by Soesman, and, are here, usefully summarised by Katelyn Mariah

1) TOUCH - which is a physical body experience that is our internal response to a contact with the outside world.
2) LIFE SENSE - which is and ether (life) experience that is the internal feeling of well-being and of being alive.
3) SELF - MOVEMENT- and astral body experience of being inwardly aware of the way the body parts move in relationship to each other.
4) BALANCE - which is an "I" experience. This sense orients us to the world with respect to up, down, right and left.

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41 My commitment to Aristotle's classification of touch, taste, smell, hearing and vision remains because this short list offers sufficient opportunity for establishing an answer to my question but I aim to locate the expansion of the sensory norm as a basis for the expansion of possibility. As Lakoff and Johnson propose 'reason is not, in any way, a transcendent feature of the universe or of disembodied mind. Instead it is shaped crucially by the peculiarities of our human bodies, by the remarkable details of the neural structure of our brains, and the specifics of our everyday functioning in the world. (Lakoff, 1999: 77)

5) SMELL - which is a physical matter experience, which allows one to come in contact with the outside world via odours carried by the air.
6) TASTE - which is an ether (life) substance experience that gives us a deeper connections with the outside world in which flavours are directly sampled.
7) SIGHT/VISION-which is an astral substance experience of the sense that takes in the exterior images of the outside world.
8) TEMPERATURE/WARMTH - which is an atmosphere/air/warmth experience. With this sense we are aware directly of the warmth of another body.
9) HEARING - Which is a physical experience of solid matter. This sense can tell us more about the inner structure of an object than sight can. When an object resonates, we learn about its deep structure from the sound we hear.
10) SPEECH - which is an either experience. It is the sense of speech or world of tone, which is the hearing that involves meaningful words.
11) CONCEPT - which is an astral experience of thought. This refers to the deeper sense of entering and of the being speaking through their words.
12) EGO SENSE - which is an "I" experience of being of the other. This is the sense of ego or I which enables us to turn our thinking toward the being of another and to behold their "I"; their unique individuality, directly.

(Mariah, 2005)

Other sources of challenge came from emerging theories of 'emotional intelligence' and 'right-left brain division. These areas are beginning to been taken seriously by the scientific establishment and offer confirmation of the challenge that are disputing the nature of the traditional way of thinking about the schism between brain and the body. (Evans, 2001) Contemporary science has finally confirmed that multi-sensory engagement is a vital and little understood human need. There is widespread acceptance that the number of senses and their potential for informing intelligence emotional interaction with experience is considerable greater than theories that still continue to inform the marginalization of sensory potential. Aristotle's 'five senses' have been extended but the exact number remains open to debate within, (and outside) the scientific community. Ganong argues that "the first 11 modalities are conscious senses" (Ganong, 2005: 121) while Refinetti, proposes, "Humans have at least nine, somatic (conscious) senses as well as numerous automatic senses" (Refinetti, 2005: 448)

Ganong provides a chart that depicts a contemporary (2005) summation of the main sense organs and their modality:

"Sensory Modality	Receptor	Senses Organ
Vision	Rods and Cones	Eye
Hearing	Hair cells	Ear (organ of Corti)
Smell	Olfactory Neurons	Olfactory mucous membrane
Taste	Taste receptor cells	Taste bud
Rotational acceleration	Hair cells	Ear (semicircular canals)
Linear acceleration	Hair cells	Ear (utricle and saccule)
Touch-pressure	Nerve endings	Probably nerve endings
Warmth	Nerve endings	Probably nerve endings
Cold	Nerve endings	Probably nerve endings
Pain	Nerve endings	Probably nerve endings

Joint position and movement	Nerve endings	Various
Muscle length	Nerve endings	Muscle spindle
Muscle tension	Nerve endings	Golgi tendon organ
Arterial blood pressure	Nerve endings	Switch receptors in carotid and aortic arch
Central venous system	Nerve endings	Stretch receptors in walls of great veins, atria
Inflation of lung	Nerve endings	Stretch receptors in lung Parenchyma
Temperature of blood in head	Neurons in hypothalamus	
Arterial Po2	Glomus cells	Carotid and aortic bodies
pH of CS5	Receptors on ventral surface of medulla oblongata	
Osmotic pressure of plasma	Cells in OVLT and possibly other circumventricular organs in anterior hypothalamus	
Arteriovenous blood glucose difference	Cells in hypothalamus (glucostats)	

Note: The first 11 are conscious sensations."
(Ganong, 2005: 121) [42]

Pines explains the complexity of the senses relationship with the brain:

- "The 'spinal cord', (contained within the spinal column) receives signals from the sensory organs, muscles and glands and relays these to the brain
- The 'thalamus' acts primarily as a relay station
- The 'hypothalamus' play a crucial role in regulating the bodies internal environment by maintaining body temperature and blood sugar levels...regulating the 'endocrine system' (that) effects specific behaviors such as eating, drinking and sexual arousal
- The 'limbic system' (informs) emotions, memory, social behavior (etc).
- The corpus callosum (a thick band of 200 million nerve fibers) conveys information between the cerebral hemispheres
- The 'cortex' (the exterior covering of the brain, divided into areas, or lobes is a 1.5 sq ft system intimately involved in thought and reason
- The 'midbrain' causes the body to act all at once by interpreting signals
- The 'hindbrain' also acts as relay station for intuitive reactions
- The 'medulla' (a dense, elongated bundle of nerve fibers) controls heart rate, blood pressure and breathing
- The 'reticular formation' controls the awareness of sensory information, muscle tone, cardiac and circulatory reflexes, and attention
- The 'pons' affects sleep, dreaming and respiration
- The 'cerebellum' (a large structure attached to the back surface of the brain stem) influences balance, coordination, movement and single joint actions and is also involved in a number of thinking operations including learning

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42 Ganong suggests that, 'future research will undoubtedly add to the list of unconscious senses' (Ganong, 2005: 121)

- The 'somatic nervous system' responds to the external senses of sight, hearing, touch, smell and taste and acts on the outside world
- The 'autonomic nervous system' controls the vital processes of the body such as heart rate, digestion, blood pressure and the function of the internal organs
- The 'parasympathetic nervous system' keeps the body running smoothly by regulating the normal operations of the body such as breathing, heart rate and digestion and calms everything down after an emergency'
- The 'sympathetic system' in affecting emotional response." (Pines, 1995: 8-9)

Evidence of the complexity and sophistication of the non-visual senses is emerging: "in order to be able to process sounds at the highest frequency of human hearing, hair cells must be able to turn current on and off 20,000 times per second.' This research also confirms 'Photoreceptors in the eye are much slower...the visual system is so slow that when you look at a movie at 24 frames per second, it seem continuous." (Corey and Hudspeth, quoted (Pines, 1995: 38)

Contemporary theory confirms that the basic emotional response of the instinctual mind is subject to making mistakes. These are avoided through the overview potential of the sensory cortex. The recognition of cooperation between the sensory thalamus, the amygdala and the sensory cortex points to opportunity for sensory gestalt. (Evans, 2001: 26) This is being caputured by new work on "Integration...a type of organization. To integrate is to bring together or organize various parts into a whole. When something is integral its parts work together as a whole unit. The nervous system and especially the brain, is designed to organize countless bits of sensory information into a whole integral experience...countless bits of sensory information enter our brain at every moment, not only from our eyes and ears but from every place in our body...The brain must organize all these sensations if a person is to move and learn and behave in a productive manner." (Ayres, 2005: 4-5)

Ganong confirms that the tendency of science to define the senses in a mechanistic way has led to a lack of appreciation of their sophistication. Taste for example appears to have little to offer beyond basic binary capacity: "Each taste bud is innervated by about 50 nerve fibres, and conversely, each nerve fibre receives input from an average of five taste buds.' But this apparently limited capability has ability for 'identifying, synthesizing, and appreciating the 'almost infinite variety of tastes so dear to the gourmet' Ganong confirms that taste is not a amodal sensory responses: "In some cases, a desirable taste includes an element of pain simulation (e.g.. Hot sauces). In addition, smell plays an important role in overall sensation produced by food, and the consistency (or texture) and temperature of foods also contribute to their 'flavour.'" (Ganaong, 2005: 189-191)

Ayres explains how experience is translated into knowledge via all the senses: "Sensory integration 'puts it all together.' Imagine peeling and eating an orange. You sense the orange through your eyes, nose, mouth, the skin on your hands and fingers, and the muscles and joints inside your fingers, hands, arms, and mouth...All the sensations form the orange and all the sensations from your fingers and hands somehow come together in one place in your brain, and this integration enables your brain to experience the orange as a whole and to use your hands and fingers to peel the orange. Sensations are streams of electrical impulses. Chemical reactions that occur within our nervous system are also producing impulses. These impulses

must be integrated to give them meaning. Integration is what turns sensations into perception." (Ayres, 2005: 6)

Kolb confirms the capacity of humans to adapt their way of engaging with the world through their senses: "Human beings are unique among all living organisms in that their primary adaptive specialisation lies not in some particular physical form or skill or fit in an ecological niche, but rather in identification with the process of adaptation itself – in the process of learning. We are thus the learning species, and our survival depends on our ability to adapt not only in the reactive sense of fitting into the physical and social worlds, but the proactive sense of creating and shaping those worlds." (Kolb, 1983: 1)

Romanticism

After the Enlightenment the Romantic movement sought an antidote to what had become a process of sensory denial, or what Webber has described as a process of disenchantment that included the loss of opportunities to engage in the magical and supernatural dimensions of existence. Goethe offers evidence of how scientific experiment did not need to be dominated by instrumentalism: "observe the subject as it occurs naturally. Through systematic observation of phenomenon, such as light, or vegetation, one would gradually refine one's intuition until at last one could penetrate beyond the phenomenon to an underlying archetype. In the name of fidelity to the senses.' Goethe rejected instruments such as microscopes and telescopes which intervene between the observer and the object of study and seems to have anticipated Benjamin's identification of 'aura' as well as reflecting emerging interest in the 'sublime' and the 'uncanny.'" (Seamon, 1998)

The development of romanticism in the late 18th and the early 19th century was clearly a response to the Enlightenment led rational, mechanistic view of the world and its gradual translation into the first major evidences of industrialization that had emerged post Descartes. Various philosophers, including Hegel, Locke, von Schegel, Goethe, Rousseau, Thoreau, Marx and Dewey evolved an approach to apprehending and understanding the human condition through the development of sensitivity to nature, ideas and emotions and sense data.[43] "Romanticism came to stand for authenticity, integrity and spontaneity. It was seen as a positive artistic and intellectual assertion of the extremes in the human psyche, the areas of experience beyond logic and reason which could be only expressed in a direct and heartfelt way." (Heath, 2000: 5)

Honour argues "Bryon succinctly articulated the first phase of Romanticism's rejection of logic and reason: "someone has said that the perfection of architecture is frozen music – the perfection of beauty to my mind has always presented the idea of living music"' (Honour, 2001: 341)[44] Bryon is in many ways the exemplar of the complexities of Romanticism, living the dream but objectively critical of his own and others affectations. His example of self-sacrifice can be understood as an act that emerges from a desire to test the boundaries of the rational. Wood confirms "In the 19th century, Lord Byron and his friends sought a discourse that would help them to describe their feelings and experiences. By way of contrast, the Dandies... had no explicit philosophy..." (Wood 2005) Bryon's affectations of dandyism, which seemed to contrast with his crusade as a defender of Greek freedom, are perhaps an expression of the

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43 (e.g. Hegel's 'Idealism', Rousseau's 'Noble Savage', Marx's concern about the replacement of nature as a source of value with 'Commodity Fetishism')

44 (Note to the 'Bride of Abydos' (1813) Bryon reacted to a metaphor proposed by Schelling in a lecture given in Berlin in 1802 –3)

schizophrenia that Tarnas writes about with reference to the continuing tension between the rational and the romantic at the end of the twentieth century: "The modern experience was still vexed by a profound incoherence, with the dichotomies of the romantic and scientific temperaments reflecting the Western Weltanschauung's seemingly unbridgeable distinction between human consciousness and unconscious cosmos." (Tarnas, 1991: 377)

For the romantic the unpredictable and the accidental are part of the wonder of nature, and the "free expression of imagination that Friedrich von Schlegel proposed as the characteristic of 'progressive universal poetry.' (Heath, 2006: 6) Wordsworth's definition of original genius 'the introduction of a new element into the intellectual universe (of which the) infallible sign is the widening the sphere of human sensibility' (Abrams, 1973: 74) offers an indication of the Romantic sensibility and its relationship with multi-sensory experience. Boorstin quotes the history painter Benjamin Hayden's account of Wordsworth and Keats's reaction to Newton's legacy from a dinner, December 28th 1817. "a fellow...who believed nothing unless it was clear as three sides of a triangle" And then he and Keats agree that he had destroyed all the poetry of the rainbow by reducing it to its prismatic colours." (Boorstin, 1983: 408)

The interrogation of nature became a key theme in poetry, art, literature, music, and philosophy but romanticism was not ultimately about subject matter but attitude and in this sense it was a primary source of modernism: "Baudelaire wrote (1864) with reference to Delacroix: to say the word Romanticism is to say modern art – that is, intimacy, spirituality, colour, aspiration towards the infinite, expressed by every means available to the arts." (p35, Honour H (1979) As Tarnas puts it: 'Romantic vision perceived the world as a unitary organism rather than an atomistic machine' (pp's 366 – 367, Tarnas (1991) The most overt example of this tendency was the Futurist manifesto, which married 'Romantic' inspired passions to their infatuation with the machine. (Marinetti, 1909)

Counter Culture?

By the middle of the twentieth century Romanticism was playing an important role in sewing seeds of doubt about the techno determinist agenda. A groundswell of questions and new ways of thinking and doing opened up new possibilities of framing and evolving human potential and it relationship with the senses and emotions. The challenge to conventional wisdom was facilitated by the counter culture movement (c1960's/70's), which helped to define and encourage opportunities to create alternatives to the narrow capital accumulation priorities of the corporate food sector. The survival and evolving prosperity of alternatives to the mainstream model had demonstrated the possibility and importance of developing economic and social systems outside, or alongside the mainstream capitalism system. These alternatives have produced important evidence of the deeper need for multi-sensory engagement opportunity.

E T Hall argued "virtually everything that man is and does is associated with the experience of space. Man's sense of space is a synthesis of many sensory inputs: visual, auditory, kinesthetic, olfactory, and thermal." He confirmed "each of these constitute a complex system – as for example, the dozen different ways of experiencing depth visually – but each is molded and patterned by culture.' Hall used his insights to identify 'that people reared in different cultures live in different sensory worlds." (Hall, 1990: 181) Hall believed "Modern man is forever barred from the full experience of the many sensory worlds of his ancestors. (because these) worlds were integrated and deeply rooted in organized contexts that could only be fully

understood by the people of the times." (Hall, 1990: 81) Hall promoted an unsentimental view of the past but recognized its value as evidence of the potential to reconnect our multi-sensory ability to culture and its design.

Hall argued "Western man uses only a small fraction of his mental capabilities,' He pointed out although 'there are many different and legitimate ways of thinking we in the West value....'logic,' a linear system that has been with us since Socrates." (Hall, 1976:1) Hall offers an alternative "notation system based on eight different dimensions, or scales for the senses:

1) Postural – Sex
2) Sociofugal – Sociopetal
3) Kinesthetic
4) Touch
5) Retinal
6) Thermal
7) Olfactory
8) Voice loudness" (Setha, 2002: 64) [45]

Hall confirmed "Western man sees his system of logic as synonymous with the truth. For him it is the road to reality" he points out that Freud's ideas "were...strenuously resisited, particularly by scientists and engineers who were still wedded to the Newtonian model." (Hall, 1976:1)

Hall's theories were reinforced by Marshall McLuhan's research. McLuhan argued that multi-sensory marginalization was a product of the evolution of design and technology. MuLuhan believed the tribal world's ability to utilize 'the senses of touch, taste, hearing and smell were developed, for very practical reasons, to a much higher level than the strictly visual. He proposes that mediated literacy through "the alphabet diminished the role of the (non-visual) senses permeating the discontinuous culture of tribal man and translating its organic harmony and complex synaesthesia into the uniform connected and visual mode that we still consider to be the norm of 'rational' existence." McLuhan concludes "the balance of the sensorium – or gestalt interplay between all the senses – and the psychic and social harmony it engendered was disrupted, and the visual function was overdeveloped." (McLuhan, 1996: 247-248) Tarnas also confirms the dangers of existing in "a state of consciousness in which experience of the unititive numinous depths of reality has been systematically extinguished, leaving the world disenchanted and the human ego isolated". (Tarnas, 2000: 431)

McLuhan believed "as information becomes our environment, it becomes mandatory to program the environment itself as a work of art...the mother tongue is propaganda because it exercises an effect on all the senses at once. It shapes our entire outlook and our ways of feeling. Like any other environment its operation is imperceptible." (McLuhan, 1996:337) He argued that technology could be adapted and designed to reconnect humans to their multi-sensory potential, concluding this would help to reframe sensory research as a antidote to the "disenchantment of the world." (McLuhan, 1996:337) McLuhan anticipated Gardener by proposed art as a means of overcoming the supremacy of logic: "Only the small child and the

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45 Hall also suggests 'interpersonal distance is a constellation of sensory inputs coded in a particular way' as another important factor in sensory interaction. (Setha, 2002: 63)

artist have the immediacy of approach that permits perception of the environmental. The artist provides us with anti-environments that enable us to see the environment. Such anti-environmental means of perception must be constantly renewed in order to be efficacious...In an age of accelerated change, the need to perceive the environment becomes urgent." (McLuhan, 1996:337)

Gendlin distinguished between emotional and other forms of bodily intelligence, arguing that "felt sense is not an emotion but something at first you do not recognize...vague and murky. It feels meaningful but is not known, it is a body-sense of meaning." (Gendlin, 1982: 165) The reality of our knowledge of the human senses is that it is still in its infancy, a victim of centuries ideologically informed neglect. The recent demonstration of new needs, technologies, insights, and practical activity has encouraged a renaissance of interest and endeavour. As Kolb points out: "It has been estimated that something in the order of 80% of what we know about the brain has been discovered in the last 10 years (confirming) the nervous system is very plastic in its structure and is constantly being modified by our environment." (Kolb, 1995:11) Thomas confirms "we can think of our sensory endowment as comprised of a number - probably quite a large number - of perceptual instruments, each specialized for the pick up of particular sorts of environmental information, and actively deployed as and when that information is needed for the guidance of behaviour...We do not so much have 5+ general purpose senses as a large array of anatomically overlapping, specialized perceptual instruments." (Thomas, 2001: 241-2) This potential is illustrated by the "string of discoveries that totally changed the study of olfaction resulted from a new emphasis on genetics (which) made it possible to study the sense of smell with the techniques of modern molecular and cell biology (and confirmed that there are approximately) 1,000 separate receptor proteins." (Pines, 1995: 52-53)

Other Sources of Knowledge

The distinction between the knowledge that science tends to produce and the potential of multi-sensory experience is evidenced by examples that reveal the sensitivity of the arts awareness of sensory experience. Proust personifies the artist's comprehension of sensory intelligence through the detail of his observations on the power of the senses in relation to memory. "When nothing else subsists from the past...after the people are dead, after things are broken or scattered...the smell and taste of things remain poised a long time, like souls...bearing resiliently, on impalpable droplets, the immense edifice of memory." (Proust, 2004: 63) Bales highlights the deeper struggle that informed the work of Proust and other modernists "By the end of the nineteenth century this worldview is doing battle with a worldview that emphasized mans reason and the ability of his senses to perceive objectively a mathematically ordered universe." He uses the Symbolist's "view of a world clouded in obscurity, veiled by appearances that must be penetrated by the artistic creative imagination to reveal its hidden order provided yet another path in the search." Bales suggest the "newly emerging form of inquiry known as psychology faced many of the fundamental difficulties encountered in the Narrators search. They must both deal with the inescapable paradox of any effort to observe man's metaphysical nature in an objective, scientific manner." (Bales, 2001:101-102)

Elsewhere the extraordinary range of subtle distinctions humans can identify in aroma is well documented in the investigations of perfumers and their historians. (Aftel 2004, Classens 1992, Ackerman 1991, Miller 1990) As Ackerman confirms in her broad ranging review of the senses, "we can detect over ten thousand different odours...Our sense of smell can be

extraordinarily precise, yet its almost impossible to describe how something smells to someone who hasn't smelled it..." (Ackerman, 1991: 3-4) Seremetakis has usefully drawn on contemporary Greek cultural experience to identify that the 'imperceptible is not only the consequence of sensory transformation but also the means by which it takes place. Thus the problematic of the senses in modernity resurrects the old theme ignored in recent anthropological theory, that of the historical unconscious.' (Seremetakis, 1996: 4) She highlights the crucial relationship between the multi-sensory encounter that informs, or can inform experience: "There is also a tactility of smells. Each smell generates its own textures and surfaces. No smell is encountered alone. There are combinations of smells that make up a unified presence, the grandma's house the garden aroma combined with animal dung, the oregano bunch hanging over the sheep skin containing the year's cheese..." (Seremetakis, 1996: 29)

History and ethnography have confirmed that the senses have huge potential for intelligence that is rarely fully utilized in the West because it is either designed out[46] or culturally restricted[47]: "In many North and West African societies learning is understood not in terms of 'reading' and 'writing' but in terms of gustatory terms of bodily consumption. This means that body and being are fused in consumptive or gustatory metaphors. Human beings eat and are eaten. People are transformed through their internal digestive processes." (Stoller, 1997: 7) Stoller confirms "vision is not always the singular sense that orders the experience of non-Western peoples. Among the Songhay peoples of Mali and Niger...smell, taste, and sound contribute profoundly to the construction of their experience, which means that their epistemology is fundamentally embodied. Songhay sorcerers and griots learn about power and history by eating it – ingesting colours and tastes, savoring textures and sounds." (Stoller, 1997: 3) (Howes 2005, Korsmeyer 2005, Gurts 2003)

Impressions Are Not Just Images

Changing the definition opens up a whole new world of possibility. Reframing our understanding of how the senses work and what they reveal development of a new appreciation of the complexity and richness of multi-sensory capacity has led to a reappraisal of the ways in which the senses operate: "Consider, first, that all your five senses are differing forms of one basic sense--something like touch. Seeing is highly sensitive touching. The eyes touch, or feel, light waves and so enable us to touch things out of reach of our hands. Similarly, the ears touch sound waves in the air, and the nose tiny particles of dust and gas. But the complex patterns and chains of neurons which constitute these senses are composed of neuron units which are capable of changing between just two states: on or off (but) there is no such thing as a half wave, or a particle all by itself without any space around it. There is no on without off, no up without down." (Watts, 1989: 25) Or as Elliot puts it: "Consciousness is a matter of information that is intentionally ordered by our own individual powers of attention, cognition, emotion,

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46 The tendency for design to ignore and/or marginalize multi-sensory opportunity will be explored in the chapter that deals with design and the senses

47 Stoller demonstrates the thesis of cultural restriction by pointing out the way in which two key texts of ethnography: Clause Levi-Strauss, 'The Sorcerer and His Magic', and E E Evans Pritchard, 'Witchcraft, Oracles, and Magic Among the Azande', shared 'the same disembodied, objectivist epistemology (using) disembodied theory of meaning and rationality to make senses of a foreign and ultimately bizarre system of belief.' He argues that both writers were true to the 'heritage of the Enlightenment (extracting) explanatory truths from the contentious network of social relations which they attempt to observe.' (Stoller, 1997: 5)

intention, and memory." (Elliott, 1995: 109) Pines explains: "Our senses are finely attuned to change." (Pines, 1995: 9)

Lakoff and Johnson identify how philosophy and, by implication, neuroscience, and business, including design, have concentrated on the "primary qualities," disembodying primary area of engagement: "Secondary qualities were seen as perceiver dependent and therefore not constitutive of objective reality." They argue that: "For real human beings, the only realism is an embodied realism." (Lakoff, 1999: 26) Setting this assertion in a historical context they confirm: "by the mid to late 1970s, a body of empirical research (began to offer) a competing view of cognitive science (based on) two kinds of evidence: (1) a strong dependence of concepts of reason upon the body and (2) the centrality to conceptualization and reason of imaginative processes, especially metaphor, imagery, metonymy, prototypes, frames, elemental spaces, and radical concepts."[48]

Sense and Meaning

The chapter that dealt with sensory denial confirmed some of the ways in which classical heritage and its adoption by western business has limited our human ability to utilize our sensory capacity to comprehend 'that complex whole which includes knowledge, belief, art, moral, custom and any other capabilities and habits acquired by man as a member of society.' (Tylor, 1871) Tarnas suggests 'what man knows is a world permeated by his knowledge, and causality and the necessary laws of science are built into the framework of his cognition.' (Tarnas, 2000: 343). Spense points out the lack of logic displayed by corporate retailers and their designers in marginalizing the opportunity for multi-sensory engagement. He argues "the senses are the key to our emotions, the source of our well being-and taking charge of them can lead to a better life for all of us." (Spense, 1999) The need to reframe the way we utilize our multi-sensory ability becomes central to releasing its potential.

There is ample evidence to suggest that our failure to use our senses is a cultural rather than biological inhibition. Fascinating glimpses of other sensory paradigms offer the creatively inclined inspirational possibilities. For example Oliver Sacks, quotes the hallucinogenic induced experience of a medical student: "I sniffed like a dog." After the symptoms disappeared he lamented, "a tremendous loss...that smell world – so vivid, so real! It was like a visit to another world, a world of pure perception, rich, alive, self sufficient, and full...I see now what we give up

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48 (Lakoff and Johnson summarize these) 'changes in our understanding of reason':

- Reason is not disembodied...but arises from the nature of our brains, bodies, and bodily experience...it comes from the details of our embodiment. The same neural and cognitive mechanisms that allow us to perceive and move around also create our perceptual systems and modes of reason. Thus, to understand reason we must understand the details of our visual system, our motor system, and the general mechanisms of neural binding.
- Reason is evolutionary...abstract reason builds on and makes use of forms of perceptual and motor interference present in 'lower' animals. The discovery that reason is evolutionary utterly changes our relation to other animals and changes our conception of human beings as uniquely rational. Reason is thus not an essence that separates us from animals; rather, it places us on a continuum with them.
- Reason is not 'universal' in the transcendent sense; that is, it is not part of the structure of the universe. It is universal, however, in that it is a capacity shared universally by all human beings. What allows it to be shared are the commonalities that exist in the way our minds are embodied.
- Reason is not completely conscious, but mostly unconscious
- Reason is not purely literal, but largely metaphorical and imaginative
- Reason is not dispassionate, but emotionally engaged

(Lakoff, 1999: 77)

in being civilized and human." (Sacks, 1998: 157-158) As Tarvis and Wade put it: "People often know more than they know they know. In fact, non-conscious processing appears to occur not only in perception, but also in memory, thinking and decision-making. However, the real-world implications of subliminal perception are not as dramatic as you might think. Even in the laboratory, where researchers have considerable control, the phenomenon is hard to demonstrate. The strongest evidence comes from studies using simple stimuli (faces or single words, like 'bread'), rather than complex stimuli such as sentences." (Tarvis and Wade, 2000: 216).

Lakoff and Johnson argue that the way that we make sense of the world depends upon metaphors "Certain neural connections between the activated source and target-domain network are randomly established at first and then have their synaptic weights increased through their recurrent firing. The more times those connections are activated, the more time the weights are increased, until permanent connections are forged." They suggest the "existence of such 'basic-level-concepts' - characterized in terms of gestalt perception, mental imagery, and motor interaction – is one of the central discoveries of embodied cognitive science." (Lakoff, 1999: 90)

Sensory Prejudice

Any attempt to reframe immediately encounters a range of resistances identified in the chapter on sensory denial that inform belief that sensory culture is the polar opposite of civilization. It is now beginning to be recognized that those cultures contain important spheres of knowledge that has been originated from embodied intelligence. Tylor and others[49] confirm cultures that were observed to behave in ways that were regarded as more 'animalistic' were labelled 'primitive'. Dawkins[50] suggests that culture is transferred from one human being to another, or from one community, or other subdivision of humanity to another through 'memes', in much the same way that genes are passed on through procreation[51]. (Dawkins, 1976: 206)

Dawkins ideas have not met with complete acceptance partly because they still assume conventional views of intelligence Kuper suggests Dawkins is referring to the snobbish tradition of defining culture as: "the sum of the greatest spiritual and artistic accomplishments of humanity." Hull suggests that the concept of memes needs to be verified before it can be taken seriously: "memeticists cannot begin to understand what the science of memetics is until they generate some general beliefs about conceptual change and try and test them." (Aunger, 2004: 49) Aunger agrees that Dawkins concept of a memes is flawed because it lacks a scientific basis. (Aunger, 2004: 175) Auger accepts "important components of culture are not in people's heads. Some argue that at least some cultural phenomena are environmental (e.g., in the form of artefacts)." (Aunger, 2004: 10)

Others llike Laland and Odling–Smee regard memes "as a valuable scientific tool', because they offer explanation of 'learned and socially transmitted information...aggregated into higher

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49 (Arnold M (1869) Culture and Anarchy)

50 A more formal definition along this line has been put forward by Aaron Lynch (1998): "MEME: A memory item, or portion of an organism's neurally-stored information, identified using the abstraction system of the observer, whose instantiation depended critically on causation by prior instantiation of the same memory item in one or more other organism's nervous systems."

51 "Dawkins suggests a meme is 'a unit of cultural inheritance...naturally selected by virtue of its 'phenotypic' consequences on its own survival and replication' or 'a unit of information residing in the brain." (Aunger, 2004: 49)

order knowledge structures, encoded as memory traces in interwoven complexes of neural tissue, and expressed in behaviour (proposing) that our ancestors constructed niches, including socio-cultural niches, in which it 'paid' them to transmit more information to their offspring...Such activities create the kind of stable socially constructed environment in which related technologies, such as food preparation...would be advantageous from one generation to the next, and could be repeatedly socially transmitted from parent to offspring, favouring further transgenerational information transition (and) set the scene for an accumulatory culture (which) might result in offspring learning higher order 'packages' of cultural traits from their parents, as appears to be the case in pre-industrial society..." (Aunger, 2004: 121-132)

The crucial opportunity that theories like those of Dawkins represent lies in their demonstration of other ways of thinking about evolution. For designers this opens up the potential of reframing in ways that draws evidence from the past without the style, or visual emphasis that generally accompany it.

Sensory Knowledge

Sympathy for sensory knowledge requires the development of a different way of defining what knowledge is as well opening up understanding of how it is collected and created. Kolb describes the difference between sensory experience (apprehension) and the 'concepts and the associated mode of knowing' (comprehension) he proposes: "What you see, hear, and feel around you are those sensations, colours, textures, and sounds are so basic and reliable that we call then reality. The continuous feel of your chair as it firmly supports your body, the smooth texture of the book and its pages, the muted mixture of sounds surrounding you – all of these things and many others you know instantaneously without need for rational inquiry or analytical confirmation.' He points out that by comparison 'concepts and the associated mode of knowing called comprehension seem secondary and somewhat arbitrary ways of knowing...forever distorting that 'flow.'" (Kolb, 1983: 43)

Evacuating the traditions that favour the disembodiment of intellect requires rethinking allegiances to some traditional markers of cultural definition like the concept of permanence and coming to terms with the ephemeral. Food makers often resist the need for permanence because they trust sensory memory allowing their fingers to remember a particular sensation, and using their sense of smell to confirm when something is ready and so on. These are skills that it is often difficult to record and communicate in the conventional tradition of audio-visual mediation. The condition of the ephemeral is exacerbated by its location in an economic model that promotes materialism. [52]

Emotional Intelligence

The relationship between the emotions, multi-sensory engagement with experience, and science is instructive. Greenspan & Shanker's work on emotional development offers an instructive challenge to the mainstream."^emotional signalling provides the missing link between

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52 Ayres confirms that: 'One way of establishing the importance of the senses to decoding and recoding experience is to focus on individuals with 'sensory integration' problems." (Ayres, 2005:3) This can result in particular examples that challenge the dominant thesis being marginalized because they are seen as exceptions to the rule. For example Helen Keller tended to be put into the 'exceptional' box rather than the 'potential' box: "Neurologically, Helen Keller's story shows that when senses are missing, other senses may be trained to make up for the loss. This has significant meaning for scientists who study the brain, and for many people who suffer from neurological illness or injury." (Pines, 2002)

what traditionally has been viewed as the world of cognition and what many modern neuroscientists are describing as the sub-symbolic and symbolic systems...emotional interactions serve as a critical foundation for language, visual spatial thinking, motor planning and sequencing and executive functioning, and other aspects of sensory processing...leads to a vital revision...that looks at its multiple levels" (Greenspan 2004 : 251) They offer a challenge to the dominant ethos that connects language to intelligence challenging Chomsky's 'nature' theory that the capacity for language is innate. Based on clinical research they argue for 'nurture.'

New methods of brain imaging and live testing have introduced considerably more evidence about how the brain functions. Although the outcome is still predominantly mechanistic some like Tichener acknowledge "the sophistication of human's 'tactual' sensibility (encompassing) all four of the "sensation attributes: quality, intensity, extent, and duration (producing) tactual ideas – ideas built up from pressure sensations, (that are) extensive, temporal and qualitative" (Titchener, 2005: 135)[53] Research has revealed: "All emotional responses contain three components: behavioural, autonomic and hormonal..." (Buskist, 2002: 433). Lefton confirms, that these responses are: "Long lasting patterns of feelings and beliefs about other people, ideas, or objects that are based in people's experiences and shape their future behaviour."

Business, like the education that serves it, finds it hard to come to terms with 'sensory intelligence' because it favours rational evidence based on statistical or other forms of proof, soft impressions because they simply do not fit in their cultural bias in which "Intelligence is the overall capacity of the individual to act purposefully, to think rationally, and to deal effectively with the environment." (Lefton, 2002: 264). Comparing a quote from a scientist and a psychoanalyst is revealing not just about the ways of understanding that are represented but also in the use of language and conceptual references.

- The scientist: "An attitude implies an internal state which, given the occurrence of certain stimulus events, will ultimately result in some sort of response or behaviour. The definition also implies that an attitude is learned and that our actions are related to it. This latter characteristic is important because it gives us the basis for deciding whether or not a given attitude exists, that is, whether a label can be attached to an individual. It is important to note that attitudes are hypothetical constructs. You can never actually observe people's attitudes; you can only infer or guess the existence of an attitude from what people say or do." (Alcock et al., 1998: 96)
- The psychoanalyst "Happiness in life is predominantly sort in the enjoyment of beauty, wherever beauty presents itself to our senses and our judgement- the beauty of human forms and gestures, of natural objects and landscapes and of artistic, and even scientific creations. The aesthetic attitude to the goal of life offers little protection against the threat of suffering, but it can compensate for a great deal." (Freud, 2005: 62)

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53 It is interesting to note that, while Norman admits that it took him time to come to terms with the relationship between the emotions and intelligence, he is still implicitly traditional and dismissive of the potential of multi-sensory encounter: 'The visceral system is incapable of reasoning, of comparing a situation with past history. It works by what cognitive scientists call pattern matching' So Norman regards the senses as 'genetically programmed' but he does recognize the role of experience in shaping our response to sensory encounter. (Norman, 2004: 29)

The scientist's definition is an accurate description, as far as neurological research is concerned, but it does little to connect us to how we feel and why we feel that way. Norman makes a useful comment in regard to this syndrome: "Emotion is said to be hot, animalistic. Cognition is cool, human, and logical. This contrast comes from a long intellectual tradition that prides itself on rational, logical reasoning. Emotions are out of place in a polite, sophisticated society. They are part of our animal origins, but we humans must learn to rise above them...Nonsense! Emotions are inseparable from and a necessary part of cognition. Everything we do, everything we think, is tinged with emotion much of it subconscious." (Norman, 2004: 7)

Norman confirms that evaluation of emotional intelligence takes place in a cultural context where there is, "a common tendency to pit cognition against emotion..." (Norman, 2004: 7) Although he reveals that his understanding of feeling is largely limited to response to visual impressions Goleman argues a "view of human nature that ignores the power of the emotions is sadly shortsighted.' He suggests 'we know from experience, when it comes to shaping our decisions and our actions, feeling counts every bit as much – and often more – than thought." (Goleman, 1995: 4)

Experience

Carroll confirms: "The emotions focus out attention. They make features of a situation salient, and they cast those features in a special phenomenological light. The emotions gestalt situations - They organize them - They make certain elements of a situation stand out. The emotions are sensitive to certain aspects of various recurring situations, and they size up and organize situations rapidly." (p 388, Carroll, 2001) As marketing and design attempt to come to terms with emotional engagement, in order to develop new relevance and new opportunities for their professions, there are signs of the development of parallel interest in the senses. (Lindstrom 2005, Norman 2004, Gobe 2001, Schmitt, 1997)

The embrace of corporate management theorists has accelerated business interest in emotional intelligence. Their interest can be seen to be a reflection of one of the recurring themes of this research: the strategic and economic failure, or underachievement, of rational, logic driven business strategy in the late twentieth century: "The rules for work are changing...academic abilities are largely irrelevant to this standard. The new measure takes for granted having enough intellectual ability and technical know-how to do our jobs; it focuses instead on personal qualities, such as initiative and empathy" (Goleman, 2000: 3) At face value science appears to be getting close to unravelling the emotional impulse to consume: "Everything we do, from blinking reflexively to falling in love, has a biological basis. Why and how we behave and think is, in large part, a function of how the brain and body work." (Bernstein and Nash, 1999, p. 40).

Earlier investigations that addressed the more open ended questions of pleasure and experience and appears to reconnect philosophy to science are now being revisited Bain, for example, working in the latter half of the nineteenth century, draws attention to the feeling of pleasure derived from experiencing the slowing down of movement across a range of activities: "The gradual dying away of a motion is pleasurable and graceful in every sort of activity." (Bain, 2000 (1868): 87) Bain recognized "feelings caused by tastes, smells, sounds, or sights (are) said to be external to the mental organization." (Bain, 2000 (1868): 101)

'I Smell Blossoms and the Trees are Bare'

The reference to the lyrics of Irving Berlin[54] highlights the implicit potential of sensory memory and its role in shaping our experience. Elran suggests that: "The metaphysics of nature and of transcendent realities that supported theories of 'bewitchment' and 'suffering may no longer be popular in our official mainstream scientific culture but the problem that they addressed – how to make sense of those somatic and affecting experiences that have more than (or other than) a somatic cause has not gone away." (Ekman, 1994: 41) Panksepp confirms:

1) "Various sensory stimuli can unconditionally access emotional systems
2) Emotional systems can generate instinctual motor outputs as well as...
3) Modulate sensory inputs
4) Emotional systems have positive feedback components that can sustain emotional arousal after precipitating events that have passed
5) These systems can be modulated by cognitive inputs and...
6) Can modify and channel cognitive abilities." (Panksepp, 1998: 48)

Damasio describes how, "Nerve terminals send signals to circumscribed entry points in the brain, the so-called early cortices of vision, hearing, somatic sensations, taste and olfaction... heavy cross-signalling among...these closely interlocked sectors are the basis for topographically organized representations, the source of mental images." (Damasio, 2005: 91) Damasio also, usefully, describes the difference between laboratory testing and real life encounter in terms of the lab's restriction of sensory experience:

- "The time frame of the events is constructed rather than real
- Real-time processing may require holding information – representations of persons, objects, or scenes
- The situations and the questions about them were presented almost entirely in language

By compassion he suggests that 'real life' offers the following 'greater mix':

- 'We are confronted with people and objects
- We experience sights sounds and smell, and so on,
- Scenes of varying intensities
- We create narratives, verbal, or visual to accompany them." (Damasio, 2005: 50)

Politics

The 19th century industrialization facilitated understanding that "alienation can be understood at the sense level." (Wood, 1998) The criticism of mainstream practices played a key role in the emergence of Marxism. Marx and Engel's, along with others, identified that wealth and wellbeing tended to be assessed only in material, terms. Work and religious piety had a clear and restrictive strangle hold over the opportunity to experience and celebrate the world through interaction via the senses: "Only through the objectively unfolded riches of man's essential being is the richness of subjective human sensibility (a musical ear, an eye for beauty of form -in short, senses capable of human gratification (can man) create the human sense corresponding to the entire wealth of human and natural substance." (Marx, 2002: 301-

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54 'I'm in Love', 'Call me Madam', Irving Berlin, 1950

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Marx and Engel's helped to politicize the senses, by associating them with a critique of the status quo but this also had a downside of reinforced prevailing and emerging suspicion of sensory engagement, reinforcing the following stereotypes:

- Decadent: through association with hedonism
- Occult related: through religious provoked paranoia
- Primitive: through dismissal by scientific and religious agendas
- Political: because of association with criticisms of conventional political doctrine/practice
- Uneconomic: because of the belief that they are associated a critique of capitalism and encourage inefficiency
- Indulgent: through stereotyping during the protestant promotion of the work ethic

Education

The late twentieth century witnessed a growing concern about the failure of education to equip its populations for the new economies of creative innovation that is reviewed in more detail in Appendix B. This has helped to fuel a growing interest in the ideas of Dewey and the gradual integration of some of the key concepts associated with Steiner and Montessori. Reflection and Experience have become key words in the new thinking. Elsewhere teaching and learning strategies that draw on Steiner and Montessori's theories of play are also being taken seriously. The following section reviews some of the thinking and practice that has demonstrated ways in which multi-sensory experience can become a central component of progressive education.

Schon has confirmed the need for a 'learning culture' brings with it a need to change the way that society thinks about learning.' (Schon, 1967: 23) Weathaby argues "adults learning interests are embedded in their personal histories, in their visions of who they are in the world and what they can do and want to do." He argues, "learning methods that combine work and study theory and practice provide a more familiar and therefore more productive arena for learning." (Quoted: Kolb, 1983: 6)

Contemporary scientific research confirms that: "The four aspects of our nature (physical, mental, emotional, spiritual) can be developed..." (Pines, 1995: 4) But the question arises of how, and where they will be taught, my research suggest the following characteristics of learning opportunity in the UK:

- Learning is still dominated by theories of stage development so that multi-sensory experiential learning is largely restricted to very young children.
- Learning is increasingly dominated by economic considerations and a government led drive for efficiency of delivery, coupled with a requirement for demonstrable results
- The goals of education are still largely focused on concepts of work as a rational problem solving activity that requires the development of useful skills that are led by mathematics and scientific method
- Higher education is still dominated by mono-discipline study
- Innovation in education is a very slow process that require approval by groups, or individuals who use precedent based evaluation to dominate decision making resulting in the 'catch twenty two' of not being able to do something until it has been done

- Computer based learning is seen as economical and efficient and takes students further away from contact with multi-sensory experience while stressing the techno-rationalist hegemony
- Teaching and learning are regarded, almost without exception, as dependent on visual-audio communication
- Lifelong learning is predicated on the acquisition of useful skills (typically meaning employable skills)
- Education is still dominated by facts and the need to learn them
- Education is still concerned with a disembodied approach to teaching and learning
- Education still sees non-rational pursuits, particularly those where multi-sensory engagement is to the fore, as remedial, leisure, or politically[55] related

Conclusions

The dependence on, and misinterpretation of classical sources is beginning to be identified as a source of much of the resistance that is now part of an embedded set of cultural values. Reinforcing the limitations of the typical scope of lab enquiry Lane and Nadel confirm that one of the principle reasons why emotions have been studied separately from cognition is due to Aristotle who "divided the mind into three functions: cognition, emotion and conation (or will)." Their review of contemporary scientific research leads them to conclude that:

- "Emotion involves cognitive appraisals
- Emotion may involve awareness of or attention to emotional experience
- Emotion and cognition may involve overlapping response systems
- Emotion can guide, influence, or constrain cognition
- Some of the most productive methods for studying emotion are those shared with neuroscience." (Lane, 2002: 3-4)

Solomon confirms that, "Aristotle had little to say of 'feeling,' presumably not because the Greeks were anaesthetic, but rather because what we (inconsistently) call 'affect' and inner sensation had little interest for them and played no significant role in their language or their psychology." (Robert C Solomon) quoted in (Lewis, 2004: 5) Solomon suggests that Descartes can be proved wrong on this score: "What can be seen, heard, touched, measured with various instruments, and observed by means of different senses and by different observers to undergo the same constancies and changes must indeed be objective if anything is." (Solomon, 2004: 69)

Lack of agreement among more contemporary champions of the importance of embodied intelligence displays the huge task of interpretation that still lies ahead. Comparing the three examples below offers insight into a potential for confusion, and/or delay in acceptance:

- Gendlin writes: "A 'felt' sense is not an emotion (it is) something at first you do not recognize; it is vague and murky. It feels meaningful but is not known, it is a body-sense of meaning." (Gendlin, 1982: 165)

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55 See reference to Marx below

- Hall writes: "Texture is apprised and appreciated almost entirely by touch, even when it is visually represented. With few exceptions...it is the memory of tactile experiences that enables us to appreciate texture." (Hall, 1990: 62)
- Gardner writes: "An individual with a strong musical bent might best be introduced to programming by attempting to program a simple musical piece (or to master a program that composes). An individual with strong spatial abilities might be initiated through some form of computer graphics -- and might be aided in the task of programming through the use of a flowchart or some other spatial diagram." (Gardener, 1983:390)

Unlike Dewey (1997), Hall (1966), Gendlin (1997), or Jordan, (2002) Gardener does not seem to notice the high level of haptic skill involved in the task that he is performing. Like a scientist he does not evaluate the wider issues including the design of the interface, the environment in which the activity takes place, the role of acoustic presence, rhythm, and other facets of the engagement experience, all of which benefit from educating and display degrees of intelligence.

On balance Gardener seems to have opened the door to concepts of intelligence that include sensory characteristics while not fully recognizing opportunity for 'gestalt.' But they could result in:

- The creation of curricular that acknowledged bodily intelligence
- The need to rethink the teaching and learning environment
- A more open-ended approach to the dominant assumption that learning is dependent on particular windows of susceptibility and ability leading to opportunities for a more organic learning journey.

Phonetic language is clearly deeply embedded in Western culture and can provide support for multi-sensory potential. Evidence words can provide a conduit to the sensory character of experience is provided by Kristeva in her analysis of 'Swann's Way,' "...this is the exploration of memory, with the 'I' unfolding ideas and images, recalling flavours, smells, touches, resonances, sensations, jealousies, exasperations, grief's and joys-if it succeeds in articulating them....Proust goes further and puts into words a category of 'felt time' which cuts through the categories of metaphysics, bringing together opposites like idea, duration and space, on the one hand, and force, perception, emotion and desire on the other." (Kristeva, 1993: 6-7)

The self-referential and self-reinforcing nature of culture represents a significant barrier to change: "People develop different sensory modalities either by temperament or training. Many people, whose talents and livelihood depend on what is written, live in a paper world and take in very little else." (Hall, 1976:175) Bringing together contemporary theory on the senses and educational practices that promote or deny multi-sensory opportunity has helped to confirm a number of ways in which change opportunity is denied:

- Science is still dominated by a tendency to try and divide and rule the senses
- Scientific research into the senses is still predicated on assumptions about usefulness that are constructed from traditional concepts of intelligence
- Education is still dominated by traditional assumptions rational intelligence
- Education is still dominated by the concern to educate an ability to understand and express rational propositions

- Education is still dominated by a concern to equip its students to contribute to the dominant and traditional need of capitalism
- Traditional definitions of the senses that have evolved through religious and scientific dismissal of animalistic tendencies as examples of primitive (underdeveloped) behaviour still dominate Western perceptions of the non-visual senses

Although "thinking in the usual way alone" as Gendlin argues "when put in touch with what the body already knows and lives it become vastly more powerful. There is a new method here, not only for personal concerns but also for theory and science. Logical thinking stays within whatever 'conceptual boxes' it starts with. It has only the different, competing interpretations, assumptions, viewpoints and one must stay within one of these." (Gendlin, 1982: 165-166) Eagleton identifies the diminishing returns of the perpetuation of the rational method in an educational system that is attempting to confront the need to prepare its students for a perpetually changing world. He writes: "Nothing could be more disabling than a ruling rationality which can know nothing beyond its own concepts forbidden from enquiring into the very stuff of passion and perception." (Eagleton, 1990: 15) Eagleton makes it very clear that he believes that "any political order (that) does not address itself to this most tangible area of the 'lived', of everything that belongs to a societies somatic, sensational life...' is doomed to failure because, 'this realm is impenetrably opaque to reason." (Eagleton, 1990: 1-2) This point is reinforced by Taussig "Like Adorno and Benjamin...my concern is to reinstate in and against the myth of the Enlightenment, with its universal, context free reason, not merely the resistance of the concrete particular to abstraction, but what I deem crucial to thought that moves and moves us – namely its sensuousness, its mimeticity." (Taussig, 1992)

British Politics has long favoured the adoption of efficiency models gleaned for industry as a solution for everything from housing to health care. It is clear that the current labour government (2007) has little interest in strategies of learning and doing that do not conform to a measurable quotient. The May 2005 election was fought largely on the basis of each of the main party promising delivery on tangible targets. Closer analysis of the overall strategy for re-election confirms a clear alliance between the world of politics and the world of business. Both sectors are looking for short-term improvement in the efficiency of the delivery of tangible (measurable) enhancement. The promise to consumers is faster access to essentials.
This said the recent example of innovation in the form of a revision of government policy on school meals due to media pressure from the campaign headed by television chef and food entrepreneur Jamie Oliver' offers a telling example of how change occurs and what it actually leads to. While their concern is informed by a simple economic truth that has already begun to be taken seriously in America, namely that preventive strategies are cheaper than post crisis cures.[56] On the other hand what has been described as the "Jamie Factor" has influenced a change in sourcing and preparation strategies for School Dinners that puts an emphasis on fresh ingredients that are cooked on the premises. As a result of the public awareness and media interest caused by Jamie Oliver's series on school dinners (Channel 4, May 2005) "The government promised to spend £280m over two years improving school meals (and) set up an advisory group to consider what else the government should be doing, including the introduction

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56 'In 2000, nearly 5 million U.S. adults were considered morbidly obese, bringing health-care spending associated with excess body weight to more than $11 billion for that year'. (Scott, 2005)

of minimum nutritional guidelines." (Curtis 2005) Curtis confirmed "there has been no commitment yet to ban junk food advertising to children." A second series aired in September 2006 achieved more investment but has also clarified resistance to Oliver's strategy that confirms the cultural values identified throughout this thesis:

- Parents protest for the rights of their children to eat what they like
- Opposition politicians attacks on the 'nanny state'
- Lack of staff who are capable of preparing the recipes
- Lack of catering equipment in schools
- The tight financial margin of creating fresh food on the budget that the new investment allows

Oliver's campaign has revealed worrying evidence that can be summarized as:

- Rapid change requires high profile 'celebrity' intervention
- Innovation always produces a backlash
- Backlash is typically informed by perceived threat to traditional values
- Apart from the human rights issues change is confronted by resistance inspired by addictive additives that make the comparison between fresh food and processed food one that is about a loss of synthetic chemical, texture and salt and fat dependency
- The need to trim costs has led Oliver to recommend purchasing direct from wholesalers which means that the raw ingredients are a product of agri-business
- The separation of food from the curriculum

These reservations aside Oliver's campaign is rare example of a degree of multi-sensory engagement having a positive affect on government policy even if the scheme has failed to address the core problem of re-educating value. The lessons that can be learned from this example are mainly negative but do usefully expose the depth of resistance to a strategy for promoting multi-sensory opportunity in education, or elsewhere. Some of the key issues are summarised below:

- Subject, or activity isolation restricts involvement from other disciplines that might be able to inform knowledge and strategy
- Resistance to change is led equally by techno- economic concerns about cost and efficiency, and subjective and conditioned values
- Aesthetic education is almost entirely absent from the curriculum
- Synthetic values are 'seen' and 'tasted' as superior to natural ones
- Cost is paramount in all decisions
- Risk concern gives very short and tentative window for change to succeed

Simon's offers a distinction between the natural and the artificial: "We have now identified four indications that distinguish the artificial from the natural:

- Artificial things are synthesized (though not always or usually with full forethought) by human beings

- Artificial things may imitate appearances in natural things, while lacking in one or many respects, the reality of the latter
- Artificial things can be characterized in terms of function, goals, adaptation
- Artificial things are often discussed, particularly when they are being designed, in terms of imperatives as well as descriptives." (Simon, 1996: 5)

Reducing contemporary education to its economic basis makes the obsession with subjects that can be learnt by rote, and thus assessed, perfectly logical, genres of art and design are given little priority. Food like the creative exploration of the senses in general is not accorded a serious learning role thus marginalizing the role it could play in developing new sensitivities and awareness. Medical care shares a similar prioritization in which emphasis on cutting waiting time for operations outstrips investment in non-conventional care. Schools and hospitals thus become supermarkets in which the predictable is served with maximum speed and maximum efficiency. Improvement of the system dominates the agenda and thus the system receives maximum investment at the expense of the search for alternatives.

One of the problems of change is the dominance of what Friere describes the 'banking' concept of education, which prevails despite numerous calls for the need to invest in 'creativity.' He highlights the "act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating the teacher issues communiqués which the students patiently receive and memorize, and repeat." He maintains that "creativity, transformation and knowledge' are lost in this 'misguided method' because 'knowledge emerges only through invention and reinvention." (Friere, 1974: 58)

Kabat-Zinn identifies the underlying ideology of understanding "the world only by the intellect (when we could) we apprehend it just as much through feeling." He quotes Proust: "The true journey of discovery consists not in seeking new landscapes but in having fresh eyes...If we wish to experience life fully, we will need to train ourselves to see through and behind the appearance of things. We will need to cultivate intimacy with the stream of our own thinking, which colours everything in the sensory domain." (Kabat-Zinn, 2005: 196)

Chapter Six: The Economic Context of Multi-Sensory Marginalization

'Measure and commensurability are everywhere identified with beauty and excellence' (Plato) Francis Amala Walker argued that 'economists tend to be a bad odour amongst real people (because they disregard) the customs and beliefs that tie the individual to their occupations and locations and lead them to act in ways contrary to the predictions of economic theory.' (Walker, 1879, quoted Frank, 2004: 155)

Introduction

Where previous chapters have highlighted the ways in which our deeper, more multi-sensory needs are repressed by the rationalizing influences of philosophy and science this chapter focuses on ways in which the schism between mind and body informed the dominant economic context of production and consumption. I introduce evidence of the potential for the mainstream model of capitalism to implicitly and explicitly impose sensory limitations on the production and consumption of food and its mediation through design. I highlight evidence that mainstream capitalism has encouraged Corporate food business to adopt many of the same drivers that have led to multi-sensory suppression in other spheres.

I confirm that the economic theories and practices that we currently accept as a mainstream solution are not the only model. I introduce other economic models from history (Physiocratic), individuals like Schumacher and organizations like the 'New Economics Foundation' that suggest alternative strategies for political, business and consumer practice. I propose that there are opportunities to question and move beyond the dominant definitions of income, efficiency, wealth, profit, success and progress. I argue that alternative motivations could include quality of life, sustainability and other possible measures that are less dependent on efficiency driven concepts of progress.

Economic Measures

The design historian, Stephen Bailey, quotes J K Galbraith on the relationship between design, consumption and the economy: "As living standards rise – as man multiplies the goods he consumes and the artifacts with which he surrounds himself – we are entitled to believe, or at least hope, that quantitative measurements give way to qualitative ones." (Quoted: Bailey, 1986: 17) Bailey and others argue that"^Economists rarely analyze, still less judge, the origins of taste." (Bailey, 1986: 17) (Douglas, 1996)

While it is true that economists tend to stress objective evidence: "At any given time...an economy's total output is determined by the quantity of the production factors employed." (Cameron, 2002: 10) it is also true, as Dewey acknowledges, that economists can take account of "psychological factors to achieve a 'a study of certain ways of experiencing, such as incentives, desires, fatigue, monotony, habit, waste-motions, insecurity, prestige, team-work, fashion, esprit de corps, and a multitude of like factors..." (Dewey, 1958: 237)
There is an interesting history of 'subjective economics' in which taste and value are given primacy but the point that Bailey makes relates to the tendency for economics to be used and perceived as an example of instrumental rationalization. (Gordon 2006) As Henrich, puts it: "practicing economists generally assume that people's preferences are 'self-regarding' and 'outcome orientated'...people want stuff for themselves, and care only about their personal costs in getting what they want." (Henrich, 2004: 28) Freidman also explains how design figures in economic calculation: "Value, at least in how economists use the term, is observed in

choice...real people...make trade-offs between life and value...My desire for pounds of food is already satiated...but my desire for quality of food...would remain even at a much higher income...value is value to us, revealed not by words but by actions. Economists call this the principle of 'revealed preference." (Freidman, 1997: 14-16) Aaker's account of 'brand equity' as "a set of assets such as name awareness, loyal customers, perceived associations (e.g. being 'pure' and 'it floats') that are linked to the brand (its name and symbol) and add (or subtract) value to the product or service being offered," also links design to perception of value. (Aaker, 1991: 4) In a free market brands play an important role in "the science of competing preferences." (Landsburg, 2006: 224)

Economic theory and practical endeavor has led to the adoption, throughout most of world, of a system of economics that has the general title of capitalism. This system makes the principle of free enterprise its priority. There is an underlying belief that free enterprise offers equal opportunity, so it is quite possible to have lots of different kinds of businesses, and economic conditions, existing under the broad label, capitalism. This study explores businesses that vary widely in scale and purpose, on the one side there is a corporate retail business like Wal-Mart with "sales of $300 billion a year...revenues larger than Switzerland." (Litchenstein, 2006: 3), on the other La Fromagerie, a small London Slow Food business with a turnover that manages to maintain the business "permanently on the edge of survival." (Michelson, 2006) Yet both types of business are representative of the capitalist system. Size and scale of economic activity do not necessarily make a difference in commitment to, or understanding of, multi-sensory needs.

The origins of economics lies in the core of ideas and practices that evolved in ancient Greece and continue to have such a significant influence on our contemporary tastes. Much like the businesses and governments that it serves economics is concerned with what Adorno and Horkheimer proposed as instrumental rationalism. (Finlayson, 2001) Aristotle proposed a link between economics, responsibility and ethical dimension (Small, 2005: 8) But as Levitt puts it: "Morality, it could be argued, represents the way that people would like the world to work – whereas economics represents how it actually does work." (Levitt, 2005: 13) Like other tools of the rationalism that was developed through the filter of the Enlightenment the economist's technique the implicit and explicit dissociation of emotional rapport through the of impersonal calculation mathematics. As Dewey pointed out: "mathematical symbols have least connection with distinctively human situations and consequences' Concluding that freedom from aesthetic and moral significance, is a necessary part of the technique." (Dewey, 1958: 192)

Operating outside of morality, the economic system seems to offer business legitimization to reduce experience to the minimum level to which consumers still feel they are receiving value for money. For the food industry economics has encouraged the development of artificial solutions to human need simply because that is what makes the most profit. The normalizing tendency of instrumental rationalism applies as much to capitalism as it does to the 'communicative rationality' that it feeds. John Mackey, CEO of 'Whole Foods Markets, `libertarian,' and, for some a hero of a new approach to ethical business, is as clear in his commitment to capitalist principles as any other corporate CEO: "Management has a fiduciary responsibility to maximize shareholder value; therefore any activities that don't maximize shareholder value are violations of that duty." (Mackey 2005)

Roots: Pre-Industrial Economies: Was the economy more supportive of multi-sensory opportunity before industrialization?

There is evidence to suggest that the earliest human civilizations had some form of economic theory and practice which has grown out of the need to manage and extend resources through trade (Cameron 2002) Economic theory and practice seems to have evolved from basic domestic management needs, our contemporary use of the word economics derives from the Old French word 'economie,' meaning 'management of a household,' which in turn derives from ancient Greek and Latin origins. 'Economics is a word made up from two Greek words 'oikos' and 'nomos'. The first means a household, though in ancient times this referred to something somewhat more extensive than the modern household, so that it could signify a large estate or even a village. The second had the meaning of a distribution or management, being derived from 'nemein,' to distribute, manage.' (Boland, 1997) The first recorded example of economic theory is credited to the Greek philosopher Xenophon, who published his theories 'Oeconomicus' (460 BC, approx). Interestingly Xenophon linked the effective and efficient economic management of the home to the farm. Aristotle took the subject of economics seriously, arguing that an economy derives from the need to manage, at an individual level, the use of wealth.

Over the centuries, trade, protectionism, and status agendas, as well as the need to regulate "the factors of production (land labor, and capital)," all became important sources of need and influence on economic theory and practice. "Economic structure...deals with the relationships between the various sectors of the economy (the) primary in which products are obtained directly from nature (the) secondary in which the products of nature are transformed, or processed (and) tertiary (which) deals with services." (Cameron, 2002: 14)

Creating currency and commodities with which to trade required the application of various techniques and skills that we would now label with the broad term 'design' which abstracted the terms of exchange into learnt symbolism, this can be found in early, as well as contemporary examples of pre-industrial cultures. (Levi-Strauss 1995, Greenspan and Shanker 2004, Howes 2005) Design became an economic tool through its ability to shape raw materials into forms that were perceived as desirable in, and outside of the immediate culture. (Wallerstein 1980, Cameron & Neal 2002, Hodgson 1998, Mokyr 1992, Mises & Reisman 1996)

In Europe the essential differences between a pre-industrial economy and our contemporary economy centered around the fact that "the main ways to gain wealth were to take it away from someone else, or force someone else...to create wealth and turn it over to their masters." (Moore, 1998: 2-3)

The Development of an Enlightened Economy

The enlightenment offered a major spur to the development of the final phase of the pre-industrial economy in Europe and North America. "Before 1500, Europe imported ideas and techniques; after 1500, Europeans were cultural creditors..." (Rice, 1994: 1) The techno-determinist position of Bacon and the mind machine concept of personal responsibility provided by Descartes, provided philosophical and practical support for of a shift from State, or Religious control, to one of cooperation between individual enterprise and democratic governance. As Grenz suggests: "the Enlightenment program of discovery is purely objective, free of the pre-modern dependency on myths and stories to explain the world. The moderns believed that they were able to see the world as it really is" (Grenz, 1996: 44).

Land as an Economic Unit

Food production and/or consumption typically played a major role in creating and determining measure of wealth in a pre-industrial economy. "Land and its products provided both the structure of the social system and the bulk of the wealth that kept it in being and provided the opportunities for social change.' (Black, 1999: 26) Kimbrell confirms 'there was a fundamental difference between industrialism and agrarianism: whereas industrialism is a way of thought based on monetary capital and technology, agrarianism is a way of thought based on land." (Kimbrell, 2002: 8)

In the UK the Enclosure movement demonstrated the potential of treating land, and the labour force associated with it, as sources of income and thus acted as important evidence, ideology, process, and investment income for the first phases of the industrialized economy. "Primitive accumulation cut through traditional life ways like scissors. The first blade served to undermine the ability of people to provide for themselves. The other blade was system of stern measures required to keep people from finding alternative survival strategies outside of the wage system." (Perelman, 2000: 14)

In France the significance of the land as a source of wealth led to its adoption as the basis of an economic theory in which it was proposed as a measure of wealth. Physiocratic economic theory (c 1650's - 1800) advocated taxing landowners and proposed that agriculture gave the most reliable measure of a Nation's economy by providing evidence of tangible surplus in the form that was not needed by that country to survive. Adam Smith acknowledged their influence in defining economic theory against real measures of productive output, rather than illusory mass-produced benchmarks. (Smith, 2003)

Agriculture was also important for the Dutch who did much to apply enlightenment rationalism to technological innovation. "The invention of the wind-driven, water pumping mill, together with massive capital investment, suddenly accelerated the tempo of reclamation...largely financed by syndicates of urban capitalists" This had the impact of demonstrating the power and potential of organized capital investment to make "a huge killing." (Schama, 1997: 38-39) The Dutch failed to fully capitalize on their strategic management and entrepreneurial flair but they helped to promote the expansion of trade on a global basis and were an important conduit for the influence of Protestant belief and its impact on economic thought and progress in North America in particular.

As Cameron and Neal suggest: "The economic policies of nation states in the period of Europe's second logistic (circa 1600's) had a dual purpose: to build up economic power to strengthen the state and to use the power of the state to promote economic growth and enrich the nation." (Cameron, 2002: 128) Mercantilism made a significant contribution to the development of the modern economy and helps to explain the origins of global strategy and corporate growth as business and political strategy. The rise of the merchant was the most significant force in the development of the modern economy in the pore-industrial period and led to a particular brand of economic theory known as 'Mercantilist'.

Trade

The precedents established during the mercantilist era played an important role for the development of capitalism, providing evidence of how to trade and invest on a large scale, and how not to. (Smith 1775) Mercantilism had many of the characteristics of Capitalism, including, corporate structure but it also relied on government intervention and protection, and thus did

not trade in a free market. (Fulcher 2006) Mercantilist theory was important as a negative and positive catalyst for subsequent economic theory, including the neo-classical, or neo-liberal theories that currently inform global and national economic policy for the worlds leading economies[57]. The importance of 'Mercantilism' is centred on five particular characteristics:

- It was led by business interests
- It encouraged state intervention in economics
- It was protectionist and favoured exports over imports
- It attempted to define a nations wealth by its business/trading resources
- It used gold (bullion) as a standard and demonstrable measure of that wealth

Colonialism, became a characteristic of Mercantilist practice and proved a major spur for economic change and development and the emergence/reinforcement of all kinds of prejudices against cultures that did not share the same priorities of time and efficiency and financial accumulation that drove the colonialists: "The transplantation of European Culture, together with the modification and occasional extinction of non-Western cultures, were the most dramatic aspects of the expansion of Europe." (Cameron, 2002: 105) They point out that: "Expansion also produced feedback." Rice confirms: "Europe acquired (power over other cultures) and exercised, along with political and economic predominance, technical and scientific leadership." (Rice, 1994: 1)

The Impact of the Pre-Industrial Economy on Sensory Opportunity

It is clear that the post-enlightenment tendency to use economic value as the primary measure of the quality of a given experience encouraged the proliferation of rational strategy which suppressed multi-sensory opportunities in every sphere of life: "Once the economists had unfolded their patterns before the eyes of their generation, the pauper, and the speculator, the green grocer and the mob were no longer incongruous actors inexplicably thrown together on a stage; but each was understood to play a role...When the economists were done, what had been only a humdrum, or chaotic world, became an ordered society with a meaningful life history of its own." (Heilbroner, 1999: 16)

Cameron and Neal argue that Mercantilism lead to 'The Price Revolution' in which the relationship between prices and wages became a matter of major concern, forcing, or encouraging governments to seek out ways of managing, or controlling that relationship. They also highlight the introduction of new commodities as an influence on global and expansionist business strategy, citing "a great increase in the volume and variety of goods traded.' These included: Coffee, tea, and cocoa cotton and sugar. They point to Chinese porcelain, along with cotton as sources 'of...Europe's largest industries.' Tobacco, tropical fruits, nuts, furs, hides, exotic woods and new fibers along with potatoes, tomatoes, sting beans, squash, red peppers,

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57 "The art of economics consists in looking not merely at the immediate but at the longer term effects of any act or policy; it consists in tracing the consequences of that policy not merely for one group but for all groups...the central sophism of the "new" economics, is to concentrate on the short-run effects of policies on special groups and to ignore or belittle the long-run effects on the community as a whole. The "new economists flatter themselves that is...almost a revolutionary advance over the methods of the classical...economists...Their methods and conclusions are often profoundly reactionary. They are often surprised to find themselves in accord with seventeenth century mercantilism." (Hazlitt, 1988: 17-18)

pumpkins, corn, domestic turkeys and rice revolutionized the European diet and helped to expand food as major business opportunity." (Cameron, 2002: 105)

Mercantilism also marks a point at which access to new types of food, ritual, and materialism increases and changes the way in which the population of trading countries begin to think about value. (Bailey 1986, Howes 1992) The evolution of capitalism had a dramatic impact on the livelihood and lifestyles of the majority of the UK population. Our contemporary infatuation with novelty is partly a bi-product of cultural memory. The conditions that Western populations now enjoy evolved from the kind of hardships writers like Engels and Dickens reacted to in the nineteenth Century. History provides clear evidence that a long-term process of coercion rather than seduction provided the human and natural resources in which capitalist enterprise is rooted. This memory is currently reinforced by each new generation of immigrants who arrive in more prosperous countries and have to engage at a basic need level at the bottom of the economic strata before they start to compete for the most obvious signifiers of material prosperity and self actualization.

As Hazlitt confirms the early phases of capitalism did not bring about wide spread prosperity, the system distributed wealth very unequally and created horrendous working conditions. The impact of technology during the first phase of the industrial revolution could lead to disastrous consequences for traditional craft workers, resulting in mass unemployment and starvation: "For example...the English stocking knitters suffered real tragedies." (Hazlitt, 1988: 50) The Reformation's concern with hard work, frugality and diligence also played an important role in the development of a new consciousness among workers and their employers. While earlier economic systems had invested surplus to create religious and dynastic monuments capitalism used the excess of production over consumption to enlarge productive capacity. (Webber, 2002, 1905, Durkheim, 1995, 1912)

Sensory Censorship

The emergence of a secular economy tended to associate wealth with evidence of loose behavior. In Holland, for example increased prosperity led to conspicuous consumption and indulgence that concerned not only the Protestants but also the ruling powers. This informed attempts to rationalize celebrations and festivities and this marked an important diminishment of sensory opportunity. Linking the economy to pleasure can be argued to be the point at which sensorial pleasure is defined as a threat to efficiency. Festivals and celebrations were typically constructed around sensorial relationships between the ingredients that would normally include a mix that ranged from the acoustic resonance of verse recital to the aroma of tobacco.[58]

Black points out that superstition and pagan habits of making offerings to fairies and other representations of good and evil had carried on, despite the strangle hold of Christianity and secularism. He argues that at "all levels of society, there was a widespread wish to understand the hostile environment and to cope with the fears that it inspired and the unpredictable gamble that was life." (Black, 1999: 22) One of the major sources of the festivals

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58 "Dr Tulp and Burgermeester Bontemantel succeeded in pushing through Amsterdam's law against extravagant wedding feasts...yet it was the same Dr Tulp who was principle guest at a resplendent banquet on January 28th 1672...he was toasted in Burgundy...verses by Jan Six were read against a centerpiece of crystallized peacock...with scented tobacco circulating on dishes of the finest Ming blue ware."(Schama, 1997: 186)

and ritual traditions was time. Thirsk estimates that in the pre-industrial Europe about a third of the year was taken up with non-work related leisure activities. (Thirsk, 1967)

Schama argues "none of these popular festivals would have survived, except as rustic pastimes, had not the ruling caste been persuaded of their moral innocence, if not wholesomeness." (Schama, 1997: 184) Survival is a moot definition: "Although their standard of living may not have been particularly lavish, the people of pre-capitalistic northern Europe, like most traditional people, enjoyed a great deal of free time...about one–third of the working days, including Sundays were spent in leisure (but) the peasants till managed to produce a significant surplus" (Perelman, 2000: 17)

As Thirsk suggests co-operation and community came out of necessity and celebration: "common fields and pastures kept alive a vigorous co-operative spirit in the community, enclosures starved it...country people had to work together amicably, to agree crop rotations, stints of common pasture (etc) by pooling so many necessities of livelihood they were disciplined form early youth to submit to the rules and customs of the community." (Thirsk, 1967: 54)

The Alternative Viewpoint

Moore argues, pre-industrial life was full of strife and inequality. Attempts to manage the economy for example were often informed by a concern by the ruling classes to avoid riots and these typically failed because: "the enforcement of measures affecting prices and quality was in the hands of the guilds that produced the goods (mainly food). It was in the interest of the guilds to keep prices up and quality down." Moore dismisses the romantic view of the past arguing that: "the much praised 'organic' and 'cooperative' nature of mediaeval society...turns out to be a rather ramshackle fraud' (Moore, 1998: 16) Black supports Moore's reading: 'Despite the confidence of some in the possibility of human progress...the vast majority of the population lived in a precarious fashion, fearful of the future and possessing only limited aspirations." (Black, 1999: 25)

The Development of the Modern Economy:

In 1964, when post-second-world-war recovery had brought unprecedented economic and material gain to more people than at any other time in history, the Encyclopaedia Britannica offered the following definition of Capitalism: "A term used to denote the economic system that has been dominant in the western world since the break-up of feudalism. Fundamental to any system called capitalist are the relations between private owners of non-personal means of production (land, mines, industrial plants, etc., collectively known as capital) and free from capital-less workers, who sell their labour services to employers...the resulting wage bargains determine the proportion in which the total product of society will be shared between the class of labourers and the class of capitalist entrepreneurs... Productive use of the 'social surplus' was the special virtue that enables capitalism to outstrip all prior economic systems...those in command of the social surplus chose to invest in ships, warehouses, raw materials, finished goods and other forms of wealth, The social surplus was thus converted into enlarged productive capacity." (Encyclopaedia Britannica 1964, Vol 1V: 839-845)

Hawken offers a more contemporary, but critical definition:

- "Economic progress can best occur in free market systems of production and distribution where reinvested profits make labour and capital increasingly productive
- Competitive advantage is gained when bigger, more efficient plants manufacture more products for sale to expanding markets
- Growth in total output (GDP) maximises human well-being
- Any resource shortages that do occur will elicit the development of substitutes
- Concern for a healthy environment are important but must be balanced against the requirements of economic growth, if a high standard of living is to be maintained
- Free enterprise and market forces will allocate people and resources to their highest and best uses"

(Hawken, 2000: 6)

The development of a modern capitalist economy was the result of a push and pull effect in which industrialization, enclosure, and the expansion of international trade encouraged urban expansion and distribution, all of which required investment on a large scale. For example the UK textile industries, (which went a through a process of unprecedented expansion during the 16th to the 18th century) demonstrated the advantages of factory production and the push and pull between economic success, increase in scale of production and demand and technological innovation. (Evans 1985, Butt 1887, Hudson1989, Lempire 1992, MacLean 1999, Collins 2004) The development of the iron industry, metal stamping and the rise of the factory system in the potteries industry in the mid 18th century all offered examples of a new kind of entrepreneurial thinking that was to have a catalytic effect on the development of new technologies designed to increase and transport production. (Forty 1986, Hudson 1989, Zell 2004)

The modern economy brought important changes in the perceived status of the individual, which were influenced in turn by the shift from autocracies to democracy in a number of key western countries. This helped to encourage a notion of society that was based on the reconciliation of the right of the individual with the broader needs of society. The "general favorable macroeconomic conditions, and by the atmosphere of peace among the great powers" also played a role. (Frieden, 2006: 18)

Adam Smith was quick to recognize that efficiency of production was the key to making and sustaining a profitable return and this ambition depended on self interest: "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages." (Smith, 1994: 15)

It is clear that the initial phase of industrialization informed a new body of understanding of how a modern economy might work. The speculations and reactions of a number of important theorists substantially influenced the spread and direction of what was to become capitalism. It is argued that Locke, Hume, North, and Ricardo, Steuart, and Adam Smith, informed, or developed what has become known as Classical Economic theory as a reaction to Mercantilism. Levitt argues: "It was the human effect, the fact that economic forces were vastly changing the way a person thought and behaved..." (Levitt, 2005: 15) Recognizing the libertarian potential of this new economic force Smith, Ricardo and Steuart arguing for Laissez-faire approach to trade and business that was missing from the monopolistic character of Mercantilism. The market economy thesis that Smith outlined in the 'Wealth of Nations' argued that goods and their

consumption, population, and institutions were the real measure of a nation's wealth. (Rand 1986)[59]

Capitalism prompted responses that ranged from the excitement of Smith to the dismay of Rousseau.[60] Reactions tended to be informed by contextual evidence. In the UK, for example, Capitalism was far more than the activities of a small number of entrepreneurs and from its outset represented a new kind of coalition between business, financial services and government and religion. The rise of capitalism as an ideology ushered in a new level of abstraction to the definition of wealth, possession and income, at much the same time as it set about marginalizing, recuperating and synthesizing and commoditizing multi-sensory experience. For example the development of the gold standard was important for the development of capitalism in the UK, not least because it marks the difference between "the invisible hand" and "natural law" beliefs of Smith, Hume and others.

By 1877, capitalism was described as: "an economic system characterized by private or corporate ownership of capital goods, by investments that are determined by private decision, and by prices, production, and the distribution of goods that are determined mainly by competition in a free market." (Merriam-Webster's Collegiate Dictionary, 1877) A mix of critical banking, entrepreneurial and political initiatives defined the phenomenon of free-trade into a theory and practice which began to determine the development of economic strategy and its values. It was driven, and substantially managed by, UK based banking and finance interests, like the Rothschild's.[61]

Marx offered a significant and influential critique, which prompted a clearer definition of capitalism as an ideology. Marx foresaw the gradual replacement of natural measures of well being, like agriculture and craft making with the illusory experience that he believed was the outcome of a culture based on the promotion and acquisition of commodities. (Marx, 1976: 164) Marx anticipated how capitalism would develop that have a relevance to my study: The evolution of commodity fetishism[62] "that causes commodities to seem so mystical, so life-like, and so mysteriously impenetrable." (Marx, 1976: 165)

Marx proposes:

- That the fetishization of commodities causes the commodity, including money to make "the social relations between the individual workers... appear as relations between material objects, instead of revealing them plainly" (Marx, 1976: 168-169)
- Once mass produced commodities are accepted as expressions of labour "their sensuous (i.e. material) characteristics are extinguished... The concrete forms of labour that produced these objects can no longer be distinguished...reduced to the same kind of labour, human labour in the abstract." (Marx, 1976: 128)

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59 Smith anticipated some of the key tenets of contemporary 'Monetarism' by advocating monitoring and control mechanisms (based on balance of trade, money supply and interest rates) to manage the balance of payments.

60 Rousseau challenged the notion of science as a source of progress. Black writes "In his 'Discourse on the Sciences and the Arts' (1749) he claimed that science, technology and culture corrupted society, transforming self reliance into decadence, and that progress was an illusion" (Black, 1999: 480)

61 Frieden confirms the importance of the major financial dynasty, the Rothschilds in the promotion of the gold standard in the latter half of the nineteenth century: "Nathan Rothschild used his position (leader of the British and Continental financial community) to reinforce the three pillars of the golden age international economy: international finance (his own business), the gold standard, and free trade.'" (Frieden, 2006: 34)

62 The phenomenon in which consumers come "to regard goods as valuable in themselves and not (an to the extent that) they help the person." (Sen, 1999: 19)

- That the source of commodities would become increasingly "abstract'"while their "use-value" would be defined as one that was determined by appearance' (Sen, 1999, Marx, 1976, et al)

Marx placed "labour" at the centre of his economic and political theory. His thinking was informed by a desire to build a measure of economic scale that was related to human scale. Marx's focus on labour led him to sidestep, or marginalize other concrete measures of value including the natural resources that were shaped (or used as sources of power to shape) the kind of commodities that he denounced. The abstraction of wealth that informed the development of classical and neo-classical economic theory provided Marx and other critics with one of their primary objections to the segregation of the economy from tangible natural experience.

Marx saw industrialization as an artificial and subversive form of exploitation. And thus challenged the classical economists "natural law" theory. (Perelman, 2000: 158) Dividing the beneficiaries of the new economy as the exploiters (Those that profit from the use of labour to produce profit) to the exploited (those who labour for others) Marx argued that society was a natural state that was subverted and exploited by industrialization, echoing his contemporaries Ruskin and Carlyle, and influenced by Rousseau and Hegel.

The crash and the 'Great Depression' of the 1930s severely dented government and business confidence in the 'free market'. The recession informed the shift from the free market theories of the late nineteenth century towards the Keynesian strategy of macroeconomic management by governments and eventually the World Bank. Keynes argued, in his influential book 'The General Theory of Employment, Interest and Money', published in 1936, that it was "demand" that drove the overall economy. He argued that demand was affected "by a number of important variables – income distribution, uncertainty, the psychological habits of consumers, the 'animal spirits' of entrepreneurs, and government policies." (Pressman, 2001: 3) Despite critical backlash, the creation of Communist regimes in Russia and China and the Great Depression post the stock market crash of 1929 by 1939 capitalism had evolved into the dominant economic system for the majority of the Western world.

Post 1945

Zukin depicts a four-stage evolution of the American economy:

1) In the 1903s the government (along with others in the Western world) adopted the Keynesian theory that involved them spending rather than saving to effectively buy there way out of the recession. This would enable factories and other manufacturing systems (including agriculture) to continue to be competitive and spew out mass products at mass prices.
2) After 1945 a combination of new products and new aspirations fueled a shift to consumer spending
3) The 1960s brought increasing automation and international competition and outsourcing of manufacturing, which placed more emphasis on the service economy
4) Post the 1984 election of Reagan, a new spirit of entrepreneurship fueled more demand for consumer goods (Zukin, 2005: 184)

Keynesian 'Neo-Classical' theory gained prominence and provided the dominant economic strategy for the launch of post second world war economic growth. The USA emerged from the shake up caused by the war in a dominant economic and ideological position and proceeded to manage and facilitate economic growth for its allies, like Britain, and its former foes, like Germany, Italy and Japan. Evidence of the self conscious decision of the USA to perpetuate its strategic role through economic control after the war is evidenced in a memo George Kennan wrote in 1948, as the head of a State Department planning committee: "We have about 50 percent of the world's wealth but only 6.3 percent of its population. In this situation, we cannot fail to be the object of envy and resentment. Our real task in the coming period is to devise a pattern of relationships, which will permit us to maintain this position of disparity without positive detriment to our national security." (Manning, 2004)

Cameron and Neal cite a number of crucial factors in the development of post Second World-War 'recovery' led by USA know-how and finance but supported by Europe through "high levels of savings and investments." This led to Government participation in "economic life both directly and indirectly on a much larger scale (by) nationalized some basic industries...economic plans, and (provision of) social services." So Government's became the source of 'between one forth and one third of national income' (while) "Private enterprise was responsible for...the largest part of economic activity." Key European countries evolved economic growth through "high rates of (Europe's) literacy and specialized educational institutions...provided the skilled personnel and brainpower to make the new technology work."(Cameron, 2002: 370)

Neo-Liberalism

Keynesian economics tended to suffer during the 1970's when it became clear that the culture of economic intervention could favour groupings, like unions who did not seem to support the capitalist system. After a decade of strikes and economic stagnation a new set of political and economic leaders turned to a form of economic theory that was predicated on a return to the 'free market' that the economic malaise of the 30s called into question. Harvey cites Thatcher, Regan, Volker and Deng Xiaoping as the architects of various strategies that were intended to liberate power from both the state and the unions and locate it in the market. According to Harvey the theory of economics that became known as 'neo-liberalism,' "is in the first instance a theory of political economic practices that proposes that human well being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices. The state has to guarantee, for example, the quality and integrity of money. It must also set up those military, defence, police, legal structures and functions required to secure private property rights and to guarantee, by force if need be, the proper functioning of markets." (Harvey, 2005: 2)

Cameron and Neal define "Economic growth...as a sustained increase in the total growth of goods and services produced by a given society." They point out: "in recent decades this total output has been measured as gross domestic product (GDP), the total goods and service produced within the territory of a country...Growth in total output may occur either because the inputs of the factors of production (land labor, and capital) increase or because equivalent quantities of the input are being used more efficiently." (Cameron, 2002: 8) They confirm: "Gross Domestic Product (GDP) is an integral part of the UK national accounts and provides a

measure of the total economic activity in a region.' GDP is often referred to as one of the main 'summary indicators' of economic activity and references to 'growth in the economy' are quoting the growth in GDP during the latest quarter." (Published on 25 November 2005 at 9:30 am (www.statistics.gov.uk 25-11) As Cameron and Neal confirm: "At any given time...an economy's total output is determined by the quantity of the production factors employee." (Cameron, 2002: 10) The system that has been created is managed through the International Monetary Fund (IMF) and the World Bank, it favours the developed Nations of the West, America in particular.

Frieden charts the rise of the global economy arguing that it and the culture that it has spawned, "form a nearly seamless web in which national boundaries are increasingly irrelevant to trade, investment, finance, and other economic activity." He suggests three principal reasons for this:

1) The development of a global economy was stimulated by the concept of free trade and classical economic theory developed by Smith, Ricardo, Mill et al, and the mid 19th century concern to promote the gold standard. By the 1860 the UK had established itself as the 'worlds economic leader,' regulating there own and other nation's economies. (Frieden, 2006: 8, 32)
2) The progress of exports allowed certain countries to dominate cultural expectations, as early as 1900 an English observer was commenting on 'the Americanization of the world' (Frieden, 2006: 57)
3) Increasing international dependency on technology allowed nations who excelled in technological innovation, or application, dominate the world's markets and needs through manufacture, export and patent.

Alternative Ways of Calculating and Manifesting the Economy

Rethinking the economy has become a major topic of concern for a range of interest groups. Schumacher observations helped to inspire a new way of thinking about the negative impact of the economy that took account of its effect on the quality of human experience as well as economic sustainability. Schumacher illustrated the potential for misusing agriculture: "The crude materialist view sees agriculture as 'essentially directed towards food-production' a wider view sees agriculture as having to fulfil at least three tasks:

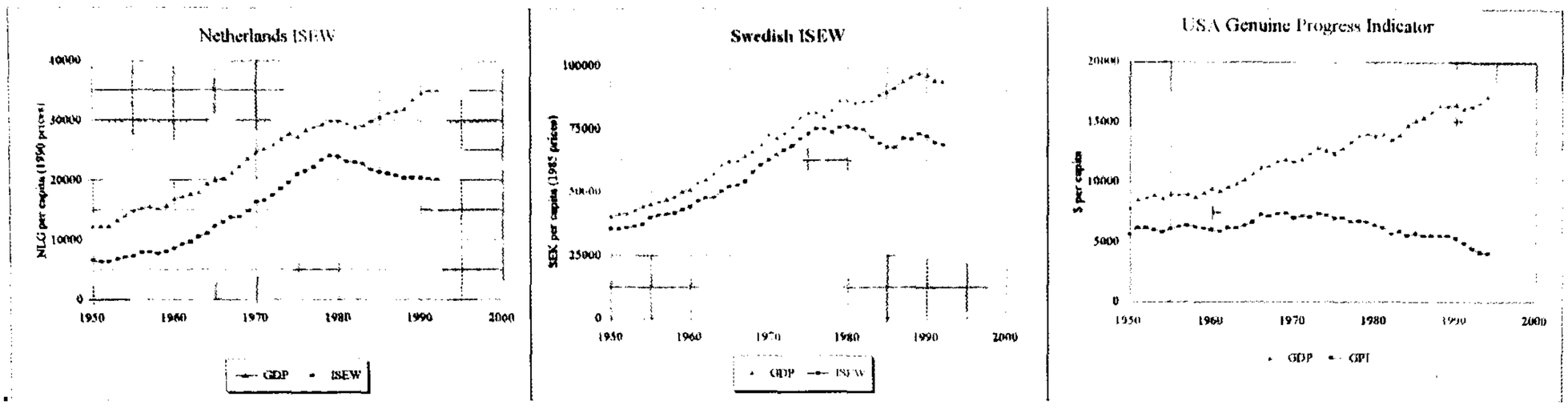
- To keep man in touch with living nature, of which he is and remains a highly vulnerable part
- To humanise and ennoble man's wider habitat
- To bring forth the foodstuffs and other materials which are needed for a becoming life."

(Schumacher, 1989: 119-120)

He confirmed, "Great Britain (1973) produces some sixty percent of its food requirements while only three percent of its working populations are working on farms' identifies the breakdown of rural culture: 'rural people are fleeing from the land; and urban people are fleeing from the cities." (Schumacher, 1989: 120-121)

Recent initiatives like the 'Index Of Sustainable Economic Welfare' (ISEW), promoted by Friends of the Earth and the New Economics Foundation represent an attempt to balance the negative impact of the GDP (Gross National Product) as the dominant measure of prosperity by drawing attention to the relationship between economics and natural capital: "The ISEW is one of the most advanced attempts to create an indicator of economic welfare. It is an attempt to

measure the portion of economic activity which delivers genuine increases in our quality of life." (www.neweconomics.org, 2005)



As Nash argues: "material economic growth is a strategy for living beyond planetary means--to the detriment of the poor in our time, future generations, and nonhuman species. This ideology assumes the practical indestructibility and inexhaustibility of the products and capacities of nature." (Nash, 1994) Even Joe Stiglitz, Senior Vice-President and Chief Economist of Development Economics at the World Bank is prepared to concede that the American led model for the global economy has its downsides: "It is recognized that there is more to living standards than is typically captured in GDP accounting. Improvements in education or health are not just means to an end of increased output, but are ends in themselves. Growth by itself does not ensure that the fruits will be equitably shared...the environment can no longer be taken for granted." (Stiglitz, 2000)

Economic theory and practice has become embedded in the day to day discourse of western culture: "In ordinary discourse the terms 'growth', 'development' and 'progress' are frequently used as though they were synonymous." (Cameron, 2002: 8) This has helped to normalize a way of thinking and doing that is profoundly unnatural. Critics of mainstream economic practice are increasingly promoting the case for what some call 'natural capitalism'. (Hawken, 2004) This is a call is for compromise and offers another way of creating responsible enterprise but it still calls for a radical change in our systems and values: "Virtually all the energy-using equipment now in use was designed using rules of thumb that are wrong. Asking different questions, much as the scientist Edwin Land did when he described inventions "as the sudden cessation of stupidity," can suggest areas to be targeted for innovation.' (Hawken, 2000: 64)

As Colborn puts it: "The journey to a different future must begin by defining the problem differently than we have until now...The task is not to find substitutes for chemicals that disrupt hormones, attack the ozone layer, or cause still undiscovered problems... The task that confront us over the next half century is one of re-design." (Colborn T, 1997: 264) Nattrass and Altomare echo the theme of design: "Today more and more people throughout the world are becoming concerned that the basic design of our industrial society is both faulty and inadequate...Our industrial economy, indeed and human economy is contained within and dependent on the natural world." (Nattrass, 1999: 2-3) Hawkins argues the best long-term environment for commerce is provided by true democratic systems of governance that are based on the needs of people rather than business. He proposes four types of capital that would enable an economy to function properly:

- "Human capital, in the form of labour and intelligence, culture, and organization
- Financial capital, consisting of cask, investments, and monetary instruments

- Manufactured capital, including infrastructure, machines, tools, and factories
- Natural capital, made up of resources, living systems and ecosystem services"

(Hawken, 2000: 4)

Supporters of capitalism like Frieden point to "the fact that only about one-tenth of the land area of the earth is under cultivation, the amount used for houses, roads, and the like is even less." (Freidman, 1997: 203) He argues in part this reflects the tendency for Capitalism to find its own level: In the late 19th and early 20th century "farmers in land rich countries were almost always free traders." Frieden confirms by the early twentieth century farming contributes a relatively small percentage of GNP even in countries that have rich land resources. (Frieden, 2006: 111) There is substantial and emerging evidence that capitalism is in a state of crisis but Marx acknowledged its resilience and remarkable adaptability. The alternative economic models that are beginning to emerge ranging from the co-operative to the barter system mainly seem to be revivals of earlier attempts to create more egalitarian systems that did not work. The failure of Communism towards the end of the twentieth century is perhaps the greatest indicator of the strength of the capitalist model. While China and Cuba continue to claim a communist principle both have, to a greater, or lesser extent, co-opted a market economy.

One of the logics of capitalism is that it makes for a one-world vision and as Schumacher argues "Centralisation is mainly an idea of order; decentralization, one of freedom." (Schumacher, 1989: Introduction) But nations, or religions like Islamic fundamentalism, which challenge the centralization thesis also provide reminders of the freedoms that capitalism does allow. The historical failure of alternatives, particularly communism has been informed by a failure to recognize the key characteristics of what makes capitalism so appealing as an economic system. Conventional advocates of capitalism tend to concentrate on three qualities to demonstrate its advantages:

- Tangible gains in efficiency
- Tangible gains in the material quality of life
- Tangible evidence of social opportunity

Design and the food chain face a major challenge of redefining 'more-for-less' concept of economic progress in ways that still enable individuals to act in self-interested way, while protecting the collective future. In the twenty first century the relationship between home (micro) and global economics (macro) has clearly not changed very much since the concept was evolved during the classical age. What has changed, and seems destined to continue to grow is the power of business. Business had moved from the microeconomic to the macroeconomic power level. The reasons for this shift are three fold:

- Business is adroit at managing the laws of supply and demand
- Business is skilled in manipulating public opinion
- Business is able to determine the size of its population

Business does not appear to be taking a responsible position in relation to the health of humans and other species. Business has already created an economic time bomb that must eventually call into question the dominant economic model. Design has some other opportunities, which include.

- Making alternative choices more accessible to the mass

- Designing alternative scenarios
- Re-designing efficiency
- Re-designing value.

Gilman asserts that the conventional view of capitalism began with three factors of production: land, labour, and manufactured capital. He argues that there is now a need for a more comprehensive recognition of the sources of wealth and drawing on Ekins he lists five:

- "(EC) Environmental Capital: representing anything that humans and other species need to survive on earth from land to oxygen and sunlight
- (HC) Human Capital: Quoting Ekins he suggests 'Human capital has three components: health, knowledge and skills and motivation.'
- (SOC) Social and Organizational Capital: Gilman argues that this is typically left out of the mainstream audit and reflects anything from traditions to rituals that represent the 'software that enables societies and organizations to function
- (MC) Manufactured Capital: the classic form of capital that Gilman argues has finite ability to grow based on the failure to reinvest appropriately in Environmental capital
- (CC) Credit Capital: Gilman points out that the origins of capitalism did not in clued services in the now conventional 'goods and services' description. He argues that the intangible nature of services creates a debt that is about 'the extravagance of the present."

Gilman argues that the conventional economy is way too simplistic and fails to account for the negative discourse between the process that ultimately begins and ends with environmental capital. He uses food to illustrate how the complexity of the process needs to be recognized if we are to gain an understanding of the real implications of the economic system that we live with: "Investment and Consumption are not distinct categories, but can be different aspects of the same activity. Consider eating. Let's assume that the food is classified as EC (although some foods are more accurately MC). The most obvious aspect of eating is the consumption of this food (output from EC) as an investment in health and motivation (input to HC). In addition, if the eating is done in a building, at a table, using dishes and silverware, these forms of MC will support the activity (output from MC) and may undergo some wear and tear (output from MC, input to EC). The peace and quiet (or lack thereof) surrounding the meal will be greatly influenced by various social norms (output from SOC), and the interaction during the meal may affect the interpersonal relationships of those present (input to SOC). Air quality (output from EC) will also affect the quality of the experience. On top of all this, there may be some transfers of money (CC) involved. Now tell me, was that meal an investment or was it consumption?" (Gilman, 1992: 52)

Redesigning the Economy

Alternatives to mainstream practice continue to ignore the fundamental problem of 'social and organizational capital' and the seductive potential of design and marketing. How people have been taught to behave has one of the most significant effects on how individuals and

societies understand the value of what they consume.[63] Complex traditions and rituals of growing, preparing, consuming and disposing have been eradicated, or simplified in order to make it more efficient for corporations to make a profit out of what they replace them with.

Whybrow makes a convincing argument that food production and consumption (pre the 1950's) informed a civilising relationship between the rational and the instinctual mind.[64] He argues corporate greed has contributing to the breakdown of the national and domestic economies of social and organizational capital of American society (and the rest of the developed world) because it taps into the instinctual mind. (Whybrow, 2005) There is wealth of evidence in marketing history that confirms that consumers have been taught to value consumer processed food, and ready meals. "After 1945, the US agencies built on a series of innovations in market research and advertising techniques to dominate the world's advertising ...agencies 'globalized' aspects of US management practice (and) spread US lifestyle. In the UK, US breakfast cereal companies (e.g. Kellogs) spent large sums on market research and advertising services (to) decimate traditional British, and later other, breakfast habits of oatmeal, kippers, eggs and sausage, and such in favour of US-style cereal consumption" (Chandler, 2005: 92)

This campaign offers proof of the ways in which the co-ordination of design and marketing can shift cultural traditions in favour of ones that are convenient for corporate business strategy[65]. It is because of design and marketing that the majority of consumers now prefer to buy pre-prepared meals rather than prepare food from source. In other words consumer values were adjusted to suit the dominant model of economics. (Marchand, 1986, de Grazia 2005)

Design, Food, Economy and Personal Prosperity

There is a close relationship between design and the economy that can be summarised as:

- Design as source of the aesthetic skill that transforms raw materials into symbolic value
- Design conceives of/or refines the machines that resource, produce, and distribute commodities
- Design as source of the aesthetic skills that market commodities in ways that make them desirable and valuable
- Design as source of the aesthetic skills that shapes the environments in which commodities are consumer or experienced

The way that the word 'design' tends to be used in western economic and social culture refers to what is effectively a process of economic problem identification and economic problem solving. Like so many of the issues that this study address the connection between design and the economy can be traced back to the ancient Greeks. For example Plato applied logic and

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63 'As a society we Americans spend only a fraction of our disposable income feeding ourselves – about a tenth, down from a fifth in the nineteen fifties. American today spends less on food, as a percentage of disposable income, than any other industrialized nation.' (Pollan, 2006: 243)

64 Whybrow confirms that human desire is informed by the same instincts that motivate other species: "We are all looking for the same things, sugar, salt and novelty, the responsibility to regulate those cravings lies in the rational minds ability to manage the instinctual mind." (Whybrow, 2006)

65 '80% of the food dollar goes for labour, packaging, advertising, and other such value changing activities.' (Nestle, 2002: 17)

what we can understand to be design to create an ordered, rational model of society in 'The Republic' (390 BC approx.) The 'Republic' offered numerous visions of the ways in which society could be ordered but emphasized a quasi-democratic model as the most civilized. Plato's presented a concept of an ideal society in which the relationship between people, politics, business, education, policing, Justice and other forms of activity and control, or management was facilitated by the design and planning of the city state.

Design enabled the Greeks to manifest and communicate their concepts into practical and symbolic forms. Design became a form of symbolic currency that communicated metaphysical and practical value and became a primary source of evidence that makes the 'illusionary' nature of exchange (that has so troubled critics of capitalism) tangible. While much has been written about the relationship of economic strategy to the development of a capitalist economy less has been said about the role of design. Even Marx does not offer evidence of how and why design was applied to encourage identification with materialism.

Webber, demonstrated that concerns about "excessive expenditure" could be reconciled through the display of material possessions. He argued that Protestants in the late nineteenth century used a strategy of conspicuous consumption in order to make their achievements tangible, confirming the opportunities of the work ethic to themselves and others. Despite this insight Webber had nothing to say about design. It is clear that Keynes ignores, or does not recognize the importance of design as one of the vital sources of persuasion that helps to fuel the capitalism system that he was concerned to explain and manage.

The Impact of the Modern Economy on Sensory Opportunity

America led the twentieth century expansion of capitalism by developing and promoting a variety of synthetic substitutes and alternatives to natural sources of sustenance and/or pleasure that offered greater potential for capital accumulation.

The plasticization of food over the past century and the marginalization of multi-sensory engagement throughout the food chain illustrates how economic interests have reduced the complexity of nature to fit an industrial approach that emphasizes malleable and mass producible commodities because they are more profitable and predictable. Victoria de Grazia offers an impressive account of how America set out to seduce Europe to accept this model and quote Rockefeller's (1948) mission to achieve the acceptance of American supermarkets in Europe this through a combination of "social objectives and capitalistic incentives." (de Grazia, 2005: 377) de Grazia confirms that the American Corporate business, with government support, deliberately developed Films and Television programs and media marketing, in order to sell and export a complete lifestyle package rather than just a product. This strategy was supported by education and subsidy and the export of the supermarket concept of food retailing and agri-industry farming and processing methods. (de Grazia, 2005)

Design has a tendency to replace tacit knowledge with hybrid and symbolic knowledge, and in so doing it replaces one set of values with another. Design is still thinking in ways that are based on conventional economic thinking and continues to create a visual patina around tacit values that inhibit rather than facilitate access to deeper values. It can be argued that design both reinforces the culture of instrumental rationality and is a product of it. Design's primary objective has become visual seduction and creates and maintains the syndrome of multi-sensory and alternative amodal sensory marginalization.

Various alternative approaches to designing a different relationship for design and the economy that have appeared over the past three decades offer intriguing ideas but appear to fail to understand the depth of cultural resistance to change. A common mistake is the underestimation of what visual style means to consumers, managers and others who determine, or allow what we eat and how it is created design is rarely appreciated, or promoted for its intangible significance. McDonough and Braungart have recently echoed Papanek's promotion of lease/use principles without consideration of perceived value. (Papanek 1971, McDonough 2002) Where later writers depart from, for example Papanek's condemnation of 'Kleenex Culture' by advocating biodegradable throwaway they are still failing to grasp the intangible significance of design in framing and focusing desire. Papanek's later writing, (1995) went someway to address the issue of the intangible but did so through summoning up ill-defined concepts of spirituality that appeared not to have been considered in their relationship to urban spaces and the cultural dependencies that they encourage. Papanek fails to demonstrate how to persuade people to reconnect with the intangibles dimensions of need that do not fit the dominant economic priority of commodity driven experience.

Hope may lie in the producers and retailers who value ethics and seem to understand that there are other forms of aesthetic value than the ones that continue to dominate the efficiency model. Perhaps the real question is: Do and/or will economists understand this? [66]

Conclusions

The logic of capitalism during its first four centuries has clearly led to the breakdown of traditional values and habits, including the multi-sensory participation that characterized human intercourse with the food chain prior to industrialization. There is evidence that the business of ethical food retailing needs to re-establish some of these values as well as introducing new ones, if it is to remain competitive. Design has a major task in rethinking its own priorities if it is to enable the ethical retailers to raise the stakes by avoiding the utilization of the same strategies as the corporate retailer. The issue raised by Bailey (1986) of whether economists consider taste in their calculations becomes irrelevant in the light of the history of capitalism. The development of a meta-economic system was informed by the continuing development for objective mechanisms that can be used to manage the distribution of capital without the need to take account of subjective considerations and the values they represent or inform. Exposing the limitations of the economist's interest and expertise helps to reveal the potential for change by unraveling the history of economics it become possible to build evidence that can be used to justify and design alternatives. For example Tuan argues that science began to dominate agriculture in the nineteenth century, achieving an, "unprecedented manipulative power over organic life...One branch took the scientific and entrepreneurial spirits of the West from the study of general chemistry to the study of soil chemistry, and from that to the manufacture of chemical fertilizers, the use of which led to impressively higher crop yields; another branch took them from the study of genetics to the scientific breeding of pants and animals which became

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66 "In the language of economics, asymmetry of information exists between the food consumer and the food marketer. Food manufacturers and retailers are as a matter or course better informed about the nature of the products they sell than are the consumers of those products. Unfortunately, the asymmetry of information provides food producers and sellers with the incentive to minimize the quality of their products. The producers, the more knowledgeable group are in position to encourage consumer misperception about their product. In classic economics language, a market for lemons develops. In a market with two food products, one safe and nutritious and one not, the seller can tell which is the better product, but the buyer cannot. Because of the buyer cannot distinguish, the better product can only be sold at the same price as the inferior product. The producer will only supply the inferior product, and the superior product will be forced off the market." (Moore, 2006)

more and more ingenious, reaching a high peak in the Green Revolution, and onward to genetic engineering." (Tuan, 2000: 17)

The economy means a number of different things to a number of different interest groups, including the many different kinds of economists. But it can be generally agreed that:

- For economists the economy is the outcome of their scientific analysis of data which is abstracted from nature and morality
- For business and government the economy is a measure of strategic success, danger and potential
- For the consumer the economy seems to be much the same as the weather, it is taken for granted until it goes wrong. It is understood through tangible everyday experience, like the value of savings, property and purchasing power.
- For the biosphere the economy is the primary source of pollution

Capitalism has allowed food industries that 'not only encourages us to eat more meals away from home but also puts more distance between us and our food. Globalization means that much of what we eat has traveled thousands of miles to our plates, but even the space between cooking and eating is being stretched (as) what we think of as conventional restaurants (become) just tables and chairs.' (Gallagher, 2006: 87) Capitalism[67] has clearly constructed a culture of business that is predicated on the survival of the fittest. In the food sector the corporate representatives of the food sector who have the money, access, and amoral motivation, to influence mass public taste and government attitudes, to achieve the goal of maximum profit[68], stand on one side of the fence, while on the other side are a relative minority

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Meanwhile the trade continues to celebrate the potentialm of the traditon of heading where the market demand exists or can be made to exist: "At this weekend's GMA (Grocery Manufacturers Association) Executive Conference, Harry Balzer, vice president of the NPD Group, discussed trends from their latest eating survey, which is based on what consumers did in the immediate past. Here are a few of the findings:

OPPORTUNITIES

* Carbonated soft drinks are the fastest growing breakfast item, with nearly 8 percent of breakfasts including a soft drink.
* Percent of in-home meals with at least one fresh item has declined from 55 percent in '85 to 47 percent now.
* Yogurt continues to grow, as a stand-alone and an ingredient.
* In 24 percent of all meals purchased from a restaurant, the consumer never gets out of the car.
* Taste preferences change VERY slowly.
* Whole Foods customers eat out 3x as often as supermarket shoppers." (Retail Wire, 14-6-06)

68 Evidence of the power of the food industry is revealed in this CorporateWatch expose of the strategies by the UK majority stakeholders in the food production and processing sector:
"The Food and Drink Federation (FDF)
Industry Areas: The Food and Drink Federation (FDF), through its 50 members, directly and indirectly represents approximately 95% of the UK food and drink manufacturing sector[1]. Member organisations include the Rice Association, the Food Association, the Potato Processors Association, the British Soft Drinks Association and the Federation of Bakers[2]. Overview: The FDF represents big business in the food and drink sector. Its current president is Peter Blackburn, former chair of Nestlé UK, and now also chair of Northern Foods. Food and drink industries use the FDF to promote their own interests to both government and the public. Interests typically include:

- The production of a globally competitive food production system which involves the intensification and genetic modification of agriculture, thereby minimising input costs for the food manufacturing industry
- The promotion and support of high profit-margin, high value-added food and drink products - in practice this tends to mean highly processed products, often unhealthy and containing many additives.
- Ensuring that the research agenda in the universities and research institutions match the ever-increasing need for new products in the processed foods sector.
- Through its 50 members, it represents a gross output of £65 billion, or 14% of total UK manufacturing. 500,000 people are employed within this sector: 12.7% of the UK manufacturing workforce[3]
- The FDF therefore calls itself the:

of ethical retailers who have neither the money, experience, or access, nor the desire, to play the game according to corporate rules. The gap between the abstract calculations of the economists and the day-to-day realities of consumers and producers makes if difficult to argue that the dominant economic system does not work for the majority, until definitions of what is meant by gain are offered. This realization offers vital opportunity for multi-sensory connections to be made between gain and loss, enabling taste and value can be rethought, and re-experienced.

Capitalism has allowed food industries that "not only encourage us to eat more meals away from home but also puts more distance between us and our food. Globalization means that much of what we eat has traveled thousands of miles to our plates, but even the space between cooking and eating is being stretched (as) what we think of as conventional restaurants (become) just tables and chairs." (Gallagher, 2006: 87) My survey of the ethical food-retailing sector confirms that the values that are promoted, and aspired to, ranging from local supplies to ethical trade, require a different kind of aesthetic strategy that embraces sensory opportunity and this requires the support of education.

- Largest packaging client
- 2nd largest advertising client
- 3rd largest energy client
- Furthermore, the FDF indirectly (through its members) buys 2/3 of all UK agricultural produce.'"(www.corporatewatch, 2006)

Chapter Seven: The Production Context of Multi-Sensory Marginalization

Unlike almost any other commodity, or service, that informs the quality of human life and aspiration in the twenty-first century food[69] *is an essential component of human existence and wellbeing, it is a basic need. Long before capitalism, corporate industry, science, and supermarkets, the need for food determined the symbiotic relationship with nature that humans created in order to survive. As Counihan states, "food is a product and mirror of the organization of society on both the broadest and most intimate levels…food is a prism that absorbs and reflects a host of cultural phenomena…foodways influence the shaping of community, personality, and family…" (Counihan, 1999: 1)*

Introduction

This chapter makes a case that the rationalizing imperative introduced in the previous chapters has become the dominant influence in the production of food by corporate business. I confirm how and why corporate business has industrialized production and demonstrate that an ambition to achieve the most efficient opportunities for capital accumulation has marginalized multi-sensory opportunity.

In order to locate the evolution of contemporary business practice and its influence I highlight some key distinctions between the contemporary norm of design industry and food culture practise and food chains in selected pre and non-industrialized economies. These non-industrial models are cited as examples of how economies can support alternative modes of temporality that allow and encourage the development of significant and deep sensory rituals that connect production, consumption and disposal to the well being of humans and the biosphere.

The Context of Production

Various political, social and economic and contextual development post the Enlightenment served to inform the evolution of businesses that were primarily motivated by the desire to accumulate capital return. For the businesses that became involved in the food chain this meant translating agriculture, farming and food processing from a relatively precarious livelihood that was predominantly locally based into a global enterprise:

In the 21st century food production, distribution, processing, and consumption is dominated by multi-national corporations who regard food as a source of capital accumulation not as a means of human sustenance and wellbeing. These corporate food producers regard nature as an unsatisfactory source of food and attempt to deny and eradicate natural conditions through the use of chemical and hormonal additives that have been developed by science to maximise and regularise the size and predictable characteristics of yield. The evolution of food under the management of corporate practice has been focused on eradicating natural characteristics that inhibit the efficient production of capital accumulation. Food production, processing and brand creation is now dominated by the addition of synthetic, or un-natural, additives designed to stimulate superficial gratification and addiction

The logic of Corporate food production is orientated towards the creation and marketing of completely synthetic, 'plastic' food that can be moulded, flavoured and textured to imitate or

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69 Drink is generally included in my use of the word food as a general descriptor of sustenance needs and profit making from the chain of supply and demand that will be referred to occasionally as the food chain.

create any existing, or imagined type of food. The design brief for corporate business food is focused on maximizing the use of land and raw material, minimizing labour and extending shelf life and the need to appeal at the point of purchase to the visual senses. Corporate business has actively worked to disembody and de-naturalize food and regard the non-visual senses as largely irrelevant, or obstructive.

The search for enhanced profits has led the food business to exploit technology, science and psychology at all of the key stages of the food chain, from mechanical ploughs and chemical fertilizers to digital consumer tracking and virtual shopping. The history of food production, distribution, processing, and consumption is coloured with fraudulent and corrupt practices ranging from deliberate adulteration to targeting and eradicating competition. Many of the amoral and unethical practice that were evolved prior to, or despite, legislation still continue to inform contemporary corporate business strategy. The corporate food business appears not to have significant loyalty, or commitment, to land, workers, consumers, or community, and no interest in developing proactive environmental protection unless it is pressurized into doing so.

The majority of commercial scientific research is not concerned with mid or long-term impact on the biosphere, or consumers, unless there is specific legislation to force those considerations and responsibilities. Problems are typically resolved by dealing with the symptom rather than the source and many corporations profit directly, or indirectly, from commercially exploiting the creation of resolutions to the problems that they have created

- The balance of corporate power moved from the wholesaler to the processor and more recently to the retailer without any real change of emphasis
- Corporate business attracts executives who excel in making objective decisions, and possess the ability to make decisions that are not clouded by sentimentality

While corporate business frequently utilizes romantic, pastoral references in the language and visuals of its food packaging and advertising it is appears to have absolutely no sentimental attachments to nature, species, including humans, the landscape, society, culture, or the protection of the biosphere. My research suggests that all nearly all[70] the major changes that have occurred to enhance, twentieth century worker rights, animal rights, food quality, health and nutrition, community and the biosphere have been led by legislation, or competition. There is substantial evidence that the corporate food industries are totally ruthless and myopically focused in their pursuit of profit. There indifference, or strategically defensive approach, to ethical and environmental concerns, and their abdication of responsibility for ethical and heath concerns, means that they are more likely to put effort and investment into limiting the damage of perceived threats.

The Land, Survival and Significance: Reality Versus the Imagination

Archaeology[71] and other forms of historical enquiry and analysis suggest that the landscape, and its cultivation to produce food, has been a subject shared by science,

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[70] The exceptions to this norm are mainly to be found in the nineteenth century and were typically informed by Christian idealism, or utilitarian motives. Examples will be given in the section that deals with the history of food processing and retail.

[71] An interesting sensory version of archaeology constructed by Hill and Wilkins (Food in the Ancient World), which involved recreating foods that were typical of classical Greece led them to argue: "The experience of eating and smelling the same dishes and aromas which would have been part of life at another stage of history may be the nearest one can come to understanding the pattern and texture of everyday life." (Hill, 2006:1)

technology, economics, politics and art since the earliest evidence of an organized response to the need to produce food for reasons other than basic survival.[72] The imagination has informed and shaped the relationship constructed with nature by human beings since at least 30,000 years ago when evidence of the human need and ability to give symbolic status to experience, need and desire is first detectable. (White 2003, Bahn 1998) "By 3000BC there is evidence for several well-defined breed in representations of cattle from both Mesopotamia and Egypt..." (Davidson, 1999: 145)[73]

The classical period witnesses the emergence of several important ways of thinking about nature that prove to be immensely influential on the future of the Western world. In summary, and with no intentional priority, these are:

- Nature as a source of bodily sustenance
- Nature as source of multi-sensory experience
- Nature as a source of, and location for, the supernatural
- Nature as a source of wealth
- Nature as a source of bodily sustenance
- Nature as a source of mathematical perfection
- Nature as a source of chaos
- Nature as a source of aesthetic perfection
- Nature as source of, and reference point for, power
- Nature as a reference point for definitions of reality
- Nature as source of healing
- Nature as a source of inspiration
- Nature as a reference point for science and technology
- Nature as reference point, and source of precedent, for art, design, engineering
- Nature as a setting for myth
- Nature a source of inspiration
- Nature as a symbol and source of symbols
- Nature as a location for journeys of discovery
- Nature as territory
- Nature as an obstacle to be overcome
- Nature as the opposite of urban

The ancient Greeks began to perceive these different attributes of nature as a series of oppositions that needed to be overcome and/or reconciled before progress could be made. Hill and Wilkins suggest that the same was true of their diet: "What emerges is the fondness for rank flavours in foods like garum or cheese combined or contrasted with sweet flavours such as honey and dried fruit." (Hill, 2006: 3)

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72 Evidence in the form of cave painting and carvings, from at least 30,000 years ago, suggests that 'hunter gathers' constructed their relationship with the landscape and its bounty through magic and ritual that went far beyond simple survival. More evolved civilizations like the one created by the ancient Greeks had a complex relationship with nature as a source of aesthetic as well as economic, social and biological needs that reflected their concern to control and 'own' the world that they lived in.

73 Naddaf confirms that the word 'nature' has it origins in ancient Greece where, in 'Homeric Greek' the literal meaning was: 'to grow,' but as the 'myths' (e.g. the 'Odyssey), that began to be recorded at this time, demonstrate nature was understood as a source of more than bodily sustenance. (Naddaf, 2005: 12-13)

From Agriculture to Agri-business: The Mechanization of Nature

The story of agriculture and farming is inextricably linked to the dichotomy between basic survival, spiritual potential and the pursuit of wealth and power. Over the past 400 years the story of food has become entangled with the story of capitalist enterprise. The push and pull between capital accumulation, technology and our sense of self are all factors that have helped to determine how food is produced, processed, retailed and consumed. While it is unlikely that the bucolic images of farming painted in images and words by the romantics and other sources of agricultural mythologies were ever really true there is substantial evidence that food used to play a much more significant role in the facilitation of a multi-sensory experience than it does today. It follows that the prioritization of capital accumulation involved the denial of methods of producing; processing and consuming that were associated with sensory opportunity.

Western food culture evolved as a result of religious, educational,[74] military, politically and economically motivated conquest and contact with other countries and cultures. Mills and Wilkins confirm that the "Greeks and Romans had extensive contact with Asian and African peoples at all periods, and inherited much from their eastern neighbours in particular." (Hill, 2006: 7) Dalby quotes Horace and other classical sources to confirm the sophistication and variety of Rome's food markets and 'hot-food' shops: Horace hints at the range of culinary choice and multi-sensory experience to be gained by visiting the Velabrum, an area that specialized in food preparation from Cheese smoking to Spice blending: "the most famous locality in the city (where) the fishmonger, the fruiterer, the poulterer, the perfumier" (can be found). (Satires 2.3.227-228) (Dalby, 2000: 213-214)

History suggests that during its pre-industrial period of evolution food was fully appreciated for its sensory qualities and while it enjoyed commodity value for various kinds of businesses its sensory dimensions played an important part in the evolution of various food types and their values, associations and uses. Hobhouse records that "merchants ruled the waves of the North Sea and the Baltic" from the early first century onwards supplying the Roman legions and their settlements promoted international trade. (Hobhouse, 2004: 81) Empire building by Romans, The Muslims and the Mongols, and the spread of Christian worship encouraged the transfer of agricultural knowledge, food processing skills, technology and cultivation techniques and the introduction of new commodities like wine and spice into countries where these had not been typical and helped to create links internationally that involved not just the trade of food but also values and skill. (Curtis, 2004, Hill 2006) [75]Trade and its strategic importance also helped to promote agricultural activity as something that was more than a source of sustenance as Hobhouse points out: "Since the Millennium year of 1000, trade has accelerated through Europe as...men recognized that trade could bring far greater wealth than booty won in war." (Hobhouse, 2004: 81)[76]

The acceleration of international trade, knowledge and species exchange was further stimulated by the periods of military and religious colonization. This played an important part in

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74 The ancient Greeks promoted travel as an important part of an individual's education.

75 Important exchanges of food culture were taking place that would have a significant impact on western diets. Kurlansky confirms the "earliest written record of salt production in China dates to around 800 B C." (Kurlansky, 2003: 19)

76 Hill and Wilkins confirm that luxury or elite foods were typically a bi-product or motive for travel in the classical period: "food and other goods were traded extensively, to meet local shortages, to meet the demands of local elites for distinctive goods and for other purposes.' They argue, 'travel came to have a close relationship with food." (Hill, 2006: 5)

the systemization and symbolization of diet[77] and opened up the Americas and other new food/trade sources to, Spain, Portugal, France and England. Despite the evolving sense of economic, ideological and strategic importance of food and the agricultural activity that provided it, the majority of food remained a relatively low key and local activity, which was centered on community well into the nineteenth century.

The increased interest in the application of scientific method to achieve and/or reinforce the evolving concept of progress promoted by Enlightenment scholarship and expansionist tendencies in Europe was a significant source of the gradual industrialization of agriculture. The development of systems approaches to planting, drainage, crop rotation and fertilizers and pesticides followed. The Enlightenment also accelerated the expansion of the need for food and the rise of the power and wealth of the food merchant. The impact of technology on the farm was much more complex than a series of inventions producing a cause and effect relationship between supply and demand. Technology was introduced when a combination of transport, concentrated urban pockets of need, thee rising costs of wages and the demise of slavery made it necessary. (McGaw 1994, Giedion 1948)

O Grada confirms the "impressive' growth in agricultural productivity during the first phases of the Industrial revolution 'founded on combination of institutional changes (e.g. enclosure) and process innovations (such as the diffusion of feeder crops and better breeds of livestock)." During the second phases (c 1820-1860) "farmers took advantage of artificial grasses, and manures, clay-pipe drainage, and farm mechanization." (Floud, 1994: 145)

While Britain set an international lead in industrialization during the latter half of the nineteenth century UK farming increasingly failed to take on the characteristics of a 'modern' business. Because farming was mainly organized and run by tenant farmers and landlords who were witnessing a substantial drop in income due to the impact of increasing imports and an increases in wages there was not a huge incentive to embrace technology and the ideologies that inform its evolution. (Fite, G C (1981) Schlebecker, JC (1975) Outside of Britain, in the USA in particular, [78] agriculture offered another opportunity for the application of industrialization techniques. The push and pull between the evolving reach and efficiency of new forms of transport, refrigeration and urbanization played an important in setting and facilitating the spread and focus of demand. The dramatic increase in urban conurbations encouraged The expansion of retail in the number and size of outlets that specialized in food and the branding and advertising of food. The expansion of food processing, packaging and refrigeration all led to the development of food types that were predicated on extended shelf life rather than multi-sensory engagement.

The application of science to produce extra yield through chemical fertilizers, pesticides and crop rotation informed the creation of larger economic corporations that dealt with the wholesaling of food and the expansion of the number, type and size of retail outlets that specialized in food. The systemization of the supply chain informed attempts to systematize demand through branding and advertising and the expansion of food processing. These and

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77 For example the Christian churches insistence that bread and wine was an essential characteristic of faith stimulated the supply and demand for wheat and wine in the countries that religion colonized like Britain. (Hobhouse 2004, Davidson 2006)

78 Several European countries began to show substantial increases in productivity and began to dominate Britain's source of meat and dairy. During the period 1860-1914 (Floud 1994)

other factors led expansion of corporate business practices that were designed to strip troublesome and inefficient traditions from the food chain.

The railway revolution, 'scientific advancement, and the gradual introduction of the machine and industrialization, provided a series of catalysts for the expansion of the scale of American farming. Scale was not new to American agriculture, Slavery had led to the formation of some large scale land based enterprise in the 18th and early 19th century but these were regimented by power over cheap to maintain manpower rather than the systems design that typified the new generations of farming in the twentieth century. (Ecologist, 1996: 10) The relatively rapid take up of scientific method and low-tech, but still, industrialised machinery was a characteristic of farming life that often outpaced other industries where labour costs were higher. There is an argument to be made for the isolated nature of the farming experience providing an incentive for reflection and investment in technology. Research suggests that in conditions where the combination of labour scarcity and land availability evidence of investment in technology was more prevalent. (Hayami & Ruttan 1985, Habermas 1970, Stone 1995).

Competition between North and the South helped to stimulate investment in and awareness of technology and science. Keen awareness of train times and comparisons, not just between the North and South, but also between America and Britain was a regular topic of the farming press.[79] Knowledge from other cultures derived from immigrants introduced agricultural expertise and helped to define ignorance that could be improved upon. In broad terms the evolution of agriculture in North America, until 1900, followed a process of adaptation and cooption and systemization. Early settlers (c 1600s) adopted Native American techniques of raising corn, squash, tobacco, after discovering that European traditions did not adapt well to the new climate. Rice becomes a major crop after its introduction in 1685 to South Carolina. Informed by the need to regiment the use of slave labour by the 1700's a systems approach to farming that predated and anticipated the Factory system was instituted in plantations. The invention of the Cotton Gin by Eli Witney in 1793 was a major spur to the mechanisation of farming as it revolutionised the production of cotton. By the 1800's technological expansion and dependency began to mirror the use of motive power in other industries as animals replaced humans. (Smith 1997, Reidy 1995, Floud 1994)

It is tempting to assume that the development and application of technology and scientific methods and chemicals revolutionized farming in the 19th century but these innovations need to be seen in perspective. Up until the twentieth century all sowing was done by hand, cultivating by hoe, hay and grain cutting was still predominantly done with a sickle, and threshing was managed with a flail.[80]

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79 Journey times were analysed in seconds as early as 1834 by the publications keen to promote their usefulness by devoting pages of copy to efficiency innovations or incentives. Comparisons were an important source of knowledge but they also fuelled ambition that seemed to be an important characteristic of American expansionism. (Reidy 1995, Smith 1997)

80 Using statistics from the USA Department of Agriculture it is possible to compare volume and the means of productivity in 1860 and 1890

- 1890: 35-40 labour-hours were required to produce 100 bushels (2-1/2 acres) of corn with a 2-bottom gang plough, disk and peg-tooth harrow, and a 2-row planter
- 1890: 40-50 labour-hours were required to produce 100 bushels (5 acres) of wheat with a gang plough, seeders, harrow, binder, thresher, wagons, and horses

During the period 1860 – 1890 the number of farms increased from slightly over 2 million to 6.4 million with acreage doubling from 407 million to 879 million acres. The expansion of farm size, and number, helped to fuel the growth of the agricultural supply industries and

The Twentieth Century

For the first half of the twentieth century mechanization was as much an attitude of mind and method rather than a process of full-scale industrialization that created what we now understand to be 'agri-business.' The evolution of the gigantism that now typifies the corporate end of agriculture and farming was relatively slow and piecemeal until the late 1940s, and was driven more by the demands and business strategies of the processing corporations, rather than the farming community. In the twentieth century the industrialization of farming was also a sign of the increasing involvement of investment and the separation of what was to become 'agri-business' from the local farm. Farming, as a small scale and local activity remained an important and often deprived aspect of local community well into the twentieth century. For many small farms investment in technology and the proliferating products of science based agro-chemicals industries forced them to strike a precarious balance between competitiveness and crippling debts. Shiva (2000) tells a typical story of corporate practice in the 1990s that would have been familiar to American farmers in the early part of the twentieth century.[81] On a smaller scale farming often remains better business for banks and corporate suppliers of chemical growth stimulants and pesticides than it does for farmers.

As Fite points out the profit margins and the actual sale prices of farm produce never kept pace with other goods, unless they could be taken to a scale where the relationship between investment and return could be facilitated by controlling the market. (Fite, 1981) Science and the aggressive marketing of the Corporations who utilized science to create new varieties of crop, animal, growth stimulants and pesticide kept the dream of the farm as a factory alive. Scientific production typically restricted and regularized variety and flavour and other sensory opportunities. Hounshell offers the example of, "the hybrid tomato, bred to be picked, sorted, packaged, and transported by machinery, (as a demonstration of) mass production methods had penetrated American agriculture" without accounting for the removal of many of the sensory characteristics that had made tomatoes desirable for chefs and consumers. (Hounshell, 1985: 11-12)

Science as Management

Contextual influences were an important spur to mechanization. Henry Ford's pioneering work in developing the fully automated manufacturing systems and Taylor's book, 'Scientific

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vice versa. The development of radical new technologies like the 'Steam tractor' and the creation of new fertilisers helped to transform farming in the twentieth century, and along with a range of other influences helped to stimulate the eventual arrival of truly mechanised farming in the latter half of that century. (Most of the data is sourced from: A History of American Agriculture 1776-1990, US Department of Agriculture (USDA), and Economic Research Service (ERS) (1991)

81 "Trade liberalization of Agriculture was introduced into India in 1991 as part of a World Bank/International Monetary Fund (IMF) structural adjustment package. While the hectares of land under cotton cultivation had been decreased in the 1970s and 1980s, in the first six years of the World Bank/IMF mandated reforms, the land under cotton cultivation increased by 1.7 million hectares. Cotton started to replace food crops. Aggressive corporate advertising, including promotional films shown in villages on 'video vans,' were launched to sell new, hybrid seeds to farmers. Even gods, goddesses and saints were not spared: in Punjab, Monsanto sells its products using the image of Guru Nanak, the founder of the Sikh religion. Corporate, hybrid seeds began to replace farmer's own varieties. The new hybrid seeds, being vulnerable to pests, required more pesticides. Extremely poor farmers bought both seeds and pesticides. When crops failed due to heavy pest incidence or large-scale seed failure, many peasants committed suicide by consuming the same pesticides that had gotten them into debt in the first place. In the district of Warangal, nearly 400 farmers committed suicide in 1997. And dozens more committed suicide in 1998. Under this pressure to cultivate cask crops, many states in India have allowed private corporations to acquire hundreds of acres of land...a large percentage of agricultural production on these lands will go towards supplying the burgeoning food-pocessing industry, in which mainly transnational corporations are involved." (Shiva, 2000: 10)

Management' (1914) are examples that raised interest in the potential of producing large quantities of goods at remarkably low costs without due consideration of the difference between car and other commodities. As Hounsell confirms, although Henry Ford argued that "all problems could be solved simply by adopting mass production techniques,' and despite conducted experiments in this direction, 'he was no more successful than the mechanical engineers and housing fabricators were in bringing about mass production in their respective industries." Hounsel also confirms that Ford experimented with the automation of food production with no greater success. (Hounshell, 1985: 11-12)

It is clear that Farming and farmers were typically well informed of the wider context of mechanization but it is misleading to assume that all welcomed mechanization, 'many farmers argued that the machinery, the chemicals, and the need for larger units of production dangerously increased the risks of production even as they created the potential for increased output and income.' (Carstensen, 1993: 106) Despite these reservations, cash flow crises, the recession and the Second-World-War, during the three decades from, 1920 – 1950, farming moved exponentially closer to dependency on machine-led production. In combination these innovations dramatically increased the size, growth-cycle, size regularity and profitability of crops and animals. (USDA), and Economic Research Service (ERS) (1991)

Comparing the efficiency of a farmer in 1950, (before the full impact of the Green Revolution was felt) the capability of a farmer in 1970 reveals an impressive almost five fold enhancement in productivity can be witnessed. In 1950 one farmer supplied 15.5 persons in the United States and abroad but by 1970 capability had risen to an ability to supply 75.8 persons in the United States and abroad. This dramatic enhancement came at a price of course; the statistics reveal much greater dependency of technology and science. In the first wave of chemical dependency 1900 to 1919 chemical use doubled from an average annual consumption of commercial fertilizer: 3,738,300 in the period 1900 to 1910 almost doubling by 1919 6,116,700 tons remaining relatively stable until 1950, when it increases to 22,340,666 tons, but by 1970 the figure has accelerated to 32,373,713 tons.

The major spur for the consolidation of the increase of dependency on chemicals and the systematic exploitation of technology and science was brought about by intervention of the Rockefeller Foundation and supported by the US Government and became known as the green revolution.[82] After the Second-World War widespread concern in America and Europe about Food shortages led to the European Union followed Americas lead and the Common Agricultural Policy.' The result of the intensification of production methods in the West was over production and the collapse of the gate price for small farmers. Europe and America both supported their production intensification strategies with subsidies and both ended up dumping food in order to protect the profits of the major corporations. (Chandler 2005, Timbrell 2005, Shiva, 2000, Mathews 2000)[83]

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82 The Green Revolution was led by researcher Norman Borlaug the Green revolution was focused on cereal production and involved the development of new seed varieties that could survive in adverse conditions and experiments with irrigation and substantial use of fertilizer and pesticides. Borlaug explains: "t started in the 1940s when I joined a new program, funded by the Rockefeller Foundation, aimed at assisting poor farmers in Mexico to increase their wheat production. We spent nearly 20 years breeding high-yield dwarf wheat that resisted a variety of plant pests and diseases and yielded two to three times more grain than traditional varieties." (Borlaug, 2002) The Green Revolution establishing the 'scientific' approach to the enhancement of yield with spectacular results and established a blueprint for the future of farming and the future of corporate business, particularly in developing countries.

83 Changes in the nature and variety of chemicals during this period occurred, partly as a result of innovation and partly because of legislation. DDT, for example, was phased out, (in the West) during the 1970s because it was a proven source of ecological and human

Other factors like the shifts in farming patterns, due to the collapse of the cotton plantations in the Southern states and subsequent investment in new crops and new methods were all influenced by the increasingly vertical integration of farm, processor and science.[84] The switch from cotton to livestock or Soya beans meant investment in factory farming systems (Breeding animals and birds in cages) brought with it the roots of the commitment to genetic modification and biotechnology that now typifies large-scale farming[85].

The push and pull between post second-world-war American government policy and the emerging embrace of modernity by industry and the public set up a complex set of cause and effect relationships but the result was a shift not only in the methods and scale of production but a series of major changes in diet and a decline in sensory opportunity at all levels of food production and consumption.

The Price of Cheap Food

Science was seen as the solution for agricultural prosperity and human well-being, even when it was the cause of the problem because it has a 'magic bullet' potential.[86] Singer and Mason confirm that evidence the legacy of the green revolution has led to a norm where, "conventional agriculture relies heavily on synthetic fertilizers, especially nitrogen. Worldwide the use of nitrogen has increased tenfold in the last fifty years. Half to two thirds of this nitrogen makes its way into rivers and other eco-systems, affecting both freshwater and marine environments. Based on a 1990 review of 8,000 water and fish samples that were analyzed for 786 different pesticides conducted by the US Geographical Survey frightening evidence of long term contamination of natural resources was revealed. For example More than 90 percent of water and fish samples from all streams contained one, or more often several, pesticides and pesticides like DDT and Deldrin, which have not been tested since the 1960s, were still present across the country. DDT was found in almost every fish sample (Singer, 2006: 205)

Despite the American Government's concern to stimulate more efficiency alarm bells began to ring in tandem with the green revolution: "As early as 1950 the House of Representatives conducted hearings on the 'Use of Chemicals in Food Production' in reaction to new ingredients

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poison that remained in the eco system for enormous lengths of time. Substitutions also occurred, for example 'Anhydrous ammonia' increasingly replaced nitrogen as a cheap source of higher yields

84 "Urban consumer's demand for beef stimulated cattle and livestock raising in rural areas capable of supplying this market. New England farmers played the livestock markets astutely, investing in equipment and land for these purposes well before the American Revolution." (Horowitz, 2006: 20)

85 Horowitz confirms how the nature of the meat and the methods for rearing it were substantially influenced by the processing industry: "The practise of fattening animals before slaughter in feeding situations that restrict movement as much as possible can have dramatic effects on meat quality...Fattening before slaughter increases the distribution of fat through the muscles and thereby creates meat that is more tender when cooked. The methods of an animal's death dramatically affect its flesh as well. The adrenaline of an animal fearing death creates insufficient lactose acid in the flesh and leads to "dark cut" meat, an inferior product that does not cure, or cut well." (Horowitz, 2006: 3)

86 Bizarre examples of science serving agriculture are abundant but this one is a favourite of mine: 'In 1946 an article appeared in 'Science Digest' that proposed blasting the north polar ice cap to bits with strategically placed atom bombs in order to warm up the climate enough to expand the grain growing region of North America into the Yukon. During the 1950s under the Atomic Energy Commission's 'Atoms for Peace' initiative called 'Project Ploughshares' conferences were held to discuss the prospects of using atom bombs like giant bulldozers to excavate canals and reservoirs for irrigation. Field research continued in various parts of the country through the 1980's on the use of nitrogen rich, low level nuclear waste as a fertilizer' (Kimbrell, 2002: 26)

in animal feeds and processed food...Out of these hearings the 'Delancey Clause' (1958) banned food additives proven to cause cancer in people or animals.[87]

Down on the Farm: Problems and Potentials

There are several types of farm, beyond the obvious specializations of arable and pasture[88] but my research has highlighted seven types of farm:

- The Rural, Small to Medium Traditional Farm: Often family run, in which knowledge of local conditions and species facilitate a precarious livelihood
- The Factory Farm: In which caging, machine planting harvesting, chemically induced intensive growth and mechanized packaging shipping dominate
- The Ethically and Environmentally Inspired: Soil Association certificated organic farms offer an example of good practice
- The Epicurean Farm: Specializes in luxury, often rare species and typically processes the farm produce at source
- The 'Slow' Farm: Sticks to the slow food movement's principles, like bio-diversity, regionalism etc.
- The 'Show' Farm: Farming either focuses on the hobby interests, or passions of the owner, or the creation of leisure business genres ranging from heritage to children's learning/play activity
- The Farm of the Imagination: There is a strong and varied mythology of farms in which a bucolic ideal, a harmony between humans and nature creates an idealized, spiritual synergy of. The farm of the imagination derives from various sources, ranging from the images of farms produced by renaissance and romantic artists like Poussain through to the farms and anthropomorphic animals of children's literature, the farms that feature on the packaging of industrially produced brands and their advertising and the farms that are the implicit benchmark in the critiques of mainstream farm practice

The majority of these farm types are businesses, and very few of them practice the kind of sentimentality that critics, mythology and/or anthropomorphism promote. To a business the animals, fruit, or vegetables that they rear, harvest, and increasingly package, are raw materials, and it is out of their transformation into consumer products that capital accumulation will be gained. The land is the industrial plant in which their goods are manufactured. Because of the 'live' and seasonal nature of farming most farmers are too busy ensuring that they survive, protect their investment, and profit, to concern themselves about issues of animal welfare, or organic practices of soil protection and enhancement, when legal chemicals in the form of fertilisers, pesticides and hormones can produce faster and more profitable results.

The issue of scale, or profit does seem to impact on ethical practice, empathy and sensory knowledge. The traditional farm acted as store for a range of community support systems

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87 The artificial sweeteners known as cyclamates were the best known casualty of this clause, but government investigators also targeted the nitrites in meat processing... that had clear cacogenic dangers...Antibiotic se in animals followed a similar trajectory of protest and regulation. Congress to ban DES (1970) "...Yet the industry fought the ban for years ...DES was finally banned in 1979 (but) antibiotics remained completely legal for animal-feeding purposes, their use regulated but in no way proscribed...Ground beef came under specific scrutiny because of series of incidents in which the E.coli bacteria contaminated large batches, causing widespread sickness and some deaths...Antibiotics, meat additives, and food borne illness." (Singer, 2006: 205)

88 "Pasture' is increasingly becoming a euphemism as more and more animal are caged and/or, reared in shed, where they are allowed free range it is often, in the case of chickens in dirt rather than grass, or alfalfa.

including, "the farmer's knowledge of his soils and seasons, the hygienic proportions and the amount of food taken (in which) material possessions provide food and covering...and make and maintain social relationships...is a long-tried and fruitful approach to the material side of existence which yields a much richer idea of social meanings than mere individual competitiveness." (Douglas, 1996: 39)

The influence of mainstream science on the food chain has worked to marginalize the sensory aspects of experience. On the one hand science, in the name of progress has removed, or ironed out much of the sensory characteristics of food. Science, for example has attempted to eradicate aesthetic irregularity and its search for faster and greater growth has resulted in the removal of flavour and aroma. At the moment government and industry continue to invest and make strategy based on their belief in the rightness and potential of mainstream science and while this is unlikely to change in the short to mid-term it is possible to see the emergence of science that is developing in different ways, funded by organizations like Greenpeace for example.

Conclusions

The mechanization of nature lies at the heart of the concern about the role of mainstream science and its philosophical justification: "We accept of course, that the rise of science and the consequent technological explosion has driven us to our secular world view. Yet a spiritual hunger remains." (Kauffman, 1996: 4) Industrial farming practices and the business strategies that inform them have stripped away nature, as far contemporary science will allow. Fruit, vegetables and animals have been bred, fed, and caged so that they offer totally predictable results with the emphasis on size, symmetry and speed of turnaround. Daylight, soil and other constituents of the natural process have, or are being removed, in the search for ever-greater efficiency. Any breeds, or species that might challenge the market dominance of these band, uniform products are eradicated by marketing, including price cutting and legislation lobbying.

As Pollan points out very little is real about what the public now assumes is natural food, including the cost, "cheap industrial food is heavily subsidized in many ways, such that the price in the supermarket does not reflect its real cost. But until the rules that govern our food system change, organic or sustainable food is going to cost more at the register, more than some people can afford...The affordability of the Western diet (has allowed) the major corporations...to deflect criticisms and exposes (They have) access to decision making at the upper level of government policy...because they control the food supply and its cost and...keep the majority of the public, relatively content with the status quo." (Pollan, 2006)

Douthwaite confirms the power of the seed industry, which is typically an offshoot of the industrial agriculture and the grain industry (e.g. Cargill, Monsanto) and their impact on bio-diversity.[89] (Douthwaite, 1996-2003) The compliance of the EU with the interests of the major corporations broadly follows the pattern established in America. The impact of this short-term economic planning has already had a catastrophic effect on biodiversity as the example of

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89 "On July 1st 1973, only months after its entry to the Common Market, the British government introduced regulations under the Plant Varieties and Seeds Act of 1964 making it an offence punishable by a £400 fine to sell seeds after 30th June 1980 unless the variety was listed on the UK national list or that of another EEC government. The regulations were introduced as a result of lobbying by an international organisation representing big seed companies, the Union for the Protection of New Varieties in Plants, UPOV, ostensibly to protect breeders from having varieties which had cost them a lot to develop being dishonestly 'adopted' by other seeds firms and sold under other names.'"(Douthwaite, 1996-2003: 2)

apples reveals: "In Europe genetic erosion accompanied the process of industrialisation of agriculture. Around 1900, for example, 3.000 to 5.000 apple varieties were grown in Austria, today only 400 to 500 and just a handful of apple varieties reach the supermarkets." (WECF, 3-2-2002)

The loss is clearly not just limited to species, Douglas highlights how "the farmer's knowledge of his soils and seasons, the hygienic proportions and the amount of food taken (in which) material possessions provide food and covering...and make and maintain social relationships...is a long-tried and fruitful approach to the material side of existence which yields a much richer idea of social meanings than mere individual competitiveness," has been eroded (Douglas, 1996: 39) Altieri confirms the scale and reasons for the loss of tacit knowledge "Three historical processes have done much to obscure and denigrate the agronomic knowledge that was developed by local peoples and non-western societies (1) the destruction of the means of encoding, regulating, and transmitting agricultural practices (2) the dramatic transformation of many non-western indigenous societies and the productive systems on which they were based as a result of demographic collapse, slaving, and colonial and market processes; and (3) the rise of positivist science." (Altieri, 1995: 2)

Rip confirms that the "modernist approach runs into difficulties. In agriculture, the history of the (living) soil, and thus local knowledge, turns out to be important." (Misa, 2004: 371) Shiva argues that the evidence of what has been achieved by the combination of capitalist, scientific and technological determinism "has not produced more food. It has destroyed diverse sources of food." (Shiva, 2000: 12) Her point is reinforced by numerous others writers and protest groups who challenge the logic of large-scale agriculture and corporate practices. Less emotional but telling is the view offered by Carstensen, whose research confirms that whilst it is possible to demonstrate widespread commitment to the achievement of efficiency via a mechanised approach there was never an absolute consensus on the issue of scale and the application of science. It is misleading to assume that all welcomed mechanization, "many farmers argued that the machinery, the chemicals, and the need for larger units of production dangerously increased the risks of production even as they created the potential for increased output and income." (Carstensen, 1993: 106).

Horowitz reveals that the problems of questioning the logic of factory farming is not helped by the attitude of small businesses, workers and communities, all of whom, he suggests, tend to think in terms of their own sort-term survival and "exhibited ambivalence on the outcomes" of government health intervention. (Horowitz, 2006: 148) The BSE crisis was probably one of the most effective anti-industrial farming and processing factors the media panic that resulted from deaths and incapacity brought the arguments of the protest lobbyists to the mainstream for the first time in the UK. The crisis spawned a first person experience/expose genre. Klien's 'Mad Cowboy' is an example that used the autobiography of a "ranchers" conversion to the anti factory-farming position, but ultimately led to relatively successful corporate threat.[90] The 'Mad

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90 Lyman's story was taken up and promoted by Oprah Winfrey and thus entered the media chain in a way that it allowed it to gain acceptance through celebrity endorsement. The endorsement was the last one that Oprah has made in support of the anti meat industry standards lobby. Her endorsement earned the wrath and considerable wealth of the Texas Cattleman's Association who sued `Oprah under a relatively new Texas State law called, ironically, the 'veggie-libel' law. Although Oprah won the case it was clearly a warning strategy, typical of the strategies of the major food corporations that worked in the longer-term by discouraging the media to lend support to opinion however well informed it might be. The veggie-libel law itself also highlighted the extent of the collusion between the food industry and state and national government. "The false Disparagement of Perishable Food Products Law' was passed the Texas

Cowboy' book reflected a growing genre of expose protest. Written in journalistic style this genre with titles like 'Fast Food Nation' and 'Super Size Me' have attracted substantial publicity as America and the UK begin to reflect on the evidence of an increasingly obese population. Unlike the work of Singer and others these books reach a much wider audience while still pointing the finger at the dangers of the mechanised approach to food production, processing and retailing. (Spurlock, 2005, Schlosser 2005, Critser 2004, Lawrence 2004, Blythman, 2004)

Health, and in particular obesity, have become the focus of a major topic and threat to industrialized production, processing and retailing. In the UK the issue has become focused around children's diet. The late, but significant intervention of the celebrity chef Jamie Oliver has played a major role in bringing the issues to the attention of the Government and the agri-business industry and its offshoots.[91] Less popularist, but highly targeted e-zines offer a cross pollination of activist and concerned consumer agendas. Perhaps the most appropriate for this study is the carefully researched and persuasively written 'What's Wrong with Supermarkets' by Corporate Watch (www.corporatewatch.org.uk) "This booklet aims to help campaigners get to grips with the reality of supermarket domination and argues why we must start looking for alternatives" (introduction) what is particularly telling about the 'corporate watch' position is the way that it unites the calls of producers (farmers) and consumers against a wide range of supermarket practices from the denial of choice to price fixing through to adulteration.

Corporatewatch identifies how the buying power of the supermarkets allows them to force down sales prices while taking no responsibility for sustainability of non-industrial production sources. "Supermarkets employ researchers to discover precisely what the average cost of production is for a particular crop worldwide, then conduct blind auctions over the internet, buying only when the price has fallen to the lowest level. Farmers do not know what price other producers have tendered and this forces them to offer their produce at low prices to ensure a sale. Producers of perishable foods are especially vulnerable." (Corporatewatch, 2004-2006: 11)

The history of American farming typically, but not entirely, offers an uncritical, progress focused, success story, orientated bias that is symptomatic of writing about others areas of business progress. But recently interest from writers who start from an analysis of the quality of the end product has begun to offer more detail. For Kunstler the solution to sustainability is one of a combination of economic realties brought on by the depletion, and or increasingly complex process of managing oil resources across a globe that is increasingly divided between eastern and western interests and ideologies. "We will simply have to grow more of our food locally...gigantic scales of operation, can no longer be carried on economically." (Kunstler 2005: 18) Pollan points out the cost of industrial farming: "The food industry burns nearly a fifth of all the petroleum consumed in the United States...it takes between seven and ten calories of fossil fuel to deliver one calorie of food energy to an American plate."[92]

The increasing collaboration between farming and science and technology is now extending to opportunities for the defence industry[93], "'precision farming': 'a computer driven, automated

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State legislator in 1995. Nestle confirms that its intention was to stop peroople giving out information that a food is unsafe unless that charge was based on reasonable and reliable scientific enquiry." (Nestle, 2004: 163)

91 See Bernard Mathews Appendix

92 Kirschenmann quotes a calculation by Chuck Benbrook, former Head of the National Academy of Science Board of Agriculture that took this measure and estimated that America ranked 23rd on the list of the worlds most cost effective food producers. Kirschenmann believes that the performance would be a lot worse if the calculation was based on nutritional value. (Kirschenmann, 2006: 2)

version of food production that emphasizes optimum chemical inputs, such as pesticides, herbicides, and fertilizers...Ultimately it leads farmers to become computerized sharecroppers for major agribusiness corporations, and ever more reliant on chemicals and (military) technology ...Lockheed Martin, the world's largest arms producing company proudly advertises: "Perhaps nowhere is the principle of pounding swords into ploughshares being carried out with (precision farming)" (Kimbrell, 2002: 261)

The history identified above confirms that capitalism has encouraged the deconstruction of nature to a point where in some respects nature is no longer needed. For example "FDA's Sundlof told the Washington Post this week that it seems unlikely at this time that the agency will require the labelling of products from cloned animals, in part because it is impossible to distinguish them from mainstream items." (Supermarket Guru, 2006) To an economist, a scientist and a Corporate Officer this makes compete sense to the consumer or the supplier who balances the problems of nature with its abundance of sensory opportunity these strategies make no sense.

Chapter Eight: The Food Processing Context of Multi-Sensory Marginalization

In chapters (3, 4 and 5) I reveal how latent human multi-sensory potential was repressed by the evolution of a dominant culture of rational instrumentalism. Chapters (6 and 7) confirm how this culture affected the disembodiment of the methodologies and values of mainstream economic theory and practise. I illustrated this argument by demonstrating how rational instrumentalism influenced corporate business to develop an industrialized strategy of food production.

I develop these themes in this chapter but also consider how the efficiency and profit driven priorities of mainstream food processing and design have lost, or missed opportunities for ethical innovation that could enhance their competitive sustainability. I highlight alternative scenarios that demonstrate how multi-sensory experience can generate pleasure at all points in the food chain and encourage a redefinition of value. I argue that design could harness and mediate these opportunities and still support the motivation of capital accumulation.

The Evolution of Industrialized and Disembodied Food Processing

The contemporary experience of processed food manufacture and consumption is located in a historical and business context through the utilization of historical, critical and theoretical sources. As much as 80% of each food pound is spent on processing, transportation, packaging, advertising and other marketing services, including the retailers mark-up. So farming and production are at the base of a steep pyramid of mark-ups that separate the consumer from the real cost of the product. (http://www.usda.gov/news/pubs/fbook98/chart1.htm) While there is currently interesting evidence of a fight-back from farmers (Planck 2006, Nestle 2004, Shiva 2002) the business complexities of food, the power of the major corporations, and their continuing ability to influence and condition the minds and decisions of consumer and lawmakers, will ensure that any change to the established hierarchy will not be entirely achieved by a simple short-circuit, such as farmer's markets, or farm shops.

The development of large-scale food processing was a major factor in the push and pull relationships that determined the growth of the corporate food industry and a study of its origins and development reveals a great deal of evidence to explain how food has become what it is today. The evolution of the food processing industry is inextricably linked to packaging innovation, the mechanization of farming, the development of road, rail, ship, and air-freight systems, commercial refrigeration, domestic storage and heating innovations and the relationship between food, marketing and entrepreneurial and ultimately corporate business practice and the economy. The processed meal and its processed components can be interpreted as the tip of a strategy of world domination, a cold war in which the ideology of convenience and efficiency enables the agri-businesses (including supermarkets that are increasingly dominating supply and demand) to determine what people eat, when they eat it and why they eat it. The parallel between the strategies of the major cigarette corporations and those practiced by the food industry is no coincidence. It is telling that Phillip Morris moved into food processing and branding, with the purchase of Kraft Foods in 1988 at the same time as Government's in the West began to finally acknowledge the dangers of cigarette smoking in terms of its impact on their health care expenditure. With food Morris are still free to practice the strategy of forming addiction through additives that encourage biological and psychological dependency that worked so well for them with tobacco. This ruthless desire to accumulate

capital is clearly the major factor in the creation of synthetic food. Kirschenmann highlights how, during "most of the industrial period the food industry has been fixated on providing as much food as possible. Any connections between farming nutrition and health were either subsumed or ignored. But human- health cannot be maintained apart from eating healthy nutritious food, which requires healthy soil, clean water and healthy plants and animals...And in much of the industrial food systems those connections have been disrupted with consequence that we are just beginning to glimpse, let alone understand." [94](Kirschenmann, 2006: 4)

Businesses like Unilever and Cargil confirm that the history of food processing is influenced by the development of corporate business. Lieber locates corrupt business practices as a root of the corporation, which he asserts evolved from "the bare-knuckle competition' between railroad builders and operators after the civil war. 'The railroads began to form 'pools' to set prices and divide up markets to avoid the ruinous rivalry... John D Rockefeller...was particularly unimpressed by the pools calling them "ropes of sand." Rockefeller (formed) his own to conduct an extortion racket against the railways by threatening to withdraw freight unless a "drawback was received." Lieber confirms "Rockefeller and his Corporate consigliore, the lawyer Samuel C T Dodd, came up with...the trust, a scheme that brought forty oil companies under tight control. Stockholders in the forty firms turned their shares over to a group of trustees headed by Rockefeller, who gave them dividends (and voting power) to fix prices and divide markets...New Jersey...made considerable revenue during the 1880s by charging corporations a registration fee that allowed them to operate (on paper) under state legislation thus allowing trusts to 'dominate major industries."[95] (Leiber, 2002: 102-103)

The long term tradition of exploitation in the name of profit is confirmed by Marchand, who points out, "If some of the great entrepreneurs of the 1870s and 1880s had proved greedy and ruthless in their pursuit of profits the new corporations of the 1890s and 1900s would have even fewer scruples...one might appeal to the conscience of an individual businessman. But the soulless corporation, driven by a cold economic logic that defined its very decision as a money equation, had none...When immense power was coupled with the relentless drive for efficiency and profits...how could moral indifference fail to result...As the manufacturers lost all direct contact with his customers by degrees he ceased to think of them as people, but merely as so many units of consumption, a set of impersonal figures on a chart...The problem lay not only in size but also in abstractness." (Marchand, 2001: 7-8)

Jars, Bottles, Tin Cans and Crisps

The first phases of the evolving relationship between food processing and capitalism involved many of the characteristics that continue to determine the nature of the industry. As the commercialization, and expansion of the business scale of food production is facilitated by

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94 "Donald Davis, a biochemist at the University of Texas, reported on recent studies of fruits, vegetables and wheat that demonstrate the nutrient values of these foods have declined by 5 to 35 percent during the past half century, Other reports have indicated a decrease in meat and dairy products by as much as 60 percent, Scientists argue...some believe that it is due to the fact that we have not paid enough attention to soil health...others argue that it is the fact that we have only sought to maximize yields in our seed breeding programs, ignoring genetics that support nutritional value." (Kirschenmann, 2006: 4)

95 Lieber quotes Rockefellers gardening analogy of the Trusts ability to "snuff" small businesses: "The American beauty rose can be produced in all its glory only by sacrificing the early buds that grow up around it.'"(Leiber, 2002: 102-103)

Traditional preserving and finishing processes that included milling, bottling, curing, biscuit, sauce, pie and jam making form the basis of the shift from local to factory processing and encourage concentration on one sector, such as meat, e.g. Armour, or grain, e.g. Cargill (See Appendix H)

As Moore confirms prior to the industrialization of food processing, "most food was produced locally and consumed locally, so that there was no widespread usage of food labels, and hence no need for extensive regulation of such labels." He argues that the spread of processing and branding introduced the need for greater control over adulteration and other forms of fraud, "industrialization of food production in the nineteenth made consumers more reliant on food labels as a key source of information in making purchases. Trademarks provided a partial assurance of quality to purchasers, but there was a clear need for regulation to prevent misleading and fraudulent labelling." [96] (leda.law.harvard.edu/leda/data/376/MooreM) (accessed 12-8-06)

The history of food industrialization did not immediately imply a deterioration in quality Schama, for example, highlights the 'slink'[97] trade in the mid nineteenth century which consisted of 'dressing' diseased cattle and "passing them off as food." (Schama, 2002: 193)[98] The consumer and the retailer began to trust in brands, which encouraged the development of large-scale business, who, while adding synthetics drew attention to the distinctions between the reliability of their brands in comparison to the unknown/unreliable characteristics of local, and/or fresh produce. (See Appendix D 'Wedgwood, Tin Cans and Cream Crackers)

Twentieth Century Packaging Technology: Push and Pull

Reviewing the history of food processing in the twentieth century it is obvious that the influence of mechanization takes on a more complex position in relation to the contextual factors, the interplay of other industries, like advertising and marketing and retailing. What is less obvious is the way in which this supports the development of a dominant corporate style business that uses vertical integration as a way of dominating and controlling the market in all respects from price fixing to political influence. The control of production provides major incentive for investment in science and technology.

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96 Moore argues, "the prevalence of lasseiz faire economics philosophy (inhibited food regulations passing) through British Parliament in the 1820s...Dr. Arthur Hassall finally brought food adulteration research into the modern era...He revolutionized the study of food adulteration by introducing the microscope to detect numerous previously undetectable forms of adulteration (based on the) evidence he compiled, Parliament passed a statute in 1860 prohibiting the adulteration of food and drink.' Moore suggests that, 'once anti-misbranding statutes were passed in the early twentieth century, regulators began to realize the need for more comprehensive regulation including affirmative labelling requirements. At first such affirmative labelling requirements were basics such as weight, the name of the food, and the address of the manufacturer.' The use of chemical additives in the production of branded products had proliferated by the end of the nineteenth century. Moore cites evidence, presented by an executive of a food distribution company that confirms the dependency of most brand food-makers on synthetics, ' leave preservatives and colouring matter out of our food and call our products by the right name and you will bankrupt every food industry in the country." (Evidence presented 1906 Committee on Food safety) (leda.law.harvard.edu/leda/data/376/MooreM) (accessed 12-8-06)

97 Schama confirms that the word 'slink' is the name of a prematurely born calf, elsewhere he uses the term 'broxy,' referring to diseased sheep (Schama, 2002: 417)

98 Selling rotten meat still continues in the twenty-first century: 'A Tottenham shopkeeper who tried to sell more than two tonnes of rotten bushmeat, including giant African snails, large rats and wild pigs feet, has been jailed for three months (evidence) was seized from the mouse-infested kitchen of Kejetia Mini-market in West Green Road. Magistrates said it was one of the worst cases of flouting food safety regulations they had ever seen. (Southern, (2004) www.haringeyindependent.co.uk)

While the nineteenth century was full of examples that were concerned merely to exploit the ability of technology to produce regularized and branded products, the twentieth century is informed by five key agendas:

- The development of 'value-added' brands
- Affordability
- Convenience
- Efficiency in production and the maximum use of raw materials
- The development of brands that inform, mirror, and exploit lifestyle changes

Many of these innovations are a response to a market that is obsessed with affordability and the concepts of 'value,' 'efficiency' and 'convenience.' Using a sample timeline from just three years when the American/global economy is in severe recession 1930 – 1932 it is possible to identify the introduction of an extraordinary range of new innovations that transformed how producers, processors, distributors, retailers and consumers perceived food.

Food Processing Innovation Timeline 1930 – 1932

1930: Direct steam injection to pasteurize, sterilize
Photoelectric colorimeter
Automatic flow control for liquids, gases
Sliced bread[99]
Cellophane

1931: Vapour-vacuum jar sealer
Automatic vegetable colour sorter
Continuous band oven
Multi-plate freezer

1932: Chromatography slashes analytical time
Gable top milk cartons
Vertical form/fill/seal packaging machine
Nozzle-discharge centrifuge, leads to wide separation applications
Rotary-drum vegetable cutter

Reviewing these innovations in terms of the interrelationships they reveal makes it possible to detect three clear themes that are still key influences on the food chain today:

- The replacement of human skills/labour with technology
- The promotion of products e.g. 'sliced bread' that is a product of the application of technologies to the processing of raw materials, their manufacture, packaging and marketing.
- The pre-preparation, wrapping, or packaging of products in ways, and materials that shifts perceptions of their value. (e.g. milk in cartons became a modern product)

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99 The sliced bread machine was patented in 1928, but was commercially exploited at a mass production level in 1930, see Appendix E Sliced Bread.

These innovations clearly had an exponential influence on the way in which food was produced, marketed and consumed. The 1930's and 1940's can be seen as a period in which the goal posts of value shifted from "making ends meet", through the domestic preparation of raw food to definitions of economy that were provided by processed food. Rather than being sold as a solution to desperate times the packaged brands were offered as signifiers of modernity, a route to convenience and access. Marchand outlines a series of important changes in the advertising industry that informed the shaping of new products, new ways of communicating value and new lifestyles:

- 'American ad men in 1920s became "apostles of modernity."
- They "heralded new technologies, styles, tastes, and progress."
- They "pushed economic modernization through consumption."

('Notes in preparation for Advertising the American Dream') (Marchand R (1985)

War and Progress

The Second-World-War required Governments in the West and the East to think very seriously about the implications of technological progress and one of the most important ways in which they reconciled the horrors, and the cost, of the war effort was to promote a benign concept of technology. (Marwick, 2000, 2003) The conclusion of the Second-World-War left America very much in charge of the World's economics, with the ability to play a much more influential role in reforming the political and business strategies of governments and private enterprise around the world. (Coats 1999, Floud 1994)

War had accelerated the pace of technological development but it had also informed the way governments and business enterprise thought about and managed global strategy. America's increasingly global strategy was promoted through the concept of progress. American designers manifested aspiration by symbolizing progress through the development of futuristic looking consumer opportunities suggested they could offer new experiences and/or tangible saving in cost and time. Food took a centre place in the manufacturing of modernity that can be best understood by an exploration of the context in which it was manufactured, processed, prepared, and consumed. (Margolin 2002, Meikle 2001, Heskett 1980)

The 1950s witnessed the introduction of a huge range of consumer choices that had either not been unaffordable or available before, or did not make the same kind of sense to consumers or business. Sussman argues that the contribution made by the big food corporations to creating transportable rations for the troops[100] accustomed the nation to processed food and drew their attention to the old fashioned and inconsistent nature of traditional food. "With fresh food there was spoilage. Portion size and availability eliminated all the need to worry about. Opening a box, can, or a vacuum sealed package eliminated all the unnecessary worry, everything was the same every time." (Sussman, 2006: 8)

In the immediate post war years America established its war time advances by colonizing the countries that it has helped to liberate, or in the case of Britain had fought alongside. For example between "1950 and 1962, at least 350 new UD-owned manufacturing affiliates were set up in Britain, the largest European host for US manufacturing FDI. By the mid-1960s, UDS-owned firms employed nearly 10 percent of the British manufacturing workforce...US Firms

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100 For example 'Maxwell House' instant coffee was introduced to the American public in 1946, 'after it was used by the armed forces in World War II.' (www.kraft.com/100/index.html)

accounted for between 30 to 50 percent of the British market for computers, rubber tyres, soaps and detergents, instant coffee, refrigerators, and washing machines among other products." (Chandler, 2005: 96)

In a post Second-World-War Britain that was still under the wartime restriction of food rationing until 1954, many of these developments can be understood as emerging potentials and aspirations that did not begin to make a significant impact on diet until the 1960s. But even as aspirations, and occasional luxuries, access to the convenience of frozen and 'instant' food shaped consumer consciousness and prompted widespread acceptance of Harold Macmillan's 1957' assertion that the British Public had, "never had it so good."[101] Consumers began to believe that they could buy their way into an age of 'space-age' convenience. As the wealthy sister of the M Hulot character says to her maid in the Jacques Tati film 'Mon Uncle': "We must learn to use these things we are all modern now" (Mon Uncle, 1958) (Sussman 2006, Shapiro 2004, Wyman 2004, Haber 2003, McFeely 2001, Lileks 2001, Inness 2000,)

America determined the future of food content through the co-option of technologies, and material and chemical science that had been developed, or enhanced for, or as a bi-product of the war effort. This broad strategy lead to a rapid, and significant, increases of the influence of technology and science on all aspects of the food chain. (Shapiro 2004, Wyman 2004)

Among the many technological innovations that relate to food processing during the immediate post-war years the following stand out:

1948: Frozen 'French-fries' 1948

Preformed portion-controlled frozen meats

1949: The use of chemical enzymes, extracts flavours to accelerate cheese ripening and alter and regularize the shelf life and constituency

1950: Meat-liquefying comminuter (for baby foods)

Dehydrofreezing

Aseptic canning commercialized

1951: Freeze drying

1952: Frozen TV dinners in disposable aluminium trays (See Appendix)

(source: 'Food Engineering Magazine' time-line)

It is clear that in a relatively short period of time perception of quality moved from freshness to brand persona and its basis in science and technology. The construction and marketing of the benign image of science depended on tangible as well as mythical advances. In much the same way that sliced bread, or the tin can, became benchmarks of progress a new wave of products that were developed in or around the 1950's and directly resulted from technological and scientific innovation provided solutions for consumers and business that were displaying a growing obsession with efficiency. (Lileks 2001) (See Appendix)

Conclusions

The food processing industry has now developed over a century of experience of how to reduce the influence of nature on their production targets and persuade the public to buy the

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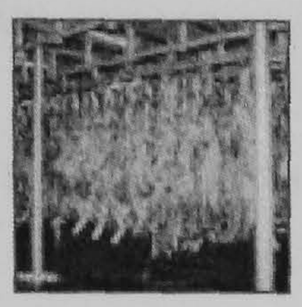
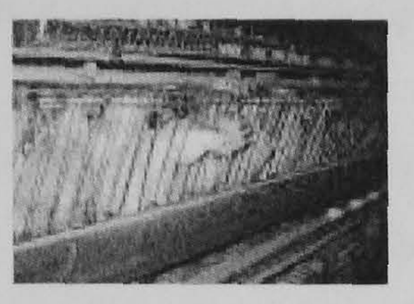
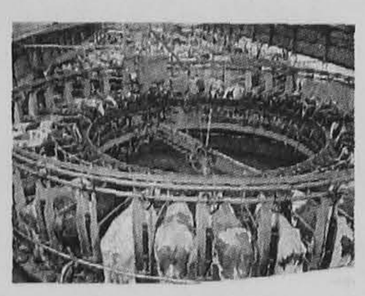
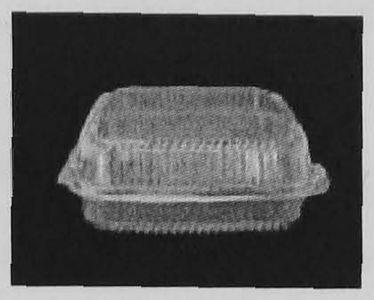
101 Copy of BBC new report for the 20th July 1957: 'The British (conservative) Prime Minister, Harold Macmillan, has made an optimistic speech telling fellow Conservatives that "most of our people have never had it so good.'" (http://news.bbc.co.uk/onthisday/hi/dates/stories/july/20/newsid_3728000/3728225.stm)

results. The tin can demonstrated that it was possible to ignore seasons and other natural restrictions on shelf life and transportability. It established a way of thinking about food as a processed product that could be manufactured in one location and exported anywhere.

A chain of relationships can be constructed that connects the tin can to the contemporary transparency of plastic containers that incorporates all of the technological and rational-scientific progress of food production into an advanced factory system that has attempted to dispose of the inconvenience of nature. The images above depict a 19th century tin, an automated meatpacking slaughterhouse, factory-farmed chickens, an automated milking system and a contemporary plastic container (images google.com)

The development of commercially branded breakfast cereals in the latter half of the nineteenth century is an example of the process that would increasingly challenge and influence the way that the consumer, business and government in West thought about food.[102] There was, and remains, a great deal of synergistic opportunism between farming and food processing and the major scientific and technological industries like the oil and chemical industries.[103] Plastic from 1875 came represent not just a material but a concept of synthetic malleability: "awareness of substitution, imitation, and innovation as three distinct motives for using plastic emerged almost simultaneously with Hyatt's invention of celluloid." (Meikle, 1997: 2)

Levenstein highlights the 1950s, a transitional decade in which the food processing industry began to exert massive influence on diet and lifestyle. He cites the increasing number of working women as a factor in the enthusiasm for convenience foods: "Food processors realized these women represented an excellent market for convenience foods; they did not have the time to prepare "balanced" family meals but they could afford to have the industry do some of the work." Citing a 1960 edition of the trade magazine 'Food Engineering' he exposes the challenge for designers, quoting an article by industrial designer, Egmont Arens who "told industry leaders that a large proportion of the convenience food market were made up by working women made it particularly important to have simple recipes on their packages: When Mary Smith rushes home from work late in the afternoon she wants to buy food that not only will look pretty on the table but is something she can get ready in half an hour before her husband comes home to dinner." (Levenstein, 2003: 105) The mission to sell convenience as a primary benefit led to some outlandish claims from the processing industry spokespeople; "At a 1962 Grocery Manufacturers Association convention, the groups president...credited convenience

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102 Advertising and other marketing strategies played a major role in the slow and relatively exponential process of transition process and this will be analyzed in more detail in the section that deals with advertising marketing and design.

103 Some dictionary definitions of plastic:

noun
1. Any of a large number of synthetic materials that can be moulded by heat and/or pressure into a rigid or semi-rigid shape, used to make bottles, bowls and other containers, fibres, film, packaging, toys, construction materials, etc.
2. colloq
Easily moulded or shaped; pliant.
Thesaurus: pliant, flexible, supple, malleable, ductile, tractable; Antonym: inflexible, rigid.
3. Easily influenced.
4. derog
Artificial; lacking genuine substance.
Thesaurus: substitute, synthetic, ersatz, fake.
5. Said of money: in the form of, or funded by, a credit card.
6. Relating to sculpture and modelling.
Etymology: 17c: from Greek plastikos moulded, from plassein to mould.

foods with having cut the average housewives daily kitchen time from five and a half hours to one and a half hours a day in ten years.' (Levenstein, 2003: 105) He confirms that during the first wave of nutrition backlash, in the late 1960s and early 1970s, the majority of food processing industry leaders clung to the 'old industry adage that nutrition does not sell food, that price, taste, convenience, and packaging are all more important."[104] (Levenstein, 2003: 196)

Beyond their attempts to condition consumer taste the giant food processing corporations are constantly trying to predicts what consumer want and this involves constant R&D (research and development) which is both costly and subject to typical failure rate of about 80 percent. According to Dr. Mieke Weegels of Unilever's Consumer Perception and Behaviour Department successful new food product development is the result of taking two basic steps, "First, you have to come up with a very good idea - usually based on a good consumer insight...then you have to translate this insight into something consumers want to eat - over and over and over again." Weegels argues "You have to learn how to translate ideas into products that deliver on their promise." Unilever has built a consumer driven innovation model that begins with a systematic design of innovation. All innovation concepts are subject to a rigorous structured process. "We look at which [food product] attributes matter to consumers; what are the preferred attribute levels; what differences are noticed by consumers; and finally what do consumers really prefer."

Unilever claim a unique strategy that moves beyond the tradition of market place testing: "Many manufacturers think in terms of make and sell rather than in terms of sense and respond...new products are sometimes attached to low profile brand carrier systems. And, often manufacturers with low risk orientation will find themselves being the third or fourth market entry."

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104 Writing about the development of branding and the packaging innovations that enabled the food processing industry to dominate the retail food sector Zukin highlights some of the advantages:

- Shoppers quickly saw the advantage of buying insect free flour and other staples in one-pound or five-pound bags instead of relying on their local shopkeeper's cleanliness and honesty.
- They preferred to buy milk in sealed in glass bottles
- Shoppers knew exactly what to expect
- Packaging made shoppers feel modern
- Displaying packaging instead of the foods themselves made stores cleaner...and also – in a paradox of modern aesthetics – more attractive

She then identifies the disadvantages:

- Shopping became more predictable
- Shoppers began to identify their food needs with specific brands
- Shoppers knew exactly what to expect
- The store as a social space become more uniform
- Control over food production became centralized
- In the hands of big processors
- Seasonal and regional differences in diet began to weaken
- Manufacturers shipped the same products all over the country, ran the same advertisements
- By the 1930s the large grocery chains and the Five-and-Dime stores stocked the same products
- Five-and-Dime and supermarket romanced shoppers by romanticizing variety and routinizing sensuality. Like the cosmetics counters in a department store they offered an unprecedented profusion of colorful merchandise in eye-catching boxes and bottles

(Zukin, 2005: 73)

For Unilever the strategy has become what they call "Sense and respond manufacturing," Weegels explained that this "begins by focusing on what consumers really need and not on what the organization wants to provide...there is a place for the make and sell orientation, which often explores new materials and new technologies, to see if they can be exploited for new product ideas...Successful consumer-centred innovation concepts are based on valid consumer insights; tied to powerful brands; hit the market first; and market based on value, not price." (Mathews, 6-2-06) Despite their constant R&D process Unilever typically buy brands to fill gaps in their ability to address consumer trends which offers confirmation that despite the level of investment in development and marketing food branding is a very inexact science, that is ultimately trialled by using the consumer as a guinea pig with the retail environment as the laboratory. What they may lack in product development skills they clearly make up for in creating a network of products that, ranging from ones that are likely to make you obese (Ben & Jerrys) to ones that claim to help you slim (Slim-Fast) (See Appendix I: Unilever)

Innovations like the sliced loaf demonstrate how technological innovation, business strategy, government intervention and the relatively easy to manipulate character of consumer taste was used to deconstruct traditional, highly sensory values and skill, and replace them with values that belong to the priorities of industrial efficiency, business profitability and market dominance. Advances in packaging technology and the introduction of plastic wrapping that could be printed with a brand logo and images that captured and communicated the brand values that were prioritized by the business and their advertising and marketing consultants removed sensory contact with bread at the point of purchase. (See Appendix E: Sliced Bread)

Consumers were taught to replace sensory skill with visual verification and were induced to adopt new style based needs Given that Sliced bread became the token representative of technological progress with the adoption of the phrase "It's the best thing since sliced bread" as the standard appraisal of any successful new technological innovation in the West it offered important evidence of the way that progress was associated, albeit naively, with multi-sensory denial, or marginalization. This tendency to focus on digestion, effectively bypassed the pleasures of selection and preparation and the sensory skill associated with it. The 1930s concluded with advertising and products that began to anticipate the speed dining, fast food agendas of the 1950s and 60's, by placing an emphasis on the superiority, modernity and convenience.[105] These new brands were offered as desirable replacements for their more expensive and/or less convenient naturally produced competitors. (Whyman, 1999)

In many instances the actual time saved by convenience food was minimal but other factors appear to have supported the myth of convenience including the guarantees of predictable appearance and quality, flavour and aroma. The final phase of the 'plastic' meal came with the development of the microwave and microwavable plastic containers. The first microwavable

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Spam was promoted as "the miracle meat" following its introduction in Hornell Foods in 1937, because it did not require refrigeration to keep and could be eaten at anytime. (http://www.cusd.claremont.edu/~mrosenbl/spamstory.html)
Kraft developed canned cheese in 1914, the USA government used it as troop rations during the First-World-War (http://inventors.about.com/od/foodrelatedinventions/a/kraft_foods.htm)

Building on the success of processed cheese particularly the 'luxury' brand, Velveeta slices (1928) Kraft Foods introduced, "Macaroni and Cheese Dinner' in 1937, with the advertising slogan of 'Make a meal for 4 in 9 minutes." (www.kraft.com/100/index.html)

frozen dinners were produced in the USA in 1979. While the microwave had been in existence for over ten years (In 1967, Amana, a division of Raytheon, introduced its domestic Radarange microwave oven) it was this innovation that led to the widespread take up of the technology in the home in the UK (sales had been expanding in America since 1971). The name of the brand (Radarange) is symptomatic of an age where the consumer accepted technology largely uncritically. (The publicity given to more recent side effects of technology would probably make a contemporary manufacturer reluctant to flag up the direct link between the name of the product and its technological origins.)

During the early 1970's the floor space given over to refrigerated display and storage in the supermarket expanded considerably. The greater availability and promotion of 'ready meals' also impacted on the size and number of refrigerators in the home, particularly in the UK.

The advances made in production, processing, branding, distribution and retailing were achieved though the support of a range of marketing strategies, which captured, shaped and reinforced the mood of the time in ways that made processed and prepared food appears to be more desirable and relevant than its natural counterparts. It is also clear that there was significant collusion between governments, producers and processors to ensure that the syndrome of mechanised production was fully supported. (Sussman 2006, Shapiro 2004, Wyman 2004, Haber 2003, McFeely 2001)

There is great deal of synchronicity between the way that governments and big corporations think and act because both sectors share an interest in controlling and exploiting resources that enable profit and/or security to be maintained. Food has always been a major factor in national security, it provides a key source of survival and also offers the ability to profit. Most Western governments work with, rather than against the big corporations because they recognize and endorse their efficiency and ultimately sympathize with their game plan and a belief that science will provide the answers, and because they seem to have very little understanding of the values of a multi-sensory approach to diet. (Milliband, 2007) The campaign led by John Hutton, the Cabinet Office Minister, led environmental pressure groups to warn against the Government "softening up" the media for "controversial scientific developments." (The Independent, August 8 2005) More recently "The World Trade Organization (WTO) -- whose Deputy Director General previously served as the European general counsel for the agrochemical and biotechnology giant Monsanto -- has ruled yesterday (Feb 6 2006) in favour of genetically modified (GM) crop producers against the European Union (EU)." (This week's United Nations, March 22, 2006)

According to Pollan the corporate food businesses benefit from Government support in a wide range of ways. For example, "cheap industrial food is heavily subsidized in many way such that the price in the supermarket does not reflect its real cost." (Pollan, 2006) It may well be that the real challenge requires a programme of re-education in which consumers are taught to re-evaluate the significance of food in their lives but this would require sophisticated communication abilities, resources and government support. At the moment these resources are clearly working hard to persuade the public that synthetic is good. Pollan points out the cost of industrial farming: "The food industry burns nearly a fifth of all the petroleum consumed in the United States...it takes between seven and ten calories of fossil fuel to deliver one calorie of food energy to an American plate" [1]and suggests that the choice about whether organic is better for you has to be answered in terms of the less selfish question of whether its better for the planet? (Pollan, 2006: 183)

Chapter Nine: Marketing or Design?

Introduction

Building on the evidence and arguments provided in the previous chapters I use this chapter to introduce the ways in which design and marketing links food production and processing to consumption. I locate design and marketing in their particular historical contexts and indicate the dependency of these disciplines on the determinist thrust of our classical inheritance. I identify how both disciplines mesh with corporate business norms through their acceptance of the principles and implications of mass industrialized strategy and scientific method.

I reveal how marketing and design have informed and are typically led by the priorities of mass production and consumption. I draw attention to ways in which the norms of visually led marketing, the promotion of value as 'more for less' limits our definitions of value. I argue that this make the mission of alternative food strategies (See La Fromagerie case study, Chapter 13) more problematic than it needs to be.

The Evolution of Design as Definition Practise and Industry

The professionalization of design that informs our own times began to occur during the Renaissance, when architects rediscovered the style, theory and hierarchies that were typical of the classical period. Designers not only began to be named and revered but also stepped away from centuries of empirical tradition to concern themselves with mathematical calculation, plan drawing and client negotiation. By the time that Descartes offered a convincing rationale for disembodying intelligence he was employing mathematically and visually led schemas of calculation and representation that were also becoming the primary conceptual/communication tools for the designer. These visually and intellectually led techniques were orientated around perspective grids, modularity and notions of aesthetic perfection that were predicated on the symmetry of visual details and masses. Calculating and balancing these elements in simulated three dimensions on two-dimensional plans enabled architects not only to step away from the multi-sensory dimensions of their master mason heritage but also to learn to disrespect it. By the time that other design disciplines were required to support and enable the mass production and mass consumption imperative the disembodiment of craft was largely complete and the tendency to design on paper was normalized along with the prioritization of mathematical calculation and other rational methods including design formulas that enabled the profession to meet the parameters of manufacturing technology, distribution and competition. The proliferation of technology which enabled and promoted visual communication served to reinforce the hegemony of the visual to the point where the majority of design and its education is now predicated on visually led origination and outcomes. (Pallasma, Lawson 2004, White 1987)

Corporate business has helped to determine the design industries fixation on visual communication and this has promoted the dominance of visual culture and scientific progress as definitions of human value and need. This has had a negative impact on the quality of contemporary life and has encouraged the disembodiment of skill and experience in the spheres of food and design. All of the interviewees, from the design for corporate business sector, acknowledged the potential of embracing a more sensory approach to design and accepted the possibility of it not only not compromising commercial imperatives but actually providing opportunities to extend them but cost was identified as an inhibiter of major change: "The

harsh truth is that commerce drives the machine." (Bruce, 2006) But they all conceded that design could be doing a lot more. Design, as it is currently practiced, was perceived to be the source of a range of problems. For McConnell, "there's no such thing as a bad client, there's just a client that you fail to convince." But he acknowledges that apart form selling innovation the design industry, could be a lot more inventive." (McConnell, 2006) For Bruce the problems stem from the fact that "the best creative talent is not found in agencies or the design industry – there needs to be more free thinkers who, from time to time work with crafts people." (Bruce, 2006) For Blandford there is simply too great a dependency on conventional design: "I would like to work myself out of a job" (Blandford, 2006)

While there is clear evidence of breaking through corporate resistance to change in Bruce's case study there is also worrying confirmation of the closed loop that keeps the design industry chasing the same objectives as corporate business without regard for the consequences to health or environment, or community. What Bruce holds up as an example of innovation can only be defended in terms of its ability to generate to achieve additional opportunities for capital accumulation as this kind of innovation only serves to exacerbate the problems that the corporate food industry already stands accused of creating major problems, ranging from obesity to packaging pollution. Daniel Weil, who initially built his reputation as designer through a series of thoughtful objects in the avant-garde tradition, and is now a partner in the commercial design consultancy Pentagram, exemplifies the dominant attitude of the professional designer and businessman: "The important thing is not to mistake your own creative needs for those of the clients. The designer needs to concentrate on identifying what the clients problems are and finding a solution to them." (Weil, 2006) This suggests that Weil has bought into the prevailing logic of the business-to-business relationship that typified design's role as a service industry. Like the majority of his contemporaries he believes that design should not attempt to bring personal, or ideological agendas to the client's door unless they are specifically requested. There is obvious business logic to this belief, which is informed by the fact that business enterprise pays for the existence of design in a whole variety of ways, including a substantial proportion of design education, and therefore it is not a good idea to bite the hand that feeds you.

My research suggests that the fundamental problem that confronts the major corporate businesses who control the majority of the food chain is centred in the fact that their ethos is predicated on thinking about food as a commodity that exists for the sole purpose of capital accumulation. Over the years these businesses have erected an infrastructure, which has been selected, and trained, to ensure that the businesses obsessions with efficiency and price are delivered. This has had achieved the desired effect of creating a self reinforcing culture that is imbued, and recruits and predominantly only liaises with individuals and entities who represent cultural allegiances that prioritize order, control, predictability, objectivity and rational method. The prevalence of the kind of strengths and weaknesses identified at the beginning of the twentieth century are still extremely prevalent because of the reliance on middle management who are: "the grey area in the middle, they have two ways to go and they are very insecure...The grey middle managers trying to persuade senior management not to do something." (McConnell, 2006)

Where mechanisms are put in place like Sainsbury's 'Design governance process', this was developed to create a stakeholder culture: "they (the product owner, or category manager) gets involved with a team. The team creates that brief and someone form a packaging, and a product expertise, get to defend that brief. Then a tripartite conversation between agency,

design manager and product owner evolves to a point where they are comfortable with it. They pitch that back in for a design discussion with the same governance group...its bit of a free-for-all. When everyone's had their input and feels comfortable with it then that's when its ready to be developed. But Sainsbury still find themselves victim to the common lament that circulates among designers relating to the fact that creative ideas are subjective "there's that grey area of subjectivity, everyone thinks they can play!" (Blandford, 2006)

Ultimately the typical explanation of corporate creative strategy is defensive and tends to work with a predictive anticipation of the negative aspects of working in a PLC, with a mass-market orientation. The brand values, legislation, predictable shareholder conservatism and customer stereotypes are summoned up provide anticipated parameters to the frame of reference: "The key objective is to communicate our brand and this comes full circle because our products should be developed within our brand strategy. It's the job of our packaging to communicate the relevant parts of that product...we have to be very careful in keeping the balance right...saying things about the product that are dependably unique from our competitors...The customer's thirst for knowledge is something that we are always grappling with. How do you get what they want to know on shrinking packages? Cost, sadly, is one of those contextual issues that will never go away. If you are in mass market you have to manage cost extremely carefully. We do invest back but it's a supply and demand issue. Not being able to speculate as much as we like to is most likely to limit the growth of environmentally sound packaging. The pace will be measured by the cost of entry and there is only so much our shareholders will allow us to invest and there is the question of how much our customers are prepared to pay." (Blandford, 2006)

John McConnell has over forty years of experience of working in the design industry, and has enjoyed the rare distinction of acting as a design consultant at board level. He identifies a number of problems with the process of creative decision-making in corporations. In particular he singles our research, middle management, designers who are designing for awards and cost. On research he suggests "Researchers sell it as a science but its absolute bull-shit, its no way near being a science, there's always a bit I call the lover's leap where the researcher makes a judgement, but ask someone else and they will give you another way, you can interpret that stuff anyway you want to but middle management buy it and live by it. It protects their assess but it has terrible habit of not allowing change to happen." On middle management he is equally dismissive: "If you reach the ear of senior executives they are generally more intelligent, and get it quicker...but as Machiavelli said: "He who rails against tradition is in for a rough ride," people who did well in the old regime will be your enemy, whereas the people who might benefit will only give you lukewarm support. That's really the big problem of business, it's the fiefdoms –middle management is too busy looking at each other to notice, or sign off anything new, and senior management is fearful that if the middle management walks away the whole thing will collapse." McConnell thinks that designers have a tendency "to take the clients money and try and win a D&AD award (and) if that the case the client has right to be suspicious." Cost is crucial as any kind of innovation like packaging that involves rethinking how things are presented is limited by the need for major investment: "There's not enough of it because of the cost. Partly because of the fact that the machine can put the grunge into a certain kind of container more easily, change the parameters of the box and all hell breaks loose. Buyers go white in the face when they are confronted by that kind of investment and stick with what they have, changing the graphics maybe." (McConnell, 2006)

Duncan Bruce offers a critique of both corporate and design industry behaviour which sounds convincing, to anyone who has worked in either sector: "The real challenge with creative business is keeping the flame alive but you need the strategy and the management...designers fall terribly quickly back into the tramlines of behaviour and thinking...you play by the rules and you rarely get challenged." Bruce believes that he is able to get past this and "connect with the metaphysics of the brand" He cites Kraft as an example of a food corporation where it was to achieve real change: "Dairylea was launched as a brand in 1951 (UK) when people didn't have refrigerators and their was still some rationing, it allowed mum's to give their kids some calcium and protein. Over the years that had morphed into as advertising story that mums give their kids dairylea because its good for them and they like it but it was stuck in a time warp that had nothing to do with the 90s, research showed that 50% of the people who had dairylea in their fridge did not have kids. The brand managers responded by adding things like Dairylea with 'Bacon Bits', or changing the tub, but that's not innovation, its just brand extension. In brand after brand there is no dream left so we had to re-awake the dream of dairylea and it was all about connecting brand management to their passion for the brand and we ended up with a dream: 'child-like delight. Now we could think about innovation and out of that came a whole new category of cheese snacking that no one had ever done before. We led the way with 'Dairylea Dunkers', 'Munchibles' and 'Strip Cheese.'" (Bruce, 2006)[106]

Design

The design of the British supermarket was clearly a product of American influence, as revealed above. Heritage has informed eleven obvious characteristics:

- Price led
- The self-service format
- Size: the supermarket tended to be bigger than the grocery stores that it attempted to replace
- Single story building types that used industrial building techniques and materials
- Unbroken shelving runs to manage customer flow and decision making
- Relatively large proportions of space given over to frozen and chilled food
- Naked neon lighting
- Easy clean surfaces for floors, walls and fixtures and fittings
- Design for trolley/basket shopping
- Car parks attached
- Packaged and processed products dominate

Nestle argues, "You are supposed to feel daunted, bewildered by all the choices and forced to wander through the aisles in search of the items you came to buy. The big companies that own the supermarkets want you to do as much searching as you can tolerate. It is no

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106 Bruce's excitement about identifying new niches is symptomatic of the design and food industries reaction to the perceived threat/opportunity represented by the growing concern among consumers for well-being. Thompson confirms: "Every company I work with is designing products distinctively different than regular grocery products to appeal to the natural-foods channel.." Steve Gundrum, president-CEO of product-development firm Mattson argues "consumers trust products carried at Whole Foods and are willing to pay far higher prices for them.'" This trend has been the source of mainstream interest since Pepsi-Colas discrete 2006 development of a non-Pepsi branded 'health drink': 'Fuelosophy' and its acceptance by Wholefoods Markets. (Thomson 2006)

coincidence that one supermarket is laid out much like another: breathtaking amounts of research have gone into designing these places. There are precise reasons why milk as at the back of the store and the centre aisles are so long. You are forced to past thousands of other products on your way to get what you need. Supermarkets say they are in the business of offering 'choice' (their) job is to sell food, and more of it. From their perspective, it is your problem if what you buy makes you eat more food than you need, and more of the wrong kinds of foods in particular." (Nestle, 2006: 17)

Patrick Barwise usefully summarised the business strategies of the main UK supermarkets during the past ten years "With the saturation of the superstore markets, Tesco recognised that further growth had to come from new formats of smaller and midsize city centre stores, Tesco Metro, and Tesco Express, respectively. Tesco's range of store formats enabled it to compete in local markets and to attract share from the smaller competitors as well as form weaker national chains. It was also the first to launch home delivery and Internet home shopping on a significant scale. During this period Sainsbury stuck to its narrower definition of the category as mainly food shopping, where it had traditionally had a competitive advantage, while largely disregarding non-food items such as clothing and other household products. It regarded value as unworthy of expensive communication, focusing instead on a more differentiated strategy based on food quality. Meanwhile Asda focused on price; Safeway concentrated on catering to mothers with children; Iceland specialized in specific food product ranges such as frozen, non genetically – modified and organic foods; Waitrose confirmed its niche position specializing in the upscale shopper...Tesco did not try to differentiate itself by segmenting the market and focussing on only one segment. It skilfully managed to combine the generic category benefits of price, quality, range, and service that are attractive to abroad base of customers." (Barwise, 2004: 93-4)

Branding by design has a long history that dates back to the earliest examples of civilization, who constructed symbols to communicate to themselves and others but for the designers and their corporate clients the benchmarks are very much located in the first half of the twentieth century. (Aaker, 1991) Ewen proposes that "the factory, the machine, tools of measurement, geometry, mathematics), and regimentation that provided a visual grammar of the future...The social Darwinist Herbert Spencer saw the development of a machine aesthetic as a sign of advancing civilization, an emblem of a higher order...Previously seen as artless and utilitarian, factories and power plants began to assume a 'classical' status, as models of 'Structural simplicity and harmonious proportion." (Ewen, 1990: 134)

The exemplars that have informed the development of Corporate and brand design are located in the slippage between European modernism and American architecture and engineering. It was the ability of the American stylists who managed to reconcile the two sources and evolved image led corporate style that fitted with the new modernist corporate building types. The attraction of the modernist style can be found in its earliest prototypes as the designers who pioneered it reveal the same sympathies for order and efficiency that their business clients were discovering. For example, "Peter Behrens, the industrial designer renounced the styles of the past for their lack of "special character." "Our eyes fall everywhere on disharmony...chaos...Our own epoch is determining day by day, its own style. Our eyes unhappily are unable to discern it." (quoted, (Ewen, 1990: 134)

In America as well as in Europe "The raw power and unsentimental rationality of industrialism were providing new principles around which a style befitting the modern age would be discovered...The functional aspect of material culture would no longer be hidden by a shell of

diversionary denotation, but would stand by itself as the ruling prescription for form. At the heart of this prescription lay a new organization of power, the modern industrial corporation. Following decades of fierce economic competition and recurrent social crises, many late nineteenth and early twentieth-century capitalists...became increasingly conscious of the need to erect corporate systems of coordination and management. Each desired to establish order and predict within a volatile social and economic environment..." (Ewen 1990: 124-125) Corporate business recognized that the interplay between internal agendas and customer seduction could be facilitated through the employment of style led design.

The first stage of evolution were fairly radical but were followed by a slow process of innovation that has characterized the aesthetic development in British supermarkets raises the question of trust. Despite the substantial enhancement of the appearance of sophistication that has occurred since Cohen "turned the counters back to front" supermarkets remain one of the most mechanistic examples of British retail aesthetic innovation. They are still largely dependent on standardized shop-fitting fixtures and fittings that are selected on the basis of maintenance as much, if not more than on appearance. Somewhere in the chain of communication that links decision makers to design there are serious blockages that prevents innovation reaching the shop floor.

Who are the Clients and who are the Designers?

While management signoff on the aesthetics that characterize the British supermarket and claim to listen to their customers there are a range of other influences that implicitly, and sometimes explicitly, inform their decisions. Shareholders, board members, and market analysts exert the most direct and persuasive source of influence and contribute to the relatively short-term approach to innovation trials that results in the incremental approach. The extensive lead-time and risky investment that was involved in persuading British consumers to engage with the supermarket concept was a rare luxury that has not been repeated. Weeks, or at most months, is the shelf life for innovations that do not capture approval from stakeholders. Journalists and analysts reinforce the culture of caution by questioning innovation that does not result in immediate profits.

Sources of Inspiration?

At a basic level the relationship between design, marketing and management is primarily maintained because design brings the conceptual, and craft skill, that gives visual, formal and functional dimension to the products and service interfaces that consumer's can, and want to relate to. "most brand theorists have treated brands as identifiers – and as identifiers only. The equation reads Brand = ID." (Schmitt, 1999: 21)

The generics of retail design generally follow established precedents rather than representing radical innovation, and can be developed from more than one genre:

- The British Supermarket: Classic machine aesthetic
- La Fromogarie: French Rustic
- Whole Foods Markets: Mainly based on the counterculture tradition of American rustic mixed with standard supermarket machine aesthetic shelving arrangements

British supermarket management's preference for the machine aesthetic and rational control model of marketing and design have been challenged over the past decade by a range of

new theories that derived from marketing and have been employed to create a different strategy for mass consumption that has been partially embraced by Whole Foods Markets. Traditional supermarkets have to confront this challenge and decide whether to evolve their embedded traditions of aesthetic rationalization of tangible features to include this new generation of intangible priorities including:

- The Experience Economy (Pine, 1997)
- Emotional Branding (Gobe, 2001)
- Health Related Consumer Concerns (Nestle, 2005)
- Environmental Concerns and Costs (Shivras, 2002)
- Ethical Concerns (Singer, 2005)
- New Consumer Trends (Mclain, 2006)
- New Kinds of Competition (Pollan, 2006)
- New materials, Processes and Technology (Bowlby, 2005)

Despite their recent promotion many of these techniques were developed, or applied during the 1950s, as evidenced by Packard:

- Selling emotional security
- Selling Reassurance of worth
- Selling Ego-gratification
- Selling creative outlets
- Selling love-objects
- Selling sense of power
- Selling a sense of roots
- Selling immortality

(Packard, 1981: 66-74)

In comparison with design the marketing sector has been putting considerably more effort into defining and promoting the possibilities of multi-sensory experience and emotional responsiveness. Sensory advocacy has been promoted by the marketing theorists in response to perceived gaps in and problems that emanate from conventional marketing and design strategy. Schmitt and Simonson state: "Aesthetics offers multiple, powerful, specific and tangible benefits to organizations. Aesthetics is one of the major 'satisfiers' in the consumer's experiential worlds. When products or services are perceived as undifferentiated in terms of their typical attributes, intangibles like experiences become the key selling points." (Schmitt, 1997: 21) The writers who have promoted this loose thesis (Pine & Gilmore 1997, Schmitt 1997, Underhill 2002, Peters 1995, 2005, Lindstrom 2005) are using case studies and evidence of psychological testing (Hirsch, 2002) to provide a case for the senses as a new marketing tool.

A typical formula involves the promotion of case studies that represent business success stories as exemplars of sensory practice: "Starbucks...began as a local coffee store in Seattle in 1987. Ten years later, the company operates hundreds of coffee stores across the United sates; has earnings above 450 million...and has entered the Japanese market. A major factor in the company's success is its systematic planning of a consistent aesthetic style that is carried through in everything that the company does." (Schmitt & Simonton, 1997: 13) Starbucks becomes an exemplar because it has various touch points, packaging, soundscaping (through its

choice and sub branding of music), aroma and taste. Schmitt argues that this mix is choreographed into a very carefully managed brand synergy but most of the evidence used to support this argument still depends on traditional visual cues and reveals a worrying dependency of traditional design management strategies of total conformity

Schmitt promotes the strategic advantage of the sensory approach as a revolution in thinking, replacing 'Traditional marketing (which) was developed in response to the industrial age, not the information, branding, and communications revolution we are facing today' (Schmitt, 1999: 12) He argues "Traditional marketing is largely focused on functional features and benefits. Traditional marketers assume that customers...in a variety of markets...weigh functional features in terms of their importance, assess the presence of product features, and select the products with highest overall utility (defined as the sum of weighed features)." (Schmitt, 1999: p13) Schmitt confirms: "Brand equity...lies in assets (and liabilities) linked to a brand, its name and symbol." (Schmitt, 1999: p21)

He argues that traditional "branding misses the very essence of a brand as a source of sensory, affective, and cognitive associations that result in memorable and rewarding experiences." (Schmidt, 1999: 21) The senses are now promoted as vital conduits to experiential, or emotional connectivity. The advocacy of the sensory approach gets more confident with each new publication. A recent contribution from Martin Lindstrom summarizes the significance of the senses: "There's every indication that branding will move...into an even more sophisticated realm – reflecting a brave new world where the customer desperately needs something to believe in – and where the brands will provide the answer. I call this realm the HSP – the Holistic Selling Proposition. HSP brands are those that not only anchor themselves in tradition but also adopt religious characteristics at the same time they leverage the concept of sensory branding as a holistic way of spreading the news." (Lindstrom, 2005: 5)[107]

Neurological and psychological support is employed[108] but there is a failure to evidence how the wider context of marketing cues impacts on the consumer's attention to the sensory details. Rather than address the problems caused by sensory overload for example they propose that: The vitality of aesthetics in customers' lives provides opportunities for organizations to appeal to customers through a variety of sensory experiences and thereby benefit both the customers and the organizations through customer satisfaction and loyalty. (Schmitt & Simonson, 1997: 3)

There is almost no evidence of field research leading to the assumption that their theory is constructed with only a very limited attempt to check the realities of marketing.[109] So when, for example, they claim: "Grocers have learned the value of the sensory effect of retail: many are placing fruits and vegetables near the entrance to provide smells, bright colours, feelings of freshness..." (Schmitt & Simonson, 1997: 301) they reveal limited awareness of the status quo in fruit and vegetable display and little awareness of heritage. Even a limited appraisal of retail histories outside of the corporate norm would reveal that the current strategy of locating fruit

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107 Lindstrom follows the familiar path of mixing anecdote with evidence of serious business strategy "Kellogg's has spent years experimenting with the synergy between crunch and taste. As part of this research they made contact with a Danish commercial music laboratory that specializes in the exact crunchy sensation of a breakfast cereal. Kellogg's wanted to patent their own crunch, and trademark and own it in the same way they own their recipe and logo...The day Kellogg's introduced their unique crunch to the market, their brand moved up the ladder." (Lindstrom, 2005:p 12)

108 "Some of a consumer's perceptions are direct, while others are cognitively mediated." (Schmitt, 1997: 19)

109 An image of the authors sitting in Starbucks is the only evidence of field research

and vegetables at the front of the store is an attempt to reconnect with a tradition of display that for decades the supermarket was attempting to eradicate because of its inefficiency.[110]

Part of the problem of marketing's embrace of the senses can be located in the areas of definition and terminology. In several areas of marketing and design theory the use of the word 'sensory' seems to become interchangeable with 'aesthetics', 'emotion', 'experience' and even design'. Marketing at best seems to be place where opportunity is researched, analysed and theorised but not a place where it is realized, that still falls to design. (McConell 2006, Bruce 2006)

Two Worlds?

One of the most problematic aspects of design briefing and signing off, it is here that design and its client base need to rely on subjective evaluation. Design's utilization of a range of hybrid skills that are segued together in ways that involve trust in high degrees of subjectivity is more fully exposed while management and marketing are forced to confront and relax their grip on their paranoid obsession with objectivity. The gap between terminology and practice is clearly diagnosed by Dodson: "We start from the commonplace recognition that 'an aesthetics of design is always problematic insofar as 'design' and 'aesthetics' refer to divergent traditions of understanding creative activity – indeed to different traditions of such activity (both in theory and practice around slogans like form follows function...It is difficult to reconcile the criteria for design – based artefacts with the traditional aesthetic criteria applied to the arts. It is difficult to reconcile the criteria for design-based artefacts with the traditional aesthetics criteria applied to the arts. This is because the basis of the latter is the universality and non-utilitarian nature of beauty whereas the basis of design is that the object in question is created for the benefit of some group of potential users, and is therefore aimed at satisfying some need, desire or economic demand. It is clear that there is a tension here between the thrust of aesthetic judgement, at least according to traditional theories where it is always conceived as universalizing; and design judgement, which must articulate the functions of artefacts, where such judgements are ultimately historically and sociologically determined." (Palmer, 1996: 3) Designers claim to deliver innovation because:

- Designers are perceived to, generally, have a better sense that their clients, or the marketing department, of what is trendy
- Designers are skilled at translating conceptual ideas and or adapting contemporary fashion into a relatively unique visual statement
- Designers are reasonably good at cutting their way through research in order to concentrate on the big idea and how to express it in order to achieve market differentiation
- Designers represent values and skills which the management culture relates to
- Designers use of visual schematics to make sense of, manage and sell ideas has encouraged a tendency for designers and their clients to rely on visual reference to make decisions that are primarily based upon visual evidence and conclusions

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110 More problematic as evidence of the gap between marketing theory and practice is the failure to acknowledge the relative lack of aroma to be found in mass produced fruit and vegetables. A combination of chemical growth enhancers, genetic manipulation, waxing, and other forms of protection, against deterioration, and freezing for transportation, and warehousing, has stripped many contemporary fruit and vegetables typologies of their aroma.

Play-Time?

While designers might be sent away to evolve concepts that give dimension to the change scenarios that research throws up problems typically occur when they return to present their ideas. The more radical the idea the more likely it is to expose the cultural differences between designers and their clients in ways that lead to negative tension. Tension then has to be resolved by a process of compromise that generally involves rationalizing the concept until it is reduced to something that the client can relate to. There are four main ways of reducing the level of compromise and its impact on innovation that are currently being explored in the corporate food sector:

- Game play, which involves the client working with the design team in an exploratory mode and agreeing conceptual and aesthetic principles through play prototyping scenarios (Kelly, 2005)
- Bringing in extra advisers ranging from trend forecasters to external marketing consultancies
- Testing prototypes
- Designers pitch in ways that allow the client to select the preferred choice, this typically involves using reverse psychology that exploits knowledge of the ways that clients make decisions

Terms of Reference

While any one or all of the above can lead to greater levels of innovation it is clear that the nature of the engagement between designer and client is typically compromised before it begins by the following norms:

- Clients commission designers who they believe will reflect their world view
- Designers who are not personally known are selected because of work that they have done that the client wants to imitate
- Designers anticipate the parameters which their client will regard as the outer limit of innovation and pitch within the safety zone
- The budget does not allow anything beyond incremental style innovation

Constraints

There are also important constraints on innovation that emerge from the client's ways and needs of doing business. In the 'needs' category the following priorities prevail:

- Health and safety which places restrictions on a range of design activity from packaging to access
- Scale, supermarkets are predicated on large turnover and that means that the solutions have to be robust enough and functional enough to meet the needs that scale brings to any brief
- Price, while price continues to be a dominant 'P' everything revolves a around it
- Efficiency, design most respect the need for efficiency access

The "ways" are typically informed by deeply embedded traditions and are often the easiest to challenge but the hardest to remove, because they represent the empirical knowledge of the client and his peers. Example of 'ways' would include:

- "Tyranny of choice" - 40,000+ SKU's (of which many are near-duplicates) while consumers can pay attention to only 160."
- "Individual product choices and innovations often do not offer enough benefit to offset the time and trouble it takes consumers to figure out what the benefits are." (Mclain, 2006)

Marketing as Design

It is the 'ways' of doing business that is the most obvious reason why supermarkets look and feel like 'a sea of sameness' (Mclain, 2006) or 'non-places for non-people' as Ritzer argues. (Ritzer, 2004) It is the ways of doing business that makes it more likely that design innovation will come from single-minded entrepreneurial vision rather than from the conventional relationship between a corporation and designers. It is the ways of doing business that leaves design as a very limited source of innovation. The marketing theory known as the 4/5 P's illustrates how the interplay between design, management and marketing tends to favour marketing and forces design to fit an instrumental strategy, which favours predictability and formula. One of the most influential places where marketing management and design most obviously meet is at the point where design is used to give dimension to the classic marketing position model. Known traditionally as 'The Four P's', the model has been extended to include a fifth P. The 'Five P's' are generally applied within a design and marketing framework that sets the generic characteristics of the retail brand.

The 5 P's can be framed as questions and they are:

- Price: How much you charge the consumer?
- Place: Where you sell to the consumer?
- Promotion: How you sell to the consumer?
- Product: What you sell to the consumer?
- People: Who are you selling to?

Designing for the Five P's

The brief characterization of the supermarkets management of the five p's confirms the extent to which supermarkets remain in the thrall of research and tradition. Designers working in the sector have experienced two main opportunities for influence and both of these were arguably products of British design's embrace and refinement of American precedents.[111] The two main design-led innovations were brand management by design and style branding both of which reached a new level of confidence and clarity of principle in the 1980's and were influenced by the Thatcher Government's deregulation strategy which stimulated greater business awareness of the need to present themselves in ways that impressed market analysts. Design management was most clearly framed by the British consultancy, Wally Olins[112] essentially claimed ownership of a way of thinking and expressing corporate identity that had its early origins in the first phases of modernism.

The precedent that Olin's drew on was pioneered by an emerging generation of American graphic designers, like Saul Bass and Paul Rand, who were both well versed in the European modernist principles of the grid but added a new flair for personality after 1945. Olin's adapted these precedents and attached them to an understanding of quality management thus offering corporate clients a holistic vision of how to express and manage the brand experience for internal and external customers through an attention to detail and a manual led approach to quality control. The manual-led approach to corporate communication covered every detail of the points at which design impacted on consumer impression levels from carrier bags to the position and font size and style of the logo wherever it might be experienced. The introduction of brand design management reinforced key aspects of the corporate relationship with, what was beginning to be called the design industry, by presenting design as a scientific management tool that offered corporations the opportunity to control their consumer perception through efficient management.

Tesco, 'Finest' range with packaging design influenced by Conran's 'Blueprint Café'

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111 Corporate design has a much longer history that is informed by European precedents that include the branding of late 19th century food retail chains like Lipton's and the modernist led strategies of modernist management of design developed by Peter Behrens for AEG in the early twentieth century and Frank Pick's makeover of the London Underground in the 1920's. (Forty, 1986)

112 Co-founder of design consultancy Wolf Olin's.

The innovation of style led packaging was substantially pioneered by Michael Peters, who followed the example set by some of the leading American designers, like Loewy, Bass, and Rand (c1930-1960's).[113] Michael Peter's use of illustration and the kind of contemporary layout style that hitherto had been the province of magazines substantially modernized the appearance of a number of brands and helped to promote greater investment in contemporary graphic style. Brand packaging tended to be used increasingly as a more sophisticated reinforcement of the above line advertising promotional campaigns that used television and print to create personality and need anxieties. In some case the traditional emphasis on the above-line strategies of the advertising agencies were challenged by the new wave of British packaging, which began to establish, rather than follow the brand personality. (Bruce, 2006)

In their different ways both of these initiatives helped to reinforce the pre-existing tendency of supermarket management's concern to grid and control consumers. Olin's manual approach to corporate design reinforced a role for design as a control mechanism that could be applied to the existing order of the five p's with more expectation of a precise link between the message communicated and the message received.

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113 Raymond Loewy (1901-1986) demonstrated the ability of a design to reposition consumer perception of a brand; his most influential work in the food and drink sector was the modernizing of coca-cola's corporate identity and packaging. He was also a key figure in raising the profile of design as a corporate tool and a means of capitalist and social engineering, claimed "the average person, leading a normal life, whether in the country, a village, a city, or a metropolis, is bound to be in daily contact with some of the things, services, or structures in which R.L.A [Raymond Loewy Associates] was a party during the design or planning stage.'"(Lowey, 1951) (http://www.raymondloewy.com/about/cocacola.html)

Chapter Ten: The Mainstream

Introduction

This chapter illustrates how the culture of multi-sensory repression revealed in chapters (4, 6, 7, 8 and 9) informed the mechanistic priorities of the supermarket model of food retailing. I explore the ways that supermarkets manage the relationship between supply and demand through a predominantly disembodied strategy of marketing led design. I consider the relationship between this strategy and the urge to maximize opportunity for capital accumulation.

I confirm ways in which the marketing model called the 4 (or) 5 P's, (introduced in the previous chapter) reinforces the coherence of retail propositions and informs the culture of visual hegemony and sensory denial. I use a case study based around Tesco to reveal how design and marketing emphasises one or more of the discrete P's in order to refresh a discourse of relevance between them and the consumer.

I draw attention to the role of design as source of visually led strategies of seduction. I confirm how packaging (promotion), form (product), store layouts based on the grid (place) influence consumer (people) habits and values (price).

I demonstrate how corporate food retailers utilize a strategy of recuperation and marketing and design to appear to acknowledge and respond to contemporary concerns (ranging from organic to ecology) that might otherwise impact negatively on their profitability.

P for Prevarication

When Tesco was a "no frills," "deep discounter," its use of a "stack-it-high-and-sell-it-cheap," display design strategy made complete sense and helped to build consumer trust that Tesco was a legal place location for the kind of bargains that the hitherto had only been available because they had "fallen off the back of a lorry."[114] This strategy fitted a time late 1950's lingering stereotype of the working class consumers it set out to target. Now that Tesco has moved up-market, and is beginning to wake up to green issues (while retaining a commitment to price) its marketing strategy clearly lacks coherence.

The emphasis of price has determined the following distribution of emphasis in the design and marketing of the 5 P's

- **Price:** A fairly constant emphasis on low prices remains a dominant feature of British supermarket marketing. Although there have been periodic attempts to evacuate this focus, tradition, competition, and consumer expectation typically forces a return. Tesco's have led the field by developing a mixed portfolio, emphasis on low price items is mixed with an increasing number of higher priced luxury items. Sainsbury's led in developing own brands has also allowed supermarkets to offer lower prices without having to pay brand owners additional mark-ups based on the brand reputation

- **Promotion:** Supermarkets traditionally relied on three main kinds of promotion, television, print and printed carrier bags.[115] The last two decades has seen greater investment in the creation of a brand personality in which the supermarket is depicted

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114 A vernacular expression that obliquely refers to illegally obtained merchandise that at the time of Tesco's first expansion still reflected a significant 'black-market' that had evolved during the war as a reaction to rationing.

115 The emphasis was initially entirely about price promotions featuring bargains that were designed to tempt shoppers into the stores.

as the shopper's friend. This strategy leaves the emphasis on price while developing the kind of persona for the supermarket that used to be reserved for luxury brands. Tesco has led the way in promoting directly to consumers by persuading them to adopt loyalty card (Clubcard) and/or credit cards. This enables the store to monitor consumer's habits and send them personalized promotions. The most recent promotional innovation consists of in-store media featuring plasma screens strung above the shelving. These are intended tom provide Tesco with additional revenue opportunities and mark the recognition of retail as a media space. Rising material and energy prices and opportunities for promotion of ecological reputation has led to various initiatives designed to encourage consumers to use and expect less carrier bags ranging from 'bags for life' to additional Tesco's clubcard points for customers who re-use bags

- **Products:** Led by the emphasis on price the need to meet that expectation has maintained a much greater emphasis on processed packaged food types, which offer the potential of greater profit margins. The development of 'own-brands' had evolved from, but not abandoned, the strategy of cloning, leading to new food brands that are exclusive to the supermarket that developed them. Design emphasis is still led by the perceived need to create the appearance of products that suggest 'supersize' content and cheapness of price. The gradual development of products designed to appeal to aspirational lifestyle trends had provided designers with some room for innovation but these innovations frequently emulate the brand styling of the innovators.[116] Design of the products also needs to incorporate all of the legal and distribution agendas outlined above as well as addressing technological innovations led by materials science. Solutions typically focus on speed of preparation and consumption.

- **Place:** Traditionally the place that personifies the supermarket has been designed to look and function like it is a location for bargains and that it will allow consumer industrial style efficiencies of access and exit opportunity. American precedents and industrial fixtures and fittings laid out in ways that were determined by the twin priorities of efficient stock flow (for consumers and store workers) and the appearance of affordable modernity. New materials, new services, and new products have informed cautious innovation. The first coherent attempt to design an experience aesthetic without compromising the supermarkets traditional emphasis on price led marketing was masterminded by Carlos Perez[117] for UK Safeway in 2002.

- **People:** During the first stage of supermarket development (c 1949-1963) a very large number of consumers were cash poor and were encouraged by any opportunity to extend their purchasing power through access to bargains. After 1963 an increasing range of lifestyle needs began to be driven by an increasing range and variety of new

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116 Tesco's 'Finest' range of quasi luxury foods and other lifestyle products cloned Conran's[116] relatively exclusive Bluebird Café aesthetic.

117 This modest rethink of the supermarket aesthetic received initial enthusiasm from journalists and consumers but did not deliver the necessary evidence of economic benefit that would cement a long term financial recovery and was therefore not given time to establish consumer loyalty and the store chain was put up for sale. Whole Foods Markets adoption of this aesthetic strategy and the increasing emphasis on lifestyle and health marketing suggests that Perez was just a little too far in front of conventional wisdom. The strategy that he pioneered will now emerge as one of the most important change drivers in supermarket place design

food brands. In the economic recession of the 1970's price remerged as the dominant priority but this was informed by consumer assumptions that they supermarkets were able to provide them with economic access to the processed brand replacements for traditional food types. The Yuppie phenomenon of the 1980s helped to fuel the development of a new range of luxury and image orientated brands. The early 90s witnessed a transformation from mass marketing specialists towards an increasing concern with targeting a broad and diverse range of demographic subdivisions. The new, or expanding demographic priorities included, health, (e.g. organic) single lifestyle, (e.g. ready-meals in singles sizes) ethnic food, (e.g. Supermarkets were quick to exploit the acceleration of interest in Thai food in the 1990s) luxury, (e.g. increased opportunities to buy expensive wine and champagne brands) aspirational lifestyle (e.g. simulated luxury like Tesco' 'Finest' range), ethical lifestyle (e.g. vegan) and dieting. All of these were increasingly packaged to fit a growing market for convenience foods.

Tesco by Design

The history of mainstream supermarket retailing and Tesco in particular is introduced in more detail in Appendix: Shopping and the Supermarket: The History of Access. This section considers the mainstream formula that Tesco and the other British supermarket currently utilize.

Tesco is clearly sending out a range of mixed messages in its attempts to cling on to the old, in terms of its lower income consumer groupings while targeting more affluent and style conscious typologies. The allegiance to the iron cage, machine, grid aesthetic is apparent in the legacy of the majority of Tesco's facades and interiors. This is the symbolism of order and control but it is also, through its adoption by supermarkets, the symbolism of 'no-frills' discounting.

P for Place

The two example of Tesco's facades, above, are symptomatic of their corporate brand strategy in which efficiency and affordability are the dominant statements.
The same controlling emphasis dominates the interiors as revealed in the two images immediately below.

P for Product

The relatively small proportion of fresh produce is forced to fit the grid via the strategy of crating that was originally employed by Cohen to reflect the notion of bargains that have fallen off the back of a lorry. "Nearly all supermarkets welcome shoppers by plunging them into their produce departments, to whet their appetite, excite their eyes, and put them in the mood for shopping. Fruits are piled high in wooden baskets even more picturesque than you would find in real markets...still it is difficult to reconcile the impersonality and friction-free flow of commodities that make supermarkets work with the tactile emotion-laden world of the market. Supermarket checkers are intentionally uninvolved with the products they buy." (Hine, 2003:61)

P for People

The attempt to target different demographics creates an aesthetic tension the reliance on visual impressions, seems to present a problem of continuity when it comes to products where provenance is important, raising questions of who Tesco is and what values it promotes? While the mass of consumers are still operating from a conditioned approach to shopping as a bargain/convenience hunt, they will edit the 'value' from the 'finest,' but a question mark must hang over the issues of health and environment that are beginning to penetrate the consumers psyche. In 1990, when Tesco was beginning to redefine its approach to design, Ewen argued that style has the potential to act as the main determinant of choice "Part of the promise of style is that it will lift us out of the dreariness of necessity...style today is an incongruous cacophony of images, strewn across the social landscape. Style may be borrowed from any source and turn up in place where it is least expected." (Ewen, 1990: 14) This reflection of the legacy of the designer values of the 1980s continues to work as a strategy but there is a hint that the obsession with surface has begun to lose its shelf appeal. This reinforcing the need for the design industry to consider what they can offer as an alternative?

P for Price

Any consideration of price will have to address sociologist George Simmel's explanation of 'the objectification of value'. For Simmel any exchange in a capitalist, or money economy had to involve a perception of the worth of the goods from the consumer. The price they are prepared to pay and their belief in its value will depend on motive. The worth may be social, to impress others for example, it may be cultural in so far as the users forms an empathy which is culturally determined, or it may be economic reflecting opinion about the relation ship between price and value. Zukin suggests, "this value is both abstract, when it is expressed in terms of price and popularity, and personal, when it has a specific quality just for me." (Zukin, 2005: 14) Tesco shares a problem that is, to a greater or lesser extent the problem of supermarkets in the twenty first century, namely that the theory that they, and their design consultants operate on is now very much a product of the first half of the twentieth century. Humphrey recalls McClelland's book on supermarkets and his proposal, citing Dr Ernest Dichter's assertion: "the package is an extremely important substitute for the personal relationship that people desire." He argued, "The loss of social contact...could be remedied (by) packaged products, the physical characteristics of the shop, company logos and advertising images." (Humphrey, 1998: 65)

P for Promotion: Paint it Green

British supermarkets have clearly evolved their appearance, scale of operation and customer base over the last sixty years but their use of design has tended to concentrate on bringing the traditional formulae of a grid constructed from long aisles of shelving up to date and tuning it to address emerging agendas. This is well illustrated by Tesco's recent commitment to 'greening' its store design as part of a money saving and promotional strategy. The list of intentions and commitments identified below from a recent retail wire report sound impressive. At first take it would seem that Tesco has turned a corner and has bowed to pressure from its critics who range from environmental activists to community groups:

- "Tesco said it was setting a 'benchmark for green technology in construction and retail," and expects to use the store as a blueprint for future developments.
- The company, which hopes to open 100 new shops in 2007, has pledged to half its per ft energy consumption by 2010.
- The Wick store in Scotland has been built using a larger amount of recycled, recyclable and sustainable products, as well as a host of locally sourced materials. (Opened November 2006)
- The new bakery ovens save enough electricity each year to light one million light bulbs for an hour.

- It is also thought the store will collect enough rainwater each year to fill more than 25,000 bath tubs.
- Lucy Neville-Rolfe, company secretary of Tesco, said: "The Wick store is a great step forward for Tesco. It brings together the latest construction, engineering and sustainable technologies. We expect this to reduce the carbon footprint of the store by half. Not only that, it will allow us and others to take advantage of the lessons learned in years to come."
- Earlier this year (Tesco) ploughed £100 million into an environmental fund in a bid to encourage customers to recycle and to cut fuel consumption by its distribution fleet. It has already used wind turbines at its Diss store in Norfolk, while solar panels are used at a branch in Swansea.
- The shop even boasts energy champions, who encourage staff to go about their daily tasks in an eco friendly manner.
- The chain hopes to open another green store in Shrewsbury next year." (Retail Wire, 30-11-06)

The reality, as the picture and local reportage below reveals, is that Tesco is still committed to a price led strategy of sourcing cheap products wherever it can find them and still understands its primary service to communities as the offer of affordable variety[118]. From a design perspective, although the store framework is wood rather than metal, the image reveals a commitment to the grid. Wooden grids are still grids and betray the legacy of the machine aesthetic that has informed supermarket layouts for at least sixty years. As Ritzer suggests "Efficient systems have no room for anything smacking of enchantment and systematically seek to root it out of all aspects of the operation. Anything that is magical, mysterious, fantastic, dreamy, and so on is apt to be inefficient. Enchanted systems typically involve higher convoluted means to whatever end is involved. Further more enchanted ends worlds may well exist without any obvious goals at all. Efficient systems, also by definition do not permit such meanderings, and designers and implementers will do whatever is necessary to eliminate them." (Ritzer, 2004: 86)

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118 Tesco uses this explanation to justify its continuing attempts to annihilate local or global competition. The strategy of enabling communities to get greater and more affordable choice is entirely focused on Tesco as the deliver of price and choice.

The key handover signifies that the structural work to the new store is complete, the staff can start stocking the shelves, and local residents can begin the countdown to the opening day. (November 27th, 2006) (Caithness.org.2006)

Listed below are some of the features that the store manager (Charlie Burness) chose to promote in contrast to Tesco's Press release above:

- "The new store in North Road will create greater choice and range for shoppers in Wick and the surrounding areas and has created more than 200 new jobs for the area."
- "With the Tesco freshness and quality guarantee and great convenience, we hope the new Tesco superstore will be a successful addition to the town of Wick."
- "We will strive to offer a good value for money store with great customer service for people living or working in the area who want a convenient place to shop, without having to travel all the way to Inverness for their weekly groceries."
- "The new Superstore means that customers will be able to stock up on their weekly shop with essential fresh and frozen foods, health and beauty, household items and entertainments such as DVD's and CD's." (Caithness News Bulletins, 22-11-06, Caithness.org)

TESCO

Every little helps.

The truth of Tesco's 2006 decision to invest £100 million in environmental initiatives was revealed by Terry Leahy in an April interview on BBC Breakfast News: "Like our customers we see our energy bills rising so we have invested this money to look for new technologies so that we can bring down the price of energy." (BBC Breakfast News, 25-4-06) This honest answer is symptomatic of the corporation's commitment to increase its potential for capital

accumulation for its shareholders but it is remarkable for its lack of spin. While the Press department is busy trying to weave stories about a commitment to the environment the CEO tells it like it is, purely a cost saving exercise. Leahy's own position is still locked into the premise that brought him to the leadership of the company: "The customer is the final arbiter, shares can go down as well as up." (BBC Breakfast News, 25-4-06)

Tesco is no different to the other supermarkets in this respect, concern to develop new packaging solutions, and attempts to educate consumers disposable approach to carrier bags begin and end with the spiraling costs of oil from which the plastics are derived. The weight of a carrier bag has dropped four fold in the past fifteen years but it is no longer profitable to supply them in the indiscriminate way that has typified supermarket strategy. The landfill and pollution crisis did not enter the frame of reference until the supermarket felt the cost directly. While these initiatives give designers a new set of opportunities if it important to note that they are driven by profit related economies and not a deeper acknowledgement of the principles that might be promoted.

Meanwhile there is pressure from the packaging industry to continue to rely on science and technology for a solution and this is a persuasive argument for the executives and designers who do not feel at ease with 'enchantment.' Morris and Bate dismiss concerns about packaging and the return to the 'cracker-barrel' claiming that these "choices are neither simple not independent of the broader social and economic context in which they are made...Packaging manufacturers and fillers must, then design packages that take into account permeability, shock absorption, light transmission, thermal conductivity (etc) consumers...have an additional set of criteria that they demand form packaged products (that) include attention to labels, appearance, safety, weight, product and packaging convenience, and price...even odor, tactile attributes, and opacity (or transparence can matter to consumers." (Morris, 1999: 81)

The following statistics and arguments represent the barrage of evidence present to the corporate food chain with the intention of perpetuating their commitment to the mainstream strategy:

- ."Transport packaging systems, such as returnable plastic pallets, offer further potential for reducing food spoilage and packaging waste...improved systems for packing and shipping foods have reduced the need for warehousing space from 40 percent for a self-service supermarket in 1960 to under 10 percent just a decade later." (Morris, 1999: 86)
- "The waste figure for the much-maligned prepared-food category (which includes microwave dinners, take out food and packaged soups and stews) is a relatively modest 4 to 5 percent." (Rathje, 1992:)
- "Plastic milk jugs weighed 95 grams in the early 1970s; by 1990 the same jug weighed just 60 grams...plastic grocery bags were 2.3 mils thick in 1976 by 1989 they were 0.7 mills thick." (Morris, 1999: 95)

Conclusions

The deeply rational approach to retailing represented by the supermarket is clearly the key to its success, there is clear evidence that the more supermarkets are managed by team and led by leaders who have no interest in the traditions of multi-sensory food traditions the more they are able to apply objective decision making to achieve capital accumulation for their shareholders.[119] There is no doubt that the objectivity involved in the corporate sector of the food business is at the root of multi-sensory denial or marginalization but there are signs that this may change. At the end of the twentieth century an increasingly vocal minority was beginning to reject the behaviourist model of control represented by the cage mentality[120] of supermarket design, and by the twenty first century this began to include some of the supermarkets: "We needed some fundamental changes," said Steven Burd, chairman and CEO of Safeway. "We [needed to] differentiate our offering from other conventional supermarkets." "Safeway's answer to setting itself apart came in the form of its 'Lifestyle' format. Starting in 2003, Safeway began a six-year program to remodel all of its stores to the tune of $1.6 billion a year... Once Safeway decided it had a story to tell, the company launched a $100 million plus ad campaign to drive consumers into its new and significantly improved stores." (Anderson, 14-9-06)

Blythman summarises an increasingly common reaction to the characteristic aesthetic of UK supermarkets: "There it was, big ugly and floodlit twenty four hours a day...What supermarkets excel at...is over-packaged, often over processed, much travelled ingredients that put two fingers up the seasons and any notion of locality or geographical specificity. I began to see what a spirit crushing and alienating experience supermarket shopping actually was." (Blythman, 2005: X1V)[121] The two American responses below confirm the universality of the critical rejection of the supermarket aesthetic:

- Ritzer quotes a film to reinforce his critique: In a reference to the film 'One-Hour-Photo' (2002) starring Robin William as an oppressed supermarket worker Ritzer identifies the

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119 The culture of management and its implicit and explicit resistance to multi-sensory food experience is explored in Appendix M.

120 The cage has become one of the major symbols for the profitability and the protest surrounding the extremes of the objective and rational application of the ideology of the factory to farming. Drawing on Webber's analysis of institutions the cage offers a useful metaphor to describe the supermarket shopping experience. This will be discussed in more detail in the sections that deals with alternatives.

121 As this message reveals Blythman does not necessarily represent the average consumer: A message to those moaning about TESCO (This article was written by an Action Network user not the BBC)
Updated: 08 May 2006, By Luke Spence: "Firstly I do not work for TESCO; in fact I don't work in retail at all.
I've noticed a few threads on here, which basically amount to many people moaning about supermarkets, but more specifically TESCO. Perhaps a re-think. Some people feel that TESCO have a monopoly on food retail in the UK, this is clearly not the case, however TESCO have secured a large portion of the market through being VERY GOOD at what they do! People choose to shop at TESCO because they feel that the all round TESCO experience is better than that of their competitors, and I for one am inclined to agree.
I can see why many would like to encourage shoppers to use smaller local shops, but in reality, it is just not practical for most, think about it:
1) In the cold British winter, who can be bothered trawling between shops on the high street, when you can get it all under one roof.
2) Due to the buying power of supermarkets they can offer better pricing, which does not indicate lower quality, as many suggest.
3) I'd trust a large organization, with a reputation, more than I would Mr. Butcher when it comes to hygiene too!
4) Most high street shops close at 5-6ish, so if you work days, you can't get there, you've got to admit, supermarket hours are convenient.
Now I wouldn't normally bother with a forum like this, but I felt that the opinions here, on this matter are unrepresentative of today's society, mainly due to the fact that the sort of people moaning on here about supermarkets, are those that have the time to shop at local shops, so here's the message 'you live in a dream world' most of us do not!"

dominant aesthetic of supermarkets all over the world: "Like the chains on which it was modeled Sav-Mart looks much like every other one. There are great long aisles with endless shelves loaded with products lacking indistinctive substance. There is a pervasive coldness in the store atmosphere (and in the attitude and behavior of the store manager) that is abetted by the abundance of white and icy colours.' (Ritzer, 2003: 11-12) Ritzer draws an analogy between the American supermarket and his identification of 'the four basic dimensions of McDonaldization...efficiency, calculability, predictability and control." (Ritzer, 2004: 22)

- Nestle writing from the perspective of a nutritionist identifies how the supermarket strategy confuses rather than supports choice: "A visit to a large supermarket is a daunting experience: so many aisles, so many brands and varieties, so many prices to keep track of and labels to read, so many choices to make. No wonder...an astonishing 320,0000 edible products are for sale in the United States and any large supermarket might display as many as 40,000 of them." (Nestle, 2006: 17)

Despite significant investments in design, trend forecasting and other forms of market research the majority of the innovations British supermarkets are made through imitating perceived rivals. Their design, product and service innovation are generally based on imitating SME's like La Fromagerie, who develop service offers designed to avoid the compromises of quality and value, which are inherent in corporate strategy. These innovations are often taken up by brand owners like Unilever or Nestle and are then cloned by the supermarket. Whole Foods Markets has based it entire strategy on imitating the alternative food sector from counter culture food stores to farmers markets and will now become the target of imitation by the UK supermarkets. For example Tesco has already copyrighted the word 'wholefoods' as a brand. The ability of smaller rivals to develop food and aesthetic innovation seems to emanate from their passion and involvement with food and the values that they choose to associate with it or perpetuate for it.

Chapter Eleven: The Supermarket Formula: Design as Business and Business by Design

Introduction

This chapter locates the history and theory presented in chapter (10) by highlighting ways in which the supermarket model of retailing evolved a modernist and visually led design aesthetic. I confirm that this aesthetic reflected and reinforced the wider culture of mechanistic determinism.[122]

I argue that supermarket's employment of scientific method and industrialized strategy helped to make tangible many of the implicit and explicit promises of the rational model of progress. In other words, it focuses on one part of the full cycle of cradle-to-cradle at the expense of almost all others.

I intend to demonstrate that the importation of American retail strategy into Britain in the post-1945 period brought with it increasing dependency on American strategies of production and consumption. I argue that this served to marginalize multi-sensory opportunity in the name of efficiency and convenience.

While I locate design's active participation in the business and cultural context of sensory marginalization I confirm a potential for designers to re-imagine and re-sense a supermarket of the future. The evidence I have gathered suggests that a supermarket that was a site of sensory choreography could become a source of benign influence.

The Story so Far

When British food businesses like Sainsbury and Tesco adopted the America supermarket format after the Second-World-War, they embraced a business strategy predicated on low prices, branded products and a set of well-defined design characteristics. Humphrey proposes that the rise of British enthusiasm for 'engineering-the-shop' modernity in the 1950s was a change "in the notion of what was exciting, a change embedded in post-war modernity and the new consumer products and experiences to which it gave rise." (Humphrey, 1998: 75) de Grazia argues: "For Europeans, the supermarket offered a new model of industrial beauty: the shadow free luminosity of neon lights, the constant temperature of air-conditioned spaces, the vast glass-and-steel refrigeration units, the rows of brightly coloured cans and packages, the mounds of fresh produce graded in string sacks or cellophane-wrapped containers." (de Grazia, 2005: 384)

Although supermarkets were regarded as innovative and modern their design formula initially depended more on the nuts and bolt innovations of entrepreneurs who materialized a display style which emphasized access to the variety, and low-price of processed branded food. The design knowledge and understanding that was reflected in the first prototypes was primarily based on an imitation of American prototypes. Jack Cohen, for example simply improvised concluding that it was price and access rather than aesthetic refinement that mattered. As Bevan suggests his "first attempts to emulate the American model involved simply turning his counters back-to front and piling them with produce. That was his classic seat-of-the-pants style." (Bevan, 2005: 8)

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122 For example the aesthetics of supermarkets are dominated by an aesthetic formula that balances the 'machine for shopping in' and 'the raw and uncooked' amalgam of European modernism and American engineering that was pioneered in America and is introduced in Chapter Three.

Cohen's disregard for professional design and marketing continued to compromise Tesco's brand image and strategy until his death in 1979 and arguably still does. His own early, and significant success was built upon challenging the branding traditions that had informed the first generation of chain food retailers like the Home & Colonial and Liptons who had evolved, with professional designers, a clear, coherent and relatively high cost brand image for their shops packaging and promotion. Cohen's instinct had informed his view that the emphasis should be placed on the affordability of the produce he sold and that this would be compromised by too much obvious investment in design detailing. From the 1930s to the early 1960s the majority of the British public were not well off, and wanted access to affordable brands, without too much concern for where they came from.[123] Tesco's continued loyalty to the 'pile-it-high,' 'sell-it-cheap,' approach developed by Cohen can still be found in many aspects of their brand design from the stores to the packaging. The example below personifies the popular style, informed by label legislation it represents a display convention allows the consumer to bi-pass the butcher by connecting the consumer to the slaughterhouse without revealing the link.

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The construction of the British supermarket aesthetic continues to depend more on American precedents, and American lifestyle iconography, values and aspirations, than it does on contemporary professional design. The culture clash between design and business management described by Olins in 1978 still seem to prevail in the supermarket business. Olins identifies a series of schisms between the creative professions and business that had to be resolved before corporate design could evolve into a mature phase.[125] The tension between the commitment to the national flag colours that continue to inform Tesco's brand image and their modernizing zeal reflects a poorly considered attempt to look backwards and forwards at the same time[126]: "While brand image is usually passive and looks to the past, brand identity should be active and looks to the future, reflecting the associations that are aspired to for the brand.

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123 Sell-by-dates did not enter the trade until legislation in the 1970's forced the food processing and retail sectors to label, including ingredients. 'Best before' information began to filter into labelling as a result of brand promotional strategy in the late 1980s.

124 A sealed pack of diced pork from Tesco. It shows the cooking time, number of servings, 'display until' date, 'use by' date, weight in kg, price, price to weight ratio in both £/kg and £/lb, freezing and storage instructions. It says 'Less than 3% Fat' and 'No Carbs per serving' and includes a barcode. The Union Flag, British Farm Standard tractor logo, and British Meat Quality Standard logo imply that it is British pork. (http://en.wikipedia.org/wiki/Packaging_and_labelling)

125 "Traditionally designers...have believed that the interests of business are inimical to design. This feeling has actively fostered in art schools...For their part businessmen have generally tended to regard anything to do with creativity art or design either as something to do with women or as a process that is mysterious and terrifying – or both...Designers have characterized businessmen as coarse, vulgar philistines, prepared to do anything for money. Businessmen have thought of designers as effete, impractical, idealistic and probably politically and emotionally unreliable." (Olins, 1978: 155-157)

126 Ian MacLaurin, was brought in by the investors in 1973 to reorganize the business. He considered changing the name to lose the reputation of 'no-frills' discount that Tesco had acquired but the board resisted.

While brand image tends to be tactical, brand identity should strategic, reflecting a business strategy that will lead to a sustainable advantage." (Aaker, 1995: 70)

For the British supermarket the strategic advantage is still led by price, and Tesco, leads this fixation. There is little evidence of the experiential branding strategies that connect with the consumer's emotions that took root in the 1990's and have become a leading agenda in the first decade of the twenty-first century. "Over the past decade, it has become resoundingly clear that the world is moving from an industrial driven economy where machines are the heroes toward a people-driven economy that puts the consumer in the seat of power...Food is no longer about cooking or chores but about home/lifestyle design and 'sensory experiences...intangible assets have become more valuable than tangible assets." Gobe, 2001:1-2) Gobe, Olins, and others argue: "brands of the future will have to signal something wholesome about the company behind the brand; the next big thing is social responsibility." (Olins, 2001: 2)

The Development of the Design of the Supermarket

Grocery chains were the pioneers of mass food retailing in America and Britain. During the latter half of the nineteenth century the Liptons (Britain) and the American A&P (Great Atlantic & Pacific Tea Company) had demonstrated the relationship between a strategy of corporate style design investment and profit. They invested to achieve uniform corporate branding and had very clear standard of aesthetic coherence management. The pioneers of mass food retailing were influenced by the benchmarks of retail design provided by the department stores that ploughed profits back into design and efficiency innovation. Investment in glass became a measure of progress in retail design through the last half of the nineteenth century and the early twentieth century: By 1915 America was consuming 50% of all the plate glass produced in the world 'all glass fronts' became commonplace and "unlike the mid nineteenth century, when it was still thought indiscreet and vulgar to stare into windows, by the beginning of the twentieth century, people were being invited – even baited – to look. Merchants hired professional 'window gazers' to encourage gawking." (Leach, 1994: 61)

The seductive power of the shop window encouraged the development of a distinct profession: the window dresser[127] and spawned a body of marketing theory led by Frank Baum, the author of one the premier 'smoke-and-mirrors' fictions: The Wizard of Oz.[128] While Baum urged his members, readers and clients to "Use the best art to arouse in the observer the cupidity and longing to possess the goods." (Leach, 1994: 308) he reveals the sympathy for brash showmanship and 'conning' that has always played an influential role in the rise of American business, particularly its food industries and clearly shares the same convictions as P T Barnum[129] Baum did not seem to have any morals "As long as the goods are properly displayed the shop window will sell them like hot cakes, even though the goods are old enough to have grey whiskers." (Leach, 1994: 60)

By moving stock to the back of the shop the supermarket helped to evolve and erode the design lead that has made an art of the shop window. The radical decision to move produce

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127 And vice versa.

128 In 1989 Frank Baum founds the 'National Association of Window Trimmers' to achieve "the uplifting of mercantile decorating to the level of a profession." In 1990 he founded a 'Monthly Journal of Decorative Art' called 'The Shop Window.' It was acknowledged by H Gordon Selfridge as "an indispensable organ' (and) in a few months circulation grew into tens of thousands." (Leach, 1994: 60)

129 'You can fool all of the people all of the time" expressed as "It is said that people are not as readily deceived by window display, but we all know better than this. There seems to be no way to protect people from imposition, even supposing they desired to be protected.'"(Leach, 1994: 59)

from the shop window and place it at the back of the store seemed to be retrogressive step, distinctly at odds with contemporary developments that used conspicuous style to evoke the promised of escapism.[130] At first glance it appears that supermarkets were evacuating a century of empirical knowledge of how to seduce consumers and were walking away from the investment in design that had been made by the first generations of food retailers. What seems to have allowed the supermarket's 'raw and uncooked' style of merchandising to gain acceptance is the development of advertising and branding. Consumers were educated to evaluate quality and value through brand value and price and were tempted in-store by the promise of an array of brands that they would not find in such abundance, or at such a price in traditional grocers.

The design styling of the store, particularly during times of recession became less important than the ability to access its bargains. So by emphasizing easy access to an abundance of brand choice and availability at discount prices the supermarket retailer had arrived at the kind of minimal aesthetics that fitted the modernist design rubric of form follows function, albeit at a bargain price: "A problem of our age and of contemporary aesthetics: everything tends to the restoration of simple masses; streets, factories, the large stores, all the problems that will present themselves tomorrow under a synthetic form and under general aspects that no other age has known. Surfaces pitted with holes in accordance with the necessities of their destined use, should borrow the generating and accusing lines of these simple forms. These accusing lines are in practice the chessboard or grill – American factories...guided by the necessities of an imperative demand, the tendency of the engineers of today is towards the generating and accusing lines of the masses; they show us the way and create plastic facts, clear and limpid, giving rest to our eyes and to the mind the pleasure of geometric forms. Such are the factories, the reassuring first fruits of the new age. The engineers of today find themselves in accord with the principle of Bramante that Raphael had applied a long time ago." (*Le Corbusier,* 1996: 41)

Supermarkets embraced the potential of making their business plan tangible, and created an exemplar of the kind of rationalism that, in principle at least, the modernists most admired, "...without plan there can be neither grandeur of aim and expression, nor rhythm, nor mass, nor coherence. Without plan we have the sensation, so insupportable to man, of shapelessness, of poverty, of disorder, of wilfulness." (*Le Corbusier,* 1996:207) So without access to modernist architects and designers but first hand knowledge of some of their primary sources of inspiration the first generation of convenience retailers invented a parallel aesthetic which exemplified good practice and perhaps more importantly presented the minimalist aesthetic in a way that the public understood: "Modernism failed as mass-housing and city building partly because it failed to communicate with its inhabitants and users who might not have liked the style, understood what it meant or even known how to use it." (Jencks 1996:475)

Corbusier anticipating the arrival of the modernist store but he may well have found the supermarket less than perfect, not least because rather than providing an end in itself it was a means to an end, which perpetuated the visual and gaudy traditions of the carnival, while

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130 Heathcote recalls how the American cinema architects Thomas W Lamb and Samuel 'Roxy' Rothapfel, "defined the architecture of the luxury cinema and created the notion of the picture palace as a place of escape and sheer fantasy in which the building played as large a part in an evening as the picture itself.'" But Heatchcote also acknowledges a separate strand of history that emerged form the fairgrounds: "Bright lights, gaudy posters, deep canopies and huge billboards were all adopted as symbols of the presence of the cinema on the street. Although the elements were refined into a formal architectural vocabulary these remained the defining essence of cinema architecture for most of the ensuing century." (Heathcote, 2001: 13)

locking them into a modernist grid. Corbusier made his contempt clear: "Decoration is of a sensorial and elementary order, as is colour, and is suited to simple races, peasants and savages." (Le Corbusier, 1996: 143). Bit he may have empathised with the goal of achieving a rationalization of the relationship between the supply and demand cycle by "Developing large sites and maximizing efficiency, building high volume with low prices and then negotiating appropriate discounts from manufacturers, investing in technology and reducing logistic costs." (Corstjens, 1999: 101) and the concern to remove "operations that add no value, eliminates delays, simplifies movements, reduces complexity..." (Walters, 2003: 67)

Ritzer argues that during the first phase of their developments supermarkets could be compared with the traditions of food retailing that they replaced: "Initial visitors to the first supermarkets may have seen them as great wonders and full of content because of all that was combined under one roof. Others may have seen them as involving a loss in comparison to the content-rich (especially in terms of interpersonal relations) grocery stores, fruit and vegetable stands, butcher shops, and bakeries that they were replacing." He concludes "Judgements about loss and emptiness are certainly affected by temporal changes. Standards change, as do the systems being judged, and this affects such judgements. The most important change affecting these systems is that they become routine, subject to the same basic blueprints." (Ritzer, 2003: 153)

Bowlby cites Carl Dipman, the editor of the American magazine 'Progressive Grocer' as a key advocate of the scientific approach to self-service through articles and book written in the 1930s. She suggests that Dipman's vision "consciously combines scientific organization and aesthetics" quoting him from 1931: "The old fashioned store was to a large extent a storeroom. The dealer was a storekeeper. But the modern grocery store must be a scientific saleroom. The grocer must be a modern sales engineer.' The consumer became 'a bundle of sales possibilities' Aesthetics were driven by economy 'the grocery store today must be both pleasing to the customer – a thing of beauty- yet so constructed that work and labour are reduced to a minimum...The application of sight and touch, coupled with efficiency of operation, are the most important factors in the new retail salesmanship.' Dipman highlights the need for 'the elimination of steps and lost motion so that the merchandise may flow through the store with the least expense (with the potential) of the elimination of an employee or two." (Bowlby, 2001: 143-144)

Bowlby cites M M Zimmerman as an important source of supermarket promotion: "He founded the journal 'Super Market Merchandising in 1936 and was the leading figure behind the Super Market Institute, inaugurated by the first national convention of supermarket operators in 1937.' Zimmerman's articles were turned into a book in 1937: 'Super Market: Spectacular Exponent of Mass Distribution," followed in 1955 by 'The Super market: A Revolution in Distribution.' Zimmerman organized the first International Congress of Food Distribution in Paris in 1950, attended by 2000 delegates from all over the world. Bowlby also cites the importance of the 'National Cash Register Company' in "spreading the gospel of self-service to the rest of the world." (Bowlby, 2001: 153-154)

Bowlby suggests that "Supermarkets radically altered the retailing situation for which packaging had to be designed, since even of some packages were still going to non-self-service outlets, the increasing dominance of supermarkets made it impossible to disregard their particular selling conditions. Tins and packets were now thought of as having to get themselves noticed among thousands of similar products, as having to make an appeal that – in the ubiquitous word of the time – would be 'instant'...instant appeal; now took the...self-service

psychology of the 1930s a step further...it implied a simple form of address to a simple mind that basically, underneath, worked through automatic reactions to a given stimuli." (Bowlby, 2001: 175)

There was also a connection with the health associations of modernism's aesthetic rationalism: "In connection with food there is often a wish to get rid of all the unhygienic associations of odor or handling that the package resolutely covers over and seals out of existence. A 'pure' modernist aesthetic implies not just doing away with messy old-fashioned designs, but also signifying the freshness of the product.' Bowlby argues that, at least in the 1930s there was 'something like a counter-lavishing of voluptuous attention on the tactile and other pleasures of newly invented packaging materials themselves." (Bowlby, 2001: 48)

Packaging development was accelerated by the business expansion of the supermarket in the 1930's. Together the supermarket and branded food had an inestimable impact on the sensory character of food and this can be described in terms of synthetic substitution. Hine argues, "packaging products were unquestionably a major force in the move towards bigness and the loss of human contact in retailing.' He suggests that this 'could not really have happened without them." (Hine, 1997:137)

During the 1930s a combination of corporate strategy, processing innovation, entrepreneurial innovation, health concerns, science, technology, materials, design and marketing psychology and widely shared enthusiasm for science as the source of utopian progress encouraged the evolution of what could be regarded as the early modern stage of sensory substitution. Bowlby cites promotion of cellophane as a 'sensory' solution during the 1930's. Sliced Bread was used as an example of the 'appeal' of transpaper packaging. The ability to "touch" products was a key promotional theme, 'Modern Packaging' magazine from 1937 states "The typical grocer's shop puts a barrier between public and goods. Sometimes they can see the goods: often goods are hidden away in drawers...to be able to feel and handle without asking and then waiting is a rarity. The counter and the unspecified human being are being reclassified as barriers. The assumption is that customers both want and have a right to get at the goods; if they can't the goods count as "hidden away." (Bowlby, 2001: 103)

This phase of innovation represented a self-conscious and to all intents and purposes genuine, promotion of packaging as something that would replace, rather than just act as a superior substitute for, the sensory information that nature can provide. Despite the recession packaging, processed food and the streamlined efficiency of the supermarket represented an embodiment of a growing enthusiasm and acceptance of the future. Public enthusiasm was encouraged by a design agenda that mixed together minimal and machine aesthetics, popular science fiction, American streamlining and the vernacular expression of the raw and the uncooked entrepreneurial know-how. It was the kind of user-friendly modernism that became palatable, literally and metaphorically, to a wide cross section of business and their consumers. It was the modernism that was captured and communicated by the last great World Fair, before the war brought temporary public closure to celebrating the future and the world powers set about trying to consolidate it. (See Appendix: The Iconography of Modernity)

Continued attempts to turn marketing into a science brought an increasing reliance on motivational research in order to design increasingly seductive packaging. It is clear that over the course of two decades the emphasis has moved to a particular focus on the visual

characteristics of the pack[131] but synthetic multi-sensory opportunity was by no means neglected: "By 1956 package designers had even produced a box that, when the entranced shopper picked it up and began fingering it, would give a soft sales talk, or stress the brand name." Vance Packard offers an insight to the state of marketing theory and practice in the 1950s. He quotes a "remarkable interview with...Gerald Stahl, executive vice-president of the Package Designers Council." (New York Times, May 18th, 1956): "Psychiatrists say that people have so much to choose from that they want help- they will like the package that hypnotizes them into picking it up...a carton that attracts and hypnotizes this woman, like waving a flashlight in front of her eyes." (Packard, 1981: 92-94)

The supermarket concentrated on the managing the balance between the rational and the instinctual mind as Vance Packard revealed in his analysis that the combination of organized aisles and an abundance of "hypnotic" packaging design reduced consumers to a trance like state. Reporting on the conclusions of a 'motivational analyst, James Vicary he confirms: "Interestingly many of these women were in such a trance that they passed by neighbors and old friends without even noticing them." Vance offers the conclusions of a contemporary DuPont study (1954) of supermarket consumer purchasing behavior that concluded that "seven out of ten of today's purchases are decided in the store, where the shopper decides on impulse." (Packard, 1981: 93)

Nestle equates the supermarket with the real-estate market "in which each product competes fiercely against every other for precious space." She confirms, "store profitability is not simply a matter of the price charged for a product compared to its costs. Stores also collect revenue by 'renting' real estate to the companies whose products they sell. Product placement depends on a system of 'incentives' that sometimes sound suspiciously like bribes. Food companies play supermarkets 'slotting fees' for the shelf space they occupy." Nestle asserts: "This unsavory system puts retail food stores in firm control of the market place. They make decisions about which products to sell and therefore, which products you buy. The stores create demand by putting some products where you cannot miss them. These are often 'junk' foods full of cheap, shelf stable ingredients like hydrogenated oils and corn sweeteners, made and promoted by giant food companies that can afford slotting fees, trade allowances and advertising." (Nestle, 2006: 20)

Packard confirms that "Most of the modern supermarkets, by the mid fifties (1950s), were laid out in a carefully calculated manner so that the high profit impulse items would be most surely noticed. In many stores they were on the first or only aisle the shopper could enter." (Packard, 1981: 95-96) Humphrey confirms the formulaic basis of supermarket design dates back at least as far Edward A Brand's 1963 book, 'Modern Supermarket Operation,' which outlined the basic formulae that most supermarkets still stick with:

- The importance of intricately planned and stylish layout in order to increase customer circulation, allow logical shopping and encourage efficient space utilization
- Careful integration of high-demand and convenience goods and 'high-margin' 'impulse' merchandise led to 'balanced-profits'

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131 'The Colour Research Institute, which specializes in designing deep-impact packages, won't even send a package out into the field for testing until it has been given ocular or eye-movement tests to show how the consumer's eye travel over the package on the shelf. This is the gauge of the attention holding power of the design.' (Packard, 1981: 95)

- Careful placing of each of the departments and the merchandise within them, foe example meat should always be placed at the back of the store, as this would draw the customer through the store and encourage "full store shopping"
- The use of long gondolas with no 'breakthroughs' so that the customer is forced to move to the back of the store before being able to shop the next aisle
- "Eye-level" goods sold the most readily while high margin impulse goods were always best placed at the checkout and the end of aisles (Humphrey, 1998: 71)

supermarketguru.com, recommends similar strategies for comtemporary readers:

1) "The eye-level trick: A recent survey of shampoo products (showed) the higher-priced shampoos were at eye level. This is true for other products throughout the supermarket.
2) End-of-aisle displays: (for) products near their freshness expiration dates.
3) Kids' cereals. The most expensive children's breakfast cereals are often placed at their eye level (not adults').
4) Candy/cereal. Grocery stores often place candy and breakfast cereal on opposite sides of the same aisle.
5) Shelves change constantly. Marketers will often rearrange shelves, making shoppers search for their regular items and discover new products in the old, familiar shelve spaces.
6) Pre-cut fruit. Produce departments now display mouth-watering fruits that are pre-cut (and more expensive).
7) Cluttered displays. Massive end-of-aisle displays, large window signs and a cluttered look create an aura that implies the store is filled with bargains.
8) Prepared meals. An employee lavishly preparing take-home meals right before your eyes creates excitement and sales, especially if a free taste is part of the strategy.
9) Specialty items grouped together. Items for special occasions (e.g. chips, dips and sodas) are often grouped together to increase impulse sales.
10) Encouragement to stay awhile. Stores sometimes have TVs and newspapers in the cafe seating area. This is a multi-purpose concept to get people used to staying longer in the store. (A rested shopper is a better shopper!)." (supermarketguru.com, 12-6.06)

Nestle confirms: "Overall, supermarket design follows fundamental rules...based firmly on extensive research:

- Place the highest selling food departments in the parts of the store that get the greatest flow of traffic – the periphery. Perishables – meat, produce, dairy, and frozen foods – generate the most sales, so put them against the back and side walls
- Use the aisle nearest the entrance for items that sell especially well on impulse or look or smell enticing – produce, flowers, or freshly baked bread, for example. These must be the first things customers see in front or immediately to the left or right (the direction according to researchers doesn't matter)
- Use displays at the ends of the aisles for high-profit, heavily advertised items likely to be bought on impulse
- Place high-profit, center aisle food items sixty inches above the floor where they are seen by adults, with or without eyeglasses
- Devote as much shelf space as possible to brands that generate frequent sales; the more shelf space they occupy the better they sell

- Place store brands immediately to the right of those high traffic items (people read from left to right) so that the name brands attract shoppers to the store brands too
- Avoid using "islands." These make people bump into each other and want to move on. Keep the traffic moving but slowly
- Do not create gaps in the aisles that allow customers to cross over to the next one unless the aisles are so long that shoppers complain. If shoppers can escape mid-aisle, they will miss seeing half the products along that route." (Nestle, 2006: 19)

The typical British supermarket relied on the basic combination of harsh lighting, metal shelving placed in grid formation to control customer flow, refrigerators and checkout in a relatively bare shell, a formula inherited from the first generation of innovators. By the late 1960s critics labelled them as "stupormarkets" (Humphrey, 1998: 71) The wider adoption of the 'grid' approach to supermarket design reflected the growth in the number and variety of brands after 1945, and price led marketing.

New science, new technologies, new lifestyles and new packaging encouraged the design and conceptual development of new brands and new presentation styles and marketing claims for existing ones. Humphrey records the expansion in the number of products: "between 1948 and 1958 about 50,000 new products sought supermarket shelf-space, most of which were not so much 'new' as variations on a theme." (Humphrey, 1998: 71) "The business formulae was targeted at 'low-income consumers'...profit margins were low compared with traditional grocery stores, although so were total labor and running expenses, and thus net profits were higher. Volume and absolutely minimal service became the key to increased retail profits." She suggests that, 'attraction was based on price and (the creation) of a culture that emphasized choice, independence, convenience, and pleasure." (Humphrey, 1998: 69) Ritzer confirms supermarkets evolved, in line with"the vast majority of franchised systems...many chains cater to all social classes." (Ritzer, 2004: 196)

While the supermarket initially made minimal use of professional design expertise it drew on a deep heritage of retailing knowledge that stretched back into the history of the market place. Retailers developed skills in placing, juxtaposing and accentuating based on a sense of colour, size and of course texture and smell both of which became more limited in the new brand environment.

Despite, or perhaps because of the 'raw and uncooked character of the supermarket it provided a major source of stimulus for packaging innovation because it created new opportunities for up-close-and-personal scenarios of compare and contrast which the traditional shop had not encouraged. Brand producers found that they now had to communicate to the consumer directly through packaging in an environment where lots of other brands were clamouring for attention.

The shift to a greater emphasis on packaging in the late 1920s was influenced by a range of factors ranging from the precedent set by the confectionary industry, which had emerged as an important leader in the use of packaging and brand names[132] to the supermarkets invention

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132 Bowlby quotes from Shelf Appeal magazine from 1933: "This year, American influence is more pronounced that ever. British confectionary houses are straining their vocabularies to out strip their rivals in finding queer names for they're bar lines. Here an assortment. Angel food, Three Deckers, Bumpers, Ha-Ha, Jakko, Punch, Scrum, Foozely Boo, Rip, Nutzipan, Chumps, Eccos, Choccos, King, Happy Day, Nutz and Humpty." (Bowlby, 2001: 129)

of what was effectively a brand gallery, where consumers could attend to compare and contrast one style against another. Books and magazines promoted the supermarket as the bastion of modernity and used a simple strategy of "before and after" stories which hammered home the inefficient and unhealthy, sensory traditions that the supermarket would eradicate. Bowlby provides examples from the American publication, 'Modern Packaging':

- "Traditional: Interior of typical old-fashioned grocery store before the ear of modern packaging. Crackers and sugar in unsanitary barrels, tea and spice in bins – and only a few canned goods to mark the beginning of a new merchandising ear.
- Contemporary: A modern grocery store interior. Everything is packaged in sanitary containers, which are designed...to sell the products they contain. A merchandising revolution has taken place...Slowly quietly, unobtrusively; the package has revolutionized modern merchandising. It has changed the habits of a nation. The American of day before yesterday asked for a pound of crackers. Today his grandson demands a box of Uneeda...The package has changed the appearance of stores (and) revolutionized window display. It has brought about surprising economies for both the manufacturer and the consumer, and it has given the consumer great gifts in the way of convenience." (from Richard Franken and Carroll Larrabee's 'Packages that Sell,' 1928) (Bowlby, 2001: 80-83)

Hine, quotes Alvin E Dodd, President of the American Management Association from 1936: "Manufacturers realized that a 'mighty little man' of glass, wood, or paper, or metal was ready to become their most vigilant salesman, a salesman who never fell down on the job – never took time out. He was the package – with a bolt on sales lightening in each hand and with general air of 'buy' emanating from him." (Hine, 1997: 134) While manufacturers poured money into designing new brands and their packaging and marketing the supermarket settled for a series of relatively modest sheds. There were clearly two parallel lines of design development, the vernacular and the professional, which complemented each other. As Bowlby confirms "packaging and the supermarkets went together like a car and garage. But it wasn't exactly a marriage of equals; for one thing their backgrounds were very different. In the 1930s...packaging had been linked to new possibilities for modern design aesthetics- whereas the American supermarket...had begun in a rough and ready way, with no thought for art of display." (Bowlby, 2001: 175)

Competition was not just the province of food processors it extended to manufacturers of packaging materials, printing folding and moulding technologies and skills, designers, marketing theorists and consultants and increasingly psychologists who specialized in explaining why and how people consumed one thing as opposed to another. These factions also needed showcases and they were provided by the appearance of two journals 'Modern Packaging' started in the USA (1927) and 'Shelf Appeal (1933) a UK publication. Bowlby quotes a contemporary commentator who believed that before Shelf Appeal, "this vast industry, trading in visual appearance was untouched by design.' She confirms that both magazines promoted modernism, 'as in every other field of design modernism can be negatively defined by its repudiation of the fussy ornateness associated with Victorian style.' Bowlby suggests that 'elimination' was a key

word to describe the priority of processing and packaging, 'this crossover between the economic and the aesthetic." The magazine called for education to address design so that future consumers would be become "tasteful buyers." (Bowlby, 2001: 83-85)

Conclusions: The Rise and Rise of the Machine Aesthetic and the Decline of Sense

After 1945 packaging innovation was driven by a succession of new technologies, a number of which had been anticipated by the war effort. New materials also prompted new thinking and/or brand re-launches.[133] All of the elements of processing, packaging and branding come together with lifestyle aspiration to establish a relationship with the aerosol that evacuates traditional sensory engagement for synthetic and instant gratification and helped to establish a norm for synthetic food types which were perceived not only as more efficient but also as more desirable than its natural competitor.

Increasing food processing, production, and retail investment in promoting (more profitable) pre-cut meat and pre-selected vegetables to supermarkets contributed to the creation of a food experience that separated everyone in the food chain from the possibility of developing a multi-sensory relationship. The supermarket's focus on packaged goods and brands enabled the packaging industry to become a major international business that exerted its own influences on the future of food by continuously developing and promoting new packaging forms. By the end of the twentieth century (1999) flexible packaging accounted for a turnover of $17.5 billion p.a. while the industry in general generated $101 billion p.a. with a plethora of new products in the process of being developed or established: "We now have glass and zone patterned coating, vacuum packs for bone-in-the-pork, breathable film for fresh cut, refrigerated salad, and other thin-gauge cook-in, heat shrinkable and formable film packs for meats, packs with oxygen scavengers, 'Smart' packaging, new dimensions in plasticization and labels that instruct and warn, Vacuum packs hold coffee and flavour sensitive foods. Stand-up gusseted pouches feature custom dispensers and re-closable fitments, there are paper laminate bags, new heat-shrinking techniques for food and non-food films, tamper evident, hot-fillable and chillable pouches, fog resistant wraps, metalized film and paper, holograms, microwaveable trays, doneness susceptors, colour-changing indicators recyclable and source-reduced packaging, anti-theft labelling, the list goes on and on." (Falkman, 1999: 42)

The combination of technology, new materials, and the association of new products with new lifestyle opportunity encouraged the demise of traditional values in food culture and enabled the culture of mass production, marketing and consumption to evolve. Vegetables were represented as some form of archaic leftover from a primal past, the brunt of metallic laughter from the 'smash martians,' animated aliens that featured in a 1974 British TV commercial created to promote Cadbury's 'Smash,' an instant mash potato mix that came in an easy open packet and was reconstituted by adding water. "The spots featured the creatures chortling as they heard how the "Earth people" peeled their own potatoes, "boiled them for 20 of their minutes," then "smashed them all to bits" - instead of using Smash instant mash. Viewers were not insulted at being called "a most primitive people" by the metallic creations - sales soared

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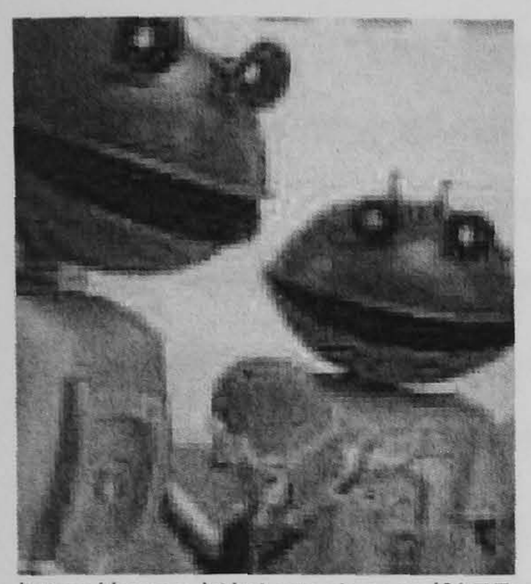
133 Hine suggests that one of the most representative examples of the evolution of post 1945 packaging is the aerosol can, which started life as wartime solution for carrying and effectively using insecticide for troops fighting in the tropics: "like most new varieties of packaging, the aerosol spawned new classes of products. Spraying was a novel way to access a product...a magic wand...Spray dessert toppings promised the indulgence of whipped cream, without the penance of whipping...attractive canapés became a snap with aerosol cheese. Spray garlic eliminated crushing and peeling. Spray tenderiser ennobled cheaper cuts of meat." (Hine, 1997: 165)

and the Martians received so much fan mail the agency which made the commercials, now known as BMP DDB, had to prepare special literature to reply to them."
(http://news.bbc.co.uk/1/hi/entertainment/572903.stm)


http://www.btinternet.com/%7Ereg.joy/images/R...

The 'Smash' commercial can be seen as a benchmark that marks the acceptance of the advantages of science, technology and rational design over human capability. Through the promotion of a lifestyle of affordable convenience the commercials confirmed public acceptance of shopping from a rational system of grid aisles in which metal baskets and trolleys were filled with instant foods that could be consumed without any contact or thought about natural provenance. The logic of instrumental rationality had finally been sieved through modernist ideals to be reconstituted as design solutions to convenience that embraced systems design new material and processes to create emblems of convenience. The products were designed to emphasize temporal and embodied engagement savings consumers saved time by abdicating their need to engage with the construction of choice, meaning or provenance.

This shift from embodied participation to disembodied echoes the journey from self generated entertainment to mass culture that had concerned theorists of the Frankfurt School in the first half of the twentieth century and beyond: "They encountered first hand a consumer society in hock to a Fordist model of industrial capitalism and mass production. They were struck in particular by the way in which culture had been industrialized (by) giant monopolistic corporations (that) exerted subtle techniques of manipulation and control that had the effect of making people accept and even affirm a social system that, behind their backs thwarted and suppressed their fundamental interests...instead of being critical of social conditions that prevented them finding true happiness they vicariously experienced the fictional happiness..."
(Finlayson, 2005:4)

The disenchantment that Webber attributed to the extreme rationalism of the bureaucrats who enabled Corporate organizations had now reached the consumer through the process that Adorno and Horkheimer called instrumental rationality and their reason had 'atrophied to the a mere calculus of the most efficient mans to a given end (through) the increasing mathematization and objectification of nature. (Finlayson, 2005:6)

Non-products and Non-Places

Ritzer's adoption of Weber's observation of "rationalized institutions" allows him to argue that they not only determine our diet but lead to the kind of visually led design that creates our appetite for a diet of non-products. Ritzer argues that we have reached a phase of "hyperconsumption" creating a "negative effect not only on our health and on the environment but also on some of our most cherished institutions, most notably the family.' He highlights the dangers associated with the 'irrationality (of) rationality...the possibility that we could lose control over a system that comes to control us." Ritzer cites the hypermarket as an example in which the logic of scale=efficiency was proved to be flawed according to one analyst, "in a hypermarket, by the time you've brought some aspirin, some Kleenex, and a bottle of milk, you could easily walk a mile." Designed to increase efficiency, the hypermarkets actually made shopping less efficient for many consumers. (Ritzer, 2004: 85-86)

Zukin highlights the dilemma of a business strategy that is based on scale. When it ceases to meet out biological as well as our conditioned needs: "The desire to shop derives from the biological drive of hunting for food, the modern ideology of individual choice, and the social drive – which has accelerated during the sixties – to get "the best." But we are thwarted by simply not knowing where, at a specific moment, to find a bargain." (Zukin, 2005: 62)

Shopping in this inefficient version of efficiency becomes a kind of blur in which bold, colorful, or distinctive colours and patterns work, particularly when they connect the consumer, or the pester power of their children to conditioning needs that are instilled by advertising and sponsorship. The selection process can and frequently is determined by a process of visual recognition rather than evaluation. This phenomenon has allowed what are essentially non-products, or, non-foods to dominate the consumer's site-line. The definition of value is determined by a lifestyle that has become, to a large degree predicated on convenience: "If the 'lifestyle' of style is not recognizable in life, it is nevertheless the most constantly available lexicon from which many of draw the visual grammar of our lives. It is a behavioural model that is closely interwoven with modern patterns of survival and desire. It is hard to define but easy to recognize element in our current history. Often silently, at time unacknowledged, style works on the ways that people understand and relate to the world around them....In so many arenas of modern life, style has become the legal tender. Style more and more, has become the official idiom of the market place. In advertising, packaging, product design, and corporate identity the power of provocative surfaces speaks to the minds eye, overruling matters of quality or substance...Democratic choice like grocery shopping, has become a question of which product is most attractively packaged, which product is most imaginatively merchandised...style deals in surface impressions, it is difficult to concretize, to discern its definitions. It forms a chimerical, yet highly visible corridor between the world of things and human consciousness." (Ewen, 1990: 20-22) Ewen admits that the tendency to invest the "ornamentation of life" with "intricate powerful, and often mysterious webs of interpretation" has been a characteristic of life and culture "been practiced within traditional cultures for millennia." (Ewen, 1990: 22)

Design Formulas and the British Supermarket

The following conclusions can be drawn about the relationship between design and the British supermarket:

- Management developed an understanding that design was primarily a management tool that was capable of deeply rational perception and flow control

- Innovations in packaging styling reinforced a perception that visual communication was a vital component of the marketing mix
- Innovations in packaging design helped to reinforce the design of supermarkets as a three dimensional grid that could control the flow of consumers and facilitate shelf stacking and other logistical needs
- Strong and uniform lighting was used to encourage consumers to notice the visual components of packaging design and most importantly their price
- Shelving and refrigeration units were primarily designed to maximize the consumers ability to reach and notice branded products and control consumer flow
- Exit and entrance strategies were designed according to the traditional model, which was intended to circulate the consumer throughout the store before they were able to check out. Increases in the number of checkouts needed to make the consumer experience as efficient as possible were compensated for by less need for stock rooms as electronic stock checking and ordering and increasing expectations that suppliers would pre-pack what had been lose stock ready for sale tightened the loop between delivery and sale

Hine argues that "the central role of packaging in American culture has been to replace human relationships, which are ambiguous, time consuming, unpredictable and emotionally taxing, with expressive and less demanding containers." He also suggests, "self-service merchandising places self-satisfaction paramount and weakens individuals consciousness of the society as a whole. Thus packaging can be understood not just as the content of litter but a part of its cause." (Hine 1997: 248)

As Kimbrell suggests the perception of value at the point of purchase is a product of a much wider set of influences that are designed by creatives in order to managing consumer response in favour of their clients interests: "Decades of advertising brainwashed the public to see uniformity and cosmetic perfection as hallmarks of good healthy food. The traditional acceptance of variations in textures, colours and surfaces of fruit, vegetables and even grains was lost." (Kimbrell, 2002: 85)

The Future

Up, until late 2005 the future of the supermarket seemed to be heading in the direction of bolt-on technology, in which the inclusion of in-store media closed the gap between home and shop. The strategy of technologically driven innovation suggested a reinforcement of the machine mentality and the machine aesthetic.

Mclain quotes Andrew Zoli, futurist in-residence for Popular Science and American Demographics magazines, who "outlined a future full of opportunity and complexity...for food retailing at the National Grocers Association's (NGA) Executive Conference...key trends (include):

Demographic Transformation

- While the world is on the road to a population of over 9+ billion, the rate of growth is slowing and population in parts of Europe and Russia is actually declining.
- Urbanization is increasing - soon more people will live in cities than in rural areas.
- In some developing countries, 70 percent of the population is under 30, while many developed countries have much older populations (e.g. Italy's average age is over 50).

- The U.S. will have the largest number of old people and young people in 2025. It will be hard for the smaller working population to provide resources to these groups
- There will be a huge number of products designed to help boomers live longer.

Choice, Commoditization & Experience

- Supermarkets are a sea of sameness, offering the 'tyranny of choice' - 40,000+ SKU's (of which many are near-duplicates) while consumers can pay attention to only 160.
- Individual product choices and innovations often do not offer enough benefit to offset the time and trouble it takes consumers to figure out what the benefits are.
- The older a consumer is, the more satisfied they are with fewer choices.
- Companies need a chief 'no' officer to simplify things, edit product choices, etc.
- Staples is an example of a retailer addressing these changes by reducing SKUs, developing an 'Easy Rebate' program, and conducting an annual competition for best consumer innovations.

The Rise of Ambient Intelligence

- Technology will be embedded everywhere, such as 'functional packaging' where a package of pills can actually email you to remind you to take your dose or another container to tell you how ripe the fruit is inside.

Green Goes Mainstream

- Environmental trends are moving from conservation to sustainability to 'ecovation.'
- LOHAS (Lifestyles of Health and Sustainability) products will sell a lot more in the future as older consumers embrace 'green' and as they think about their legacy. Young people will embrace the trend, as well.
- LOHAS consumers are willing to pay a 20 percent premium." (Mclain, 2006)

Chapter Twelve: Alternatives as Corporate Strategy Whole Foods Markets

Introduction

This chapter explores the possibility of countering the syndrome of disembodiment, disenchantment and superficial ethical concern that I focused on in the previous chapter (11). I consider the American owned Corporate: Whole Foods Markets (WFM) as a possible role model for the reconciliation of corporate retailing strategies with the values and methods that were pioneered by the whole foods movement.

In order to maintain relative continuity and fairness I have adopted a similar format to the previous chapter. This begins by profiling the entrepreneurial led origins and evolution of the WFM business before moving into a 5 P's informed analysis of its design and marketing strategy and their implications. I conclude that although WFM has made a more substantial commitment to ethical practise than many of its corporate rivals it has failed to invest effectively in multi-sensory design strategies that would enable it to do more to connect consumers to alternative values.

The Safer Way?

To a number of its supporters Whole Foods Markets offers a comprehensive solution to the syndrome of disembodied and disenchanted corporate food. The background of John Mackey, the CEO and co-founder of Whole Foods Markets, who promotes himself as the person responsible for growing the business into 'the world's leading natural and organic foods supermarket,' looks promising as a sourcing ground for sensory knowledge and sympathy for counter culture idealism. (www.wholefoodsmarket.com) A college dropout, in the early 70s, "he moved into a vegetarian co-op where he focused on reading philosophy, cooking natural foods and being outdoors. Living in the co-op awakened his food consciousness and set the stage for what would eventually become Whole Foods." His first food retailing business venture, called 'Safer Way,' (1978) suggests an anti-mainstream bias and a high level of sensitivity to 'natural food' and its characteristics, potential and context. Whole Foods Markets was formed in 1980 through a merger with an established natural food retailer in Austin Texas. By 1992 Whole foods Markets had expanded to 12 stores and has turnover of $92 million pa, in 2006 it is the world's largest retailer of natural and organic foods.

According to Ernst & Young's profile: Ernst & Young Names Top US Entrepreneurs of 2003, "Underlying Whole Foods success is Mackey's strong commitment to the environment. On a global basis, the company supports organic farming – the best method for promoting sustainable agriculture and protecting the environment and farm workers. Locally, Whole Foods is actively involved in its communities by supporting food banks, sponsoring neighbourhood events, compensating the company's team members for community service work and holding 'Five percent days' when that amount of sales for a particular day is given to a local not-for-profit organization." (http://entrepreneurs.about.com/cs/breakingnews/a/eoy2003.htm)

Compared to the majority of American supermarkets (up until late 2005) Whole Foods Markets reads like a credible alternative to mainstream practices. They list a comprehensive range of quality standards that appear to ensure the polar opposite of conventional corporate food business practice.[134] But closer analysis reveals some troubling flaws in the branding

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134 "We carry natural and organic products because we believe that food in its purest state — unadulterated by artificial additives, sweeteners, colourings, and preservatives — is the best tasting and most nutritious food available. Our business is to sell the highest

strategy. For example each claim is typically concluded with a codex that suggests that commitment has been developed recently as a conscious factor in the business strategy.

There are four key reasons why Whole foods markets has begun to wake up to the environmental and community issues wrapped up in the anti 'food miles' movement:

- Considerable protests were voiced (and continue to be voiced) over the decision to open a major store in Manhattan's Union Square a site of one of New York's major 'Green-Markets.' The markets were established to protect and encourage local farming and agricultural initiatives
- The decision to enter Europe with the purchase of the British organic food chain Fresh and Wild brought with it a direct need to embrace European food standards including some of the British supermarkets long-term investment in organic produce and some very successful independent retailers who promote 'slow food' values
- The growing influence of the Slow Food movement in Europe and the Britain in particular on consumer and retail standards
- The independent authority of the 'Soil Association' over organic standards as opposed to the USA's, UDSA approach with its political associations, including substantial corporate interest. "Many individuals and groups involved in the organic industry (including Whole Foods Market and some of our vendors) worked closely with congressional representatives to help shape what eventually-after 11 years of input and revision-became the U. S. Department of Agriculture's (USDA) Organic Rule, which becomes effective on October 21, 2002." [135] (www.wholefooodsmarkets.com)

Considering the high profile that Whole foods Markets give to organic produce it is difficult to reconcile their clarification of their strategy on organic with their commitment to green issues, local sourcing and communities. There is a lack of coherence between these claims and their statement that the scale of their business operation will allow them to reduce prices.[136]

My review leads me to the conclusion that Whole foods Market's main commitment is to capital accumulation. Its position on ethics, the environment and encouraging sensory participation is little more than a fairly superficial lifestyle branding and marketing strategy,

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quality foods we can find at the most competitive prices possible. We evaluate quality in terms of nutrition, freshness, appearance, and taste. Our search for quality is a never-ending process involving the careful judgment of buyers throughout the company.

- We carefully evaluate each and every product we sell.
- We feature foods that are free of artificial preservatives, colours, flavours, sweeteners, and hydrogenated fats.
- We are passionate about great tasting food and the pleasure of sharing it with others.
- We are committed to foods that are fresh, wholesome and safe to eat.
- We seek out and promote organically grown foods.
- We provide food and nutritional products that support health and well-being.'
- We are permanently committed to buying from local producers whose fruits and vegetables meet our high quality standards, particularly those who farm organically and are themselves dedicated to environmentally friendly, sustainable agriculture."

(www.wholefooodsmarkets.com)

135 The UDSA standard is seen a substantial fudge by many of its critics because it allows for the existence of confusing definitions of organic,

136 "Although many organic products do cost more, the price of organic foods is increasingly competitive as supply and demand continue to rise." (www.wholefooodsmarkets.com)

designed to target a potentially influentially segment of the consumer demographic that had been left underserved by the traditional supermarket offer.[137]

While the development of the South `Kensington site[138] may well reveal a different outcome my review of the New York Store suggests that it is not investing in design innovation, and that it has very limited understanding of multi-sensory experience including food knowledge. While it is likely that this opinion is informed by high degrees of subjectivity it can be reinforced by an evaluation of the CEO's (John Mackey) stated values most of which are available from the Whole Foods Markets website. Mackey makes a variety of claims, which never seem to touch on the sensory enjoyment, or meaning of food in any detail.

Leadership and Management

Mackey's management style, although it appears self-taught, is very similar to the other corporate executives who utilize the distinction between leader and manager. Where there are differences, for example in his management strategy of delegating to teams these seem to relate to the use of particular theoretical models[139] rather than any attempt to democratize his business. Reading through various public statements, the majority of which are maintained on the Whole foods Market's website, it seems that John Mackey's main goal is to both promote and redefine the dominant definition of capitalism, for example quoting Milton Friedman: "there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud." (Friedman, 1970) (Mackey, 2005)[140]

Like a number of the statements made by Mackey there is a high level of ambiguity attached to his proposal that capitalism can increases the quality of pleasure to be derived from consuming experience. "Of all the food retailers in the Fortune 500 (including Wal-Mart), we have the highest profits as a percentage of sales, as well as the highest return on invested capital, sales per square foot, same-store sales, and growth rate. We are currently doubling in size every three and a half years.

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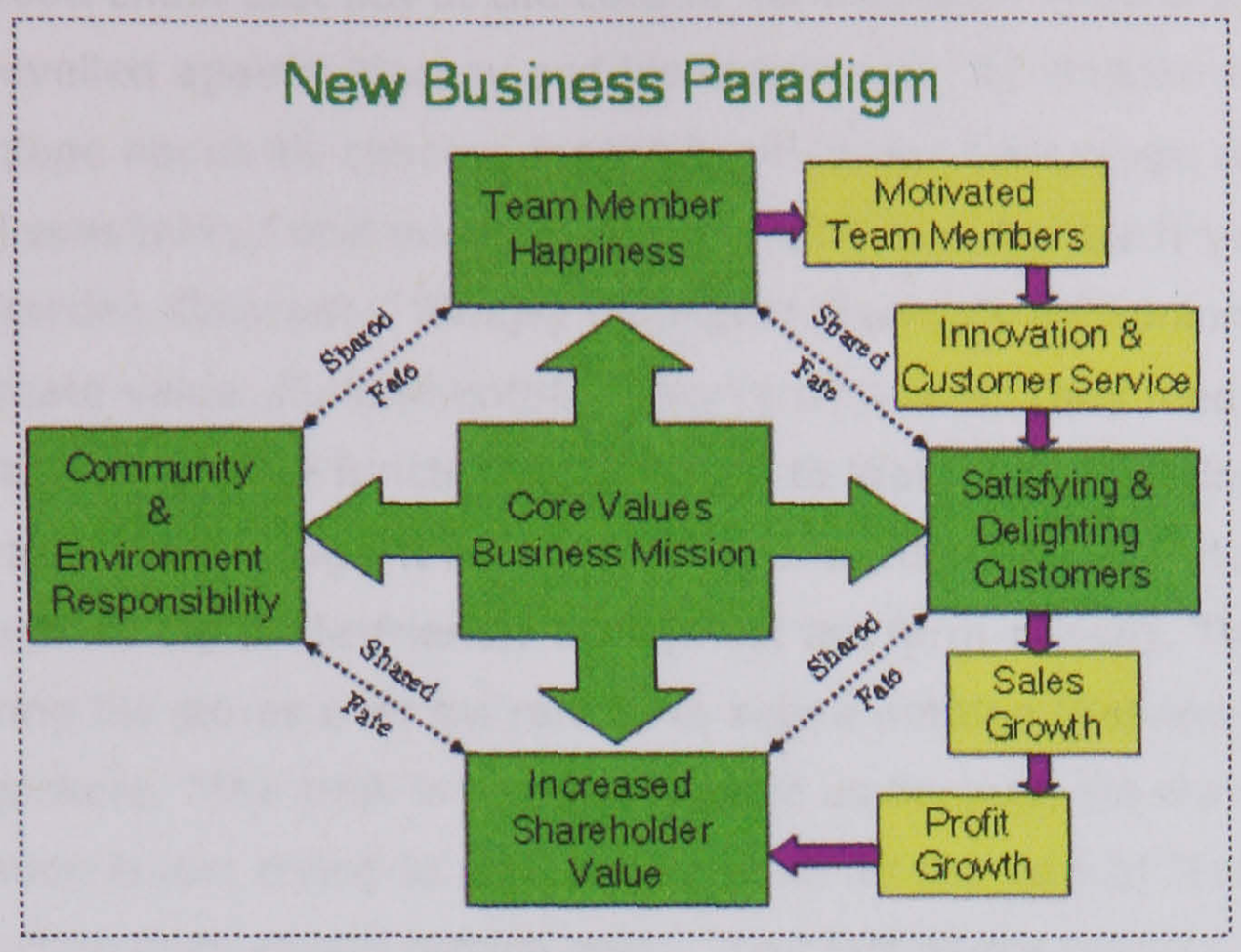
137 "Compared with the flourishing U.S market, analysts say the British natural and organic food market lies largely untapped in the fastest growing segment of food retailing, with an estimated global value of $22 billion. Most U.K. supermarket chains, including J. Sainsbury Plc (SBRY.L: Quote, Profile, Research) and Tesco Plc (TSCO.L: Quote, Profile, Research), feature a limited assortment of organic foods compared with Whole Foods which has made the natural and organic food scene a highly lucrative niche." (Mnyandu, 2005)

138 "The company expects higher than average pre-opening expense in fiscal year 2007 of approximately $7 million relating to its first Whole Foods Market Store in London." (Whole Foods Markets Reports Forth Quarter Results, November 2, 2006)

139 Mackey's teams based approach to management at store level draws substantially on 1970s Japanese management models. (Fishman, 2004: 70)

140 Mackey suggests "Friedman also understands that Whole Foods makes an important contribution to society besides simply maximizing profits for our investors, which is to "enhance the pleasure of shopping for food.' This is why we put 'satisfying and delighting our customers" as a core value whenever we talk about the purpose of our business.' He then raises the questions: 'Why don't Friedman and other economists consistently teach this idea? Why don't they talk more about all the valuable contributions that business makes in creating value for its customers, for its employees, and for its communities? Why talk only about maximizing profits for the investors? Doing so harms the brand of capitalism." (Mackey 2005)

Mackey offers a model to demonstrate his business philosophy



We call this a 'New Business Paradigm' because it puts the Business Mission and Core Values at the centre of the business model -- not maximizing profits. Profits aren't the primary goal of the business. They are an important result of fulfilling the Business Mission and meeting the needs and desires of customers." Mackey interview (www.endervidualism.com/salon/, 2005)

The reality however seems to be rather different, Whole Foods Markets have just raised their maximum pay level to 19 times the average and this includes Mackey: "To deal directly with envy, a business must open up and becoming more transparent...We also have a cap at Whole Foods, which is currently 19 times the average pay (raised from 14 times average pay on November 2, 2006)." (Mackey 2006)

'Transparency' does not account for the fact that all the executives get substantial share benefits and their dividends in addition to their salary. (Mackey, 2006) As Mackey frequently states, "Whole Foods is the fastest growing and the most profitable public food retailer, percentage-wise, in the United States. 'Our store return on after-tax invested capital is 34 percent overall, and higher for stores that have been open for more than one year. Whole Foods Market's stock price has increased almost 3000 percent since our IPO in 1992. The sum of $10,000 dollars invested during our IPO would be worth nearly $300,000 today.' Put together with the 'team strategy' Mackey claims this gives the corporation a competitive edge: 'Whole Foods has never had a store we open ever fail in the marketplace. We have never lost a competitive battle in 27 years of business!" (Mackey 2006)

This fighting talk is balanced by the creation of aid strategies: "Our mission with Whole Planet Foundation is to create economic partnerships with the poor and developing world communities that supply our stores with products. Through innovative assistance for entrepreneurship, including direct micro-credit loans, as well as intangible support for other community partnership projects, we seek to support the energy and creativity of every human being we work with in order to help create wealth and prosperity...Whole Planet Foundation partners with Grameen Bank, which pioneered micro-lending to the poor (both Grameen Bank and its founder, Muhammed Yunnus won the 2006 Nobel Peace." (Mackey, 2006)

Mackey claims various other philanthropic gestures towards communities[141] ranging from social funding to support for the arts but he is frequently accused of indifference to issues

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141 Although Mackey frequently makes it sound like they follow the Ben & Jerry model of slicing off annual profits the reality is"...we also hold five 5% Days throughout the year. On those days, we donate 5 percent of a store's total sales to a nonprofit organization... It's

related to the food chain that lies at the core of his business. Michael Bluejay highlights some of the criticisms levelled against Mackey and his responses: "In Whole Foods annual report Mackey waxes on one page about his concern for the 'well-being of everyone on earth' and 'environmental sensitivity,' and on another of wanting to pulverize his nemesis, Wild Oats, on its home turf in Boulder, Colorado." Bluejay highlights Mackey's anti-union stance "Basically, labour unions don't create value...Fundamentally, they're parasites. They feed on union dues." Makey's keenness for "a private body functioning (similar) to Wall Street's rating," to rate organic provenance is also cited along with: The Earth Island Institute is hounding him to certify that his shrimp are caught using turtle-friendly nets (most are farm-raised). The United Farm Workers union is pestering his stores over his refusal to sign a petition that would guarantee the 'rights' of strawberry pickers. "The UFW is trying to coerce us because we won't sign their damned petition, the union is just trying to organize.' People for the Ethical Treatment of Animals are after him for selling farm-raised ostrich meat. "The fact of the matter is, we deal in dead animals, and animal-rights people are against that," he says bluntly." (Bluejay, 2006)

Friedman pointed out the lack of connection between the various claims made by Mackey: "The differences between John Mackey and me regarding the social responsibility of business are for the most part rhetorical. Strip off the camouflage, and it turns out we are in essential agreement. Moreover, his company, Whole Foods Market, behaves in accordance with the principles I spelled out in my 1970 New York Times Magazine article. With respect to his company, it could hardly be otherwise. It has done well in a highly competitive industry. Had it devoted any significant fraction of its resources to exercising a social responsibility unrelated to the bottom line, it would be out of business by now or would have been taken over..." (Mackey, 2006) [142]

The inconsistencies that seem to riddle Mackey's politics also inform the way that Whole Foods markets uses terms like 'natural which it correctly identifies is, at best an ambiguous term: 'Natural' often is misrepresented in product labelling to imply "healthful," but "natural" only means that the product has undergone minimal processing. Unlike products that are certified organic, natural products have no certification or inspection system.[143]

It is clear is that they Whole Foods Markets were quicker off the mark than the majors in recognized a market gap for servicing the needs of consumers who felt that they not being provided for in terms of health and ethics. As the majors, including Tesco close that gap it will be harder to take Whole Foods Markets claims for differentiation seriously, and this, in large part will be due to the adoption of their design as marketing strategy.

During the past five years the American based supermarket Whole Foods Markets has emerged from being a bit player in the global supermarket stakes to sharing billing with giants like Wal-Mart and Tesco without achieving a fraction of their market dominance, or turnover.

The reasons for Whole Foods Markets notoriety and perceived status is mainly based on their carefully targeted challenge to the traditional supermarket formulae of 'more-for-less' based on the mass market ethos of processed food and agri-business production economies. Whole Foods

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a question of finding the appropriate balance and trying to create value for all of our stakeholders." (www.endervidualism.com/salon/, 2005)

142 Prior to this Mackey frequently quoted Friedman and had close political ties to his advocacy of free market capitalism and its associations with Libertarianism.

143 "All foods and beverages carried in Whole Foods Market stores are natural and meet strict quality standards, meaning that they are free of artificial flavours, colours, sweeteners and preservatives; however, they are not all certified organic." (www.wholefooodsmarkets.com)

Markets have deliberately associated themselves with a number of counter culture traditions that centre around a 'less-as-more' ethic in which many of the efficiencies associated with the traditional corporate approach to food are rejected on ethical and environmental grounds.

The counter culture position typically results in a higher price but this has to be calculated against what is being purchased, consumers get better food, in the sense of uncontaminated and ethically produced food, and a better experience through their reconnection to the origins and values of the food that they consume. They are also making a contribution ot the perpetuation of bio-diversity.

Critics of the Whole Foods Market's business strategy argue that it has cynically adopted counter-culture values and design traditions in order to target the growing and lucrative Lohas/Cultural Creative demographic.[144] (Pollan 2006, Nestle 2005) Belasco's analysis of the counter culture response to food in the late 60s and early 1970s is a useful starting point for evaluating contemporary business strategy in terms of form versus content priorities. The alternative health, environmental, ethical and spiritual awareness that now informs a variety of food brands and retail propositions owes much to the ethical, health and style innovations of the counter culture movement of the 1960s and 70s. [145]

Belasco's reading identifies certain features that are listed below:

- "Counterculture was highly selective, elevating vegetable protein over animal, 'natural' foods over those deemed to be "poisoned" by chemicals and processing

- Food preparation techniques need to be labor and time intensive, requiring some willing ness to make dishes "from scratch" using low-tech manual implements – in opposition to the dominant corporate cuisine's reliance on 'quick and easy' automated convenience

- The aesthetic principles of taste, texture, and presentation were adapted largely from ethnic styles, particularly Mediterranean, Latin American, and Asian dishes and was more interested in improvisational creativity than antiquarian authenticity.

- Rituals of consumption tended to be informal, irreverent, and spontaneous – the use of fingers or simple instruments (especially chopsticks), much sharing and deliberate inattentiveness to matters of time, order dress, microbial combination, or conventional decorum

- Many participants were intensely interested in setting up an alternative infrastructure of organic farms (some operating communally, some independently, farmer's markets,

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144 Lohas: Lohas is an acronym for Lifestyles of Health and Sustainability, a market segment focused on health and fitness, the environment, personal development, sustainable living, and social justice. (www.lohas.com)
Cultural Creatives: 'There are probably about 80-90 million Cultural Creatives in the European Union as well.) In this era, our biggest challenges are to preserve and sustain life on the planet and find a way past the overwhelming spiritual and psychological emptiness of modern life. Cultural Creatives are responding to these challenges with solutions directed toward healing and integration. (www.culturalcreatives.org)

145 Belasco borrows Barthes's method of categorizing the food experience as a "distinctive set of flavor, textural, visual characteristics (aesthetics); a set of rules for consuming food (ritual); and an organized system of producing and distributing the food (infrastructure). Embedded in these components are a set of ideas, images, and value, (ideology) that can be 'read' just like any other cultural 'text' to read counterculture 'food arrangements.'

cooperative stores, natural foods processors, group houses, vegetarian restaurants and groceries, as well as increasingly sophisticated informational distribution system of periodicals, newsletters, cookbooks, guides to simple living, and think tanks devoted to agricultural, nutritional and entrepreneurial research (This elaborate but decentralized infrastructure differentiated counter culture from the earlier health food movement)

Belasco detected three themes that intertwined to give shape and coherence (ideologically) to countercultural food writings and practices:

- A consumerist theme targeted foods to be avoided, especially chemicalized "plastic" foods
- A therapeutic theme associated with positive concerns for pleasure and identity, particularly a hunger for craftsmanship, leisure, and tradition
- An organic motif (concerned with the integration of self, nature and community) addressed serious issues of production and distribution – how to reconcile private consumption with wider planetary needs." (Quoted, Watson, 2005: 220)

The counter culture movement did not overtly promote multi-sensory engagement but it did facilitate the possibility of its growth in the following ways:

- The counter culture movement was informed by ideas and ideals that had emerged in the 18th and 19th century romantic-socialist response to industrialization and therefore co-opted the historical tenets of resistance to the false consciousness associated with synthetic substitution while promoting craft and batch values and aesthetics
- The counter culture movement embraced a wide range of cultural and spiritual traditions that were associated with multi-sensory rituals ranging from the incorporation of incenses and music into food preparation and consumption to the concern to acknowledge and celebrate the connections between production, consumption and disposal in ways that made them experiential.
- A shift from a focus on economic calculation of value to one in which source and sensorial qualities were calculated and accounted for
- Transient multi-sensory experience was acknowledged and respected as sources of knowledge and pleasure[146]

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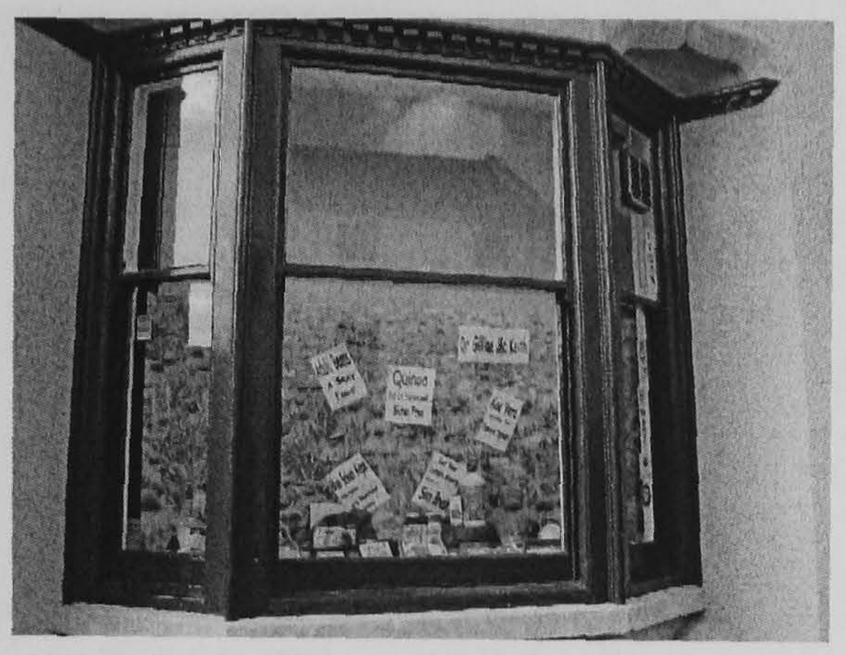
While many of the qualities associated with the counterculture movement's engagement in food production, processing and retailing were predicated on the rediscovery and appropriation of traditional values that were gleaned eclectically from across cultures and history these were communicated a relatively coherent packaging and retail aesthetic that had the following characteristics:

- Wooden floors and shelving
- Wooden or fiber baskets and bins for grains and pulses to enable customers to help themselves
- Handwritten price and sourcing information that emphasize human interaction rather than machine interfaced typography
- Limited intensity of lighting schemes that incorporate day light sources
- Use of traditional woodcut styles of illustration and typography for packaging
- Resistance to carrier bags and encouragement of recycling in which cardboard boxes and used carrier bags are offered if the customer has not brought their own
- Emphasis on locally sourced fresh produce including batch produced processed food
- Various ways of emphasizing the wholeness of food on sale from lose whole grain to staff knowledge about sources and preparation methods



The Wholefood Store, Glastonbury Somerset, April 2005 Established in the early 1970's (Crook 2005)

The Wholefood Store in the High street in Glastonbury reflects most of the important tendencies identified above. The store also shows an acknowledgement of the 'Whole Foods Markets' trend with the incorporation of mainstream racking systems. Vegetables are sourced on the basis of their nutritional freshness rather than appearance and so are not entirely regular in size. Labels reveal their local provenance. The store is entirely vegetarian and includes the standard whole-food supply of pills and potions, from vitamins and minerals to herbal tinctures. This is managed by making one side of the double fronted store wholly about food while the other deals with medicinal, toiletries and wine.

The evolution of the store over the past decade in which its aesthetic has been tracked reveals typical trend of compromise in a search to extend the customer base beyond its hippie associations to embrace the values associated with Lohas/Cultural Creatives. The eclectic mixture of references and incorporations that characterized the first evolution of the whole-food shop aesthetic had a high level of clarity and coherence that relates to its adoption of traditional materials and storage strategies that were more typical of nineteenth century retail before packaged goods and mass brands became ubiquitous. The contemporary relevance of what was effectively a nostalgic aesthetic constructed from heritage references was informed by the much broader enthusiasm for Victorian style in fashion, interiors and graphics in the late 60s and early 1970s. Used in the context of this kind of business strategy the aesthetics offered something deeper than contemporary styling as they referred directly to the pre-industrial ethos of the food chain that the 60's pioneered were trying to re-establish.

Conclusions

Whole Foods markets suggest that their offer is based on an abundance of choice and freshness[147] Whole Foods markets has clearly adopted the aesthetics associated with the Whole-

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- Casual clothing worn by staff that reflects their personal values and lifestyle as staff are generally attracted by the values of the business this does tend to lead to a certain degree of coherence in the relationship between how staff look and how the shop looks
- Abundance of unpackaged fresh vegetables, fruit, bread, pastries and spices which have clear olfactory values
- Ample opportunities to handle food to make tactile evaluation/contact
- Tendency for customers to know and socialize with staff and distinctive music which creates ambient acoustic resonances
- Opportunities to sample goods that are unfamiliar, creating taste potentials

147 "Coffee and Tea: Bold and Sublime Flavours: The hand-selected coffees and teas that we feature come from farms across the globe. Our in-house coffee bar features our own Allegro coffee blends and is located in the Picnic area upstairs. We roast our own coffee beans daily, and feature a huge selection of high-quality, fair trade, shade-grown and organic coffees from around the world. Our tea selection features green, black and oolong teas, in addition to herbal tisanes. Juice Bar: Our juice bar serves delicious, nutritious, and energizing smoothies and juices. Our smoothies have a base of real fruit that will be sure to get you on your way to achieving your 5-a-day servings of fruits & vegetables! We're more than happy to mix and match flavours, boosts, & vitamins to satisfy your unique tastes.

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food store traditions that emerged form counter culture retail strategies in the late 60s and early 1970s. Unlike the small store tradition Whole Foods Markets applies the materials that were associated with nature and an anti-industrial stance in a relatively cosmetic way to create an ambiance that was self consciously at odds with the supermarkets systems approach to design while maintaining much the intention of the supermarket model to control customer flow and facilitate restocking. The similarities between a conventional supermarket and Whole Foods Markets can be identified by a comparison of two aisles.

Whole Foods Markets, Union Square
New York, NY 2006

British Tesco 2006

The differences between these two examples are mainly down to materials. While Whole Foods Markets (WFM) have utilized wooden shelves and flooring Tesco reflects the supermarket techno-rationalist, systems/efficiency tradition by using metal shelving and plastic floor tiles. Lower voltage lighting helps to create a softer look to the WFM offer but on the other hand Tesco creates wider aisle space because of the need to accommodate more trolleys. The conclusions that can be drawn from the section-by-section analysis of the Union Square store suggest that the design solution is largely cosmetic and is informed by the lack of clarity about the stock and its provenance. When first asked about the proportion of organic produce Hermann claimed that the store was "about 40 percent organic" but the maths, although approximate, tell a very different story to the one that is promoted by Whole Foods Market's publicity spin. In reality they suffer badly in comparison with mainstream British supermarkets, like Tesco, in terms of the range of actual range of organic stock that they carry.[148][149]

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you can sample a tried-and-true flavour combination from our lengthy menu of options. For those that are purists and simply prefer juice, we feature fresh-squeezed carrot, apple, and orange juices daily."
There is no mention of organic and as Herman was able to confirm there are "no organic choices" in the 'fresh' selection offered by the café."

[148] The difference in the stock and marketing strategy of Whole foods Markets from a mainstream British supermarket can be summarized as:

- Copious dressing of the way that products are presented to consumers, using vernacular design references like bins and natural pine that are common to the health-food/whole-food tradition identified by Belasco above
- Significant use of ambiguous words like 'natural' and 'fresh'
- Strategic use of traditional design display techniques that draw upon the vernacular techniques of small shopkeepers. For example vegetables are stacked together in ways that represent an abundance and colour contrasts are utilized in ways that are similar to an artists approached to colour composition
- Greater emphasis on the input of human labour in the key display areas where "our store's selection of fruits and vegetables is hand-stacked colourfully high in dazzling displays."
- More areas where consumer interaction with loose produce as a 'self-selection' choice
- An absence of obvious cheap and cheerful 'value' offers, or brands that do not make any claim to 'natural' associations

Whole Foods Markets claims to offer it consumers a sensory experience but this is not born out by the Union Square, or Columbus Circle Stores where the tendency to clean and package limits contact with sensory engagement. None of the produce smells and they feel like the waxed equivalent produced by the agri-industry. This phenomenon is exacerbated at a psychosomatic level by the lack of variety. All of the selections seem to reflect a very narrow choice of species. It is clear that the hand stacking policy is designed to emphasize visual rather than multi-sensory potential The industrial obsession with identical perfection limits selection evaluation. The prepared food section provides a familiar and largely negative experience because of the strategy of leaving food on warming trays, results in a cacophony of negatively completing slightly overcooked aromas.

In terms of appearance comparisons the main point of distinction between Whole foods Markets and a typical British supermarket is in WFM's application of mock heritage, through the use of wooden racking, a colour scheme that is dominated by warm browns and beige, rather than white, softer lighting, scoop bins and brown paper bags with woodcut style prints, and a greater variety of serving areas based on interaction with employees who appear to be specialist old-style skilled workers, like butchers, fishmonger and bakers. In comparison to Tesco's tentative flirtation with retro references the Whole foods market's aesthetic is simply more coherently achieved as. The British tend to apply the same strategy as bolt-on's to the dominant machine aesthetic.

If a comparison were made with Carlos Criado Perez's British Safeway makeover shortly before they were sold to Morrison's in 2004, then Whole foods Markets would compare badly. Perez achieved a much more sophisticated re-think of the ambiance of the supermarket with much greater use of lighting differentiation and strategically placed 'live' sensory points, like an open pizza oven, achieving a much greater degree of mult-sensory engagement opportunity. Perez confirming that it is possible to create sensory atmosphere, and while he relied on retro references they were clearly considered from at a level that went beyond visual styling and nostalgia. He demonstrated that a supermarket could provide sensory ambiance and maintain efficiency. The repositioning strategy was part of vary pragmatic policy based on price, customer-service, freshness and product availability. (Owen, 2003: 19- 20)

Whole Foods Markets and multi-sensory opportunity

- Traditional style brown paper bags are offered for outer packaging but there is no mention of recycled paper publicity or encouragement for consumers to bring their own bags, The bags are printed with a substantial, retro logo that adds to recycling difficulties.
- The lack of obvious recycling strategies extends to internal and externally consumed takeaway food and drink. Disposable paper napkins, plastic cutlery, straws, cups and paper wrapped salt and pepper are all offered without recommendations in respect of discriminating use and disposal.
- There is no evidence of the use of recycled materials for construction, shelving, packaging, or use of energy saving equipment

149 Hermann's lack of knowledge of fair trade seems to be indicative of Whole Foods Markets position on labour in general. There statement on employments emphasizes positive involvement: "We support Team Member happiness and excellence. Our success is dependent upon their collective energy and intelligence. We design and promote work environments where Team Members can flourish and reach their highest potential, and we encourage their participation and involvement at all levels of our business." (www.wholefoodsmarkets.com)

My research confirms WFM's approach to creating a customer experience is mainly predicated on visual display. The fact that this has been recently augmented by marketing textbook version of experiential design suggests that WFM's knowledge comes from theory and competitor practice rather than their own knowledge of food and its multi-faceted sensory rituals and histories. Where there is opportunity to link and educate consumer awareness in encouraging consumers to select interesting varieties that have individual character WFM reflects mainstream practice in washing and selecting varieties that have been grown for their large size and symmetrical and unblemished appearance to create a homogonous, visually led display. This syndrome is reinforced by the recent new that WFM have adopted the mainstream practice of dictating prices to their suppliers,[150] a strategy that usually results in a systems and wholly mechanized led approach to production. Creating a spar clearly offers huge extension of the sensory opportunity available in a supermarket but this is no different from the UK multiple chemists failed attempt to open up spar experiences in their larger format stores in 2004-5. It is a linked experience to the Lohas branding but it does not impact on the development of producer, staff, or consumer knowledge. In many respects WFM's move into spar style stress busting reflects the mainstream agri-business links with the pharmaceuticals industry in which the illness and stress provoking activities of the one provide healthy business.

Reviews stress that, "Whole Foods brings excitement to an industry that needs it." (David Merrefield, editorial director at Supermarket News.) quoted (Horovitz, 2006) but the excitement seems to be relative to the fact that compared with the prevailing blandness of the traditional model, using the kind of 'lighting for the produce is the kind used in art galleries (playing) music (that) is classical (and making token gestures to environmental agendas) the conscience store signs and displays aren't plastic and particle board but a more eco-friendly, wood-like product made from wheat straw' (Horovitz, 2006) WHF appeals to those who are 'looking' for more. Whole Foods Markets is clearly a very traditional capital accumulation led model of corporate food retailing that has carefully targeted an emerging market of health conscious consumers. My research suggests that the average WFM consumer is not particularly well informed about the sensory dimension of food and is thus available to be manipulated to accept the kind of smoke and mirrors controllable replication that WFM offers as a substitute for real food knowledge. Mackey argues, "Many of our customers are well-educated. 'The common link is education, not income...that correlates with income, but not perfectly."

Whole Foods Markets finally entered the 'experience economy' with the opening of a new concept store in Austin, Texas in 2005 makes substantial claims for originality but seems to be draw on the same European precedents that Central Markets researched and adopted as well as a clear strategy of emulation of C M's solution. The new Austin store marked the confirmation of the WFM's decision to concentrate on larger format stores and to develop an experiential approach to food and lifestyle retailing: 'Call it a better-for-you food bazaar on organic steroids. Or the grocery equivalent of Disney World for food junkies. Whole Foods executives believe that the ideas in the store — which is broken up into enticing, food-centric lands, à la Disney — could have the kind of industry-shaking impact on grocery shopping that Starbucks has had on coffee drinking. Whole Foods could help transform grocery shopping into interactive theatre.' Mackey is quoted as saying, 'Americans love to eat. And Americans love to shop. But we don't like to shop

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150 "By dictating selling prices to manufacturers, Whole Foods takes advantage of their "economy of scale" by distributing goods through their own regional distribution centers. This theoretically allows for lower retail prices on the store shelves while creating greater profits and dividends for the stakeholders." (Pollan, 2006)

for food. It's a chore, like doing laundry...Whole Foods thinks shopping should be fun. With this store, we're pioneering a new lifestyle that synthesizes health and pleasure. We don't see a contradiction."

The key features of the experiential design and marketing strategy include:

- Candy Island, where you can dip a fresh strawberry in a flowing, chocolate fountain for $1.59 each.
- Lamar Street Greens, where you can sit among the organic produce and have a salad handmade for you to enjoy with a glass of Chardonnay.
- Fifth Street Seafood, a version of Seattle's Pike Place Market, where you can have any of 150 fresh seafood items cooked, sliced, smoked or fried for instant eating.
- Whole Body, where a massage therapist will work the kinks out with a 25-minute deep-tissue massage for $50.

Horovitz confirms "Each of the sections is designed with self-contained architecture that is curved inward to feel intimate — and to encourage shoppers to linger. Whole Foods plans to plop some of these elements into future stores, from Annapolis, Md., to Salt Lake City to Cincinnati." (Horovitz, 2006)

John Mackey

The image above feature John Mackey, CEO, of WFM, opening the Austin store, revealing his juggling skills, with no apparent irony intended. WFM's embrace of the supermarket as circus concept echoes the early history of the format when its newness created a buzz for shoppers who were unused to an abundance of choice at an affordable price. Apart from the one-off act from Mackey, chefs and food preparers from fish-gutters to pizza cooked are encouraged to display the kind of virtuoso performance featured in the film 'Cocktail,' in which Tom Cruise displayed a skill in juggling bottles to reflect the contemporary cocktail bar experiential marketing strategy, in which drink making became both display and experience. The chocolate fountain, café and organic clothes all point to the attempt to follow contemporary supermarket business strategy of destination marketing, while constructing the kind of market experience that Central Markets have evolved from European precedents.[151]

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151 Whole Foods Markets is almost twelve years behind one of its major rivals the Texas/Mexico based privately owner supermarket group H E Butts who established a sub-brand to cater for the emerging Lohas market in 1994 called Central Markets. H E Butts began trading as a traditional food retailer in 1905 and despite remaining locked into its original Texas/Mexico location it has a long history of innovation that has made it the largest privately owned grocery business in the USA.

- HEB donates 5 percent of its profits to charitable causes (WFM holds localized and occasional 5 percent days that are specific store related)
- The Central Markets concept commits an average of 30 percent of its retail space to fresh perishable produce which means that its risks the double or triple mark-ups that processed foods provide competitors including WFM that has placed an increasing emphasis on processed food

Reviewers suggest that the new WFM's experiential design and marketing is full of sensory opportunity but it is also full of the kind of superficial and synthetic sensory ploys that have long been the norm for retailers and service providers who trade in mass produced and sensorial anathematised products, which are then given sensory dimension by air circulation technology that circulates evocative aromas. WFM's version of this technique is based on nut roasting: "Walk by the hot nut section and special fans waft that tummy-teasing smell of roasting nuts your way." (Horovitz, 2006)

The design contribution of Whole Foods Markets is broadly similar to their contribution to food ethics, the biosphere and health, a flair for publicity but no original contributions, the experiential strategy seems to be designed to appeal to Cultural Creatives, who 'step away from the mainstream assumptions and values of modern culture, they are pe4icing together life that they care passionately about...In the midst of a society with compartmentalized values, they are doing what they can to weave a coherent and integrated life.' (Ray, 2001: 20)

Consumers who fit the profile of Lohas, or Cultural Creative, generally have two very clear characteristics:

- Central markets created a "Theatre of Food" concept that includes cookery classes, sampling and "foodies" to provide sources of experienced inspiration and to answer customer's questions
- The development of a 'Café on the Run' concept provides chef prepared fresh food for customers
- Instead using the standard supermarket grid layout in which customer movements are controlled by long runs of shelving the store has evolved a serpentine track that encourages circulation through key themed areas that reflect specialist produce
- Colour coding is used to make it clear what is organic and/or local what is not, unlike WFM who integrate without clear differentiation
- Central Markets uses humorous signs to make jokes at its won and its customer's "foodie" preoccupations
- Central Markets bakes their bread on site: 'We follow Old World recipes and techniques to create more than 70 varieties of dense, European-style breads, crusty French breads and assorted other specialty breads like scones and kolaches. All are made from scratch right here on the premises, with loving care by our expert bakers.'
- Central Markets use self pricing scales so that customers can see exactly how much they are paying for fresh/loose produce
- Central Markets chefs prepare foods into meal 'kits' to encourage customers to cook fresh food rather than reply on processed food
- Central Markets is focused on educating consumers to shop and live more discerningly, their recruitment policy states that they are looking for people who can 'chew and think.' Jim Smits the VP of Sales and Merchandising: 'We have one criteria: If you love to eat, we are the place,' he said. "What we really want to do is expand your food horizons."
- Central Markets feature a playground for children
- HEB began to convert their delivery vehicles to natural gas in 1999 and have a strong recycling and environmental policy

(Anderson 8-12-06, Howell 22-10-01, http://www.centralmarket.com, 8-12-06)

- They are looking for qualities of personal experience that appear to be at odds, and may well be inspired by the predictable and synthetic character of the products, services ands systems that mass production model provides
- They typically begin their journey towards better health with a high degree of sensory naivety that is the general experience for consumers who have been conditioned in their values and knowledge by the mass production model

It is this mix of longing for a deeper level of value and quality of experience and sensory naivety that makes the term lifestyle so appropriate. Style according to the dictionary includes: "A distinctive manner of expression...the state of being popular." (Merriam-Webster-online, www.m-w.com/dictionary/style) In this respect the theatrical-circus style that WFM version of experiential retailing supports the need to pose, that is neatly summarized in the title of Pine and Gilmore's book The Experience Economy: Work is Theatre & Every Business a Stage it clearly provides pleasure but it does little, or nothing that is clearly supportive to intelligent sensory engagement that might facilitate more discriminating choices. The bottom line for WFM is the same as the one realized by the brands like Nike and Disney who pioneered the evolution of experience economy: "Consumers will be willing to pay more for a brand if there is a perceived or actual added value from their experience of using the product or service." Michael Morrison research director, Australian Centre for Retail Studies (ACRS) quoted in: (Ligerakis, 2004) For WFM the design, marketing and business strategy is clearing delivering on the goal of capital accumulation:

Recent mainstream ecological initiatives, albeit designed to save money, make WFM look more like an old style corporate rather than credible ecological savour. Their tendency to pastiche the whole food rustic genre displays the extent to which their strategy is informed by scaling-up up rustic formulas and evolving experiential theatre. Neither strategy appears to be intended to do achieve anything beyond mass merchandising high profit prepared food nor the superficial 'natural' claims that the corporation has chosen to specialize in. WHF provide a case study of the potential for retailers to exploit the gullible into believing that they are doing something for the planet, or themselves, when they are simply contributing to corporate profit.

This is a long way from what enlightened passion led collaborations between design and food might achieve in rethinking retail. The danger of WFM's success is that they may simply exhaust good will and credibility before there is a chance to evolve an alternative.

Chapter Thirteen: Innovations in Wellbeing and Luxury

Introduction

I confirmed in Chapters (10 and 11) how the dominance of the conventional supermarket model has extended the culture of multi-sensory marginalization. Chapter (12) introduced (and criticized) Whole Foods Market's attempt to reconcile mass strategy with whole food ethics. I exposed WFM's tendency to superficially co-opt ethical food aesthetic conventions into a grid orientated and visually led design and business tradition without substantial investment in new design strategies.

This penultimate chapter uses a final case study of an SME ethical food business: La Fromagerie (LF) to exemplify an alternative starting point from the strategies that dominate corporate food retailing. I use (LF) to reconsider the relationship between ethics, multi-sensory knowledge, practice, design and business. I explore the potential for a food retailer to embody the theories that can be summarized as 'small is beautiful' (developed by Schumacher and others) to affect a benign influence on the chain of supply and demand.

I have chosen (LF) because my research confirmed that it was attempting to connect, support and develop the heritage of embodied food knowledge through strategies that could be described as a design process. I argue that (LF) has moved beyond the limitations of the whole foods approach to design by evolving a more a contemporary brand that utilizes a multi-sensory design and marketing strategy to articulate ethical concern. I demonstrate (LF's) potential to connect consumers and producers to a spirit of ethical concern by encouraging discerning choice in a context of embodied and enchanting conviviality.

While I recognize that (LF) is a relatively isolated example of responsible practice I believe that it provides valuable evidence of the potential for multi-sensory strategy to reconnect ethics, embodied enchantment and wider choice to business. I recognize that (LF) does not immediately provide a model that would work at a mass level but I propose it as an alternative starting point for designers who are concerned to develop more benign strategies for mass marketing.

I follow the same format that I used for the two previous case studies and consider La Fromagerie's use of design and marketing through the framework of the 5 P's.

La Fromagerie: The Background

La Fromagerie is a small to medium enterprise (SME) that is led by food retail but includes a café, a wholesale business, tasting events, and in 2007 the business will embrace mail-order business. Based on accountants figure the main retail outlet at Moxon Street, Marylebone "turns over approximately £850,000 p.a, excluding the café, and the other non-retail activities." (Bilney, 12-12-06) The Moxon Street shop has a display and sales area of "approximately 1200 square feet" (Bilney, 11-12-06) and is open 7 days per week, opening and closing time are: Mon 10.30am - 7.30pm,Tue-Fri 8.00am – 7.30pm, Sat 9.00am – 7.00pm, Sun 10.00am – 6.00pm. With two shops, based in Highbury and Marylebone, London.[152] La Fromagerie specializes in cheese but also sells fresh vegetables and meat along with some condiments and

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152 30 Highbury Park, London N5 2AA, 2-4 Moxon Street, London W1U 4EW

wines. Its marketing strategy is informed by slow food principles[153] but is also a product of the very particular passion and philosophy of its founder Patricia Michelson

"I could talk about cheeses until the cows come home…describe the nuances aromas, textures, styles and varying shades of yellow." (Michelson, 2001: 3) Delivering that passion in a way that creates a sustainable business on a day-to-day level is the responsibility of the business manager, Sarah Bilney.

The Start of the Business

"I started from a place in time, 1986 there was a very bad storm in October, all the communication networks went down and it affected a lot of businesses including my husband's retail business which suffered greatly- it was real struggle to keep going. I was working for a theatre director and it was an interesting job but not much money…we went on holiday skiing and there was white out and I got separated from my husband and was on this mountain all alone and somehow had to find my way down. You have to take control and eventually I made it. I was in a real state I brought a bit of cheese, with the few pence I had one me, and it made me feel better. The next day I went and found the farmer who had produced it and brought some back and put it in my shed, thinking that I could share it with friends and then I thought this could make a business.

It was an epiphany moment, the kind of episode that can change your life if you let it. I do like the sense of danger involved in taking a risk on something that you believe in and so it was lets put what ever money we can raise and try it. I found someone at a Trade Show, that I got into by printing up a business card, who would help me bring cheeses in to the country in small amounts I could only afford £250 per week and that was not enough to go straight to the suppliers. My first experience was a market stall in Camden Lock and that taught me a lot about what customers need and made me realize that I was doing something that no one else was doing and that made me feel quite powerful. I wrote a cheese menu that was full of the kind of tasting notes that I felt customers needed to understand what they were buying. I wanted to treat people how I wanted to be treated so I gave as much information about what the cheeses was, why it was like that, where it came from, who created it and so on.

When I found the shop in Highbury I thought that it would keep me occupied 3 days per week and within a month it was 6 days a week and within two months it was seven days. It was only me and I was often out making deliveries at midnight. It was that moment in the early 90s when there was recession and all of sudden people were spending loads of money on their homes, building flash kitchens that they never used but wanted food to impress. All of sudden news got around it was "that little shop, La Fromogarie in Highbury," Cherie Blaire started coming there and it kind of grew as a destination and lifted the whole area which had been in retail decline for years. It was that led to the invitation to set in Marylebone the developers saw the draw potential of specialist retailer." (Michelson/Crook, 2006)

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153 See Glossary

Management

"I do not have a manual, I watch (the staff) and let them go with the flow but I encourage them to try everything and form their own way of selling it to a customer, if they believe in then the customer is likely to believe them. I try and give them the confidence to trust in themselves. Sarah came from a very structured background but she has learnt to trust her instincts." (Michelson/Crook 2006) Sarah got into food retailing by setting up a retail outlet for the Chef, Sally Clark, she had never worked in retail before and "learnt by doing it," over the eleven years that they worked together before she joined Patricia in 2004. According to Sarah, she and Patricia "have a hands-on relationship with the business, we do anything that needs doing from cleaning to serving." (Bilney/Crook, 2006) Training of staff can take up to 6 months and appears to be based on a strategy of sympathetic immersion, in which the learning curve is encouraged and slow comprehension is tolerated provided the recipients display the kind of empathy that enables them to interface with Patricia and Sarah at the level of the core value of a passion for natural food.

La Fromagerie and the 5 P's

Following the strategy used for analyzing the use of design and marketing by British supermarkets and Whole Foods Markets LF use of the 5 P's is described below

Place

Two contemporary reviews depict the Moxon St location as 'rustic' in style: "The 'tasting café' in the back of this popular, rustic-style deli offers the opportunity to sample some of the shop's carefully sourced foodstuffs.'[154] (Time Out Eating & Drinking Guide 2007) And the decor was pretty nice too, in a rustic sort of way. Informal, cafe-esque, and with a nicely cluttered feeling, surrounded by bottles of wine. It's just a shame this didn't abet the ambience. (http://www.london-eating.co.uk/5697.htm) The references to rustic clearly annoy Sarah and informed her concern to re-brand the business: The old shop was very country bumkin-ish and that is really not how I think that we should be presenting our selves. I think that this (Marylebone) is a lot more industrial and the branding complements this, its more modern." (Bilney/Crook 2006)

For Patricia, the 'rustic' references create less of a problem and reflect her concern and source "My business is an extremely personal statement and I found it extremely difficult to explain it to a branding person who is used to dealing with big corporations like Coca-Cola who just need a bit of tidying up of the formula." "The first results were very literal someone came

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154 "It's a simple set-up: one large communal wooden table, flanked by benches, plus three small satellite tables...The place is mobbed at weekend lunchtimes and staff can veer from offhand to charmingly solicitous." (Time Out Eating & Drinking Guide 2007)

up with this idea of a box that was based on my cheese book...what I wanted to get across was a sense of discovery so no phone number, a dark background colour....after a while I got extremely bored with the whole thing as the branding was not the most interesting thing in my life." (Michelson/Crook, 2006)

"The furniture is made to reflect the texture of the cheeses and its dark to reflect the sense of discovery. It like a cave, if its dark then the produce glows it can't do that in the supermarket. We are deliberately a bit rough around the edges so that people can feel at home, flop around if you like. We don't need to pretend and nor do our customers it needs to feel natural. There are little shops up above Lake Como that look and feel like they have been carved out of the rock. I did not want to copy them but I do want to achieve that level of integrity and give the food a home that it would feel comfortable in." (Michelson/Crook, 2006)

The display/sales area of the Moxon street shop is relatively small, (approx. 1200 square feet) in relation to the range of produce and activity, including the tasting area that it houses. The doors open on to the fruit and vegetable section but these are interspersed with tables offering sweets and various jars of chutneys, and jam etc. The cheese room is located to the right as you enter the shop it is screened by the glass panel shown below and is naturally lit by the right hand window (ref, front view above) The tasting area, (see image below) which is also used as a café by customers, is located at the rear of the left hand space and can be seen immediately from the entrance. Customers have to pass through the fresh produce area to reach the café, and the same on return. Tables and the small areas of shelving are used to combine produce display with decorative items, (see below). Everywhere, information is provided in handwritten, notes that provide information about use, potential and provenance

Design detailing emanates from significant purpose, knowledge and experience: referring to the maturing room that is in the basement of the Marylebone shop Michelson states, "the quiet dark areas are fitted with aged shelving from a disused Cheddar storage barn in Somerset...these fifty year old shelves are seasoned and happy to lie in this atmosphere. A hot water scrub cleans them; we never use cleaning products down here as the natural flora would be destroyed and the bacterial balance would be upset. Then harmful bugs would place themselves on our delicate white moulds and show up as ugly black spots....Once a cheese has been washed – brushed if a hard rind is required – it placed on wooden shelf lined with mats made of natural untreated straw, which I bring from France." (Michelson, 2001: 14-15)

Patricia explains that the 'rustic' aesthetic evolved from practical, not style considerations: "cheese responds better to surfaces like wood rather than metal and the straw mats allow the cheese to breathe." (Michelson, November 2002) Rather than emphasising the functionality of the aesthetic decorative, personal touches, like the cows and the bottle of wine give LF a unique character personal character that avoids looking over designed.

The aesthetics derived from the spirit rather than the desire to clone traditional cheeses retailers in Europe. "When I started I knew nothing about the formulae of the traditional model of food retailing, strip lighting, metal shelving, putting your best sellers at eye contact level etc., they are just trying to get into the customers psyche, its all a load of bollocks because the one thing that's always missing is the concern for the quality of the food they sell, they are only interested in selling. Food is a people business, when people come here to try and copy the way we do things I have to remind them that they might be able to steal the look but they won't have me, my knowledge and passion. They don't understand they think it's all about the look." (Michelson/Crook, 2006)

The shop was professionally designed, Eduardo Rosa was commissioned to design La Fromagerie, to reflect the merchandise. The results achieved style-shopping status, appearing in a 'coffee-table' style book called 'Fabulous Food Shops' (2005) L F features as the cover image. 'The cheese is from small rural farms so a natural look, predominantly of wood was favored. With new goods coming in daily, a lively and dynamic but flexible design was essential to reflect the changing produce and the seasons. This was fulfilled with the display units, for instance collapsible table bases imported from Brazil – used there by unlicensed street traders who swiftly fold them up and scarper at the sight of a police officer. Added flexibility was achieved with wooden shelf boxes, which...double as trays...Fixtures and fittings were constructed with scaffolding planks dyed to 'age' them and light fixtures were sourced from an architectural salvage dealer – the bell-shaped lamps formerly lit the art deco department store Peter Jones...Slow food...is about a calmer way of shopping, so the shop layout is designed to reduce speed. Tables stick out into the walkways, an obstacle that causes shoppers to stop and browse, and eye catching display units hug the interior column...Rosa used the same construction materials in the café as the shop to highlight the marriage between the two. At night wooden shutters are closed over the door of La Fromagerie and the façade. With its patina of age...an exterior that provokes a previous era but with something fresh and new inside.' (Peyton, 2005:106-107) According to Patricia, "they come in from all over the world clutching that book, wanting to copy the look and I won't let them take photos." (Michelson/Crook 2006)

Product

Like the resistance to neat classification of the other four P's, below, it is hard to define what the product is without offering a multi-dimensional explanation. At an obvious level the LF product offer beings and ends with cheese.

Passionate expertise ranks highly in the LF offer and the difficulty of locating this as 'product', or 'promotion' highlights the complexity of the marketing mix. Patricia's philosophy is predicated on the need to be understood, respect and nurture natural processes. The narrative of the journey from supplier to shop is full of significant sensory moments: "As soon as the cheese arrives at my shop we inspect them one by one, handling the soft ones gently we work out how they will develop. How plump and buttery the rind feels gives us an idea of how long the maturing will take, and where in the maturing room we will store it, whether want to hold it back a bit, or bring it forward. The main purpose is to transform the cheese from its youth to mature ripe state...Soft cheeses, such as Epoisses, will be sprayed with alcohol (ideally from the region where the cheeses was produced) to help them become creamier and develop the rind giving it a fuller flavour...I rub a little wine laced wash into the soft smooth rind of say a Reblochon, from the alpine region of Savoie, to which I have also added a little crème fraiche, I gently massage the whole cheeses with my fingertips so it is absorbed right the way through. In a week the texture will be subtle, the rind will take on a beautiful apricot glow and the taste will be more nutty with a light fruity tang....seasons play a part in the maturing process too. The quality of the milk changes from summer to winter. Cheeses taste quite sharp and strident when the cattle have less access to outside grazing and rely heavily on hay. `In summer they have a floral fragrance and rich taste because the cattle graze in warm meadows and pastures. Autumn cheeses are richest in texture..." (Michelson, 2001: 14-15)

Price

The price range, despite negative reportage: 'So it is probably no great surprise that La Fromagerie was filled in every nook and cranny with greatly extortionate goods. You didn't want to even look at a stick of bread in case somebody put a twenty-pound price-tag around your neck.' (http://www.london-eating.co.uk/5697.htm) does reflect the broad range of customer types, some of whom: "send the chauffeur and we have never met." (Michelson/Crook, 2006) Sarah confirms: "There is nothing in the shop that is not there for a quality reason...we are not led by profit but by quality...we try and cater for everyone, you can but spend £2 on a small cheese or £49 on a Truffle Brie" (Bilney/Crook 2006) The price issue is one of the most important factors in determining LF's customers. In relations to the other P's and the mission of representing fresh, and natural food, the prices are entirely appropriate and do offer access at a wide range of demographic thresholds. But it is possible to recognize that it is unlikely that the way things are priced is probably the most significant deterrent to consumers who are supermarket trained to expect the promise of discount opportunity. Patricia makes a strong case for the price of fresh produce: "People do not necessarily have to spend more, prices of fruit and veg look expensive priced by the kilo but the actual cost is relatively small." She compares the average cost of £1.99 for a bag of washed salad leaves in a supermarket 'stay fresh bagged'

offer and argues that 50 grams of salad sold in this way is infinitely more expensive than anything LF offers. Confirming "that's how they make their profit!" (Michelson/Crook, 2006)

People

Both Patricia and Sarah emphasize the broad range of customer types "from students to media types" (Bilney Crook, 2006) My observations of the shop at work confirm that the staff are enthusiastic and display absolutely no discrimination, or intimidation, in relation to their customer's financial, or other determinants of status. It is inevitable that LF will attract a wealthier demographic that the average British supermarket but observation confirms that this sector do not dominate. The breath and non-denominational nature of the customer base fits Patricia's concern to inform and instill some of the passion and represents a self conscious concern to show that there is an alternative to the British supermarket experience: "They know that people are gullible because there is nowhere for them to learn about food quality. Schools don/t teach it and their parents are too busy trying to save time in lugging home carrier bags of rubbish that they though saved them time and money. What do they do with it they spend it on gadgets that they do not need and close them off from each other and the world?" (Michelson/Crook, 2006)

Promotion

Patricia is clearly obsessive about detail and has a very clear set of views on the need for design to reflect a range of tangible needs. For example her position on packaging is informed by her knowledge of cheeses as a living entity and her own empirical approach to developing her knowledge. "The first cheese I bought came from a hut on the mountain and that is what led me to put it in a dark shed. I worked out that the rind is a natural form of packaging." But it is also informed by a concern to reject the habits of the Food processing industries and Corporate retail practices: "Most of the cheese you buy in supermarkets is full of water, added salt, and all kinds of nasty additives but they also wrap it in plastic which changes the flavour, it's the big is beautiful approach, but most people end up throwing the bargain block away because it goes hard after a few days. I did a tasting for the Observer and I told them that a number of the cheeses simply could not be scored because the packaging had changed the flavour. If it has been packaged in paper then I would have included it but the plastic compromised any hope of quality evaluation. Supermarkets need to understand the relationship between taste and packaging...Supermarkets are only really interested in making money they specialize in introducing consumers to micro waved food that have no nutritional value that have been bulked out with all sorts of nasty additives." (Michelson/Crook, 2006)

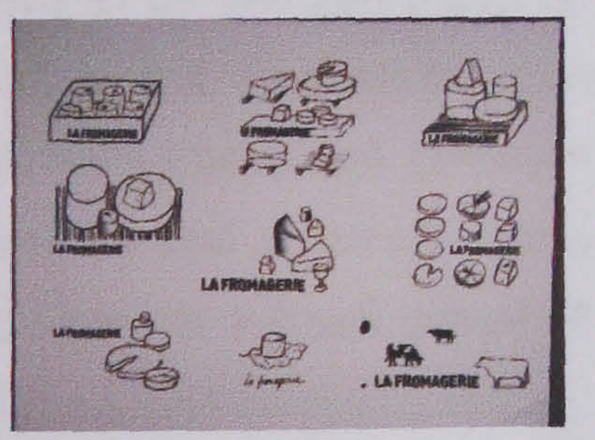
"When people come in here and they are only used to shopping in a supermarket they are naturally suspicious, they assume it costs more and they worry that they might need specialist knowledge. I just go up to them and offer to help; I get them to taste things. I encourage them to buy a little rather than a lot. Its little and often, that the way to shop, shopping is pleasure ritual, not a chore. Corporate business made it seem like a chore, you are encouraged to think they could help you minimize the time and they will even do your thinking for you. They are too busy with their mission statements and branding to think about what is really important in terms of quality and taste. Its like Sainsbury with their taste the difference, they are right it does taste different, it tastes horrible, Whole Foods Markets is just the same, lots of mission statements and very mixed food. Its like those old Hollywood film about the Wild West they

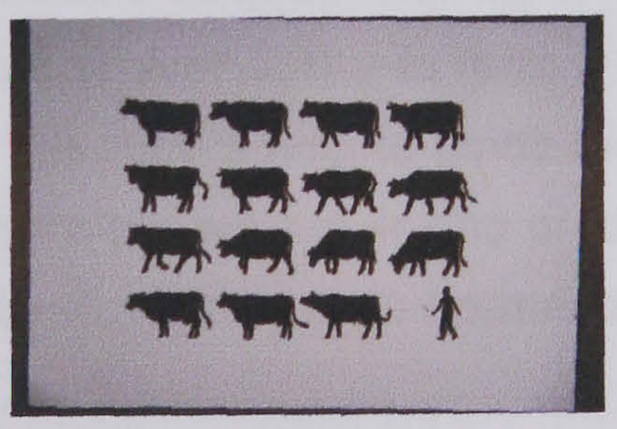
created the town out of cardboard, it looks real until you open the door and there nothing behind it." (Michelson/Crook, 2006)

Promotion as Brand

In 2005 Brand consultant, Simon John and his team began to work with Patricia and Sarah to try and find a way of expressing La Fromagerie in a more coherent and contemporary style. The attempt to create a contemporary logo and brand management strategy has been driven by Sarah. The decision to use dark colours was led by Patricia's 'cave' analogy, in which she wishes to capture the relatively 'raw and uncooked' style of Italian Cheese retailers and her personal style. "I was not going to have bright colours. I like to think I am discrete but like to push boundaries and have a little madness in my life." The process involved "lots of conversations." (Bilney/Crook, 2006) in which Patricia's enthusiasm for Wyndham Lewis and the Vorticist movement informed "the dark colours" (Michelson/Crook 2006) and their taste in music.

It was clear from the interview that despite the fact that the branding exercise probed Patricia's tastes in art, music and her passion for food/retail philosophy it still produced something that was less than the sum of the parts and created a corporate image that had very little to do with the sensorial richness of the LF experience and the knowledge that informs it. This raises a fascinating question about how you do (if you ever can) package and promote a distinctive multi-sensory personality without resorting to visual The images demonstrate the interpretation stages identified by Patricia and Sarah, as they reviewed and rejected attempts to give more primacy to the cow. Others reveal the use of colour, which was rejected as the brand image was focused on the cave as dark and the cheeses as light. The solution clearly answers many of Sarah's concerns to improve the business potential of LF and there is important evidence that the new 'look' has brought a "25 percent increase in our wholesale business simply because they take us more seriously as a professional supplier." (Bilney/Crook, 2006)





Various sketches that supported the dialogue between La Fromagerie and their branding consultancy. Various elements, like the cows were proposed and rejected. Much of the dialogue was taken up with removing colour creating a brand that reflected the cave like retail environment that Patricia had first experienced in Northern Italy and making subtle changes to the typography.

The images below demonstrate the way in which a marketing consultancy responded to the same opportunity by emphasizing the pungent smell of cheese through protective clothing. Their ideas were immediately rejected.

The sensory aspect of P for 'place' identified above is also an important element of the 'promotion.' In response to a question about sensory ambiance Patricia confirms: "We did not set out to manage the senses but it kind of happens. Smell, there is an immediate senses as you enter that it is shop selling fresh food. The vegetables that greet you have a range of colour and textures and communicate seasonality. Bread gives you a yeasty smell, nothing covered up. The Cheese room kind of wafts, all the children that come in get the 'pong!' at once. Its that senses of smell that starts off the brain's need to explore and gets the juices in the moth going." (Michelson/Crook, 2006)

Sarah's relatively pragmatic clarification makes for an interesting comparison with Patricia's above: "The process of developing and maturing the cheeses on the premises makes it a real experience and our staff reflect that, we all work hard because we value what the quality of what we produce and sell and the role that it can play in improving the quality of life. The cheese room can be a very unromantic place, its cold and smelly but once you understand why it needs to be like you begin to become involved in the magic, The smell of the cheese room dominates but each section contribute to your ability to form a picture in your head, we want you to walk about and discover and the senses help to guide the journey. The news letter seasonality and gives a sense of dimension...we are linking product to producer to receiver to table. There is a great sense of where the stuff comes from and that we live it." (Bilney/Crook, 2006)

Sweets as contrast to savouy

Virtual

The website (www.lafromogerie.co.uk) is part of the re-brand and although not complete has begun to communicate the LF ethos through seasonal announcements. A contemporary (12-11-06) example of the website's role in promoting LF is quoted below: "News & Events at LA FROMAGERIE: October & November 2006

Vacherin du Mont d'Or: The headliner in the cheese room at this time of year is always the Vacherin. Mid-October sees the start of the Vacherin season we start selling them later than most but we prefer to wait for the rich flavours to develop with a nutty toasty edge. When they arrive we wash the top crust in Arbois wine before maturing them in the cellar in high humidity. The cheese maker is Richard Sancey who is based in Metabief, Haut Savoie, we also get the wonderful Morbier from him. Pair with Chignin Bergeron from the Savoie, Eastern France. Made from the Chignin Bergeron grape variety originating from the ancient Roussanne vines - Rene Quenard's famous wine from the lower slopes where the vines ripen in more sheltered warmth. The perfect wine for Vacherin Mont d'Or, with its delicate perfume masking a full bodied fruity wine of juicy intensity, or an aged Beaufort d'Alpage."
(http://www.lafromagerie.co.uk/events.html)

Physical

The hands on, 'meet and greet' style is informed by the fact that despite their modest turnover LF in Moxon street carries 18 staff and is open from Mon: 10.30 am - 7.30pm, Tue – Fri: 8.00 am - 7.30 pm, Sat: 9.00 am - 7.00 pm and Sun: 10.00 am - 6.00 pm. While the staff double up to assist in wholesale and packaging orders they are in store and available to insure maximum customer interaction potential. While this offered huge opportunity for the construction of sensory engagement, as customers are offered the comfort of non-pushy and highly informed invitations to sample they are immediately taken into a sensory engagement ritual which begins with the human voice, moves to tactile and aroma contact and evolves into taste and back to audio confirmation. This helps to build trust but can also separate the philistines from the curious.

The condecending extract of a review (below) by A A Gill reveals more about the writers prejudice and/or limitations than the sensory strategy of LF but is does sound a warning note on the dangers of evangelism: "I wandered down the road with Christiane Amanpour to La Fromagerie. This is an incredibly impressive shop, a real London treasure. There's a glass cold room guarded by a morose Frenchman, and inside it's cool and smelly, like a cross between a catacomb and a discount brothel. We tasted cheese, and I muttered that however much I'm told about the stuff, however hard I concentrate, and I never seem to learn anything. "I still know absolutely nothing about cheese," I said out loud, and behind me a fierce, beady lady in an apron agreed enthusiastically. "You're right. You know absolutely nothing about cheese. Nothing whatsoever. I wasn't going to mention it, but I can't help myself."
"Do you think she knows who you are?" whispered Christiane.
"You're not the worst, though. Chefs are the worst. They know nothing about cheese at all."
"Well," I said weakly, "cheese trolleys are the biggest loss-makers in a dining room."
"No, they're not!" she bellowed, and for an awful moment, I thought she was going to flay me with one of those little Dutch cheese-slicer things." (Gill, 2006)

The staff provision, and the knowledge and passion of Patricia and Sarah are clearly important in constructing the sensory narrative because it is constantly informed daily decisions about how to display things. An example of this depth drawn for Patricia's book confirm the

seriousness of the craft: that needs to be conveyed without alienating people who just want something to eat: "The hands of experienced affineur...can turn a mundane cheese into a full, fruity, fragrant morsel...There are clear rules in affinage but ultimately it is the affineur's individuality in developing the taste and style of a cheese-their imprint- that creates the impacts of flavors, in some cases, spell out their names. For instance, our particular style is sufficiently evolved to be recognized by customers dining in restaurants where our cheeses appear unlabelled." (Michelson, 2001: 13)

The pragmatic decisions that range from the nurturing needs of the cheeses, through the challenges presented by the profound freshness of the fruit and vegetables, to the management of cooking aromas are never allowed to dominate. This sense of managing live produce highlights a major distinction between La Fromagerie and the British supermarket where fresh means fresh from the freezer, or fresh when it was put into the bag. The 'fresh' of the supermarket has been grown and packaged to make it efficient so no-one asks the kind of questions that LF asks and no one forms the kinds of relationships between person, product, place, price, promotion that are normal for LF. The complexity of experience is well illustrated in Michelson's description of the 'craft, (of Cheese nurturing) where the final outcome or destiny of the cheeses is defined using olfactory terms (aromatic nuances, floral, fruity, earthy, etc.), aspect (the overall look of the chesses), flavors (whether the strength, or milder qualities are coming through) to the end result (a cheese that ripened and ready for eating)' (Michelson, 2001: 14)

Aside from Branding design decisions are part of the day-to-day discourse of LF which begins and ends with acknowledging, protecting and promoting nature as a source of well-being. Design in this sense becomes a process that has analogies with improvisation in theatre, or jamming in jazz. The Place, whether it is food retail, location, a theatre, or a jazz club, becomes a set into which people and products are introduced for the primary purpose of developing an organic and creative process. The place, rather than dominating, or controlling allows intuition and experiment to flourish. Rules are broken and the used as part of a dialectical process in which the necessary elements of rigidity complement the state of flux in which ideas and juxtapositions ebb and flow.

Although there are elements of the place, price, product and people that are relatively predictable the fixed grid and the manual approach that dominates the supermarket strategy is absent. Staffs are empowered to make decisions about where things are placed, how they relate to each other, and how they will surprise and enchant the customer's experience. Products are typically located in ways that enable them to add synergy to a rich sensory discourse. That includes the enthusiasm, knowledge and availability of the staff. The products are also be tuned in ways that allow them to communicate for themselves.

Conclusions

Scale is clearly a fundamental issue, it allows staff and customers time to form a discourse with the kind of experience that informed Schumacher's concept of 'small is beautiful,' a human scale in which passion for quality and the maintenance of the planet supercede the objective quest for capital accumulation.

However a number of issues concern me about the way in which LF utilizes design and marketing in respect of communicating and encouraging sensory interaction and these are summarized below:

- Talking at length to Patricia and Sarah, it became apparent that they see multi-sensorial engagement as a bi-product of the concern to sell natural food that has its own sensorial properties, the interplay and constantly changing juxtaposition of different types of produce, the café aromas and the largely un packaged character of the majority of the produce. While there is a concern to use appropriate natural materials for tables, shelving and other fixtures and fittings on display these do not seem to be used in ways where haptic and acoustic opportunities are taken into account. Display design is informed by the interplay between an architect, food and what I would describes as a homemaker's sensibility rather than by a sensory design approach.
- Despite the impact on sales and perception the brand design process was traditional and style and continuity led. While it manages the visual expression of LF in print, shop front, website, and deliver van there is absolutely no evidence of s sensory understanding or strategy. Paper choices, typeface and images seem to be working to cancel out multi-sensory reference rather than celebrating and expanding them. This is design pastiche rather than the encouragement of sensory sensibility.
- While the 'Slow Food' principles that inform Patricia's mission are admirable they are obviously compromised by the fact that her beliefs in and fixation on French, Italian and Spanish sources means that a sizable carbon footprint is an inevitable outcome of the business
- The fixation of the French origins/craft clearly dominates not just the quality management but also the aesthetic which reinforces the syndrome of retro-nostalgia that is currently inhibiting creative design innovation. Implicitly and explicitly it reinforces the clichés of tradition as the only way of designing an economic and aesthetic response to the scientific rationalist tradition.
- La Fromagerie is a romantic statement but it does not offer insights into how romantic sensibility can be translated to address twenty-first century needs and potential
- While LF has helped to spearhead Marylebone as a location for destination shopping, the subsequent rise in property values has had the inevitable consequence of limiting the demographics of community to the well off, and or/educated.
- So LF is doing less that it could to sustain and promote British produce and is also contributing to the demise of community. The undeniable sensory discourse and relative affordability of LF is not presented (designed/marketed) in away that encourages access from cultural grouping who represent the inexperienced and bargain hunter mentality that supermarkets, economic theory and practice and politics have helped to evolve, or reinforce. For these groupings LF is twee and irrelevant.

Where LF is making a contribution is in the sphere of demonstrating that it is possible to survive and within reason prosper despites a range of challenges. During my conversation with Patricia and Sarah the following issues came to light:

- Supermarkets Economic and Political Power: "Supermarkets have created a stronghold that prevents small shop from operating but there is an opportunity to reintroduce shops back into the city, they still work in Spain France and Italy and they play a vital role in the health of the community. It's really important to have a place where you can

interact with your neighbors. We don't need to be isolated. Small shop and markets can enable that." (Michelson/Crook, 2006)

- 'Nazi Regimes' Legislation and Beauracracy: "Government, local government and the EHO (Environmental Health Officers) Nazis all seem to be trying to push people out of business rather than helping, unless you have the financial clout and influence and fit the industrial formula." (Bilney/Crook, 2006)

- The Cost of Responsible Packaging: "We have found it difficult to create eco-friendly packaging solutions and we are trying to involve a group of retailers with London Remade and Green Pack so that together we can develop something that works for all of us. It's a problem of being a small business ethical innovation can be prohibitively expensive." (Bilney/Crook, 2006)

- Lack of Support from Slow Food: "I went to the Terre Madre[155] and found that Slow Food is repeating itself Alice Walters was telling the same story about starting her restaurant in the sixties and it all seemed to be like a superficial private club. They are talking to each other rather than trying to share their knowledge with the people who are controlling front lone buying." (Bilney/Crook, 2006)

- Stealing Suppliers: While Patricia and Sarah encourage their corporate competitors to visit and sample the quality threshold that they represent in the hope that it will influence the adoption of better practice (Patricia believes that this is the case with Marks & Spencers) they object to unthinking appropriation. "There are a range of issues that corporate could use their power to influence for the better, including encouragement to consumer's to make your own and setting an example by keeping it simple. Making something to eat doesn't have to be time consuming, its what I say in my book: while the pizza guy zooms around trying to meet his twenty minute time slot I have taken some fresh brochette toasted it with cheese, added a simple salad and in eight minutes I have something delicious and nutritious. I did this dinner for the M&S food development unit and I explained to them that the secret is to keep it simple, quality matters more than variety. Supermarkets try and cram too many ingredients in so that they all cancel each other out and destroy the potential of developing a taste for the integrity of good ingredients, its like the sandwich from Selfridges that has twelve different things in it, horrible!" (Michelson/Crook, 2006) While they are pleased that due to their influence as Sarah explains, this adoption attempts to transform a craft into an industrial process and can result in suppliers no longer being interesting in supplying SME customers We have lost some of our suppliers because they get offered what they think is better deal from the supermarkets but then they find that they have to invest £30,000 in packaging technology and suddenly they no longer have an artisan product.

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155 Terra Madre is an annual get together for the Slow Food Movement, held in Italy, in which a broad cross section of members (currently about membership of SF is 80, 000) from over the world gather together to discuss and present their ideas, skills, produce and concerns. Sarah's main criticism was the notable absence of the leading corporate agri-industry, food processing and food retailing giants, who she sees as the main target for SF's knowledge and potential to influence.

Big business and artisan do not go together, you cannot mass produce artisan." (Bilney/Crook, 2006)

- Stealing the Image: A typical visit from corporate business and their consultants will involves looking for aesthetic detail to copy, this annoys Patricia in particular. I say to them, "you can borrow the look but you haven't got me!"

Despite its passion, multi-sensory awareness, and the success of its style aesthetic with shoppers and style junkies there are clear opportunities for translating L F's knowledge and ability to connect real food to real consumers by drawing out and accentuating their multi-sensory knowledge without the intrusion of conventional styling. Unlike WFM's superficiality LF offers reassurance that a multi-sensory strategy would enable food and design to collaborate for the enhancement of health, biodiversity and the biosphere.

Chapter Fourteen: Conclusions

Introduction

The arguments and aspirations that I laid out in the introductory chapter have been developed in more detail in subsequent chapters. These chapters clarify and compare a broad cultural syndrome of visual hegemony with the suppression, or marginalization of the non-visual senses in the corporate food chain.

I have demonstrated the evolution of a complex commitment to instrumental rationality and evidenced why this commitment could inhibit sensory design and business innovation. More optimistically I demonstrate potential for a multi-sensory strategy for design in the form of needs and opportunities.

The evidence I have gathered and interpreted in the preceding chapters confirms that the priorities of food production and consumption are informed by long standing cultural assumptions about value, meaning and method that have their origins in Classical Greece.[156] I have shown how this legacy continues to dominate supply and demand of food in the UK. I demonstrate how the design of mainstream food retail provision is currently loaded with an overt commitment to visual hegemony (packaging) and the instrumental rationality of the grid (aisles of shelf racking).

Subsequent chapters reveal possibilities for reforms that could enhance the ways that food is produced, processed, marketed and consumed. The case study of Whole Foods Markets confirms that it is possible to combine mainstream capitalism with higher standards of food provision by encouraging consumers to consider some issues of provenance. But this case study also reveals substantial opportunity for multi-sensory design led innovation. I argue that the need to re-sense the food chain is urgently needed and propose that the supermarket could become an influential location for sensory innovation.

The decision to focus my case studies on food retailing was informed by my belief that retailing provides a site where the interaction between the work of designers, the marketing strategies of the corporate food business and consumers is more pivotal. I argue that food that has been artificially manipulated at the production stage, chemically adulterated at the processing stage and refrigerated offers little opportunity for sensory choreography. I evidence

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156 Utilizing a broad range of critiques of capitalist and industrialization theory and practice I have demonstrated the degree to which different political positions have reached broad consensus about the negative characteristics of industrialization. They conclude that:

- Industrialization separated people from multi-sensory contact with natural sources of food and experience by creating and promoting more efficient and profitable synthetic substitutions
- Industrialization and the corporate structures that it inspired replaced the tyranny of nature with the order and control of instrumental rationality (See Glossary)
- Instrumental rationality informed the marginalization of multi-sensory and intangible experience by identifying and challenging its potential for distraction form the primary goal of efficiency
- The marginalization of intangible value informed a syndrome of disenchantment (See Glossary)
- Capitalist businesses prioritization of efficiency led to a deterioration of production and consumption ethics
- Corporate strategies for maximizing yield and profit have led to widespread environmental and social damage ranging from pollution to the breaking down of traditional communities and cultures
- Corporate strategies for maximizing yield and profit have informed the deterioration of food quality and the conditions and values of production and consumption, including some desensitization of human taste
- Design has been predominantly utilized as a tool of instrumental rationality and has contributed to the syndrome of disenchantment by creating solutions to the capitalist imperative to control the relationship between supply and demand by creating and managing desire
- Design has worked to marginalize multi-sensory opportunity through its overwhelming prioritization of visually led skill and value

how freeing food from the façade of packaging would enable agendas like 'localism', wellbeing and variety to become more obvious and accessible. I identify a strategy of sensory choreography as a key opportunity for design to make a significant contribution to contemporary ethical concerns. I argue that ethical design strategies could enhance consumers understanding of the value chain that food represents in the retail environment. Higher prices could become a measure of tangible values rather than a marketing led strategy of visual seduction.

I develop arguments that demonstrate that investment in sensorial led innovation would enables everybody involved in the food chain to re-establish connections between embodied practise and health and ethics. I offer evidence that confirms that reform would not have to adversely affect the mission of capital accumulation, although it may question and affect the conventions of achieving this.

I acknowledge that sensing the supermarket would encounter significant resistance and would require widespread investment in different ways of thinking and doing. I confirm that stripping away the conventions that supermarkets rely on to deliver profit would need to be informed with clear evidence of design's ability to deliver an alternative that works.

I conclude that there is a potential for design to facilitate a re-enchantment of the food industry in Britain by sensing the supermarket. The La Fromagerie case study demonstrates how this potential could open up new ways of thinking about and practising design. I conclude that food knowledge and design knowledge have an opportunity to combine forces. I argue that collaboration would help to overcome design's relative lack of multi-sensory experience and food knowledge.

I demonstrate that La Fromagerie's design approach is closer to multi-sensory choreography than the static, visually led conventions of design. Many of the core skills that design shares with other creative disciplines including composition, drama, narrative, discourse, catharsis, colour, harmony, resonance, discord and others become crucial to the tasks of an ongoing and highly organic opportunity to enable food to 'speak' for itself. I propose that aspects of La Fromagerie's design and business strategy could be incorporated into larger scale retail practise in ways that enhance customer experience and awareness while opening up new competitive business opportunity

Allowing food to 'speak' for itself through a process of multi-sensory choreography represents a very different potential for creating 'cupidity' than the one that Frank Baum unashamedly recommended to his readers in the late 19th and early 20th century as process of disguising rather than revealing the true qualities. (Leach 1994)

A SUMMARY OF MY CONCLUSIONS

- I demonstrate how mainstream food business strategy has incorporated and reinforced a broad historical and contextual commitment to instrumental rationality.

- I reveal how mainstream food business has engaged in multi-sensory marginalization in order to achieve greater profit led efficiencies

- I confirm how visually led design practise has become the primary source of connecting the dominant methods and values of the food chain to the consumer.

- I argue visually led design practise promotes efficiency over issues of provenance and impact

- I have provided compelling evidence that there are links between multi-sensory opportunity and wellbeing

- I have demonstrated that despite the attempts of Whole Food Markets to reconcile the relationship between corporate business practice and ethics there is a substantial opportunity for multi-sensory design innovation in the retail food sector

- I propose that human and environmental wellbeing could be enhanced by the introduction of non-visual aesthetics into the palate of possibilities that designers use to construct meaning and facilitate satisfaction

- I argue that enchantment depends on the ability of individuals and communities to form deeper links with the experience of production and consumption

- I have confirmed that designers have the ability to re-embody their practise in ways that would facilitate the reconciliation of business profit with benign contributions to the biosphere

- I have shown how design can support the principles of localism and multi-sensory reflective engagement that inform the 'Slow Movement's' agenda

- I have highlighted the role that designers can play in rethinking their own and others relationship with industrialization by moving beyond the mechanistic priorities of the grid

- I have provided evidence that confirms that the re-embodiment and re-enchantment of food retailing could encourage greater awareness of the relationship between provenance, responsibility and value

A SUMMARY OF GENERAL OPPORTUNITIES

- I have demonstrated that while not all of the 'Slow Movement's' priorities may be directly transferable to food cultures in the Northern hemisphere they exemplify the possibility of mounting successful challenges to the mechanistic priorities of industrialization.

- I have demonstrated through my case study of La Fromagerie that multi-sensory communication can connect consumers to the provenance and values of food enabling them to engage with slow food principles

- I have shown how a rapidly growing number of consumers are benefiting their own and others health and wellbeing by adopting ethical food values

- I have revealed that the spread of these lifestyle trends are encouraging mainstream practice to address these needs.

- I have shown how ideas that have informed Romantic theory and practice are now increasingly taking centre stage in the re-alignment of business and political strategy in ways that foreground the significance of intangible aesthetic experience

- I have shown that intangibles like 'pleasure' (Jordan, 2002) and 'happiness' (Csikszentmihalyi, 1997) are not only necessary for wellbeing but also represent business opportunity through the experience economy

- I have evidenced how this awareness has already helped to redefine consumer and business agendas (Pine, 1997)

A SUMMARY OF THE HURDLES THAT THE DESIGN INDUSTRY WOULD HAVE TO OVERCOME TO RE-EMBODY ITS PRACTISE AND GAIN BUSINESS AND CONSUMER SUPPORT

- Design would need to rethink its reinforcement relationship with the visual hegemony that dominates supply and demand and reinforces a disembodied relationship with the food chain

- Designers typically lack sensory knowledge and skills that would enable them to immediately develop expertise in multi-sensory communication

- Design would need to convince a range of gatekeepers who would attempt to resist the displacement, or extension of the traditional conventions of visually led communication

- Many of the case studies used by marketing to promote sensory and experiential marketing are very superficial, and frequently dependent of chemically manufactured aroma. There is also notable lack of quantitative statistical evidence that confirms a tangible contribution to profit and brand impression

- Many of the case studies used by marketing to promote sensory and experiential marketing operate on a small scale, or deal with simplistic broadcast strategies for aroma distribution.

- There is no reliable evidence of sensory strategy that works for the big shed efficiency driven format of the typical supermarket

- Design would need to demonstrate evidence that multi-sensory strategy works to deliver profit and other needs that business depends upon

- Design would need to confirm that the temporal displacements involved in allowing time and space for multi-sensory engagement and reflection would deliver other benefits that compensated for potential loss of revenue

- Design would need to gain support from design education, its professional bodies and the design media

- Design would need to learn to work with other professions that already possess multi-sensory knowledge

- Design would need to rethink its business models in order to begin to invest more of its income in R&D

A SUMMARY OF OPPORTUNITES FOR DESIGNERS TO RECONCILE BUSINESS WITH ETHICS

- Design is a business that ultimately depends on demonstrating ability for successful creative innovation. Developing multi-sensory practise provides a significant entrepreneurial opportunity

- Design has a significant and distinctive capacity to translate theory into tangible evidence. It does this by its ability to create and give dimension to conceptual thinking through prototype iterations. This capability separates it from its clients and other disciplines like marketing that influence its work

- Design shares with it supermarket clients a common need to commit to a business strategy based on perpetual innovation

- Design shares with its supermarket clients the need to develop new and workable answers to the issues of health, sustainability, environmental damage, the breakdown of communities and other major global concerns while still producing profit

- Design and its supermarket clients have demonstrated a concern to explore strategies that fall outside of the narrow confines of the grid system that has dominated supermarket management and the aesthetics of display

- Design and its supermarket clients have begun to reference the language of the Experience Economy (Pine, 1997) and Experiential (Schmitt, 1997) and Sensory Marketing (Lindstrom, 2005)

- I believe that designs existing capabilities could be re-embodied through collaboration with food experts and that this would make for a new and potent consultancy opportunity

- My research has confirmed that contemporary design practise could do more to exploit the PR and networking strategies that other businesses use to achieve their priorities.[157] [158]

- Design has an opportunity to connect theory and practise in ways that avoid marketing claiming much of the credit for new thinking

- Design has an opportunity to restructure its business model to allow investment in R&D outside of specific client led work. This restructuring could lead to the development of multi-sensory prototypes that go further, faster than client led initiatives

- Design has an opportunity to promote its potential through a pre-existing network of galleries and museums that it does not affectively exploit for the promotion of new practise paradigms

- Design/Business journalists are typically hungry for new stories but designers need to understand the difference between a design audience and a business audience

- New models of design practise and business could support the development of entrepreneurial strategies that combined design with retail in ways that short-circuited corporate gatekeepers and encouraged a culture of competitive recuperation

- Design education has a major competitive opportunity to embrace and promote research into multi-sensory design practise and theory

- Professional bodies like the Design Council and the CSD have a major opportunity to redefine design to embrace and encourage multi-sensory practise while at the same time evidencing their own relevance

DESIGN AS A DIALECTICAL PROPOSITION

While I have evidenced a healthy degree of synchronicity between the goals that design shares with its corporate clients I argue that it is the differences between design professionals and supermarket professionals that offer the greatest possibility for multi-sensory innovation. I conclude that design's potential to provide an antithesis to the thesis of rational instrumentalism could enable it to deliver an effective synthesis of the different motivations that inform the priorities of the conventional supermarket.

Despite growing awareness of their need to break free of the grid supermarket managers are conditioned to use and rely on scientific method. This makes it very difficult for them to

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157 An example of this is provided by the connection between Patricia Michelson and Jamie Oliver. Patricia was a key advocate of Jamie's potential at the time when he was an employed chef and provided him with an important source of knowledge and passion for better food values. The fact that he has subsequently advocated more responsible food practices by exploiting his celebrity status and media access has helped to promote Patricia's business strategy as a benchmark of good practice.

158 While successful design businesses have used self promotion effectively there is clearly a gap between the way that the marketing industry uses self branding and other PR techniques and those that are employed by designers to affect a culture of influence

embrace unprecedented innovation. Design by comparison (despite its ability to evolve grid aesthetics) is riddled with a subjective passion for moving beyond the known.

Obedience to the rational urge restricts the ability of design to meet their client's needs for new thinking. It also inhibits the development of new ways of presenting supermarkets to new (or existing) demands from consumers and competitors.

Typically successful design solutions emerge out of the reconciliation of the objectivity and subjectivity (following much the same process that allows productive negotiation between the instinctual and the rational mind) (Whybrow, 2005).

I argue that design's ability to move beyond the predictable enables it to provide the rational manager with a confirmation of what lies beyond what they know already.

A SHORT SUMMARY OF WHAT DESIGNERS COULD DO IMMEDIATELY

The multi-sensory strategies that designers could develop to evolve greater awareness of alternative food values could well be learnt through collaborations with food experts. So the recommendations below are mainly derived from the La Fromagerie case study:

- The use of informed staff who can connect consumers to provenance and preparation knowledge as a designed component of the multi-sensory solution to store layout and point of sale design

- The utilization of aesthetic strategies that are closer to choreography than they are to the static grid orientation of conventional design practise

- The creation of reflective zones that encourage consumer connections by utilizing different evaluation criteria such as aroma, feel, taste, sound and appearance. These could facilitate consumer understanding. of values that lie beyond the conditioned price/visually led agendas of decision making.

- Utilizing particular food expertise and specialist knowledge as a focal point (or hub) of the design strategy (building on the exemplar of La Fromagerie's Cheese Room)

- Redefining value by promoting a less is more layout strategy for food display

- Using fresh and unique products as the core of each zone and ensuring that these communicate different sensory priorities. For example some might be chosen for texture, others for aroma, some would be prepared to encourage consumers to taste. Others could have acoustic qualities that were engaged when consumers sampled them (e.g. crunchier carrots)

- The development of multi-sensory choreography strategies that are informed by seasonality, or issues like localism of species sustainability

- Developing ways of facilitating viral (word of mouth) marketing rather than depending on above line investment

In order to evidence the potential of these conclusions I have developed an alternative to the 5 P's I call the 5 C's. The comparison below indicates opportunity for stressing attributes that involve temporal departures from the implicit efficiencies of the 5 P's. By highlighting possibilities like movement and engagement that require more time to prepare and consume design could acknowledge a different set of priorities and relationships from the ones that currently lead marketing.

THE 5 P'S	**THE FIVE C'S**
PEOPLE	CONVERSATIONS
PRODUCT	CHOREOGRAPHY
PLACE	CONSERVATION
PRICE	COST
PROMOTION	CONNECTIONS

(NOTE THE 5 C'S ARE PROPOSED TO MAKE A POINT OF COMPARRISON RATHER THAN TO REPRESENT A DEFINITIVE ALTERNATIVE)

This exemplar evidences how a combination of food and design expertise could refocus designer's sensibilities enabling them to define and articulate their strategy with the same economy that marketing utilizes.

I conclude by proposing that collaborations between design and food knowledge and skill would enable design to meet the task of re-embodiment and re-enchantment of the food chain. I believe that food sensibility would support design's need to re-embody its practise. I conclude that the subsequent re-enchantment of food experience would expose the need for and enhance the possibilities of developing ethical practise.

Appendix A: Selective but Indicative Examples of the Evolutionary Steps that Link Aristotle to the Present are Enumerated Below

- Aristotle's (384-322 B C) reflections on the senses, cognition and metaphysics relate to a wider contemporary enquiry and draw on the history of Greek philosophy
- Aristotle utilizes deductive logic, geometric calculation and empirical scientific method in order to verify and establish his theories and thus helps to establish a belief in, and the use of scientific method as a means of providing proof of experience and hypothesis.
- Aristotle's research, and the theories that it leads to, propose that experience is different from understanding and this proves to be influential in giving primacy to a belief that the senses are merely conduits for data while sense is a product of a developed intellect.
- Aristotle classifies the human senses and establishes a tradition of classification that centres on the 'five senses': taste, touch, smell, hearing and vision.
- By isolating the five senses Aristotle encourages a way of thinking about them as discrete potentials and this discourages consideration of their synergy and gestalt potential.
- While Aristotle's conclusions about the status of the senses are confusing he helps to establish a belief that smell, taste and touch are the lower order senses and have very little impact on logic and rational intellectual decision-making.
- The legacy of Aristotle's wisdom has been passed down through the centuries in written/printed, audio-visual form in order to which has helped to establish the authority and permanence of the visual
- The influence of the Ancient Greeks was substantially informed by the adoption and survival of engineering, architectural and artistic solutions that were used as a benchmark of mathematical perfection
- Aristotle suggested and helped to inform an implicit and explicit acceptance that truth is disembodied, that is it is a decision that is made separately from the distractions and distortions of sensory experience
- Aristotle's views and methods dominated the early Renaissance because they came back into favour among scholastic philosophers (e.g., Aquinas, 1225-1274) who were concerned to use rational method to establish the existence and the logic of God and his doctrine
- The rediscovery of Classical wisdom, method and aesthetics[159] leads a to a number of influential breakthroughs in scientific knowledge, and philosophical proposals, about the nature and meaning of reality that inform the development of a more human centred view of the universe. Key examples include the theories of Copernicus (1473-1543), Galileo (1564-1642), Descartes (1596-1650)
- The period of scientific, philosophical, and economic endeavour known as the 'Age of the Enlightenment' (17th and 18th century Europe) utilizes classical theory and method as means, or starting point of reframing contemporary ideas about reality and the purpose and nature of human potential. The most significant outcome of this period was

159 See reference to Pollitt (1972) below.

the creation of a belief that humans are capable of determining their own destiny by the judicious application of scientific method

- Applied science and the theories and evidence of progress that it created became a touchstone of the potential of rational method for progress (e.g. Bacon (1561-1626) and dangers (e.g. Rousseau (1712-1778) of the human-centric universe
- Despite the reservations of Rousseau, Marx, and other critics of the instrumental application of science to all spheres of life, scientific method became the main source of achieving, and evaluating, progress in the Western world
- Economic and scientific progress became synonymous with an emerging ideology of progress that was built on the strategies and evidence of capitalist endeavour
- Industrialization of production and consumption helped to encourage a widespread acceptance that the management, and replacement of, natural experience with synthetic objects, environments, interfaces and experiences was a necessary and beneficial syndrome of modernity
- Industry embedded rational method in its means of production (technology,) and the metaphors of progress that it fostered (machine age)
- Science and industry provided means of creating and disseminating information that gave primacy to visual culture (e.g. the internet)
- Capitalism's need for skilled and semi-skilled workers helped to promote the creation and expansion of primary, secondary and higher education strategies that were substantially informed by classical theory and precedents that favoured the rigour of scientific method over sensory engagement as a route to useful knowledge
- Design predominantly evolved as a business-to-business service industry and exploited and promoted the dominant cultural obsession with efficiency by providing symbols, aesthetics products and services that reinforced and facilitated the development of the cultural characteristics associated with modernity
- Design and the businesses that it serves, continue to be dominated by classical ideas and precedents which reflect Aristotle's legacy by favouring the audio-visual senses and reinforcing a culture in which multi-modal sensory engagement is denied, disembodied, marginalized and disregarded
- Classical heritage has encouraged the tendency for management to depend upon on rational calculation as a source and measure of strategy and this has helped to disenchant experience.

(Latour 2006, Howes 2005, Buller 2005, Webber 2005, Aunger 2004, Magee 2003, Ritzer 2002, Stroud 2002, Korsmeyer 2002, Lakoff & Johnson 2003, McMahon 2001, Bain 2000, Tarnas 2000, Lakoff, 1999, Geisler 1999, Taussig 1992, Aune 1991, Strawson 1990, Rorty 1981, Berlin, Breedlove, & Raven 1974, Austin 1962)

Appendix B: A Brief History of Progressive Learning

The following section is intended to review some of the ideas and achievements of progressive education over the past two hundred years in order to demonstrate the legacy of multi-modal sensory understanding that has evolved in parallel to the mainstream emphasise on learning by wrote and scientific calculation efficiency.

- Germany: In the nineteenth century Germany provided a seedbed of a number of progressive ideas, for example Humboldt's theories were a reaction, "against formal schooling in the nineteenth century and to promote progressive humanism." "All education originates from the inner soul of man, all external arrangements or events can only initiate but not cause education" quote for the 'Sphere and Duties of Government': 87 (Quoted: (Palmer J A, 2001: 82)[160] Froebel, who was strongly influenced by the philosophers of his time, particularly Hegel, Scheeling, Fitcfhe and Schiller continued this trend of alternative theory. Humboldt's theories were a reaction, "against formal schooling in the nineteenth century and to promote progressive humanism." "All education originates from the inner soul of man, all external arrangements or events can only initiate but not cause education" quote for the 'Sphere and Duties of Government': 87 (Quoted: (Palmer J A, 2001: 82)

- Psychoanalytic Theory: The development of psychoanalytical theory played a major role in twentieth century educational theory by liberating, at least temporarily, psychology from the role of mind control to one that was more involved with releasing potential. The context of the massive upheaval caused by the First World War helped to forge a broad consensus among many educational theorists about "the need for a new social order" Palmer describes how "the 'new education' movement had come together in 1920 as The New Education Fellowship." (Palmer, 2001: 6)[161]

- John Dewey (1859 - 1952) had a major influence on education in general and creative education in particular. Noddings quotes Dewey critique of scientific method: "It exaggerates beyond reason the possibilities of consciously formulated and used methods, and underestimates the role of vital, unconscious attitudes...It takes, in brief, everything educational into account save its essence, - vital energy seeking opportunity for effective exercise." (Noddings, 1995: 21)Dewey reinforced his belief in sensory potential by comparing informal learning with the rational tradition to demonstrate the limitations of the latter: "We often see person who have had little schooling and in whose case the absence of schooling proves to be a positive asset. They have at least retained their native common sense and power of judgement, and its exercise in the actual conditions of living has given them the precious gift of ability to learn from experience." (Dewey, 1997: 48)

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160 These concepts were introduced to Britain by John Stuart Mill was an advocator of Humboldt's ideas in Britain

161 The NEF published a magazine 'New Era' until the 1940's promoting the concept of freedom of inquiry as the basis for children's learning.

- Rudolf Steiner (1861 – 1925) was a polymath who was schooled in traditional scientific method that he reacted against He shared with Dewey and Montessori and others, particularly in the creative sector, a concern about the increasing orthodoxy and dominance of rational belief. Like them he shared a belief in making education fit the individual rather than the other way round. Steiner's approach was informed by his own practical knowledge and clearly show the influence of contemporary philosophic and creative theory and practice: "Steiner went further than the search for living forms characteristic of the Jugendstil, He was able to unite supersensible perception of occult script with the experience of organic life in sense perceptible form." (Barnes, 1997: 273) In many respects Steiner anticipates evolving scientific interest in the extra sensory component of experience identified by Polanyi: "The two somewhat disparate formations of discovery achieved up this point, namely (1) spontaneous organizations of mind and clues to the realization of potential discovery and (2) extra-sensory perception of reality called into consciousness by the aid of relevant clues – would become identical if one were to assume that the ordinary perception of Gestalt includes a process of extra sensory perception." (Polanyi, 2000: 38) Steiner like Dewey balanced support for scientific method[162] with concern about dogma and one-dimensional enquiry: "The materialistic science of today (1916) is just beginning to bring its thoughts about the senses into some kind of order of life, of movement and of balance from one another, and they have begun to treat the senses of warmth and touch separately. The other senses about which we have been speaking are not recognized by our externally-orientated, material science...today's material science is afflicted with stupidity..." (Steiner, 1990: 86) [163]

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162 According to Koetzsch: "Steiner believed the human being develops these functions from birth in a predictable universal pattern. During the first seven years of life, children are largely beings of will and movement. They are completely open to their immediate environment and constantly in motion as they explore the world through their own senses and experiment with their own body as an object in the world. Preschool children are imitators, who materialise and then manifest as their own, the speech, movements, and even moods of those around them. With the loss of baby teeth at the age of six or seven, children enter the next stage of life. Between the ages of seven and fourteen, they are naturally beings of feeling, aesthetic sensitivity, imagination and artistic creativity. During these years children will develop and learn at their best if they engage their aesthetic and effective capabilities." With puberty children enter yet another distinct stage. New faculties emerge. In the next seven years the thinking function develops and dominates. The adolescent becomes able to think abstractly, analyses, conceptualize, and be highly critical. At this stage of development, too education must appeal to and nurture the special capacities that are emerging and developing." (Koetzsch, 1997:217)

163 Steiner proposed that there were twelve senses and that they corresponded with:

The Seven Process of the Human Body:

Outer	Breathing - Every living organism has this process
Outer	Warming - This occurs along with breathing, sustained by it
Outer	Nourishing - This provides the energy to sustain the processes below.
Inner	Secreting - Absorption of nourishment and elimination of waste
Inner	Maintaining - Whatever is Secreted must remain connected with the life processes and this process ensures that happens
Inner	Growing - Every living thing has a process of inner growth: the ability of one part to produce other parts as it increases in size
Inner	Reproducing - This process produces an entire individual including the reproductive process to continue the life form He defined 'The Twelve Senses of the Human Being'
Within	Touch - the internal response to a contact with the outside world
Within	Life - this sense is the internal feeling of well-being, of being alive
Within	Movement - being inwardly aware of the way body parts move in relationship to each other
Within	Balance - this sense orients us to the world with respect to up, down, right, and left
Outside	Smell - the sense that allows one to come in contact with the outside world via odours carried by the air

- "Montessori (1870 - 1952) viewed education as a necessity in the formation of the human personality...she "wanted to help children...to love learning"...Among the ideas that set Montessori schools apart from other schools of her time were the practices of heterogeneous grouping by age, self-selected and self paced materials, auto-education (self correcting materials), materials that progress in difficulty from simple to more complex, materials that progress from the concrete to the abstract, graduating sequence and isolation of sensory attributes in the materials, giving extraneous cues to facilitate fine discriminations, repetition and practice, and an adaptation of the "contiguity principle" (the close association of a stimulus and a response)." (Lascarides, 2000: 154) Montessori had respect for science but advocated the need to balance rigour with imagination: "It is plain that the scientific vision of the truth has not been reached solely by the help of the microscope, but because man's mind is creative...It is by imagination, or, thanks to an intelligence which can "see behind the things of senses" that man can make conjectures on what is happening." (Montessori, 1995: 37) She identified: "The individual is by no means mechanically enslaved to its senses...the senses exist and render service to their master, and it is he who acts under guidance. The child is specially favoured. His senses, which also have a guide, are not limited like those of the animals...he does not absorb only by means of the mechanical camera of the eye, but a kind of psychochemical reaction is produced in him, so that impressions become a part of his personality...the child's impressions are so profound (that) the mind ends by resembling the environment itself. Children become the things they love." (Montessori, 1995: 101)

- Summerhill The stereotype of progressive education was reinforced when its ideas were appropriated into the wider revolt against authoritarianism in the 1960s. There are certainly more varieties of alternative education than the formal versions that they present a counterpoint to. Much of the criticism they have attracted is informed by the reputation of Summerhill, which took an extreme approach by banning discipline and constructing learning according to the child's interests. As Neill, the founder of Summerhill developed a strategy in which their was no discipline and ample opportunity for developing, "an inner feeling of well-being, a senses of balance, (and) a feeling of being contented with life." (Palmer, 2001: 2) Palmer records Neill's belief that, "conventional education makes the mistake of exalting the intellect over the emotions with the result that the children may know a lot of facts but lack inner contentment and fulfillment." (Palmer, 2001: 2)

Outside	Taste - a deeper connection with the outside world in which flavors are directly sampled
Outside	Sight - the sense that takes in the exterior images of the outside world
Outside	Warmth - with this sense we are aware directly of the warmth of another body
Outside	Hearing - this sense can tell us more about the inner structure of an object than sight. When an object resonates, we learn about its deep structure from the sound we hear.
Outside	Speech - the sense of speech or word or tone - which is the hearing that involves meaningful words
Outside	Thought - this refers to the deeper sense of entering the being speaking through their words
Outside	Ego - this is the sense of ego or I which enables us to turn our thinking towards the being of another and to behold their I, their unique individuality directly.

Contemporary Theory

This section will briefly review a selective sample of theories that have had some influence on Western education, particularly in the past three decades. Main emphasis is given to the ideas of Piaget, Gardener, Kolb and Schon. While education has continued to be dominated by a prevailing orthodoxy that is informed by very specific theories about age and ability.[164] The ideas outlined below hint at what an alternative system might be capable of achieving:

- Jean Piaget, the Swiss psychologist has proved to be a major influence on educational theory of the late twentieth century. While Piaget may be responsible for unleashing learning he is has also reinforced the tendency to regard learning as something that happen during specific stages of cognitive development that are linked to age. His theory of cognitive development provides a useful illustration of the advantages and disadvantages of stage theory in relation to cognitive development.[165] Flavel argues that "formal thought for Piaget is not so much about this or that specific behaviour as it is a generalized orientation, sometimes explicit, sometimes implicit, towards problem solving: an orientation towards organizing data (combinational analysis), towards isolation and control of variables, towards the hypothetical, and towards logical justification and proof": (Flavell, 1963: 211) Kolb creates a matrix to describe the relationship between the different phases of Piaget's theory of development that reveals the modes of engagement that they involve, or could involve. While the primary purpose of this diagram is to represent the stages of development it offers another interpretation potential through its representation of the juxtaposition of experience and ability. Reading the diagram as a depiction of the potential for a sensory gestalt demonstrates how our perceptions and beliefs are often limited by our ability to transcend the grids that appear to contain us because we have been conditioned to believe that there is only one order of events.

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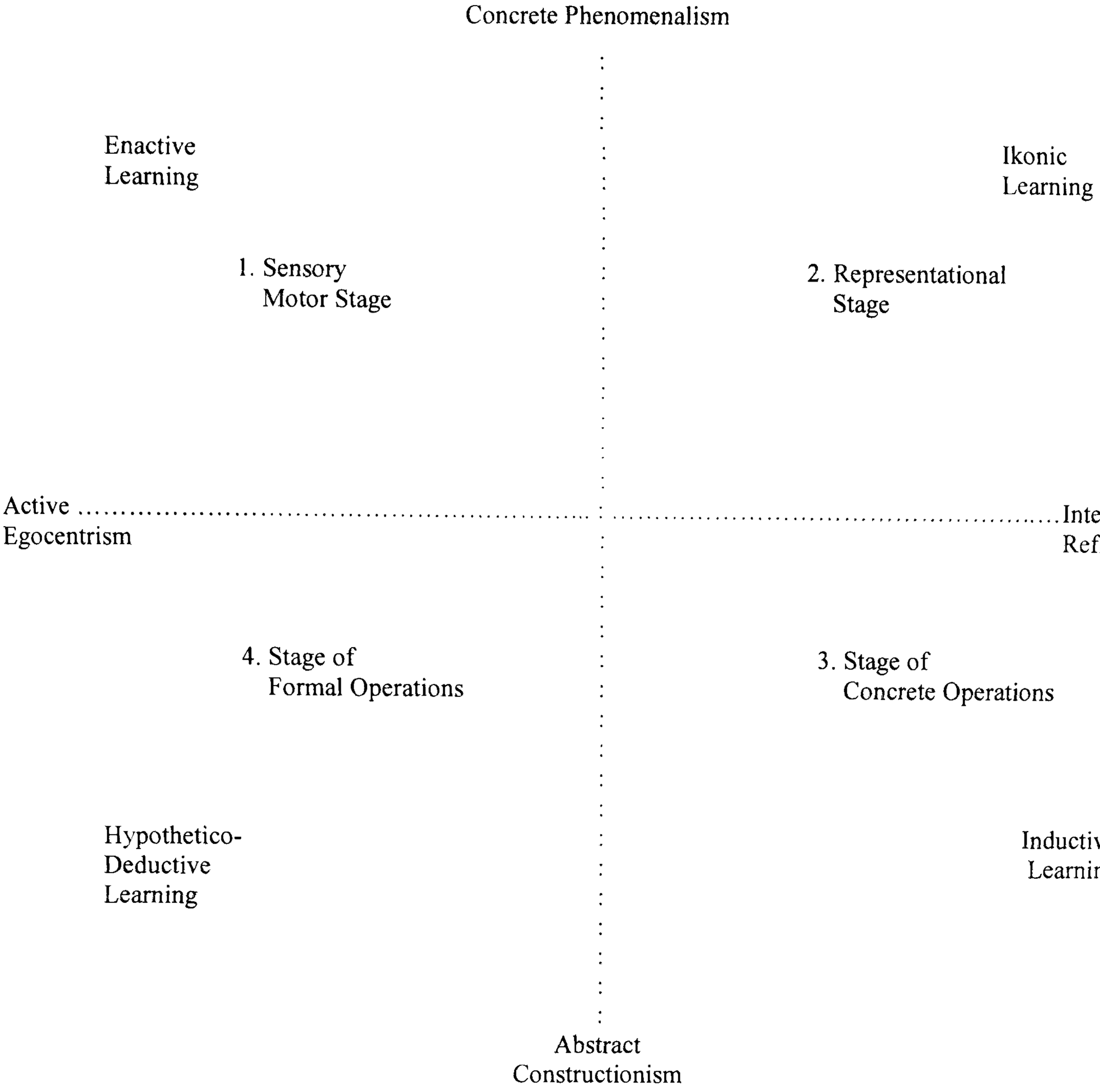
164 For example Palmer seems to lament the fact that the Summerhill managed to overturn, in Court, the recommendations of an OFSTED (Office for Standards in Education) visit of 1999 on the grounds that it needed to "keep its basic principle intact." (Palmer, 2001: 4) (According to her book jacket: Palmer is professor of education and Pro Vice Chancellor of the University of Durham, She is Vice-President of the National Association for Environment al Education and a member of the IUCN Commission on Education and Communication.) Why does educational relevance have to be always of an immediate and practical nature. These are the sorts of questions that begin to bother one when reading Neil's work and for all his conviction and sincerity, they suggest a major dimension of education that he fails to acknowledge." (Palmer, 2001: 4)

165 According to Flavell Piaget's 4 stages of cognitive development are as follows:

1) Sensori-motor period (from birth until age 2)--Behavior is organized around its sensory or motor effects--Culminates in attaining the concept of object permanence.--Object permanence: understanding that objects have a continued existence when they disappear from view.
2) Pre-operational stage (from 2-6)--Characterized by egocentric thought.--Children cannot adopt alternative viewpoints; they cannot think from another person's perspective.
3) Concrete operational stage (6-12)--Children are able to adopt alternative viewpoints.--Conservation task: pour water from short, wide glass into tall, thin one--Concrete operational child understands the amount of water stays the same.
4) Formal operational stage (12 and up)--Child is not limited to concrete thinking.--Child can reason abstractly and logically.



Piaget's Model of Learning and Cognitive Development (Kolb, 1983: 25)

- Howard Gardener: Despite his "conservative (belief), that we should not turn our backs on those methods and procedures that have been worked out over long periods of time" (e.g. "decoding alphabetic text"). (Gardener, 2004: 18) Gardener challenges mainstream educational theory and practice mainly in terms of its failure to address what he call 'multiple intelligences'[166] He has made an argument that humans have

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166 In short summary Gardener's intelligences are:

- Linguistic intelligence: This relates to the ability to learn and use languages in a goal orientated way. A poets and lawyers offer role models.
- Logical-mathematical intelligence: This relates to the ability to analyze problems logically, which, for Gardener include the ability to read patterns, reason deductively and think logically. Mathematical skill and scientific method figure highly.
- Musical intelligence: This is similar to linguistic intelligence and relates to the ability to recognize and utilize musical pitches, tones, and rhythms and other characteristics of performance and composition. Gardener promotes the haptic skill of playing and feeling the instrument and the rhythm as part of the intelligence.
- Bodily-kinaesthetic intelligence: This relates to the ability to use the body or bodily skill to problem solve. Gardener argues that coordination and physical control ability is analogous with other forms of mental skill.
- Spatial intelligence: This relates to the ability to recognize and plan spatial relationships.

different kinds of intelligences that are not supported by the dominant educational solutions: "In the heyday of the psychometric and behaviourist eras, it was generally believed that intelligence was a single entity that was inherited; and that human beings - initially a blank slate - could be trained to learn anything, provided that it was presented in an appropriate way. Nowadays an increasing number of researchers believe precisely the opposite; that there exists a multitude of intelligences, quite independent of each other; that each intelligence has its own strengths and constraints; that the mind is far from unencumbered at birth; and that it is unexpectedly difficult to teach things that go against early 'naive' theories of that challenge the natural lines of force within an intelligence and its matching domains." (Gardner, 1993: xxiii)

Gardener claimed to offer, "a new definition of human nature, cognitively speaking." (Gardner, 1999: 44) He believes that most individuals possess and utilize effectively more than one of these intelligences. Initially he did not engage with the tendency for education to focus on single discipline through streaming and higher education qualifications that typically isolate a discipline. Recently (Gardener, 2004, 2005) he has begun to accept that "interdisciplinary education" may provide a solution to nurturing a portfolio of intelligences. Gardener has also begun to toy with the idea of extending the number of intelligences to include a naturalist intelligence, a spiritual intelligence and an existential intelligence: "Naturalist intelligence: This relates to the ability to recognize, interpret, and utilize aspects of the environment." He also considers "Spiritual intelligence" but draws back from acceptance: "It seems more responsible to carve out that area of spirituality closest 'in spirit' to the other intelligences and then, in the sympathetic manner applied to naturalist intelligence, ascertain how this candidate intelligence fares." (Gardner, 1999: 59) He toys with the idea of "Existential intelligence," which relates to the mental capacity to speculate on "ultimate issues." (Gardner, 1999: 64) And "Moral intelligence: a concern with those rules, behaviours and attitudes that govern the sanctity of life - in particular, the sanctity of human life and, in many cases, the sanctity of any other living creatures and the world they inhabit" (Gardner, 1999: 70). "I recognize that the ideal of what is valued will differ markedly, sometimes even radically, across human cultures...acute use of sensory systems is another obvious candidate for human intelligence" (Gardener, 1993: 61)

- Interpersonal intelligence: This relates to social interpretation and response that enables people to work effectively and meaningfully with others.
- Intrapersonal intelligence: This relates to self-knowledge and the ability to plan and control ones life.

Gardener evolved eight criteria for diagnosing and assessing these intelligences but recognized that assessment was impressionistic, rather than scientific:

- Potential isolation by brain damage
- The existence of idiots savants, prodigies and other exceptional individuals
- An identifiable core operation or set of operations
- A distinctive development history, along with a definable set of 'end-state' performances
- An evolutionary history and evolutionary plausibility
- Support from experimental psychological tasks
- Support from psychometric findings
- Susceptibility to encoding in a symbol system. (Gardner, 1983: 62-69)

Kolb

I have given more space to Kolb's theories because my research suggests that they offer a broader perspective on the relationship between the senses, land cultural learning and the potential for change. At roughly the same time that Gardener first published his theory Kolb offered an alternative way of thinking about intelligence and the need to nurture its different forms that appeared to be more aware of the sensory aspects of understanding and expressing. Kolb defines Learning as "the process whereby knowledge is created through the transformation of experience." (Kolb, 1983: 38)

Kolb drew on Stephen Pepper's (1942, 1966) "system for describing the various forms of social knowledge. This system is based on what Pepper calls hypotheses. World hypotheses correspond to metaphysical systems that define assumptions and rules for the development of refined knowledge from common sense. Pepper maintains that all knowledge systems are refinements of common sense based on different assumptions about the nature of knowledge and truth. In this process of refinement he sees a basic dilemma. Although common sense is always applicable as a means of explaining an experience it tends to be imprecise. Refined knowledge on the other hand is precise but limited in its application or generalizability because it is based on assumptions or world hypotheses. Thus common senses requires the criticism of common sense, suggesting that all social knowledge requires and attitude of partial scepticism in its interpretation." (Kolb, 1983: 38)

Kolb describes experiential learning as "a four-stage cycle involving four adaptive learning modes – concrete experience, reflective observation, abstract conceptualization, and active experimentation." (Kolb, 1983: 40) He defines the difference between sensory experience (apprehension) and the "concepts and the associated mode of knowing" (comprehension). In relation to apprehension he proposes: "What you see, hear, and feel around you are those sensations, colours, textures, and sounds that are so basic and reliable that we call then reality. The continuous feel of your chair as it firmly supports your body, the smooth texture of the book and its pages, the muted mixture of sounds surrounding you – all of these things and many others you know instantaneously without need for rational inquiry or analytical confirmation." He suggests that comprehension dilutes the power of apprehension: "The concept "chair" for example, probably describes where you are sitting...It is a convenient way to summarize a whole series of sensations you are having right now, although it tends to actively discourage attention to parts of that experience other than those associated with "chairness." The concept also ignores particular aspects of your chair that may be important to you, such as harness or squeakiness" He points out that "concepts and the associated mode of knowing called comprehension seem secondary and somewhat arbitrary ways of knowing...forever distorting that "flow."[167]

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167 But then Kolb retracts to defend the value of the dominant mode of understanding reality "that have made it primary in human society – namely that comprehensions of experience can be communicated and thereby transcend time and space." He continues with a seminal example of the dominant belief system: If "you get up from this chair, and leave the room, your apprehensions of that situation will vanish without trace (substituted by, of course, by new apprehensions of the hallway, or whatever new situations you are in) Your comprehensions of that situation, however will allow you to create for yourself and communicate to others a model of that situation that could last forever. Further to the extent that the model was accurately constructed from your apprehensions, it allows you to predict and recreate those apprehensions." (Kolb, 1983: 43) Kolb clearly see permanence as a n important potential and this locates him firmly in the classical tradition where the notion of leaving permanent monuments to the intellectual prowess was clearly a major motivation for the records, architectural monuments, art and other forms of communication that were made to last. Other cultures and food makers often resist this need and function perfectly well because they are able to rely on sensory memory. For example their fingers remember a particular combination, sensation, they use their senses of smell to confirm when something is ready and so on. These are skills that it is often difficult to record and communicate in the conventional tradition of writing, oral, image etc.

Kolb is clearly sensitive to the potential of multi-modal sensory experience but ultimately he does not grasp its discriminating power. For him like so many other theorists who are locked in to the tradition of mind-body division it is capable of confirmation but not analytical sense.

This is precisely the point at which my thesis separates from this mainstream assumption, while I recognize and value the confirmatory role of sensory encounter I also argue for a much more active and intelligent potential in which the senses are used to precisely differentiate between various, often subtle, characteristics of what makes up our particular experience. Our senses are also capable of confirming the absence of certain characteristics that we deem to be desirable, whether we associate them with quality and/or personal preference. These preferences and the ability to sense them are clearly capable of evolution and respond to casual as well as formal education.

Schon

Schon is best known for his work on what he calls "reflective practice," or "learning in practice." But he was also active in promoting the relationship between innovation and cultural change ('Beyond the Stable State', 1973) arguing for the need for society to enable continuous processes of transformation Schon, based his concept of a learning culture on Athenian society during the time of Aristotle, which he felt was analogous to contemporary society (circa early 1970's) with the vital difference that technology had replaced slaves as a solution to liberate the general population to learn. Schon has probably done more than any other theorist to explain and promote the value of reflective learning, which he developed from Dewey's insights.[168] Along with 'experiential learning', which emerges out of his concern with aesthetics, the influence of empirical philosophic method, and the Rousseau influenced 19th and early 20th century enthusiasm for nature as a source of knowledge enabled Dewey to evolve a distinct and increasingly influential take on education and experience.

Schon believes that, "We are bound by an epistemology of practice which leaves us at a loss to explain, or even describe, the competences to which we now give overriding importance." (Schon, 1983: 18) Like Gardener Schon also demonstrates allegiance to some of the understanding of sensory engagement promoted by Hall and Gendlin: "When we learn to use a tool, or a probe, or stick, fro feeling our way, our initial awareness of its impact on our hand is transformed "into a senses of a point touching the objects we are exploring". In Polanyi's phrase, we attend "from" its impact on our hand "to" its effect on the things to which we are applying it...which is essentially the acquisition of a skill the feeling of which we are initially aware becomes internalized in our tacit knowledge." (Schon, 1983: 52)

Schon goes on to argue that the, "indeterminate zones of practice – uncertainty, uniqueness, and value conflict – escape the canons of technical rationality. When a problematic situation is uncertain, technical problem solving depends on the prior construction of well formed problems, which is not in itself a technical task...It is just one of these intermediate zones of practice, however that, practitioners and critical observers of the professions have come to see with increasing clarity over the past two decades as central to professional practice (Schon, 1990: 6-7) For Schon feedback was crucial and beyond sensory (tacit) knowledge it advocated the need for flexible organizations in which feedback loops, shifting leadership centres and transformation were all essential characteristics. Learning became a matter of developing new and different "ways of knowing." It has been suggested that Schon's advocacy

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168 Schon's doctoral research was about Dewey's educational ideas

of reflective learning was a response to the proliferation of technology and the belief system that encouraged it (Usher, 1997) Schon's concept of learning certainly challenged the rationalist position by required the learner to make mistakes and to grow knowledge exponentially: "The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain, or unique. He reflects on the phenomenon before him, and on prior understandings, which have been implicit in his behaviour. He caries out an experiment which serves to generate both a new understanding of the phenomenon and change in the situation." (Schon, 1983: 68) At the heart of his theory lie two sources of inspiration, or precedent, Dewey's "leading ideas" and Aristotle's distinction between The 'technical' and the 'practical.'

Schon also employed the concept of metaphor, which he proposed as a means of 'framing' or 'reframing" problems': 'When a practitioner makes senses of a situation he perceives to be unique, he sees it as something already present in his repertoire. To see this site as that one is not to subsume the first under a familiar category or rule. It is, rather, to see the unfamiliar, unique situation as both similar or different with respect to what. The familiar situation functions as precedent, or metaphor, or...an exemplar for the unfamiliar ones.' (Schon, 1983: 183) Schon recognized that phonetic language is clearly deeply embedded in Western culture and can provide support for multi-modal sensory potential. Words can provide a conduit to the sensory character of experience is provided by Kristeva in her analysis of 'Swann's Way,' '...this is the exploration of memory, with the 'I' unfolding ideas and images, recalling flavours, smells, touches, resonances, sensations, jealousies, exasperations, grief's and joys-if it succeeds in articulating them....Proust goes further and puts into words a category of 'felt time' which cuts through the categories of metaphysics, bringing together opposites like idea, duration and space, on the one hand, and force, perception, emotion and desire on the other.' (Kristeva, 1993: 6-7)

Schon draws on pragmatist[169] tradition in philosophy and constantly sought to make theory contribute to an enhancement of the quality of life for all[170]

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[169] In simple terms pragmatism means the practical application of the truth of ideas. Its adoption by Dewey and Schon, and others, was clearly informed by a desire to make philosophy 'practically' useful. William James provides a useful definition of pragmatism: "The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable. Is the world one or many? - fated or free? - material or spiritual? - here are notions either of which may or may not hold good of the world; and disputes over such notions are unending. The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to any one if this notion rather than that notion were true? If no practical difference whatever can be traced, then the alternatives mean practically the same thing, and all dispute is idle. Whenever a dispute is serious, we ought to be able to show some practical difference that must follow from one side or the other's being right.

A glance at the history of the idea will show you still better what pragmatism means. The term is derived from the same Greek word pragma, meaning action, from which our words 'practice' and 'practical' come. It was first introduced into philosophy by Mr. Charles Peirce in 1878. In an article entitled How to Make Our Ideas Clear, in the Popular Science Monthly for January of that year Mr. Peirce, after pointing out that our beliefs are really rules for action, said that, to develop a thought's meaning, we need only determine what conduct it is fitted to produce: that conduct is for us its sole significance. And the tangible fact at the root of all our thought-distinctions, however subtle, is that there is no one of them so fine as to consist in anything but a possible difference of practice. To attain perfect clearness in our thoughts of an object, then, we need only consider what conceivable effects of a practical kind the object may involve - what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, whether immediate or remote, is then for us the whole of our conception of the object, so far as that conception has positive significance at all.
" (James 1904)

[170] Schon has been accused on elitism and perpetuating the tradition of organizational hierarchy (Ranson, 1998)

Appendix C: Bernard Mathews: A Bird in the Cage

A brief case study based on the industrialization, or factory farming of chickens and turkeys illustrates the way in which demand was changed by farming methods and farming attitudes across the Western World. Chickens represent an exemplary study because they reflect all of the major changes that have characterized the transformation of food in the twentieth century. These changes can be summarized as:

1880 - 1900

- Large scale farming
- Development of corporate business practice
- Rail transport of live animals to processing
- Rationalization and mechanization of slaughtering/processing
- Establishment of centres of expertise based on transport infrastructure, location, and entrepreneurial ambition
- Refrigerating shipping of meat cuts to butchers
- Commercialization of feed
- Breeding of species that respond to, or set demand for meat that can be produced efficiently

1900 1940

- The emergence of very large corporations that dominate entire markets
- Demand increasingly dictated by urban population
- Increased use of chemicals in meat processing
- Increase of scale of operation in farm size and an emphasis on containment
- Slaughtering industry expands use of bi-products. Uses range from human food, e.g. sausages and pies to fertilizer and animal feed
- Road transport begins to compete with railways
- Scientific method impacts on processing to extend shelf life and alter the texture, flavour and appearance of processed products

1940 – 2005

- Animals moved indoors, cages make access and feeding more efficient Automated feeding
- Increased reliance on chemical growth stimulants
- Increased use of animal bi-products in feed
- Chickens and Turkeys are transformed from luxury products into every day foods by a combination of new breeds, chemical feeds, hormone injections, battery farming methods and integration of farm, processing and branding
- Packaging and processing technologies extend the shelf life of all meat types
- Chicken and other meat products become the staple ingredients of ready meals
- Scale of farms moves towards gigantism led by the ration of more animals, less acreage
- Most animals never experience natural environment, daylight, grass, etc
- Price and efficiency dominate
- Production is moved to countries where labour costs are lowest and health and safety legislation is relaxed

- Processed, and packaged products like chicken nuggets, that contain little prime meat begin to dominate the market (Horowitz 2006, Singer & Mason 2006, Striffler 2005, Zukin 2005, Nestle 2004, Shiva 2000, Kiple & Ornelas 2000, Smith & Marx 1994)

The meat industry has been transformed in the course of a, little over one hundred years to a point where it has largely dispensed with nature as a solution. Meat production is now dominated by scientific methods and materials, which are predicated on the achievement of the following priorities:

- The removal of the obstacles imposed by nature that limit efficiency and profit
- The removal, or avoidance of the legislation that limits profit potential by protecting the quality of life of animals, workers and community
- The shift from meat based products to combinations that involve the addition of meat substitutes, or otherwise un-sellable bi-products of the meat processing industry
- Increasing reliance of synthetic flavour, texture and colouration
- Increasing reliance on moulded and coated products where the meat is no longer visible
- Competitive expansion based on price cutting

Striffler, confirms the transformation of the status and nature of the chicken "Chicken an afterthought on American farms before World War 11, has been transformed into the most studied and industrialized animal in the world...the agro-science revolution that transformed much of the food industry led to astounding gains for purveyors of chicken. The amount of time it took to turn a day-old chick into a full-grown broiler decreased by almost 20 percent between 1947 and 1951 alone. In 1940, chickens required more than four pounds of feed for every pound of weight gained by the late 1980s, this figure was down to two pounds." (Striffler, 2005: 15) [171] It is clear that these gains were achieved at the expense of variety: '...Aggressive cross breeding of chickens following the war largely eliminated breeds outside of poultry fanciers, in favour of distinctions by form in which the animal would be used: layers, broilers, rosters, and so forth...Poultry farms helped transform chickens place in America's diet by literally changing the form of in which consumers encountered it in eating establishments and supermarkets. This entailed a conceptual shift that the physical integrity of the chicken could be violated to create new products; that the meat type chicken' could be transformed into many kinds of chicken meat.' (Horowitz, 2006: 103-104)

These business led innovations have helped to transform farming from being a locally focused enterprise into an international corporate exercise in capital accumulation. Reliance on local knowledge and empirical wisdom has been stripped away and replaced these sources of skill and empathy with a complete trust in science. The opportunity to establish a relationship with animals was eradicated by dramatic increases in scale that turned animals into industrial

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171 Horowitz identifies the development of commercial interest in the profit potential of chickens and turkeys as a source of meat to the post-Second-World-War Government's interest in rationalizing food production through the application of scientific method: 'In June 1948 an enthusiastic three-mile parade wended its way through the tiny town of Georgetown, Delaware as the final event the..."Del-Mar-Va Chicken of Tomorrow Festival.' The parade celebrated...the national 'Chicken of Tomorrow' contest...initiated by the A & P retail chain and the US Department of Agriculture, 'to encourage production of superior meat chickens'...The winner, the Vantress Hatchery...Within ten years the Vantress-produced birds would be the standard used by the nation's poultry farmers.' (Horowitz, 2006: 103)

components. Singer and Mason highlight that scale is increasingly defining the nature and price of organic farming, citing how organic chicken farming in America is increasingly 'barn'[172] based where a big organic (barn) chicken farm has about 100, 000 hens, whereas in "the conventional industry one million hens is a small farm" (Singer, 2006: 103) [173] [174]

This also results in an approach to energy consumptions and waste disposal that is symptomatic of the practices of the corporate meat industry in general. Stiffler writes about the "chronic and wilful nature" of the leading chicken farms corporations to their birds, the workers and the environment. They are regularly fined for polluting the environment for example but prefer to pay the fine rather than clean the mess and prevent further spillage from their sewage lagoons (Striffler, 2005: 157-159)

With the exception of the emphasis on turkeys, rather than chickens all of these characteristics of production change are exemplified by the British Turkey based meat producer, and processor, Bernard Mathews. According to Mckeown, "Mathew's company has an annual revenue of £400 million, 7,000 employees, and eight million turkeys, making it the biggest turkey producer in Europe" (Mckeown, 2006)

The company conveniently identifies Mathew's history as a series of perceived achievements website: http://www.bernardmatthews.com/CompanyHistory00.asp

1950 Bernard Matthews bought a second hand incubator and twenty turkey eggs

1953 Gave up his insurance job and went into turkey farming full-time

1955 Great Witchingham Hall and 36 acres of land was purchased for £3,000

1958 Bernard Matthews Ltd formed

1959 First airfield bought for turkey sheds and the building of Great Witchingham Factory began

1960 Last turkey was raised in Great Witchingham Hall

Bernard Matthews enters the Guinness Book of Records as the biggest turkey farmer in Europe

1963 Development of the Mini Turkey, making turkey affordable and everyday meat

1964 Meeting with Nikita Kruschev to discuss the modernisation of the Russian Poultry industry

1968 First year over 1,000,000 turkeys farmed

1971 Company went public on Stock Exchange

1974 New processing factory added to the Great Witchingham Factory.

Innovative products developed such as Turkey Fillets and Turkey Breast Roast, making turkey a more everyday meat.

1976 Purchased Armour Le Grys, leading to the production of the first basted turkey -

Golden Norfolk Turkey

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172 The word 'Barn' is increasingly a marketing euphemism for a big, industrial prefabricated shed, which are typically sealed isolating the birds from contact with Pasteur, despite legislation which determines this as a condition of organic sub clauses allow the removal of birds from nature if there is threat to their health. So avian flu has become an excuse

173 'Moark', one of the largest producers of Battery eggs in the USA has 24 million caged birds producing a turnover of more than $500 million (Singer, 2006: 108)

174 Singer and Mason expose the vagaries that surround organic certification in the USA where various bodies ranging from charities to local government carry out inspections creating discrepancies according to who tests and where the production centre is located.

1980	First TV commercial featuring Turkey Breast Roast, introducing famous 'Bootiful' catchphrase
1982	Launch of first breaded poultry product - Crispy Crumb Turkey Steaks
1984	Food Service Division created
1985	Golden Drummers launched
1985	Turnover exceeded £100m for the first time
1988	Mini Kievs launched
1992	Bernard Matthews is awarded CBE in New Year's Honours List
	Turkey Dinosaurs launched - UK's first children's shaped poultry product
	Entered previously private-label dominated market of Cooked Meats
1993	Launched in Germany and acquired the Hungarian company, Sárvár - leading poultry producer in Hungary
1994	Purchased Advanced Foods of New Zealand
	Purchased Turner's Turkeys Ltd
1995	Entered Fresh Breaded Poultry market with first ever-flavoured crumb Turkey Escalope - Lemon & Pepper
1996	Acquired the German company Bernhard Bartsch, to produce cooked meats and frozen ready meals for Europe
	Amalgamated two Hungarian companies, Sárvár and SáGa, to create SáGa Foods
1997	Offices opened in Czech Republic, Poland and Slovakia
2000	Launch of branded fresh pre-packed sandwich range
2001	Move from being a PLC to a family run, privately owned business
2003	2003 Dunstable sandwich factory opened
	Entered Savoury Pastry market
2004	Dunstable pastry factory opened
	New brand identity created

Over the years there have been numerous charges levelled by animal rights groups, the Consumer association, Jamie Oliver and other concerned about the relationship of fat and salt to health, and organizations that are concerned about the exploitation of immigrant labour, at Bernard Mathews. For example, 'Bernard Matthews Turkey Twizzlers' came under fire in Jamie Oliver's television programme 'Jamie's School Dinners' and the company has seen a slump in sales since. (Source: mad.co.uk | Author: Branwell Johnson | Published: 16 October 2006 15:45) The response of the company reads: "The issue of healthy eating affects all food manufacturers. Bernard Matthews Food Service works with school meals organisations to ensure that the company's products meet their requirements whilst still being enjoyed by children and customers."

The litany of complaints also extends to the way that Bernard Mathews make claims about their products, which are clearly less than honest. This has been picked up by the Consumers' Association in 2002 in their 'honest labelling' campaign." A BBC report confirms the CA's strategy: "Food manufacturers who make confusing and sometimes misleading claims about their products, have been 'named and shamed' by the Consumers' Association. The move follows notification by the shopper's watchdog last month that it would publish a list as part of its "honest labelling" campaign. Among the "Named and shamed" was Bernard Matthews

chicken breast - 62% chicken." (Source: © MMIII | News Sources Wednesday, 24 April, 2002, 15:19 GMT 16:19 UK) This approach to communicating deceptive values is symptomatic of the ways in which the food industry markets its products, and, as the examples below, derived from the company website reveal, the brand image of the business itself. The impression that the Bernard Mathews Company want to communicate is one that is clearly designed to refute concerns about the companies reputation and offer a guarantee of traditional values. The visual reference to an idyllic countryseat, is based on an image of Great Witchingham Hall, the derelict mansion that Mathews filled with cages in the early 1950s because it was it the cheapest large building he could find.

Both images are clearly at odds with the origins and reality of company, which has been driven by the profit motive since it was established as source of business opportunity back in 1950s. It is clear that it would difficult to prosecute any of the claims made by Mathews in these two sources under current legislation, but it is also evident that there is a real danger of misinformation attached to food communication that relies on the exploitation of deceptive language and visual references that disguise, or distort the true origins of the food. Bernard Mathew's adopt a typical American[175] Corporate stance towards perceived threats. Nature, health, worker and animal ethics are all perceived as obstacles. Defensive, offensive strategies against the potential of negative publicity range from threatening, or engaging in legal action, claiming ignorance, or pro-active initiative. Industry awards for production quotas, or profits are used as commendations of ethical or environmental practice.

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[175] Broehl reports on Cargill's, (one of the world largest grain corporate)[175] response to their controlling share in Shaver that "had major breeding farms in England, Sweden, Germany, Pakistan, Chile and Japan (he notes that) Cargill felt that Shaver, perhaps more than any other breeder "has the material and versatility to produce whatever local markets may require, or prefer." Broehl highlight their pleasure in a "new feather-sexing layer...for more primitive markets." (Broehl, 1998: 76)

Appendix D: Wedgwood and Cream Crackers: Two Case Studies in the Relationship Between Design, the Economy and Sensory Opportunity

The impact of the capitalist system of economics on design is enormous. Design became a crucial tool for capitalists who used it to give raw materials value and meaning and to market their products and services in ways that would make them desirable. Design of all kinds and at all levels became a crucial skill that was and is used by capitalists to raise their profit potential and sustain a competitive edge. The use of design as a solution to managing the relationship between supply and demand and thus achieving maximum profit is explored through two brief case studies, Josiah Wedgwood and Jacobs Cream Crackers. Wedgwood is offered as evidence of the emergence of a relationship between design for mass production that is centered around the idea of organizing dining and cooking to suit capitalist endeavor, while Jacobs are explored as an influential example of the way in which design was used to develop and market food as mass market branded commodity.

Wedgwood

Wedgwood is often cited as a key example of the development of the factory system although the scale of his industrial activity was relatively small, compared to the textile industry. Forty explains: "By 1769[176], the average pot-works in Staffordshire was thought to employ about twenty men" (Forty, 1986: 17)

A more interesting example of Wedgwood's contribution for the purposes of this study can be constructed by focusing on his use of various management and manipulation strategies in order to exert control supply and demand and rationlize eating and cooking. Wedgwood demonstrated that a combination of division of labor, carefully researched and targeted marketing, design and quality control, could establish an entirely new demand for products that had hitherto only been available to the very rich, or had not existed. (Forty 1986, Margolin 1986) The division of labor was common practice when Wedgwood opened his first independent factory in 1759 but the concerted management of quality was not. Wedgwood sought "to make such machines of the men as cannot err"[177] (Forty, 1986: 33)

It is clear that Wedgwood is not only pioneering the characteristics of what became more widely known in the twentieth century as 'Fordism' and 'Taylorism' but he is also making an early strike against the sensorial characteristics of pre-industrial craft practice and anticipating the dominant use of design in the twentieth century. By removing the individuality of the worker' technique in order to achieve uniformity Wedgwood anticipated the shift from pre-industrial to industrial design.

Viewed from a sensory perspective Wedgwood's innovations did much to remove sensory opportunity from making and consuming and he thus established an important precedent for the 'machine age.'[178] Wedgwood helped to establish uniformity as a measure of quality and value

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176 Forty confirms: "At the beginning of the century, few (pottery) workshops had employed more than half a dozen men." (Forty, 1986:17)

177 Quoted from a letter to his business partner, Bentley sourced by Forty from (Finer and Savage, 1965 : 82-83)

178 A short list of innovations and their impact on sensory opportunity is offered below:

Wedgwood's Innovations	**Their Impact on Sensory Opportunity**
Deskilling his labor force through replication of a uniform, mass	Sensory sensitivity is characterized as idiosyncratic and inefficient

while simultaneously devaluing individuality. The translation of supply from craft to mass required consumers to respect and desire uniformity and repetition as indicators of value. They were taught to do this through print and point of display marketing. Aesthetic innovation was predominantly centered on three primary agendas:

1) Producing designs that reflected contemporary taste. Wedgwood's initial business was predicated on servicing and extending the prevailing taste for Classical references. This which would allowed Wedgwood to tap into the lucrative, and emerging market for landed gentry/nouveau riche clients who were beginning to seek out a contemporary style that expressed the informed nature of their taste (Bailey 1986)
2) Designing ceramic forms and decoration style that lent themselves to mass production
3) Filtering down Elite taste into cheaper range promoted modular forms, devoid of craft reference, that were suitable for mass production by relatively unskilled labour (e.g. 'Creamware')

Long before automation really figured in the production of ceramics Wedgwood created an industrial system that allowed him to manage the relationship between supply and demand on a mass scale. The Wedgwood brand was carefully evolved and promoted and became an indicator of quality that anticipated the designer brand strategy of marketing in the late twentieth century[179]. Wedgwood's strategy extended the craft tradition of adding value to raw materials

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produced version of his, or her skill.

Turning craftspeople into automatons production process	Removing aesthetic pleasure from the
Promoting regularity as an indicator of quality and value	Devaluing irregularity and evidence of hand-craft
Measuring production value in terms of efficiency of production	Craft skill is replaced by time skill
Promoting the brand of the owner as a mark of quality	Eradicating and/or discouraging the workers signature
Using classical aesthetics as an indicator of quality and value	Discouraging the vernacular tradition and aesthetic/craft innovation
Controlling the workers sense of value	Removing associations of making from the consumer's appreciation
Exporting nationally and internationally	Replacing local aesthetics and craft knowledge with mass taste
Replacing point of contact with print and point of display marketing	Promoting visual evidence at the expense of sensory engagement
Replacing relationships with the maker with a brand	Denying sensory/social engagement
Determining quality through price/appearance	Limiting the use other, sensory criterion

179 Forty explains how Wedgwood and his partner were discrete about the technological origins of their products in the first phase of their business in order to preserve a myth of craft origin. (Forty, 1986: 12-13)

into an industrialized solution. By organizing the design, manufacture and marketing process he produced objects that people would desire beyond their utility value without he need to engage at a deeper sensorial level. Wedgwood was creating a market in which everyday objects became objects of fashion and style and thus gained additional or alternative utility as representations of their owners taste, status and/or aspirations.

Cream Crackers

In the sphere of food production the strategy that Wedgwood had helped to pioneer was employed to turn processed food into an exemplars of mass production and mass marketing technique. The logic of capitalist economics minimizes the number of steps and processes involved in turning a raw material into a desirable commodity. Eradication of waste and extension of shelf life were also primary characteristics of an ideal capitalist product. Translating production and consumption conditions that were characterized by a relatively long growth cycle, high degrees of waste, associated with the relationship between appearance and the salability of the raw material, and a dramatically short shelf life, into commodities that maximized crop potential and dramatically extended shelf life was an economists dream[180]. With the development of Corporate Business the amounts of capital available for investment increased dramatically and the economic relation between supply and demand became more critical. The development of mass-market commodities was critical factor in the rise of the Corporation. Mass markets commodities allowed business to think on an unprecedented scale and therefore to invest in factory systems that would churn out homogenised products that design and marketing gave relevance to. The scale of investment in design and marketing increased dramatically. Advertising and marketing were quickly promoted as a science and began to be taught in the same Universities that were promoted the 'science of management and the science of economics. (Baritz 1960, Benson 1988, Strasser 1988, Scott 1912)

Motivated by capitalism food became a perfect[181] raw material from which to develop a mass-market commodity because no mater how far away from its natural source it became it could still be linked to the "healthful" connection of nature[182]:

1) Reliability of the goods or the firm

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180 One of the essential characteristics of the economist's criterion for profit potential is the search for production and design solutions that reduce as many downsides as possible while maximizing the range of opportunities for profit. It is probable that an economists approach to design would be to create one mould from which all commodities could be produced. A brick for example would be perfect. This may help to explain why modernism was embraced by capitalism as the preferred style and design solution. The development of marketing in which the cost of promotion typically exceed the cost of production is an example of the consequences of this way of thinking an doing.

181 "Like advertising executives domestic scientists treated standardization as moral advance; they prised processed cheese over farm cheese because the factory version possessed greater "uniformity"...the domestic scientists attitude to the widespread adulteration of mass –produced foods; they treated it as a problem of consumer education rather than of industrialist's malfeasance" (Lears 1995: 185-186)

182 Cross argues that "another important benefit (of consumer goods) was new taste sensations – candy, soft drinks, and cigarettes all uniquely engineered and packaged pleasures of flavour and simulation...Food engineering simulated physical desire and often created dependencies. The combination of tasty tar and addictive nicotine in cigarettes and the distinct taste but also caffeine (and briefly even cocaine) of Coca Cola created a new sensual world. These manufactured sensations partly replaced the glutton's indulgence in sheer quantity of carbohydrates, protein, and animal fat. Technology could surpass the sensous joys of nature's Garden of Eden with foods synthesized to taste smell and look "supernatural". The nnew packaged pleasures of the were subtle, bringing a kind of epicure's refinement to the taste buds of the masses and with a succession of enticements that led imperceptibly to dependency. There were differences between the chocoholic and the alcoholic. But there were also similarities" (Cross, 2002: 55-56)

2) The goods supply a present need

3) Money considerations, e.g., cheapness, investment, chance to win

4) Labour saving, convenient or useful

5) Healthful

6) Stylish

7) An attractive and frequently repeated advertisement

(Scott, 1912: 121 122)

Prior to the mid nineteenth century, "with minor exceptions, most food was produced locally and consumed locally." (Davidson, 1999: 76) Cream crackers and other packaged biscuits the recipe were typically originated by a craftsperson (baker) and then sold locally before expanding, nationally and internationally. The expansion of perishables, like biscuits, required a different way of thinking about food, making something that was fugitive into something that was had a relatively long shelf life. Biscuits already partly served this function in pre-industrial economies as part of a repertoire of domestic skills that allowed the preservation of food to sustain families during the winter months. They were also famously used to sustain travellers, particularly sailors[183], in situations where fresh supplies were hard, or impossible to come by. The evolution of the mass-produced, and mass-consumed, cracker demonstrates the push and pull effect of the economy on food as well as other commodities.

The spread of industrialized conditions of work, as has and will been discussed elsewhere led to the breakdown of domestic skills as the whole family began to be employed for long hours of low-income generation. This helped to erode the traditional role of the woman as the cook and led to greater dependency on processed and packaged food. The growth of the chemicals industry for example, was a direct result of the growing interest in applying science to achieve, what began to be understood, as economic progress: "During the 19th century supplies of cheap sugar and flour, plus chemical raising agents such as bicarbonate of soda, led to the development of many sweet biscuit recipes." (Davidson, 1999: 76)

The development of transport, particularly the railways, provided an incentive for small scale, local manufacturers to expand their market.[184] Printing and paper and tin box manufacture also expanded dramatically in terms of scale and sophistication, allowing and encouraging the evolution and ubiquity of branded packaging.[185] The problem of food adulteration, and false measuring, also provided an incentive for the development of the brand. Prior to the development of the mass-market, although there is a long history of corrupt practice among producers, processors, and retailers of food,[186] "there was no widespread usage of food labels, and hence no need for extensive regulation of such labels. The industrialization of food production in the nineteenth century made consumers more reliant on food labels as a

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183 The cream cracker was in fact evolved from the ship's biscuit. (Kipple, 2000)

184 The railway system, led by entrepreneurial speculation interests in transport and technology, expanded rapidly in the nineteenth century. By the mid 1850s most of England was networked by railways. (Simmons 1999, Porter 2001)

185 Printing moved from hand press to mass production by automated and semi-automated machines in the first half of the nineteenth century, supported by the mechanical production of paper, tin and folding techniques large scale packaging industries emerged providing a major new influence on mass marketing. Through their expertise in producing branded containers and wrappers that were printed with the manufacturer's logo and images, that were designed to encourage consumers to notice and desire the brand these new industries benefited and encouraged economic expansion based on the concept of large scale. (Tyman 1970, Eisenstein 1980, Feather 1989, Porter 2001)

186 As Tannahill confirms food adulteration was a centuries old problem, writing about the 15th century she suggests that for contemporary "food inspectors...catching a wily London baker...was a matter of almost pure luck." (Tannahill, 1995: 163)

key source of information in making purchases."[187] (Moore, 2006) The proliferation of enterprise and its scale served to make isolated examples into an epidemic of corruption and led to demands for regulation: "If not for the prevalence of lasseiz faire economics philosophy at the time, food regulations might well have passed through British Parliament in the 1820s." (Moore, 2006)

According to Davidson, the combined effects of economic expansion in Britain led "several entrepreneurs (to lay) the foundations of the modern biscuit industry...Since the mid 19th century the range of commercially baked biscuits based on creamed and pastry type mixtures has expanded to meet the demand."[188] (Davidson, 1999: 76) As well as responded to demand these entrepreneurs created demand.

The development of mass-produced and branded food had a relatively immediate impact that created a range of culturally embedded norms and beliefs that informed the marginalization of multi-modal sensory opportunity. Some of the primary effects are identified below:

- Design becomes a primary source of value and food quality definition, through the association of Brand logo, packaging, labelling and advertising and marketing.
- The eradication of local craft and its replacement with chemical and machine science and technology
- The use of price and aggressive marketing to drive out regional/local competition
- The persuasion of the consumer to accept that food is of higher value when it was processed
- The development of the culture of convenience, in which food can be consumed from the packet, without preparation
- The association of time-saving with food consumption
- The replacement of sensory interrogation as a means of establishing value with visual cues
- The spread of artificial/chemical additives to add flavour and shelf life
- The diminishment of domestic cooking as a source of the majority of the daily diet
- The tendency to form and package of food to fit distribution and shelving proportional convenience
- The replacement of craft reputation with brand reputation
- The development of products that allow producers and processors to dispose of food sources that would not be able to be sold without the translation of processing
- The transfer of investment and price emphasis from production to distribution and marketing

It is clear that designs ability to manifest value cues is used as a primary tool of economic expansion in the food sector. The application of design is a major shift that is encouraged by

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187 "The work of Dr. Arthur Hassall finally brought food adulteration research into the modern era, with his massive investigations of food adulteration. He revolutionized the study of food adulteration by introducing the microscope to detect numerous previously undetectable forms of adulteration. In the face of the evidence he compiled, Parliament passed a statute in 1860 prohibiting the adulteration of food and drink." (Moore, 2006)

188 "The firms of Carrs, Huntley & Palmer, and Crawfords were all established by 1850." (Davidson, 1999: 76)
According to the Jacob Fruitfield Food Group's website Jacobs Crackers were invented in 1885 and are "Baked with only the finest wheat flour and yeast...This light and flaky layered cracker has been a much- loved family favourite since its introduction." (info@jacobfruitfield.com, 2005)

capitalist economics. Cream crackers illustrate how a commodity that was born out of extreme needs was re-designed to appeal to a mass market. Once the decision was left to the relationship formed between the consumer and the packet and its mass advertising and point of sale marketing the manufacturer was in a position to manipulate the taste of the consumer at (at) least three levels:

- The creation of affordable status through the design of recognition via packaging, logo and advertising associations[189]
- The promotion of the concept of convenience
- The use of additives, particularly salt and sugar to create addictive dependency[190]

The range of contextual factors referred to above, and others, like the spread of literacy all helped to inform a paradigm shift in which durable (e.g. ceramics) and non-durables (e.g. cream crackers) are removed from their craft origins and translated in mass market commodities. The replacement of multi-modal sensory involvement at the levels of production, processing, retailing, marketing and consuming with designed interfaces is a direct outcome of capitalist expansions impact on social as well as economic circumstance.

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189 "Baked with only the finest wheat flour and yeast...This light and flaky layered cracker has been a much- loved family favourite since its introduction.".
(info@jacobfruitfield.com, 2005)

190 "Worse yet, the manufacturer can engage in sophisticated adulteration techniques that go completely undetected by the consumer, and can in fact only be detected by an inspector. Producers figured out ways to subtly alter the chemical composition of pre-packaged foods so that quality of production without the consumer perceiving any drop in the quality of the product. Even if an occasional customer might be able to detect low quality, the company knows that on average, more customers will continue buying the products than will be alienated by perceived quality concerns." (Moore, 2006)

Appendix E: Sliced Bread

The development of sliced loaf is the equivalent of the cream cracker in the nineteenth century a highly processed and relatively tasteless food product that signifies progress and modernity in the form of mass processed food that is regarded as a major enhancement. The sliced loaf was not promoted a cheap substitute for the local baker's traditional product but as a high-tech product that had superseded the primitive nature of the original.

There are several starting points for the sliced loaf, the obvious one is the invention of the machine that would slice and wrap a loaf, but others include the development of milling and the constant 'enhancement' of the flour brand, which was typically achieved by taking refining the characteristics that made it nutritious. Pollan explains the economics that drive "food coming off the farm to either falling profits – or more processing": "The problem is, a value-added product made from cheap commodity can itself become a commodity, so cheap and abundant are the raw materials. That lesson runs straight through the history of a company like Great Mills, which started out in 1926 as a mill selling whole wheat flour: ground wheat. When that product became a cheap commodity, the company kept ahead of the competition by processing the grain a bit more, creating bleached and then: "enriched" flour. Now they were adding value, selling not just wheat but an idea of purity and health, too. In time, however, even enriched white flour became a commodity, so General Mills took another step away from nature – from the farm and the plants in question – by inventing cake mixes and sweetened breakfast cereals. Now they were selling convenience, with a side of grain and corn sweetener, and today they beginning to sell cereals that sound an awful lot like medicines. And so it goes, the rushing stream of ever cheaper agricultural commodities driving food companies to figure out new and even more elaborate ways to add value and so induce us to buy more."(Pollan, 2006: 96)

Up until the 1860s the development of the bread making industry was achieved by a relatively slow process of incremental change in which bread was transformed for a home baking staple to a commodity sold in small bakery shops to a product manufactured in automated bakeries in the late 1800s. Britain was considerable ahead of the USA in this period as the example of the ABC bakery confirms: "The ABC (Aerated Bread Company) was founded in 1862 to mass produce bread through a new manufacturing process designed to appeal to a health conscious public. The production system was based on forcing carbonic acid into an air-tight machine containing water, flour and salt. Of equal significance was the industrial nature of production...a typical; bakery could produce around 200,000 pounds of bread per year, ABC methods could produce ten time this from one machine. The first factory failed to cope with the large demand and by 1863 a second factory was opened in Hackney (London) close enough to share supplies with the main Islington plant. By the following years there were 28 depots "for the retail sale of bread" and nearly 100 'agencies' or wholesalers. The ABC was also busily expanding outside of London with activities in Manchester and Liverpool (the) technical innovation...enabled them to produce bread and bread products on such a large scale that they were able to tender for, and provide bread to large institutions, such as schools, hospitals, orphanages and asylums. As these changes led to a mass production system of bread manufacture, the company saw the need to expand its manufacturing base and then gain organizational efficiencies of scale by integrating manufacturing, wholesaling and retail functions... (Sources: Baking Industry April 12, 1952; Baking Industry April 1987.) In Britain home delivery was a major factor in the traditional buying and selling process as small local

bakers served a relatively small catchments area of customers by delivering bread fresh from the oven.[191]

Britain's lead during the nineteenth century was typical of many advances that were achieved and then lost as America quickened the pace of scientific advance during the early twentieth century. The development of the bread slicing machine was typical example of the kind of entrepreneurial invention that comes from outside an area of expertise, often led by an individual who spots an innovation gap and aims to profit from its exploitation.[192] 'Wonder Bread' followed a pattern of evolution that was becoming increasingly common among bakeries that was influenced by the dominance of the flour market by the large-scale corporate business like Cargill and Great Mills, who promoted the advantages of white, refined flour nationally setting a consumer impression that it was superior. Refined flour was slower to respond to yeast so bakeries began to add sugar to speed the reaction, which sweetened the taste of the loaf.

Softness was the other characteristic of 'Wonder Bread,' encouraged by a gradual, turn of the century, consumer rejection of the solidity of the dominant staple, sourdough bread. This led bakeries to use baking soda to 'soften' the bread and make it puffier. 'Wonder Bread' was one of the softest and sweetest breads on the market, and this helped it to be come a brand sector leader. The public took time to adopt the sliced version and production was halted during the war and the loaf was effectively re-launched in 1946 and helped to anticipate the growing post-war enthusiasm for 'modern; convenience foods. Sliced, refined and offering almost instant gratification due to the inflated and sweet character of the bread it extended the concept of convenience from point of purchaser to digestion.

Following and reinforcing an increasingly familiar pattern the intervention of the US Government influenced innovation, in 1941, Wonder Bread was involved in a government-supported move to enrich white bread with vitamins and minerals to improve nutrition in health strategy targeted at the diseases Beriberi and Pellagra. Subsequently known as the "quiet miracle," the bread enrichment programme authenticated what corporations had been claiming to do for at least two decades in the form of 'enriched' claims. The inclusion of essential vitamins and minerals was intended to ensure that everyone got the basic staple requirements even if they were surviving on a diet that was dominated by bread. Post the second world war the scientific character of the enrichment strategy was heavily marketed as part of the wider imperative to supersede the taste for natural and traditional foods with processed brands that

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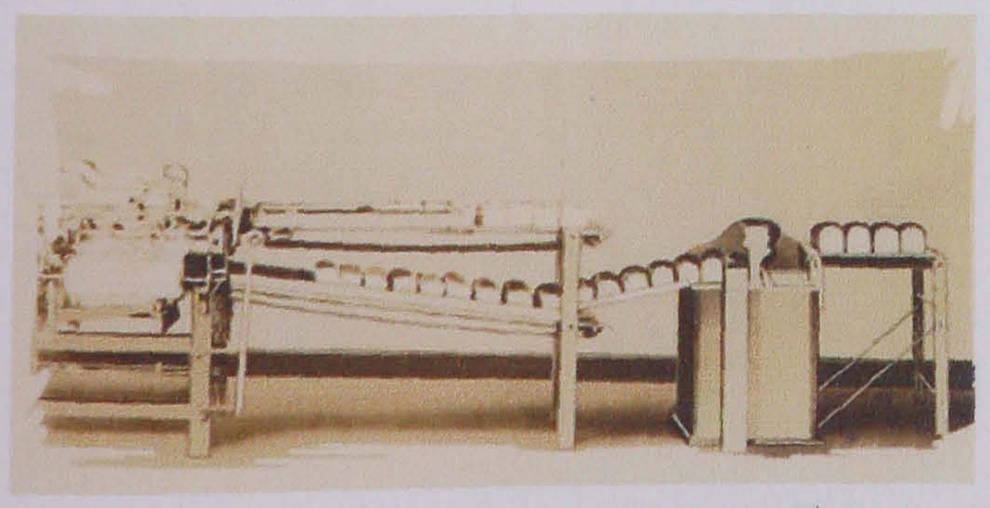
191 This duplicated the strategy of milk delivery to the door in urban and rural areas. A number of other local delivery services were normalized in the early twentieth century, including groceries and soft drinks. In the UK bread delivery declined rapidly in the early 1960's as direct result of competition from the emergence of supermarkets and the growing popularity of sliced bread brands, that were competitively priced and promised American style convenience. This led to the thick crusts associated with the traditional loaf going out of fashion, (in the majority of value orientated household this resistance to crusts remains the norm)

192 Otto Frederick Rohwedder, the inventor of the bread slicer, evolved his concept over a period of sixteen years, from 1912 to 1928. The main challenge was to combine the slicing mechanism with a wrapping mechanism that would stop the bread going stale once it



was sliced. Commercial exploitation really took off with the adoption of the slicer by the Continental Baking Co, who produced a sliced version of their 'Wonder Bread' in 1930. Continental Baking Co had taken over the original developers of Wonder Bread, the Taggert Baking Co of Indianapolis in 1925.

were promoted as being healthier, as well as modern and convenient. At the same time the technological and scientific advances in the production processes Wonder Bread introduced a revolutionary new way of baking that eliminated holes in bread, making the loaf appear to be even more modern. Other advances like providing consumers with ingredients and nutritional information and shelf life were led by legislation. Wonder Bread continued to adapt by extending the brand to address changing fashions in consumer taste, or concern, for example in 1986, a new reduced-calorie 'Wonder Bread', 'Wonder Light,' which has moved from the position of sub-brand to brand leader. (www.wonderbread.com/history, www.zingermans.com)

Appendix F: The TV Dinner

The TV dinner is one of those iconic products that helped to change the future of the way that food was produced, processed, marketed and consumed. Its initial launch price made it a luxury and this played an important role in its adoption that helped to shape the pattern of marketing and adoption for many industrially processed alternatives to traditional foods A brief example of the journalistic history of this innovation provides evidence of the push and pull between a number of key factors in the nineteen fifties and also suggests that the innovation was as much a product of chance as it was business and future strategy. "The turkey TV dinner, the first in a long line of such cuisine, made its debut in 1952 "in grocery stores in six cities between Omaha and Chicago" largely because Swanson, the "largest turkey grower in the world," found that it had a lot of unsold turkeys on hand and needed something to do with them. The frozen dinner was one solution."[193] (Goode (2002)

The concept and the packaging solution of the 'ready meal' were borrowed from airline catering but this was at a time when long haul flights were still the province of the rich, or business passengers. The appropriation, and mass marketing, of what was a luxury service product addressed and anticipated another key theme of post-second world war marketing: "affordable luxury."

For consumers the 'TV Dinner' made the sci-fi zeitgeist of the 1950's much more tangible, not least because it associated itself with the, then aspirational, consumer and lifestyle revolution of Television. (Lileks 2001) Contemporary reportage, historical memory, record and analysis confirm that there was a genuine belief that science and technology would provide a utopian future. A rapid succession of innovations and increasing access and dependency on technology transformed the home life of a growing number of individuals and/or set the aspirational benchmarks for others who were inhibited from participation by traditions and/or economic limitations. As Jankowski puts it: "American food manufacturers, caught in an increasingly competitive market after World War 11, began selling their products in containers that seemed better suited to sputniks than for the down-to-earth, Formica covered kitchenettes. Housewives squirted squeezed, and sprayed all sorts of unlikely foodstuffs from foil pouches and bottles, aerosol containers, and plastic tubes...many of the breakthroughs were the bi-products of experiments for the real and imagined needs of jet and space travel...in 1954 Swanson introduced the tv dinner...packaged in a carton designed to look like the front of a television console (complete with wood grain and control knobs) it contained an entire dinner in an oven proof aluminium tray...no pots to clean, no chopping, or measuring to do, no dishes to wash or dry. Life was never so easy" (Jankowski, 1998: 1)

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193 "The new product sold "for 98 cents to $1.29--a whopping amount, considering that a McDonald's hamburger was only 15 cents" at the time--so folks perhaps regarded these instant banquets as something of a luxury. The dinner included cornbread stuffing (soon changed to the white-bread variety) and a sweet potato (later changed to white mashed potatoes). The frozen turkey dinners didn't sell well at first, in part because Americans had become accustomed to eating turkey at Thanksgiving and were not at ease with it on other occasions. There was another problem: Most grocers didn't have frozen-food cabinets. But Swanson decided that all that had to be done was to familiarize American consumers with the quality and convenience of their TV dinners--and that proved right. By the end of their first year on the market, 10 million had been sold. The rest, as they say, is history. In October 1953 Swanson introduced a fried-chicken dinner. That was followed in March 1954 by a sliced pot roast of beef and in January 1955 by frozen fillet of haddock. Cranberry sauce, and a fourth tray compartment to hold it, was added to the turkey dinner in 1960." (Goode (2002)

The paradigm shift status of the TV dinner is located in the ways that it brings together the agendas of the 1950's in forms that link consumer aspiration with the agendas of the business of food to establish a new way of understanding food. For the consumer the implications of convenience food were loaded with the promise of efficiency as the gateway to convenience. For the producers the TV dinner offered a way of persuading the consumer to depend entirely on processed food for their dietary needs. This meant that the ingredients and the process of manufacture no longer needed to worry about freshness, or quality of cut and other traditional measures of quality the emphasis moved to two levels of visual appearance, the package and the reheated product. Both aspects of appearance were therefore more dependent on technology and science, new innovations in packaging, from foil dishes to printing, artificial colours and flavours, than they were on nature. The objective of maximising efficiency in production was extended to take account of the goals of regularising norms of appearance and taste and reducing growth time and the production of animals and vegetables began to increasingly take on the language and techniques of widget production including, and, particularly, quality control.

For the processing industry the representation of food in adulterated form as convenience brands offered the potential of maximising the profit potential and disguising. Meat and vegetables no longer needed to be defined by first appearance; their manipulation during the process could transform even the most limited and unattractive raw ingredients into a desirable cuisine. The addition of flavours and aroma ushers in an age where the artificial begins to be accepted as the real. (Taylor 2001, Barthes 1993) So at the point where the UK supermarket begins to expand the definition of staple produce is beginning to transform from value defined by 'fresh', to values that are more to do with printed and audiovisual language and imagery. The psychology of persuasion pioneered during the first phase of psychological advertising (Marchand 1985) is evolved into a rhetoric that looks beyond basic needs to concentrate on the attributes of modern lifestyle, to address the need for products that are more to do with "self actualization" (Maslow 1968) The definition of food was changed by design, which promoted and presented the products of mechanization and science under the general rubric of 'modernity'.

Although food had not become completely artificial both its production and promotion had a lot in common with the strategies used to produce and promote the new plastic products that were being offered to domestic consumers as part of the mise-en-scene of the modern age.

The 'TV Dinner' offers useful evidence of how innovations in production, processing, packaging and retailing influenced patterns of consumption:

- Before the innovation of serving precooked turkey the 'Turkey Dinner' had hitherto been regarded as a luxury dish reserved for special occasions[194]
- Consumers regarded the shift to pre-prepared as confirmation of the benefits of modernity
- The ability to eat what was wanted when it was wanted was also seen as an advance
- The acceptance of prepared meals was accepted as an indication of modernity and its promise of additional leisure through convenience.
- The refrigerator became a much more significant component in the technology of all stages of the food chain. Retailers and consumers began to invest in refrigeration
- The proliferation of shrink wrapping and foil dishes accelerated the popularity of pre prepared meals as well as frozen foods that can be placed into the oven.
- For the consumer processing promised liberation from preparation and thus represented convenience.

194 'Thanksgiving' in the USA, Christmas in the UK

Appendix G: The Iconography of Modernity

This brief section provides a sketch of some of the important contextual factors that influenced and were influenced by the development of corporate food production, processing, retailing and consumption. It is not intended to provide a definitive history but does give indications of some of the sources of the push and pull influences that enabled the corporate food sector to expand, prosper and substantially influence the definition of what food, and its consumption, would be about. Modernity, as a concept of progress that could be accessed through participation with, and in, an array of futuristic designed icons had been sold to consumers and businesses by successive government around the Western World since at least the British Great Exhibition of 1851. The Great Exhibition helped to establish a blueprint for what an international trade exhibition did which has been the prevailing format for the past one hundred and fifty plus years. The main characteristics that relate to this study are:

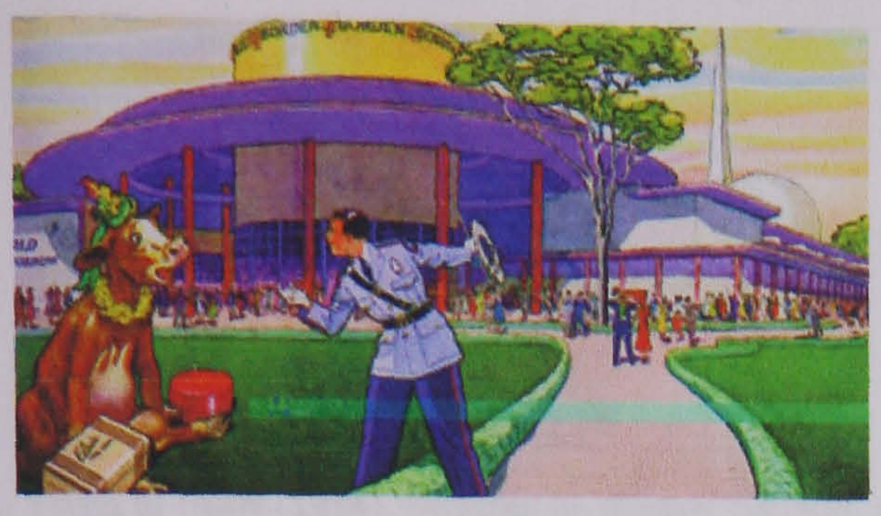
- The promotion of scientific and technological progress
- An emphasis on design as a means with which to express of the forms of progress
- A display of futuristic aesthetics
- A demonstration of the utopian power of science, technology and design
- A link between progress and national prestige
- A link between innovation and a prosperous economy

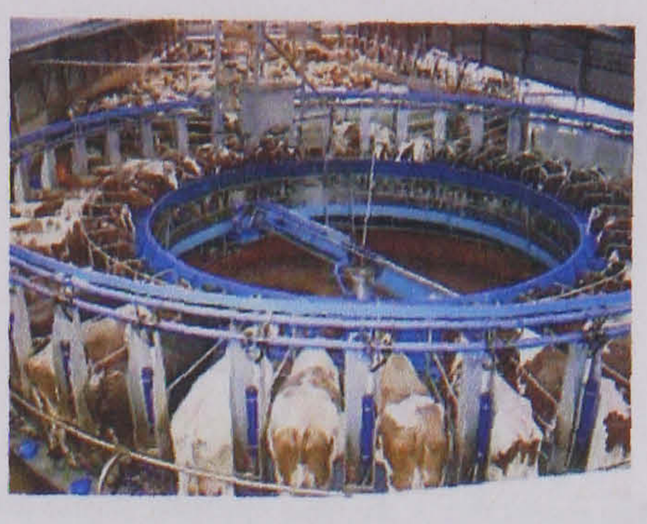
The iconic poster

Happy families

The landscape of effciency

The prelude to the design aesthetics, business and cultural agendas that would dominate UK aspirations in the post 1945 period was provided by the New York World Fair of 1939. It combined the styling and emotional resonances of American Industrial Design with European modernism and constructed a seductive proposition for a self-consciously modern world. The world of the tomorrow as it was represented by the NYWF offered a convincing promise of a utopian idyll that was free of the threats that popular science-fiction associated with it, while loaded with the promise of scientific determinism. The world of tomorrow would be streamlined, efficient, affordable, abundant and convenient and most importantly promised a life of leisure in which science and progress in general liberated the constraints of time and cost and access. The images above reveal the general strategy, which brought together futuristic iconography, models and images of urban modernist landscapes that were heavily indebted to Le Corbusier and the idealized family. Tradition formed part of a dialectic, where sentimentalized images of the past, were balanced by seductive impressions of an equally benign but much more progressive techno-rationalist future. The image below is typical of the 'past versus future' dialectic that was used to deconstruct allegiance to the past by improving on nature.





The copy[195], from this Borden promotion, which represented part of their display of the future of farming and produce at the World Fair, offers an indication of the variety of heavy handed but effective strategies that were used to sell modernity.

The Festival Of Britain 1951

With substantial American Support, and influence, the British Government applied a similar strategy to try and kick-start the British Economy and to modernize its culture in the aftermath of the Second-World-War. The British public were relatively inexperienced in modern consumerism, compared to their more affluent American counterparts, but encouraged by a combination of rising wages and extra leisure time they happily complied with Government propaganda and bought into modern design and lifestyle including a an array of new brands and technologies like food mixers, refrigerators and televisions.[196]

Britain can have it V &A 1949

Festival of Britain 1951

Richard Hamilton 1956

Official and Business propaganda was very effective in persuading business and the public to buy into modernity at a commercial and aesthetic level. One of the reasons why the public found it easier to accept modernity after the war was because aesthetically it began to make more sense to them. Hamilton's image, 'Just What is it that Makes Today's Homes so Different, so Appealing' reflected the Pop embrace of America lifestyle and its infatuation with the iconography and art direction of American films like 'Young at Heart,' which promoted an aspirational concept of home, family and suburbia.

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195 In this example anthropomorphism is used to reassure public concerns about the relationship between science and nature: *"--but you promised me a meadow!" "Elsie looked disappointed, dazzled, and curious, all at the same time -- a rather difficult feat for a cow. "It is a meadow, Elsie," insisted the world's fair man. "It's flushing meadow -- the most wonderful meadow you'll ever see. All those bright buildings and wide avenues and gay flags have been put there for the New York World's Fair."*
Elsie still hesitated. "Maybe it's just a bit too grand for me," she said. "Maybe I'll feel out of place."
"Nonsense," chuckled the man. "You're going to have the time of your life here, living in 'the dairy world of tomorrow.' why, you'll be in a lovely, air-conditioned Borden barn -- you'll still eat the finest food -- and you'll be milked on a merry-go-round . . . "
"What fun!" mooed Elsie, brightening. "But why bring me way out here . . .?"
"So that millions of people can actually see how you live," the man explained. "We want everyone to see the kind of care and skill and science that make milk so good it can be Borden's milk."

196 Independent Television, The British Government's answer to a commercially funded broadcast addition to the BBC Television channel that had started broadcasting again in 1946. Ownership of television sets increased considerably after the introduction of ITV: "television sets had been a rarity in the 1950's but by 1961, 75 percent of families had one. (Marwick, 2000:241)

Young at Heart (1954), Directed by Gordon Douglas. Much of the action takes place in the amply stocked kitchen in a modern but idealized suburban home in which the relationship between the future and the past is reflected though the roughly equal billing of the refrigerator and the piano both of which serve to communicate family values.

What had seemed quaint and/or alien[197] before the war now carried persuasive connotations of health, efficiency and affordability that were being embedded as advantages a modern lifestyle. In a few short years the aesthetics of European modernism became ubiquitous as the techno-rationalist grid began to shape the world that people lived in, watched, read, ate and aspired to.

Villa Savoye, Le Corbusier (1928-1931)

An American supermarket interior

A TV Dinner

The typographic grid

The pictorial links made by the images above are of course arbitrary but I argue that they are emblematic of the way that European functionalism moved from Elitist buildings into everyday currency, with, or without a grand strategy.

30s depression imagery

The T V Dinner

TV becomes the centre of the home

Modernism was represented as a kind of magic bullet that replaced the old, dangerous, dirty, unhealthy, un-wealthy and unequal pre-war world with a utopia of equality and abundance all wrapped in the gloss of the new aesthetics and new materials of space-age modernity. While the imagery immediately above is only intended to demonstrate indicative links it does represent the way in which family, community and individual memory of hard times played a major role in accelerating the embrace of modernity, particularly in relation to food. The image of a dust-bowl casualty had its own equivalents in Britain in the form of hunger marches and soup kitchens during the 1930s. In Britain, as in America, this was supported by

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197 Forty confirms that initial resistance to modern design, citing the example of kitchen gadgets, was overcome by a combination of design and advertising. He quotes Arthur BecVar, head of appliance design for General Electric: "...By his investments in mechanical servants and individual can show how he is providing for his family. The woman's role has become more active in our society...She is caught in maelstrom of and needs all the technological help which a technological society can give her...she still wants to retain the role of creative homemaker without unnecessary drudgery." (Forty, 1986: 220-221)

substantial, if incremental enhancements in disposable income and parallel decrease in the cost of food. Between 1950 and 1961) personal disposable incomes increased from £390 to £532 leaving a surplus of income for consumer with consumer expenditure at £385 in 1950 and £486 in 1961. (Marwick, 2000:241) This gave working class consumers access to a range of durable and expendable luxuries ranging from cars and televisions to process and frozen food brands that reduced preparation and involvement to opening a packet, can, box or bag.

Humphrey records that Britain followed the pattern established in the United States by innovating 'self-service' before they developed supermarkets, "the first English self-service grocery store was opened by Harold Wicker of the London Co-operative Society in 1942...post-war rationing worked against the concept and it was not until 1954 that self-service took hold in England with the relaxation of war-time controls...Christina Fulop noted that there were no more than ten self-service shops in England in 1947, but nearly 12,000 by 1963, including about 1000 supermarkets with an average stock of about 1000 items.... (Humphrey, 1998: 73) In 1956 the introduction of a commercial television in London and the home counties, with reasonably country wide coverage by 1958 closed the communication loop by allowing brand owners to broadcast audio-visual advertising directly to consumers into their own homes for the first time.

Television had a massive impact on the way that consumers began to evaluate and experience food and almost certainly contributed to the breakdown of multi-modal sensory engagement, while arguably extending the acoustic aspect of eating by associating particular brands with 'jingles.' Television contributed to changed the Britain's food habits in three important ways, all of which helped to marginalize multi-modal sensory engagement:

- Television linked the image of the brand to the purchase decision
- Television created narratives that helped to establish a perception of food as an instant and synthetic product that signified progress
- Television encouraged the breakdown of eating and socializing around the table

Modernism gives substance to Marx's concerns about commodity fetishism by opening the way for the emergence of a dominant culture of synthetic replacement. Hine argues that when you look at a package "you see far more than a container and a label. You see a personality, an attitude toward life, perhaps even a set of beliefs." (Hine 1997: 5)

Appendix H: Cargill

Cargill was one of a number of trading companies that developed large-scale grain processing activities in the late nineteenth century (1865) and over the twentieth its extended the scale and scope of its business activities to become the largest privately (family) owned corporation[198] in the world, generating $47 billion per annum[199] by the end of that century. Cargill has interests in commodities trading, transport, food processing, food production, and agricultural products and has 47 business units in 54 countries. (Gersick, 1997: 175) Cargill's origins are parallel to those of Armours, in the sense that the initial growth of the company was founded on successful speculation on the outcome of the civil war. Cargill built grain silos that followed the expansion of the railroad westward. Miller confirms how the business was "perhaps the ultimate example of an integrated system that has evolved across more than a century, which now connects at every stage of the food supply chain, from seed to packaged end product." Miller outlines the integrated system as:

- A gain farmer buys all the Cargill inputs as a package: seed, herbicide, and Cargill fertilizer. The farmer signs a contract, which determines the growing and handling conditions, to deliver the produce to Cargill at a specified price and quality.
- The farmer sells the harvest a Cargill elevator (storage facility)
- Cargill processes the harvest into animal feed
- Cargill ships the animal feed to Thailand
- There it is fed to poultry, by a farmer under contract to Cargill
- Cargill buys the poultry and processes, cooks, and packages it
- Cargill ships the packaged product to Europe and sells it to McDonalds or a supermarket

As Miller points out this business strategy "makes contract workers out of many farmers and give Cargill significant influence over the entire value chain" but he also confirms that Cargill, "remains very much anchored to its core competency: as a middleman that removes inefficiencies from the supply chain between producer and consumer. It rarely becomes involved in farming or selling to the final customer." (Miller, 2005: 112) Chandler confirms how the expansion of Cargill's interest in commodities trading evolved out of government intervention: "The postwar decades also saw the rapid international growth of commodity trading firms like Cargill, the US grain trader and largest private company in the United Sates, which took advantage of increased government intervention in the marketing of commodities and the nationalization of mines and plantations, By 1970 a hand full of commodity traders, including Cargill, Continental, Louis Dreyfus, Bunge and Born, and Andre, accounted for more than 90 percent of the European and US wheat exports." (Chandler, 2005: 95)

Storing, or hoarding, grain continues to play an important role in the core strategy, "We bought more capacity with each capital dollar than our competition...must, not wants. The result we out-earned the competition by twice, measuring profit per bushel processed, and up to five times measuring profit on capital invested." (Cargill executive Pete McVay) (Miller, 2005: 117) The stress on "needs, not wants" is central to the tradition of parsimony that Cargill share with the Protestant tradition and other business leaders like Wall-Mart. This association with the

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198 In the USA the majority of corporations are privately owned: "Fewer than 2 percent of all US Corporations ever sell their shares on the public market." (Gersick, 1997: 54)

199 Revenue had increased to $50.83 billion by 2002 (Miller, 2005)

Protestant tradition is further reinforced by a quote from McVay: "We are productive, inventive, and efficient. Spartan, if you will but good citizens."[200] (Miller, 2005: 117)
The tendency to see life as being about a responsibility to generate and preserve capital accumulation seems to create its own morality, which may genuinely inhibit CEOs and executives from fully comprehending the damage that their business practices impose upon others.[201]

Broehl confirms how the major grain trading corporate use "hedge" funding to manage their profits: "this process of acquiring at one point and relinquishing at another can used to counterbalance efforts in the physical market itself to thus give protection against price movements." (Broehl, 1998: 51) He quotes Caves view that "prices in the futures market were "moment-to-moment decisions resting on each dealer's current trading position and conjectures about the future." Almost inherently, each rival was incapable of coordinating his competitors." Caves also observed that "The presence of large traders at high concentration export sales did allow scale economies in coordination and risk bearing that are due to the characteristics of information as an input...There were also scale economies in physical facilities, transportation and storage."(Broehl, 1998: 322)

The ruthless, profit centred, business strategies of Cargill and the other giants of the food processing industry have led to competition in two areas that have had profound effect on what food is grown and how it is processed and consumed. The combination of government subsidy, and investment in technology made it profitable for Cargill and others to extend the use of corn and soybeans in a similar way to how the meat industry had turned its bi-products to profit. Processing corn that was not fit for human consumption into animal feed was at the forefront of a century of investment that quickened after 1945 in which the genetic character and the opportunity to genetically modify corn and soybeans represented a holy grail to business: endless profit and total market control. At the moment corn has better subsidies and offers more immediate opportunities for diversification. Pollan explains: "In the third age of marketing which begins after World War 11, merely preserving the fruits of nature was deemed too

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200 "The God of Calvanism demanded of his believers...a life of good works combined into a unified system...The moral conduct of the average man was this deprived of its plan-less and unsystematic character and subjected to a consistent method of conduct as a whole." (Webber, 2002: 72)

201 Whatever the excuse might be Cargill has a history of flouting and trying to work around the law. Like many large corporations its investment in other countries is predicated on an ability to exploit the lack of legislation to protect workers and the environment. The ruthless business practices of Cargill were exposed in 1975 through an investigation that began with the discovery that three Port Commission grain inspectors assigned to the Cargill terminal in Louisiana had been caught taking bribes (to upgrade the standard of their soybeans) from a company that shipped through the terminal. The upgrading involved assigning clean labels to dirty and contaminated shipments. This led to a wider indictment of industry practices by an Iowa senator Dick Clark who made 5 charges directed at the "big six" grain corporations who dominated the industry:

1) That major grain-exporting companies might be paying cash bonuses to grain elevator operators who deliberately sorted their shipments
2) That major grain companies profited from the sale of these excess stocks
3) That the quantities of grain involved could be massive
4) That there were a number of practices available to grain operators, from "tipping" scales to mixing or blending below grade to misrepresenting loadings to bribery of inspectors
5) That while the major exporters were only indirectly involved in a bribery scandal, they were directly enmeshed in the bonus fraud..."this damaging form of corruption"

The charges led to the setting up of a 'Grain Irregularities Task Force' and files of complains were produced by the UDSA that included complaint from Africa about infestation of weevils and other insects in grain received from Cargill, a shipment to England was found to contain lower protein content than it should have. (Broehl, 1998: 269-171)

modest: The goal now was to improve on nature. The twentieth-century prestige of technology and convenience combined with advances in marketing to push aside butter to make shelf space for margarine, replace fruit juice with juice drinks and then entirely juice free drinks like Tang, cheese with Cheez Whiz, and whipped cream with Cool Whip. Corn, a species that had been a modest beneficiary of the first two ages of food processing (having taken well to the can and the freezer, really came into its own during the third. You would never know it without reaching the ingredient label...but corn is the key constituent of all four of these processed foods. Along with the soybean, its rotational partner in the field, corn has done more than any other species to help the food industry realize the dream of freezing food from natures limitations and seducing the omnivore into eating more of a single plant than anyone would have ever thought possible." (Pollan, 2006: 91)[202]

The business strategy makes for perfect capitalist sense but is deeply worrying for supporters of biodiversity. Cargill and Monsanto have a real interest in not just profiting from the extension of corn and Soybeans as additives but they see opportunity to compete with the meat industry (including their own stake) to produce synthetic, and, in the long-term, far easier profitability. This strategy is symptomatic of the big picture investing that corporations like Cargill excel in. Cargill are not interested in the impact of their strategy on populations, communities, species, other business and the environment, their goal is global dominance. The development of 'suicide seeds'[203] for example, is indicative of the closed mindset that informs the profit motive. The only benefit of a seed that expires once it had germinated is to ensure the continuing profits of the agro-industry corporations. The price to the bio-diversity and the sustainability of communities and fragile eco-systems is ignored in the name of progress and profit.

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202 Pollan argues, " we've been deliberately confused by an industry that spends $36 billion dollars a year on marketing messages to persuade us to eat more, at different times, indifferent paces, like the car, highly processed food because that where the money is...a mass-spectrometer (device for analyzing residues) would reveal that humans (who have been fed on industrial food) mainly consist of corn...agricultural policy in this country is now captive of that (corn) industry so for every bushel they produce they get a check...there's a lot of money behind the corn lobby..." Pollan goes on to explain the links between the oil and pharmaceutical industries and the food industry, pointing out how industrial production depends on two key off shoots of those industries: Ammonium nitrate fertilizer (a bi-product of oil) and antibiotics that "supports the way we raise our animals, because you can't do that without antibiotics..." (Pollan interviewed on Amazon Fishbowl by Bill Maher, October 14th 2006)

203 A suicide seed will only produce one crop, forcing farmers to buy seed form the corporation that has patented them as genetically modified brands that they wholly own (Shiva, 2000)

Appendix I: Unilever

Unilever established, developed, and appropriated many of the characteristics of the corporate food business in the late nineteenth and early twentieth century and undoubtedly provided inspiration for the agenda for the American corporations that followed in their wake. Much of the pioneering work was done by the two companies that combined to form Unilever, they were Jurgens and Van den Bergh, who started manufacturing margarine in the Netherlands in 1872, and Lever and Co who started to produce Sunlight soap in Liverpool in 1884. The two companies combined to form Unilever in September 1929.

Unilever claim credit for inventing modern packaging but the reality is that their early success in marketing was largely based on the pioneering work of Thomas J Barratt[204] who developed a very sophisticated strategy for Pear's soap that Lever largely emulated, including the use of art works by Royal Academicians[205]. Barratt anticipated many of the strategies of modern advertising but he was particularly influential in five respects:

1) Barratt developed the strategy of PR by investing in strategies that led to debate and substantial media coverage[206]
2) Barratt was an early adopter of the use of high art to promote his products and by making reproductions of the originals cheaply available through coupon redemption helped to establish the culture of the visual
3) Barratt was a pioneer of the testimonials, he sought out prominent figure in every country where his products were to be promoted and featured the testimonials in large-scale campaigns that included full page advertisements and hoarding advertising. [207]
4) He significantly altered the scale of turnover invested in advertising
5) He pioneered the development of 'saturation' promotion[208]

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204 Thomas J Barratt was the son-in-law of Francis Pears the grandson of the founder of Pears (1789) he took over joint ownership of the company in 1862. His promotional strategies have earned him the title "the father of advertising."

205 Barratt set the fashion for using art in advertising with his purchase of Sir John Everett Millais' painting 'Bubbles" in 1886 after it has been used as a presentation plate in 'The Illustrated London News'

206 One of Barratt's earliest stunts was to purchase French currency and overprint it with Pear's advertisements before putting it back into circulation. This led to the British government making foreign currency illegal tender but it achieved substantial reportage.

207 Barratt "broke into the American market by persuading the enormously influential religious leader Henry Ward Beecher to equate cleanliness, and Pears Soap in particular, with Godliness - Barratt promptly buying up the whole of the front page of the New York Herald on which to display this glowing testimonial." (bubbles.org)

208 Barratt was essentially responding to the changing context of technology and legislation that had enabled a number of businesses to substantially alter their practices of communicating as well as helping to develop business that specialized in communication: The key factors in the contextual influence included:

- The publication of "The Penny Magazine, 1832
- The publication of the Illustrated London News in 1842
- The invention of Chromolithography around 1866 by Jules Cheret
- The abolition of Advertising Duty in 1853
- The abolition of glass tax 1845
- The abolition of stamp duties on newspapers in 1855
- The abolition of paper tax in 1861
- The invention and application of continuous roll (rotary press) newspaper printing 1863
- The national coverage achieved by the railway system in the 1840s
- The spread of outdoor advertising in the mid nineteenth century on
- The proliferation of shops in the mid nineteenth century on

(http://www.victorianweb.org/history/legistl.html)

Other factors like increased income, leisure-time, literacy and a growing concern about health and cleanliness (and its association with godliness) all contributed to the relative explosion of a new market for branded commodities in the last half of the nineteenth century.

William Hesketh Lever, the founder of Lever Bros may have emulated Barratt's advertising innovations but he, and the two partners that Lever Brothers eventually amalgamated with, were more original, and adroit, in their business strategy. It was the overall business strategy developed by the two companies that became Unilever that made them ultimately so successful and so influential.[209]/[210]/[211]/[212]/

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209 Lever stated that 'sunlight soap' was created, "to make cleanliness commonplace; to lessen work for women; to foster health and contribute to personal attractiveness, that life may be more enjoyable and rewarding for the people who use our products." (www.unilever.com)

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211 "Unilever was the first multinational company that started using genetically modified (GM) products. Their "Beanfeast" range (which is now being sold) contained GM soya. A tiny asterisk attached to the ingredient list was the only mark to warn consumers." (www.corporate.org)

212 An indication of the concern to gain political influence is indicated by the current (2006) roll-call of Non-Executive Directors:

Antony Burgmans - Chairman Unilever N.V & PLC
1972: Joined Unilever
1991: Appointed director
1991/94: Personal products co-ordinator
1994/98: Business group president, Ice Cream and Frozen Foods Europe; chairman of Unilever's Europe Committee
1998: Vice chairman, Unilever N.V.
1999: Chairman of Unilever N.V. and vice chairman, Unilever PLC
2005: Chairman of Unilever N.V. and PLC
The Rt. Hon. The Lord Brittan of Spennithorne, QC
1989/99: Member of the European Commission
1989/92: Responsible for competition policy and financial institutions at EC
1993: Responsible for external economic affairs and trade policy at EC
2000: Advisory director to Unilever
2004 Non-executive director to Unilever
The Rt. Hon. The Baroness Chalker of Wallasey
1974/92: Member of Parliament for Wallasey
1992: Life peer in the House of Lords
1998: Advisory director to Unilever
2004 Non-executive director to Unilever
Wim Dik
1964: Joined Unilever
1964/81: Various positions in the food and chemical divisions
1981/82: Minister of Foreign Trade in the Netherlands
1988: Joined Netherlands PTT
1989: Chairman of board of management and CEO of Koninklijke PTT Netherland
1998/2000: Chairman of the board of management and CEO of Koninklijke KPN
2001: Advisory director to Unilever
2004: Non-executive director to Unilever
The Lord Simon of Highbury, CBE
1962/95: CEO, BP plc
1997/99 UK government minister
2000: Advisory director to Unilever
2004: Non-executive director to Unilever
Jeroen van der Veer
2005: Chief executive, Royal Dutch Shell, following 30 years with the business
2002/04: Member, supervisory board, Dutch Central Bank
2002: Advisory director to Unilever
2004: Non-executive director to Unilever
Dr Byron E Grote
1979: Joined Standard Oil
1986: Vice President, Retail Sales at Standard Oil's mining subsidiary, Kennecott
1992: Regional Chief Executive, BP Columbia
1995: Deputy Chief Executive Officer, BP Exploration
1999: Executive Vice President, BP Exploration and Production
2000: Chief Executive, BP Chemicals
2002: Chief Financial Officer, BP
Mr Charles E Golden
1970: Joined General Motors
1989: Chairman and CEO of Vauxhall Ltd – GM's UK operation
1996: Executive Vice President and Chief Financial Officer at Eli Lilly
2006: Non-executive director to Unilever
Mr Jean-Cyril Spinetta
1972: Head of Investment, Planning and Research at the French Ministry of Education
1976-1990: Various Civil Service posts, including Head of the Information Department for the Prime Minister and Director at the Ministry of Education
1990: Chairman and CEO, Inter Air
1997: Chairman, Air France

Some of the key factors that informed the early success of these businesses are identified below:

- Both companies had a clear sense of the brand characteristics of their products
- Both companies targeted their products at the low-income market and aimed for mass sales
- Both companies took full advantage of contemporary science to enhance the effectiveness, and ease of use, of their products
- Both companies were quick to exploit advances in printing, packaging, and distribution to ensure that their products had high recognition, relevance and availability
- Both companies promoted their brands through words and images that exploited the leading concerns of contemporary consumers
- Both companies sought out international sources for raw materials and set up, or bought into production and processing companies in those countries
- Both companies sought out foreign markets and moved production to countries where import taxes made it prohibitively expensive to export
- Both companies were quick to extend their product range through diversification and innovation
- Both companies expanded by buying out competitors or companies that presented brand extension opportunities
- Unilever maintained the brand names that it purchased as well as inventing new ones, rather than promoting the master brand of the Corporation
- Unilever maintained close contact with the centres of political influence in the countries, or communities in which it operates.
- Unilever has maintained a commitment to philanthropy that William Lever created with the building of a workers village in Port Sunlight, in Liverpool. Though the current policy is less significant financially than Lever's gesture it is equally informed by an intention to win friends and influence perception

(www.unilever.com, www.corporatewatch.org, www.adbrands.net, Koehn 2001, Belasco 2001, Segers 2006)

Unilever has maintained its pioneering approach to business and through a combination of its strategic targeting of low-income consumer markets, acquisition, political influence, brand innovation and extension, vertical integration of growing, processing, distribution and a relatively high (in relation to its competitors) spend on advertising and marketing that continues to focus on emerging, or dominant consumer concerns, the corporation has maintained a dominant role in the global market place. It is one of the world's top three largest branded food suppliers, the second largest (after Procter and Gamble)[213] packaged goods manufacturer and the U K largest business advertiser. Having built its market dominance through diversification the corporation decided to rationalize its activities at the end of the twentieth century in the face of falling profits. The company was split into two separate divisions: food and home, and the brand portfolio was set at 400 rather than the 1600 that it comprised of in 1999. While Unilever

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Mr Kees J Storm
1993 to 2002: Chairman of the Executive Board of AEGON N.V.
Mr Storm is Chairman of the Audit Committee (Source: www.unilever.com)

213 Corporate watch confirm that Unilever and Proctor & Gamble signed an agreement to share market intelligence in 2002 (www.corporatewatch.org)

has continued to shed brands, including Birds Eye and it other frozen food brands this year (2006) it has also purchased new brands, like the USA corporation 'Better Foods.' The strategy is based on a desire to concentrate on the most profitable brands and this has meant substantial job losses and cost cutting as well as dispersal. In the meantime the corporation has been struggling to find relevance in a market place that is increasingly witnessing a questioning of its core strategies of packaged, processed foods on the basis of health[214] and to some degree ethics and environmental responsibility.[215]

The historical, scientific, processing, packaging, advertising and brand led strategy of Unilever can be illustrated through its acquisition of Slim-Fast in 2000. Cynics could argue that Slim-Fast provides the perfect stalking horse for the promotion and the conditioning of the public's taste for future foods. [216]As a corporation that is committed to science as the answer to the food of the future Slim-Fast gives Unilever substantial strategic advantages:

- It allows Unilever to balance its portfolio of addictive and unhealthy processed brands with the provision of a solution to the problem that it is actively helping to create.
- Slim-fast's promotion and branding explicitly and implicitly suggests that the problem of obesity is a problem of eating the wrong foods, which allows them to promote slim-fast as a scientific solution to a natural problem. This marketing strategy legitimizes Unilever's promotion of highly processed nature of the slim fast-brands as health supplements.
- The slim-fast diet requires participants to substitute, or supplement natural foods with a highly processed alternative that is made of bi-products of the food processing industry, a number of which have been identified as addictive.
- The Slim-fast strategy is designed to build a relationship with individual consumers and build brand trust
- Slim-fast build belief in a diet that begins and ends with a meal in can that legitimizes sweet, fatty tastes and the absence of any involvement in preparation

The following extracts are taken from the current web sight and reveal how the product is marketed and what it claims to do and how. The product has been recently 'improved,' which is typical strategy employed by the food industry to persuade new consumers to try the product and offer existing consumers evidence of continuing development. There are normally motives involved in improving a product:

- Competition
- Health concerns in which some of the ingredients of the existing product have been targeted as a problem
- More efficient and cost effective use of raw materials and manufacturing process

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214 CEO Niall Fitzgerald (Fitzgerald was replaced in 2004 by the current (2006) CEO Patrick Cescau) "likes to say he bought the ice-cream company Ben & Jerry's on the same day he bought Slim-Fast because "one makes you fat, and the other makes you thin." (source: BusinessWeek online, date viewed: 19/8/01)

215 Unilever has been, and continues to be, a major developer, user and lobbyist in support of biotechnology, advocating a position of the most efficient source of raw materials.

216 Unilever had a leading reputation in the sector for leading the introduction of highly synthetic food brands that are typically predicated on 'instant' results dating back at least as far as Nescafe, "instant coffee." Possibly to build on an association with the plastics industry, "In 1956 Unilever hired W Gardener Barker, a market researcher from Simonize Wax to be in charge of new products at its Lipton subsidiary. Three years later he was chosen to lead the company, where his distinguished career was highlighted by his successful introduction of 'Cup- a Soup.'" (Levenstein, 2003: 114)

- Extended shelf life
- New packaging that picks up on the brand's current attempt to pitch to consumers at the point where there is maximum persuasive opportunity. (Hui 2004, Owusu-Apenten 2004, McGee 2004, McWilliams 2004, Weaver 2003, Neilsen 2003, Singh 2001)

Unilever's explanation is clearly different: "Why did Slim·Fast decide to improve the Optima Shakes? As a leader in weight loss, Slim·Fast is committed to bringing new products to the market that can help people be successful at losing weight. For the last 4 years, Slim·Fast has been studying how to make foods more satisfying so people can feel full longer to help manage between-meal hunger. This is a key to helping people fight hunger pangs and avoid overeatingso they can stick to their diet and be successful at losing weight. This new, innovative technology has been added to the Slim·Fast Optima Shakes." (www.slimfast.com) [217]

Unilever claim, "The improved Optima Shakes contain a unique blend of natural, common food ingredients (proteins and fats) to create a nutritionally-balanced formula that not only has a richer, creamier texture but also helps control hunger for up to 4 hours, Per calorie consumed, the improved Optima Shakes control hunger longer than our Original Slim·Fast Shakes. This means that if you consume an improved Optima Shake, you will stay full longer than if you consumed the same amount of calories of our Original Slim·Fast Shake. This new advance in food technology is designed to work with the body's natural digestive process to stimulate the body's natural ability to signal satiety (satiety is a feeling of fullness after a meal). The result is that the feeling of fullness lasts for up to 4 hours with just 190-calories—fewer calories than most meals and many snacks. Feeling full and content between meals can help you better manage your food intake so you are less likely to overeat, making it easier to stick to your diet and lose weight. Optima Shakes do not contain any stimulants, herbal ingredients, or appetite suppressants. (but they do contain) milk protein (calcium caseinate) and vegetable oils (canola and hydrogenated soybean oil) richer and creamier than our original Slim·Fast shakes."[218]

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217 Although Unilever do not draw attention to the balance of ingredients and their actual role, or desirability, it is clear from this contents list that the primary addictive components of salt and sugar that play a major role in stimulating the current health crisis are present in relatively substantial amounts, figuring in the top eight ingredients.

Nutrition Facts		
Amount Per Serving		
Calories (Energy)	180	
Calories from Fat	50	
% Daily Value*		
Total Fat	6g	9%
Saturated Fat	2g	10%
Trans Fat	0g	
Polyunsatured Fat	0.5g	
Monounsaturated Fat	3.5g	
Cholesterol	5mg	2%
Sodium	200mg	8%
Potassium	600mg	17%
Total Carbohydrate	25g	8%
Dietary Fiber	5g	20%
Sugars	18g	
Protein	10g	20%
Vitamin A	35%	

Vitamin C	100%	
Calcium		50%
Iron		15%
Vitamin D	35%	
Vitamin E	100%	
Vitamin K	25%	
Thiamin		35%
Riboflavin	35%	
Niacin		35%
Vitamin B6	35%	
Folate		30%
Vitamin B12		35%
Biotin		35%
Pantothenic Acid		35%
Phosphorus	50%	
Iodine		35%
Magnesium	35%	
Zinc		15%
Selenium	25%	
Manganese	35%	
Chromium	35%	
Molybdenum		30%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.
*results vary based on starting weight, activity level and other factors.

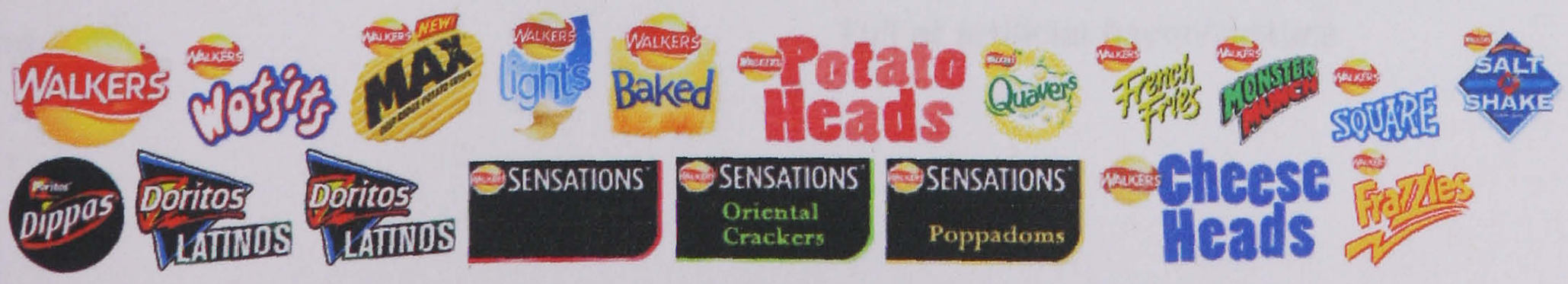
Appendix J: Non-products

Greater levels of investment in contemporary packaging style design reflected the need to squeeze differentiation to the maximum pitch in an increasingly confused and competitive visually led competition between brand extensions, new brands, and own label brands, all of which were beginning to target more specific demographic potential market opportunities. This reinforced the pre-existing tendency to concentrate on formal shelving arrangements that directed the consumer's journey in very precise ways. This can be illustrated through a brief analysis of how the design of crisps has responded to the competitive but lucrative environment provided by the supermarket. When supermarkets started to impact on food pound British crisp sales by an Australian firm 'Smiths,' that had entered the British market shortly after the end of the First-World-War. Smith's crisps were a familiar but relatively minor player in the British food market, which was informed by their relatively high cost and the fact that the savory snacks were not an established part of the average consumers diet. A combination of competition and television advertising and supermarket promotions helped a British company, Walkers to gradually overtake Smiths market dominance while at the same time helping to establish crisps as a premier snack food. The real shift occurred in the early 1990's when Walkers used design and new packaging materials to shift the image of crisps from a cheap and cheerful snack to something that looked more substantial

Walkers 1950s Walkers 1980s Walkers 1990s

The 1990's witnessed a growing interest in the crisp market as various new brands appeared and Supermarkets began to improve the branding and quality threshold of their own brands. Walkers were deemed to be in need of personality and a television campaign was developed featuring the ex footballer, turned sports commentator, Gary Lineker. The use of Lineker was designed to draw an analogy between the nice but bland personality of Lineker with the public perception of Walkers crisps at a time when new competitive brands were stressing a more exotic personality. The first advert screened in 1995 was called "No More Mr. Nice Guy" and featured Lineker playing against type by trying to steal children's crisps suggesting that Walkers were so desirable even Lineker would go through a personality change to get hold of them. The campaign was supported by a redesign of the packaging and a strategy that involved paying major supermarkets, "slotting fees" in order to ensure that crisps has a prominent place in the crisp display.

The growth in popularity of crisps points to a key role that the supermarket has played in the deterioration of the British diet. In 2006 Walkers are selling 11 million packets of crisps per day or 3,916 million a year and this has been achieved by a carefully orchestrated strategy of design and product innovation that includes sub-branding, niche branding, different sizes



A selection of the carefully designed brand and sub-brand varieties that allow Walkers to dominate the market by competing with itself:

The 2006 Walkers Range

Walkers Heinz Tomato Ketchup Flavour Crisps

Walkers Cheese & Onion Flavour Crisps

Walkers Crisps BBQ Rib Flavour

Walkers Crisps Steak & Onion Flavour

Walkers Lights Cheese & Onion Flavour

Walkers Lights Simply Salted

Walkers Lights Sour Cream & Chive Flavour

Walkers Marmite Yeast Extract Flavour Crisps

Walkers MAX Paprika Flavour

Walkers MAX Chargrilled Steak Flavour

Walkers MAX Cheese & Onion Flavour

Walkers Pickled Onion Flavour Crisps

Walkers Potato Heads Naked (Unsalted)

Walkers Potato Heads Prawn Cocktail

Walkers Potato Heads Ready Salted

Walkers Potato Heads Salt & Vinegar

Walkers Prawn Cocktail Flavour Crisps

Walkers Ready Salted Crisps

Walkers Roast Chicken Flavour Crisps

Walkers Salt & Shake Crisps

Walkers Salt & Vinegar Flavour Crisps

Walkers Sensations Caramelised Onion & Sweet Balsamic Vinegar

Walkers Sensations Gently Infused Lime & Thai Spices Flavour

Walkers Sensations Olive Oil Lightly Salted

Walkers Sensations Olive Oil Sun Ripened Tomato & Basil Flavour

Walkers Sensations Sea Salt & Cracked Black Pepper Flavour

Walkers Sensations Sea Salt Flavour

Walkers Sensations Thai Sweet Chilli Flavour

Walkers Smoky Bacon Flavour Crisps

Walkers Spicy Chilli Flavour Crisps

Snacks

Doritos Cool Original Flavour

Doritos Extreme Chilli Heatwave

Doritos Latinos Chargrilled BBQ

Doritos Latinos Peppered Chicken Sizzler

Walkers Frazzles

Walkers French Fries Cheese & Onion Flavour

Walkers French Fries Ready Salted

Walkers French Fries Salt & Vinegar Flavour

Walkers French Fries Worcester Sauce Flavour

Walkers Monster Munch Flamin' Hot Flavour

Walkers Monster Munch Pickled Onion Flavour

Walkers Monster Munch Roast Beef Flavour

Walkers Quavers Cheese Flavour

Walkers Quavers Prawn Cocktail Flavour

Walkers Quavers Salt & Vinegar Flavour

Walkers Sensations Poppadom Bites Lime & Coriander Chutney

Walkers Square Cheese & Onion Flavour

Walkers Square Ready Salted

Walkers Square Salt & Vinegar Flavour

Walkers Wotsits Flamin' Hot

Walkers Wotsits Prawn Cocktail Flavour

Walkers Wotsits Really Cheesy Flavour

Walkers Wotsits Twisted BBQ Flavour

Walkers Wotsits Twisted Really Cheesy

Walkers Great British Dinner Flavors (a temporary promotion late 2006)

Designers are faced with giving the individual brands shelf appeal, while maintaining an overall brand feel. The design of a new logo and the use of plastic printable bags give the designers a canvas on which to feature the Walkers logo and specific product details. The packets are filled with nitrogen gas immediately prior to sealing in order to preserve the contents and keep the bags looking full. The mix of packaging and the traditional cage strategy of supermarket layout and consumer management works to create its own logic and its own substitution of nature's harvest. Crisps become the bounty that is ready to pick from the shelves. All of the negative associations of nature that have been constructed from the promotion of efficiency and convenience criteria are answered:

Nature	**Industrial**
Dirty	Clean and Hygienic
Work intensive	Easy to locate and digest, no preparation
Unpredictable	Predictable, uniform experience
Bland	Full of artificial flavor/texture

The supermarket follows the general strategy of the corporate food industry to transform nature into a totally synthetic equivalent while maintaining a visual impression to satisfy tradition. In the supermarket the non-product is located in a non-place in which the shelves

become the equivalent of the row between the plants that facilitates the easy pickings of the bountiful harvest tradition, but without any of the effort associated with the before after, or during physical exertion.

Walkers epitomizes the logic that began with branded biscuit commodities like the cream cracker but her development of the late twentieth century crisp is a much more sophisticated commodity that proposes itself as an all-purpose snack food. While it has negligible nutritional value, and despite (2005) massive decreases in the salt and fat content it is bought and treated like an instant meal. The British Heart Foundation has recently promoted a campaign to draw attention to the dangers of the crisp habit: "Eating one packet of crisps a day is the equivalent of pouring almost five litres of cooking oil down your throat every year. A BHF survey of eight- to 15-year-olds showed half of children admit to eating at least a pack of crisps a day, while almost one in five eat crisps twice a day or more. Professor Peter Weissberg, BHF medical director, said: "The BHF believes having a daily dose of such high fat, nutritionally poor product is a threat to children's long-term health..."This campaign is about challenging our children about what's lurking in their snacks, takeaways and ready meals. It's about making these foods the exception rather than the rule." (British Heart Foundation, 26-8-06)

Despite increasing competition from corn-based chips most English crisps still have their origins in potatoes but this is more to do with tradition than an allegiance to nature. The Crisp has been retextured, flavored and represents the value system that reject unequal size fruit and vegetables, purely on aesthetic grounds. Evidence of the artificial nature of contemporary crisps was reveled last year in an additive scare" "A new alert over illegal chemical dyes in food was issued by the Food Standards Agency last night. Nineteen new products, most of them varieties of supermarket crisps, were added to the list of nearly 50 foods contaminated with Para Red, a suspected cancer-causing ink. Food industry tests have shown that Para Red dye has been used to adulterate chilli and cayenne powder, which has in turn been used in the manufacture of large numbers of pates, sauces and ready meals supplied to UK shops. The latest adulteration scandal follows the discovery of another illegal and cancer-causing dye, Sudan 1, in the food chain earlier this year. It raises the possibility that a substantial part of the spice trade is corrupt. Para Red has a very similar chemical structure to Sudan 1. Crisps on sale in Tesco, Asda, Morrisons and the Co-op were among the products being taken off sale yesterday. (Guardian, 25-5-06) [219]For the food industries and the food retailers the crisp provides an ideal commodity that achieves the following benefits:

- Crisps provide a highly profitable demonstration of the technological/scientific capability to translate a raw natural food source into an almost synthetic one[220]

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219 There is increasing evidence of the side effects of the synthetic additives that are a typical characteristic of crisps. For example in 2003 The Council of the European Union "considered a ban on smoky bacon flavouring amid concerns that it may increase the risk of developing cancer. Studies have found an increased risk of certain cancers in countries where there is a high consumption of smoked foods.
However, the research has only uncovered an association – and no definitive proof of cause and effect. The proposed regulations would cover all artificially flavoured smoked foods including ham, fish, barbecue sauces, flame-grilled burgers and snack foods." The reaction of British MEPs illustrated the links between the interests of the food industries and government. "People in Britain spend £5bn a year on crisps, eating more snacks than any other European country, and there is a fear among some MEPs that these new measures will impact disproportionately on the domestic industry...this specifically affects the food-and-drink industry in the East Midlands." (Sunday Times, 5-5-03) The EU has subsequently clarified that it was concerned about the actual impact of real wood smoking, as opposed tto the chemical simulation applied to crisps like Walkers 'Smokey Bacon. (http://ec.europa.eu/unitedkingdom/press/euromyths/myth122_e)

220 The Co-op took a lead in 2005 and banned the following colours, (all of which should be avoided according to the HACSG), from Co-op brand products, many of these are still currently available if crisps:
E120 Cochineal, Carmines and Carminic Acid
E102 Tartrazine – linked to intolerance/allergic reaction. Widely thought to cause hyperactivity
E110 Sunset Yellow – thought to cause allergic reaction, some evidence of gastric upset and some inference affects kidneys

- Crisps have an extensive shelf life
- Crisps are relatively cheap to transport from factory to retailer
- Crisps encourage a dependency on artificial additives
- Crisps demonstrate the relationship between above line marketing and demand
- Crisps demonstrate that the consumer's continuing trust in the USP and ESP of branded products can be entirely manufactured by marketing and artificial additives
- Crisps demonstrate that PR led strategies like salt and fat reduction not only divert attention away from health risks but create a myth of that the processed food industry behave responsibly
- Crisps demonstrate that nutritional value has little impact on diet
- Crisps demonstrate that health dangers have little impact on diet
- Crisps demonstrate that brand expression via bright, attention grabbing colours, printed on plastic, convince consumers of the products values more effectively than raw and real food
- Crisps demonstrate that spending more on marketing than production works to create profit from non-foods

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E122 Carmoisine – linked to intolerance/allergic reaction

E124 Ponceau 4R – linked to intolerance/allergic reaction

E129 Allura Red AC – some evidence of hypersensitivity

E104 Quinoline Yellow

E127 Erythrosine – may affect thyroid hormone levels in children. Adverse effects on thyroid

E131 Patent Blue V – linked to intolerance/allergic reaction

E132 Indigo Carmine – linked to allergy/allergic reaction

E142 Green S – low incidence of testicular cancer has been reported in a study

E151 Brilliant Black (Black PN)

Existing list of colours banned by the Co-op:

E123 Amaranth, E128 Red 2G, E154 Brown FK, E155 Brown HT, E133 Brilliant Blue FCF, E180 Litholrubine, E173 Aluminium, E174 Silver and E175 Gold (http://news.bbc.co.uk/1/hi/health/4670953.stm) (11-7-06)

Crisps Conclusions

Through their bright colours, plastic, gas filled packaging and sports celebrity associations Walkers crisps express the characteristics of the relationship between the processed food industry and the supermarket. The images below form the Walkers website (walkers.corpex.com) reveals the journey after the potatoes have arrived at the factory. The clock symbol is designed to emphasize the freshness and the speed of transformation from a natural sources the packaged and delivered crisp (four hours). Another reading would note the regular size of the potatoes, the lack of information about their source, the mechanical nature of the production process and the lack of multi-modal sensory involvement of the workers (beyond, quality sampling) the invisibility of the additives that create the brand texture and flavors transforming the crisp form natural to synthetic product, and the invisibility of the gas injected bagging process.

The process is one in which the factory system is designed to overcome any natural aspects of the raw materials in order to maximize the profit potential by avoiding the time wastage involved in human interaction. Humans are reduced to machine minders and nature is transformed to into a synthetic and infinitely malleable material that can be transformed in terms of taste and texture at the touch of a button.

Appendix K: The Machine Syndrome

There is a tendency at the corporate level of business to unquestionably, apply, certain aesthetic norms that emanate from the modernist tradition, and or materials, technology and management priorities, that represent efficiency, and profit benefits/strategy. Design for the corporate food sector reflects the modernist 'machine-aesthetic' values that have dominated mainstream design since they were developed in the early twentieth century. The store design and layout of Tesco for example continues to reflect these values unquestionably layout but food products typically disguise the rational grid priorities with a cardboard wrapper that balances the rational with allusions to nature, or wholesomeness. The concern to develop a modern style pioneered by a number of European and America designers had a huge influence on the techno rationalist tendencies of the corporate food business and served to cement the connection between business, design and classicism.

Le Corbusier was a pivotal figure in the development and advocacy of the modernist aesthetic but while he was an advocate of the "mass-production spirit" he also talked about the need for "classical hierarchy (as) discipline." (Le Corbusier, 1985: 6), (Gans, 2000: 24) Le Corbusier helped to establish and exemplified the connection between design, classicism, capitalism, mass consumption and multi-sensory denial. He saw architecture as a visual art: "Man looks at the creation of architecture with his eyes, which are 5 feet 6 inches from the ground. One can only deal with the aims which the eye can appreciate..." (Le Corbusier, 1985: 10)

While he recognized the importance of the spiritual dimension of design and sort to in clued it with in his own Le Corbusier's ideas, along with those promoted by the Bauhaus [221] and the Ulm Schools of design (1919-1933)[222] have become a manual of form and function [223] for successive generations. "As designers we have a great responsibility. I believe designers should eliminate the unnecessary. That means eliminating everything that is modish because this kind of thing is only short-lived." (Dieter Rams, quoted: Fairs, 2004) The primary skill of the designer in the twenty first century is centered on visual seduction and designers demonstrate little or no interest in the non-visual senses, and multi-modal sensory experience.

The consequence has been the disembodiment of experience for designers, business and consumers and this syndrome of multi-sensory marginalization are exponentially reinforced by the every expanding range of designed commodity and interfaces that dominate and shape out perception of experience. The incorporation of the machine aesthetic into product design and architecture by some of the major corporate business and institutions[224] and its association with

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221 'German models were more scientific, rational and restrained, respecting the laws of simple geometry and classical proportions" (Sparke, 1985: 55)

222 The Ulm School was initially proposed by American John McCloy and was established in 1953 with the Bauhaus educated architect Max Bill as its first Director. The school originally intended to cover a broad spectrum of industrial and communication studies but this was rationalised by the Bill's successor Tomas Maldonado who took over in1956. The relation between 'Man and Machine' played a key role in Maldonado's pedagogy and his approach has been accused of lacking emotional connection. 'Industrial Design is an activity the ultimate goal of which is to define the formal characteristics of industrially produced articles. With these I do not mean the distinctive outward forms but rather the structural and functional connexions that change the product into appropriate units and which both the manufacturer and the consumer consider as such'

223 "In 1923, the Bauhaus reacted with a changed program, which was to mark its future image under the motto: "art and technology - a new unity." (Bauhaus Archive Museum of Design, ttp://www.bauhaus.de/english/index.htm)

224 The majority of the stylistic norms and their advantages for business were revealed in two key buildings that were completed in the 1950's. Le Corbusier's plan for the 'Secretariat at the United Nations Headquarters' (1952) and Mies van der Rohe's Seagram Building built in Park Avenue, Manhattan, 1954 – 1958 became an icons of modernist architecture around the world. These two very different

wealth and taste has helped to make it ubiquitous and has also informed its adoption as benchmark of taste. Products that have nothing to do with food become measures of trends and this has allowed the machine aesthetic to penetrate, survive and prosper in spheres of design that have a completely different purpose.

The design and cultural heritage that contemporary design is still slavishly dependent upon is conveniently illustrated by the Apple iPod, an mp3 player, that has dominated design and business conversations for the past five years product because of its iconic and financial success. According to the New York Times Apple's iPod was developed in just six months and launched on October 23rd 2001. The device was created by a 35-member team of designers led by Tony Fadell,[225] an engineer and was styled by Jonathan Ive[226] (New York Times, 26-4-04) As the illustrations below reveal Ives is reinterpreting the design lead of rams who inherited his minimalism form the Bauhaus, who borrowed from Classicism. Ive's product provides twenty first century design with what appears to be a contemporary icon that perpetuates the visually led grid mentality that would have been recognized by Descartes and Aristotle as an expression of the disembodied intellect.

2001

Design: Jonathan Ive, 2001, Desiription: Apple iPod,
Company name Apple (http://store.apple.com/Apple/WebObjects/)

1977

Design: Dieter Rams, 1977, Description: Remote control
RC 1 for "Atelier" series, Company name: Braun
(http://www.io.tudelft.nl/public/vdm/fda/rams/...)

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buildings helped to persuade sceptics of the functional as well as the aesthetic advantages of modernism by opening up interior space. The machine aesthetic became a perfect backdrop for the emerging profession of corporate design. The linearity and clearly stated concern with efficiency matched contemporary agendas in management theory that was beginning to embrace the concept of the 'silent sales man' the 'hidden persuaders' that Vance Packard (Packard (1955) rallied against were subsumed in the language of the buildings where the control of consumers desire and need was arguably much more insidious that anything that Packard found lurking in contemporary advertising. These examples of international style architecture had a major influence on the adoption of building and interior design solutions that were the product of rational design and worked to support rational management. "Skyscrapers reveal their bold structural pattern during construction. Only then does the gigantic steel web seem impressive. When the outer walls are put in place, the structural system, which is the basis of all artistic design, is hidden by a chaos of meaningless and trivial forms...Instead of trying to solve old problems with these old forms we should develop new forms from the very nature of the new problems. We can see the new structural principles most clearly when we use glass in place of the outer walls, which is feasible today since in a skeleton building these outer walls do not carry weight. The use of glass imposes new solutions." (Mies van der Rohe, quoted (Pawley M (p12), introduction and notes. Library of Contemporary Architects: Mies van der Rohe)

225 Tony Fadell is senior vice president of the iPod Division at Apple reporting to the CEO. (http://www.apple.com/pr/bios/fadell.html)

226 London born designer Jonathan Ive is the senior vice president of Industrial Design at Apple, reporting directly to the CEO. Since 1996 he has been responsible for leading a design team widely regarded as one of the world's best.
Recognized with numerous design awards, Apple products have become celebrated design icons featured in the permanent collections of museums worldwide including MOMA in New York and the Pompidou in Paris.
Ives holds a Bachelor of Arts and an honorary doctorate from Newcastle Polytechnic. In 2003 he was named Designer of the Year by the Design Museum London and awarded the title Royal Designer for Industry by The Royal Society of Arts.
(http://www.apple.com/pr/bios/ive.html)

These norms generally implicitly and/or explicitly dominate briefing and signing off. Competitors who break rank, or significant swings in consumer habits and values normally drive the exceptions to the general norm of aesthetic rationalization, and its implications for multi-modal sensory marginalization. Among the most obvious examples of aesthetic rationalization sources are:

- The techno-rationalist traditions of European modernism know as the machine aesthetic
- Information Design traditions that favour the grid approach to layout
- The rationalist tradition of industrial design
- The prevalence of modularity in the design and manufacture of commercial display fixtures and fittings
- The prevalence of using industrial techniques for building design and erection that favour big shed formats, which maximize access and efficiency and limit investment because of the off-the-shelf potential of standard materials and systems
- The tendency to rely on drawn plans that allow management, designers and other skill sectors to evaluate and prioritize the most effective use of space before any other priority is considered
- Legislation
- The rational priorities of the bureaucratic mindset that dominates supermarket management

Appendix L: Shopping and the Supermarket: The History of Access

Shops, markets and fairs have been a feature of life since the earliest civilizations rationalized their relationship with their habitat, with each other and other cultures. Consumerism, which is often treated as a bi-product of industrialization, has also been a factor in determining why things, including food, is bought, or sold for a considerable period of time. Stearns argues "that, once established and as political conditions settled, many aristocracies did make a fairly explicit transformation to a more affluent style of life." He points out by example, the "European feudal nobility by the thirteenth century (who displayed) the common signs...a growing interest in fancy clothing, a taste for key imports (like sugar...the European nobles developed a pronounced sweet tooth after they encountered sugar during the Crusades) plus a growing interest in decorative objects in the home." (Stearns, 2001: 2)

Access is the most obvious distinction that separates the shop and the act of shopping, from the pre-industrial/industrial past. Stearns suggests, "Modern consumerism differed from past precedents in part because interests in consumerism became more widely shared beyond the upper classes. The interests themselves were not brand new." (Stearns, 2001: 2) Sterns highlights the connection between income and the spread of consumerism, while being careful not to generalize she suggests, "before modern times, and if measured by modern standards, most people were poor; often desperately poor. One key reason for the lack of mass consumerism was this poverty. Furthermore, even people above the most desperate were geared primarily for production for local self-sufficiency. Trade consisted largely of exchanging goods and services within the region, mainly by barter...In these circumstances, not much money circulated, and opportunities to buy consumer items were accordingly constrained. But...peasants were not uniformly poor. Most villages contained a bit of a hierarchy...but they did not primarily use their margin in consumerist ways." (Stearns, 2001: 4)

Phase One: The Emergence of the Multiple Chain

There is considerable debate concerning the relatively dramatic expansion of food retailing during the latter half of the nineteenth century. The debates centre on questions of who led whom, and what led what? These debates typically centre highlight the relationship between Britain and the USA in particular. Some key contextual factors help to explain why both countries enjoyed retail innovation and expansion and, taken from historical reviews of UK retailing, these include the following:

- Professionalism: Precedent and text books were increasingly available and has been developing since the seventeenth century, Benson and Ugolini highlight the emerging professionalism of retailing in the seventeenth century (e.g.: 'The Complete Tradesman,' which went through three editions in 1684) and contained chapters on bankruptcy and the rules for buying and selling goods. (Benson, 2006: 224) Fortnum and Mason (est. 1707) and Harrods (Initially food only, est.1849) were influential examples of the ability to make substantial profits from selling food.

- Population increase: Floud & McCloskey confirm, "between the census years 1861 and 1911 the British population rose from 20.066 million to 36.070 million, a rise of 79.8 percent." (Floud, 1994: 4) Most of the population increases were in the rapidly growing cities. (Jeffreys 1954)

- Increased employment: "The labour force grew from 10,523 million to 18.286 million during the same period." (Floud, 1994: 4) A dramatic increase in white collar/service sector workers was key factor in the increased numbers of people in employment. (Kirby 1994)

- Economy: Floud confirms, "at the end of the nineteenth century Britain possessed the wealthiest and most powerful economy that he world has ever known. The average income of its citizens was greater than that of any other country, the majority of the world's trade was carried out in its ships and financed by its institutions while its external investments surpassed those of all the other major economies combined." (Floud, 12994: 1)

- Income: Sterns highlights the connection between income and the spread of consumerism, being careful not to generalize. "before modern times, and if measured by modern standards, most people were poor; often desperately poor. One key reason for the lack of mass consumerism was this poverty. Furthermore, even people above the most desperate were geared primarily fro production for local self-sufficiency. Trade consisted largely of exchanging goods and services within the region, mainly by barter...In these circumstances, not much money circulated, and opportunities to buy consumer items were accordingly constrained. But...peasants were not uniformly poor. Most villages contained a bit of a hierarchy...but they did not primarily use their margin in consumerist ways." (Stearns, 2001: 4) In the period 1860-1914 "nearly 80 percent more people were each on average about 80 percent better off." (Floud, 1994: 4)

- Profit-Margin: Sainsbury's was among the early grocery chains (1869) but it was slower to expand than its newer competitors like Lipton's: "In order to sell at competitive prices John James needed to negotiate low prices with his suppliers. This was only possible when buying large quantities. Other retailers, for example Thomas Lipton or Home and Colonial, had far more shops than Sainsbury's and although they sold only a limited range of goods - Home and Colonial sold just five products - the scale of their businesses enabled them to do so very cheaply. It was essential for John James to match their prices and so he increased his chain of shops. This allowed him to buy goods in greater quantities and sell them more cheaply." During the period 1890 to 1900 Sainsbury's increased their number of branches from 16 to 48 and the number of staff increased from 180 to 950. By 1903 Sainsbury has expanded again to on hundred branches. (http://www.j-sainsbury.co.uk/museum/timelineFrameset.htm)

- Legislation: Zukin highlights the pressure from local government in the first half of the nineteenth century as an incentive for food shopping to move indoors. Health concerns, tax revenue and corruption that were rife in the wholesale food business were all factors. She points out that moving "shopping indoors helped to end informal haggling over the prices, and limited the opportunity for poor women to buy unsold fruit and vegetables at lower prices late in the afternoon." (Zukin, 2005: 21)

- The expansion in size and function of cities and towns and the formalization of shopping zones, like the high street, that were associated with quality retailers. (Scott, 1977: 4)

- Culture change: Stearns argues that the "rise of consumerism in eighteenth-century Western Europe involved an array of new goals and behaviors. In addition to the novel methods of the shopkeepers and producers, host of individual people were reevaluating what the goals of life should be, and what brought happiness." He suggests that it was never as simple as, "give a person more money than he absolutely needs, and he'll become a consumerist." Stearns acknowledges that "new earnings, and some human nature impulses, the factors of new goods and new marketing procedures' (and emulation) goes along way to providing an explanation" but he does not feel that they provide an adequate explanation of "why some people would pass down a dress or a teapot with loving care, clearly believing it had deep emotional meaning beyond its material form." (Stearns, 2001: 26-27)

- Imports: O Grada confirm the dramatic increases in Britain's dependency on imported foodstuffs after 1860, "though Britain had long been an importer of food-stuffs such as cheeses from Holland and live cattle and grain from Ireland...The opening up of the American prairies fro grain production, improvements in long-distance transport technology both on land and on sea, and the massive increases in the output of dairy products in parts of the European Continent, were important developments for the British economy." These developments led to "a four-fold increase in wheat, a five-fold increase in butter imports (and) a sharp drop in the relative price of food-stuffs." (Floud, 1994: 145) By 1914 Britain "was relying on imports for more than half its food." (Floud, 1994: 171)

- Transport: Floud & McCloskey cite the "obvious sign of the increase in the distributive networks was the growth of the transport and communication sector of the economy which absorbed 12 percent of the labour force, up from 8 percent fifty years earlier." (Floud, 1994: 23)

- Status: Stearns highlights the potential of consumerism growing in the late nineteenth century ("consumerism was feeding itself by this point") as a means of compensating for the "unpleasantness of industrial work.", Which also applied to "middle-class-man...who needed other outlets to demonstrates success and seek satisfaction" (Stearns, 2001: 56)

Conclusions: Phase One

Humphrey points out that the history of British business, including food retailing, that is written by business historians tends to utilize an evolutionary structure in which each stage is step up the ladder of progress. So the evolution in British retail that occurred in Britain during the Nineteenth century led to the emergence of, "the era of modernity": "these changes revolved around the displacement of fairs, markets, itinerant traders and specialist producer-retailers (such as shoe makers, tailors and dairyman) as the dominant form of retail distribution, By 1850 this dominance was being challenged by the rapid growth of fixed shops including grocery stores, the establishment of department and a variety stores, the development of retail co-operatives, and the emergence of chain store forms, or multiples as they came to be known. Part and parcel of these developments was the rise of manufactured and nationally distributed products, the increasing use of advertising and marketing methods, the packaging, branding and price marking of goods, and the gradual de-skilling of the shopkeeper – the traditional producer retailer was giving way to an increased division of functions between producer, wholesaler and seller." Humphrey also points out that some historians differ with this account, highlighting for example the spread of "the small, 'lower-class' backstreet store," in the eighteenth century." (Humphrey, 1998: 69)

The impact of the context of change identified above made an important contribution to the development of the food industry in Britain. This influence helped to establish a number of the typical characteristics that shaped its evolution in the twentieth century. Some of the main ones are listed below:

- "During the second half of the nineteenth century urban retailing underwent a radical transformation, in which several basic elements of the modern retail industry became firmly established. In particular, an industry which had hitherto been dominated by single units, operating in family business and employing at most a handful of employees, experienced the rise of giant, nationally based enterprises." (Scott, 1977: 4) The development of national chains of food retail outlets such as Maypole Dairies, Lipton's, and the Home and Colonial Stores (Floud 1994, Bowlby, 2001, Benson 2006)

- Scott confirms, "the most rapidly growing early multiples based their expansion on a strategy of low prices and rapid turnover...Costs were kept low by not undertaking order and delivery trade and by avoiding credit, except for "institutional" clients (and0 concentrating their stores in the main thoroughfares of towns, or in other areas with substantial pedestrian flow." (Scott, 1977: 7)

- Multiples were able to use their size to manage and, to an extent, dictate, wholesale and supplier prices. They also imported cheaper sources

- Multiple ownership stimulated increases in the size and number of shops. (Bowlby, 2001, Scott 1997)

- The use of newspaper, hoarding, and flyer/card advertising was used aggressively to promote the chains, their offers and brand promises.

- Corporate branding was developed so that every multiple has clearly defined and very recognizable design characteristics wherever they were to be found. This extended to the promotion of brand values

- Floud & McCloskey highlight "the distribution of goods became more complex as the growth of national chains...replaced the small-scale distribution networks of an earlier period." (Floud, 1994: 23)

- The Co-op movement[227] differed from the other multiples, in the sense that it was formed to help communities and not to make profit but it offered substantial and highly influential examples of multiple practice, including rapid national expansion, corporate branding[228], vertical integration[229], clear and honest[230] brand mission, moral and ethical practice,[231] and customer tracking and loyalty payments in the form of the 'dividend.'[232] The Co-op was so successful by 1914 the "turnover of the English Co-operative Wholesale Society has reached c £35 million, making it one of the world's largest businesses." (Scott, 1977: 8)

- Multiples invested in quality control and other retail innovations. Thomas Lipton for example sailed to America to work in the food department of a New York department store from 1865 to 1869 in order to learn American merchandising techniques. (http://www.britannica.com/ebi/article-9315236)

- The development of "value brands" was typically used as a "loss-leader," and/or to take advantage of the growing investment in vertical integration. For example in 1890, "Thomas Lipton enters the tea business to assure supplies of tea at low cost for his 300 grocery shops. He offers "The Finest the World Can Produce" at 1d 7p lb. when the going price is roughly a shilling higher." (http://www.246.dk/teachronology.html)

- Making substantial profits was also another characteristic of the multiples. Both Sit Thomas Lipton and Sir Julius Drewe, the founder of the Home & Colonial Stores had made their first million by the time they were 33. (Scott 1997, Bowlby 2001)

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227 "1844: The Rochdale Society of Equitable Pioneers, the first modern cooperative society, opens a store in Toad Lane. Flour, oatmeal, butter, and sugar are its only initial wares but the store soon adds tea and groceries." (http://www.246.dk/teachronology.html)

228 Corporate branding including recognizable facades and interiors but also extended to a pioneering development of own brands.

229 Vertical integration: linking supply, distribution and retail into one business model.

230 The co-ops went out of their way to ensure accurate scales and unadulterated food.

231 The co-ops invested in local communities, "spending resources on housing, health care, education and recreation for their members." (Scott, 1997: 6)

232 The dividend disposed of the profit by sharing it between customers according to how much they had purchased. It thus anticipated some of the basic characteristics of contemporary loyalty cards (see Tesco) but it motives were benign, rather than being about attempts to collect and profit from customer data.

- Targeting and determining consumer taste was also another characteristic of the multiples. In their first period of growth they were adroit at responding to competition by cloning, or developing innovations in every aspect of their business models. Price was a key market strategy. (Floud 1994, Scott 1997, Bowlby 2001)

Phase Two: From Self-Service to Supermarkets

The second phase of food retail clearly happens in the USA and is primarily focused around the development of multiple chains that base their business strategy on self-service. America had developed its own multiples approach to food retailing in the last half of the twentieth century and had learnt the value of targeting the less welloff with price-led marketing strategies. According to Grant "the self-service food market came into being as a direct result of the first Piggly Wiggly store, established in Memphis, Tennessee by Clarence Saunders in September 1916.[233] Prior to Saunders' introduction of Piggly Wiggly, grocery chains were essentially "economy stores," which had replaced home-delivery and credit sales with a 'cash-and-carry' system but were not planned for self-service. Saunders' first store, the forerunner of contemporary supermarkets, was designed to allow customers access to shelved merchandise which they would select and carry through turnstiles to checkout counters." [234] (Grant, 1996) Jango-Cohen attributes the invention of 'cash-and-carry' to Clarence Saunders in response to the increasing tendency to brand foods in pre-measured packets that did away with the need to measure (and discuss measures) contents out for customers. (Jango-Cohen, 2005)

Piggly Wiggly was the first store to:

- Provide checkout stands
- Price mark every item in the store
- Feature a full line of nationally advertised brands
- Use refrigerated cases to keep produce fresher longer
- Require employees to wear uniforms
- Design and use patented fixtures and equipment throughout the store
- Franchise independent grocers to operate under the self-service method of food merchandising. (Jango-Cohen, 2005)

According to Grant: "The plan was extremely successful, and the original Piggly Wiggly company extended franchises to hundreds of independent grocers who wanted to use the system and operate under the Piggly Wiggly name...Even some of the leading food chains, like Kroger and Safeway, operated stores under the Piggly Wiggly name before converting their parent stores to self-service. By 1920, stores under the Piggly Wiggly name were doing an aggregate $60 million per year business, with 35 stores in Memphis and hundreds in other cities and towns. The following year, Saunders and his organization had direct control of over 350 Piggly Wiggly stores, and there were many others operating on a royalty basis, paying a half percent of their gross sales to retain the franchise rights." (Grant, 1996)

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233 The first Piggly Wiggly opened September 6, 1916 at 79 Jefferson Street in Memphis. (Grant, 1996)

234 "The concept of the "Self-Serving Store" was patented by Saunders in 1917." (Grant, 1996)

In chronological terms the next stage of innovation was marked by the launch of the first retail concept to use the word supermarket, King Kullen, which opened on the site of a former garage in Jamaica Avenue in Jamaica, Queens, on August 4, 1930. Michael J. Cullen the originator of the concept had noticed a market opportunity for a cut-price self-service concept while working as a general sales manager for Mutual Grocery and Kroger Stores in Illinois. According to Singer Cullen wrote a letter to the company's president proposing a series of innovations that, including separate departments, self-service and cut pricing. "In his letter to Albers, Cullen had written, 'Can you imagine how the public would respond to a store of this kind? To think of it - a man selling 300 items at cost and another 200 items at 5 percent above cost - nobody in the world ever did this before. There would be a riot." His suggestions were ignored and by 1936, despite the recession King Kullen was a chain with 17 stores throughout Queens and Nassau County, with $6 million in annual sales. (Singer, 2004) King Kullen's emphasis on discount was clearly targeted at Depression poor consumers but in other respects it was yet another amplification of one of the key strategies of modern food retailing that already led to the success of the first generation of British discounters like Lipton. It was the comprehensive nature of Cullen's approach to discounting that marks King Kullen out, as an original brand concept, it was marketed as "The world's greatest price-wrecker." (Bowlby, 2001: 135)

In terms of store design a retail concept that could be regarded as completing the blueprint for modern food store retailing was provided by the second phase of business strategy innovation emerged in the form of Big Bear. Hine argues that, initially at least "Big Bear was one of a kind." Hine confirms Big Bear was "opened in a vacant automobile plant [235]in Elizabeth, New Jersey in 1932...In an enormous interior, packaged grocery items were sold directly from their shipping cartons at very low mark-ups. Large aggressive advertisements sounded a populist note, promising "no high-salaried executives," no large overhead," no fancy frills and fixtures." The discounts were subsidized by renting out large parts of the space "to concessionaires who offered household goods, produce and other items" and thus acted as a lost leader. "Otis and Dawson (The developers of the Big Bear concept) went to the wholesalers 'with a plan for attracting the masses from a much wider area than was customary for people to travel for food and other necessities...as people entered, they received a market basket and were left to themselves to walk about, helping themselves to what ever attracted them." Bowlby identifies the initial cynicism "a depression set-up," highlighting the value, price led nature of the strategy. (Bowlby, 2001: 135-137) Hines confirms, "By 1938 the company was operating more than 1,100 supermarkets (typically leading to the closure of) 6 to 8 stores in the marketing area." (Hines, 1997: 133)

The invention of the shopping trolley by Sylvan Goldman, an Oklahoma grocery store owner in 1937 was another defining innovation from the 1930s that took a while to catch on. (Hines, 1997: 132)

Conclusions: Phase Two

It is clear that the Supermarket was invented in America during the period 1916 (Piggly Wiggly) to 1937 (Supermarket Trolley). It is also clear that the supermarket was a continuation and clarification and extension of a number of the key characteristics of profitable food retailing

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235 Some sources claim that it was in a former skating rink (Food Marketing Institute, 2006)

that emerged in Britain during the late nineteen-century. Among the important precedents that were carried over from the nineteenth century and augmented by the supermarket innovators the following stand out:

- The use of bulk purchase to force competitive wholesale prices
- A concern to cut out the wholesaler wherever possible
- An emphasis on low prices
- Heavy use of marketing
- An emphasis on packaged products
- A ruthless approach to undercutting established competitors
- A clear brand statement in terms of the look of the retail outlet that could be generally reproduced nationally
- Management obsess about efficiency

Bowlby highlights the significance of Piggly Wiggly's strategy of concentrating on "advertised packaged goods (food only) that exactly suited the new self-service form, as though they were made for it" She quotes the 1934 response of the British packaging magazine 'Shelf Appeal': "packaged goods formalized the store because they simply asked to be stood in rows on shelves." (Bowlby, 2001: 142) She cites Carl Dipman, the editor of the American magazine 'Progressive Grocer' as a key advocate of the scientific approach to self-service through articles and book written in the 1930s. She suggests that Dipman's vision "consciously combines scientific organization and aesthetics" quoting him from 1931: "The old fashioned store was to a large extent a storeroom. The dealer was a storekeeper. Bu the modern grocery store must be a scientific saleroom. The grocer must be a modern sales engineer." (The consumer becomes) " a bundle of sales possibilities" (Aesthetics were driven by economy) "the grocery store today must be both pleasing to the customer – a thing of beauty- yet so constructed that work and labour are reduced to a minimum...The application of sight and touch, coupled with efficiency of operation, are the most important factors in the new retail salesmanship." Dipman highlights the need for "elimination"..."the elimination of steps and lost motion so that the merchandise may flow through the store with the least expense (with the potential) of the elimination of an employee or two." (Bowlby, 2001: 143-144)

Humphrey highlights the dramatic increase in the number of supermarkets in the thirties. "By 1935 there were about 300 supermarkets in operation...a figure that skyrocket to 6,175 by 1940." The business formulae was targeted at "low-income consumers"...profit margins were low compared with traditional grocery stores, although so were total labor and running expenses, and thus net profits were higher. Volume and absolutely minimal service became the key to increased retail profits." She suggests that, "attraction was based on price and (the creation) of a culture that emphasized choice, independence, convenience, and pleasure." Humphrey relates the contemporary 1930s psychological explanation of supermarkets as "circuses." She also confirms the growing professionalism of supermarket culture: "supermarketing was becoming a 'science'... In 1937 the Super Market Institute was formed in order to further the interests of the fledgling industry. Retailers become increasingly interested in theories of shelf arrangement, store deign, display techniques, "traffic-flow", and the phenomenon of the 'impulse buy'. In the carefully designed self-service store, retailers came to believe, the customer literally sold herself the goods." Humphrey confirms that as early as 1931

"the major scene of the industrial revolution has definitely shifted from production to distribution." (Humphrey, 1998: 69)

What was new and relatively unprecedented about the supermarket and (along with the developments identified above), became the blueprint for the final phase of supermarket innovation are listed below:

- Self-service
- The dramatic reduction of staff based customer service
- High reliance on branded and packaged goods
- A stress on tangible efficiency of access for workers and customers
- 'A pile-it-high' and 'sell-it-cheap' approach to layout
- Consumer management by the use of long runs of shelving
- Car parks attached to the store
- Trolleys
- Check-outs

It is clear that the developments that are shaping the production and processing of food begin to play a role in determining the future of food retailing. The positive watchwords become 'scale', 'efficiency', 'convenience, 'guaranteed,' 'hygienic' and 'value.' The pursuit on these goals confirms them as expectations for the majority of American consumers as well as the businesses that profit from them. All of these innovations are serve top separate the consumer from the associations of food with multi-modal sensory engagement. Sensory qualities are explicitly and implicitly associated in a negative way with concepts like 'old-fashioned,' 'unhygienic,' 'inefficient,' 'inconvenient' and 'expensive.' The supermarket not only echoes the imperatives of the industrial producers and processors but also amplifies them by adding a physical dimension of stripped down industrial scale and abundance, thus making the concept of modern food tangibly about availability, price and convenience.

The Third Phase: Supermarket History: Overseas and Over Here

Outside of America the main consumers of the promise of the efficient profits that were offered by the supermarket format were established and aspiring food retailers. These groups were absorbing expert insights and case study histories through the frequent features in progressive food retailing and packaging magazines and some influential books. In its literary form, at least the supermarket became the embodiment of the holy grail of profit, efficiency and modernity. In the 1930s the main advocates were journalists writing for trade publication but after the war the supermarket became part of the economic and ideological mission developed by the USA Government and the major corporations and financial institutions in order to export American values and systems to the rest of the Western world.

The advantage was a joined up world in which new opportunities for American investment evolved along side shared values and expectations. Bowlby cites M M Zimmerman as an important source of supermarket promotion: "He founded the journal 'Super Market Merchandising in 1936 and was the leading figure behind the Super Market Institute, inaugurated by the first national convention of supermarket operators in 1937." Zimmerman's articles were turned into a book in 1937: Super Market: Spectacular Exponent of Mass Distribution, followed in 1955 by: The Super market: A Revolution in Distribution. Zimmerman

organized the first International Congress of Food Distribution in Paris in 1950 and 2000 delegates from all over the world attended this. Bowlby also cites the importance of the 'National Cash Register Company' in "spreading the gospel of self-service to the rest of the world." (Bowlby, 2001: 153-154)

The export of the supermarket happened in ways:

- Entrepreneurs who saw an opportunity to accumulate capital advantage form investment in a new business strategy came to America to witness the strategy at first hand
- Executives of existing businesses also came to America to learn about the supermarket
- American financial institutions saw an opportunity to establish supermarkets in Europe
- Magazines, books, conferences and professional associations saw passionately promoted the advantages of the supermarket over traditional food retail strategies
- More food types were branded and advertised as convenience foods
- Governments, with American encouragement and financial support promoted a lifestyle that was focused on progress through modernization in which design and science played a major role in eradicating the negative associations of the past. This educational strategy provided support for modern progressive business and institutional concepts to develop products and services that were designed to reflect the aesthetics of modernism

Humphrey records that Britain followed the pattern established in the United States by innovating 'self-service' before they developed supermarkets, "the first English self-service grocery store was opened by Harold Wicker of the London Co-operative Society in 1942...post war rationing worked against the concept and it was not until 1954 that self-service took hold in England with the relaxation of war-time controls...Christina Fulop noted that there were no more than ten self-service shops in England in 1947, but nearly 12,000 by 1963, including about 1000 supermarkets with an average stock of about 1000 items....Developments in the United sates were a crucial influence...during the 1930s and 1940s Jack Cohen, the founder of Tesco, visited the United Sates several times in order to study developments in self service declaring on one trip..."The improvements since my last visit were beyond belief...there were gleaming palaces, well lit, roomy and clean"...when Alan Sainsbury and other executives of the company visited the United sates in 1949, they enthusiastically reported that the literally 'lived' in supermarkets everyday contemplating the means by which to introduce the new concept in Britain with due regard for the 'traditional' in British retailing." (Humphrey, 1998: 73) The Tesco branch in St Albans was the first Tesco to be converted to self-service in 1950. (Sainsbury's in Croydon also converted in this year) In1956 the first Tesco supermarket was opened in a former cinema in Maldon, Essex. Safeway opened their first fully fledged American style supermarket in Bedford in 1963.many of the 'convenience" strategies like snack-bars, launderettes, pram-parks, did not work but pre-packaged meat and vegetables quickly established itself as a mark of convenience."

Awareness of the commercial export value of America's business expertise existed before the Second-World-War, de Grazia quotes Douglas Miller, a commercial adviser attached to the US Embassy in Berlin: "One of the most valuable commodities we have to export is American merchandising and distribution technique." (de Grazia, 2005: 216) Zimmerman, identified

above as leading USA advocate of the supermarket extended his missionary work into Europe in the late 1940s with USE government funding. The fact-finding mission resulted in the publication of a booklet, 'Surveying Europe's Food Picture' (1949) and involved meetings with, among others, Jack Cohen (Tesco). This trip led to the creation of the 'First International Congress of Food Distribution,' (1950) which de Grazia suggests had an underlying motive of establishing "an international network among entrepreneurs in what was newly being called the "food business." (de Grazia, 2005: 381-382)

One of the most active post-war applications of this insight was developed by the Rockefeller Brothers in the form of the International Basic Economy Corporation.' According to Nelson Rockefeller IBEC was set up to combine "social objectives and capital incentives (by raising) living standards and earn substantial profits." (de Grazia, 2005: 377) One of its many offshoots, Supermarket Italiani Inc. opened its first supermarket in Florence in 1961 (February) to an enthusiastic response from sightseers but mixed reactions from shoppers, which led to quick hands on reaction from management. The mismatch between tradition and modernity was the main reason for consumer resistance. De Grazia highlights the size and cost of packages in relation to average incomes, the size of the American shopping carts (which looked empty when filled with the average family needs) "There was no market at all for pre-cooked items and little for prepared cake-mixes." (de Grazia, 2005: 395) She argues that Supermarkets Italiani "represented the power condensed in American consumer culture both to accelerate and to shape material standards in Europe. A model, a catalyst, and a sustained presence it drew on deep pockets of capital, knowledge, and the strategic use of political influence, as well as collateral cultural capital." (de Grazia, 2005: 398)

In the UK the supermarket concept did not really get into its stride until the 1960's partly because of tradition, partly because of economics and the relatively slow expansion of supermarket chains and partly because the co-op still provided a cost effective and competitive solution, by this time self service solution, for a lot of consumers.

Tesco: The Growth of the British Supermarket

The development of the British supermarket is wholly dependent on American precedent but its launch during the 1950s is linked to significant changes that occur in the income, and lifestyle aspirations, of the British public. These contextual factors include the complete end of food rationing in 1954 and a group of consumers who are keen to escape from decades of denial caused by the recession and wartime shortages and rationing. These restrictions on the type, cost and quality of food bred a nation that was literally and metaphorically hungry for access to quality, quantity and affordability. This was also a nation that was being conditioned under government direction to embrace progress and the aesthetics of modernity.[236] Bevan confirms that the supermarkets were also able to capitalize on the "mass ownership of cars, fridges and freezers," that proliferated in the 1960s. (Bevan, 2004: 31)

The business strategy and therefore the evolution of the British supermarket is increasingly determined by Tesco so rather than offering a blow by blow or compare and contrast account of all the British supermarkets I have decided to concentrate on Tesco. Tesco reveals the

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236 The founding of the Council of Industrial Design in War-time Britain built on earlier work before the War which also linked health to Modern design: "Governments...began...to show a greater awareness of the economic role and propaganda possibilities of industrial design." (Conway, 1987: 123) See also (Wilk, 2006)

particular, and indicative characteristics of the market sectors evolution. Each phase will be reviewed in terms of Tesco's impact on multi-modal sensory opportunity.

Tesco Phase One: From Market Stall to The American Way

The story of the evolution of Jack Cohen's business starts with a market store and evolves from supermarket owner to chain and beyond. It is a well-documented case study and seems to fit the classic small to large-scale business growth scenario that is favored by business historians. Tesco offers its own version:

- 1919 – Jack Cohen founded Tesco, when he began to sell surplus groceries from a stall in the East End of London. His first day's profit was £1 and sales £4
- 1924 – The first own-brand product sold by Jack was Tesco Tea – before the company was called Tesco. The name comes from the initials of TE Stockwell, who was a partner in the firm of tea suppliers, and CO from Jack's surname
- 1929 – Jack Cohen opens his first Tesco store in Burnt Oak, Edgware, North London
- 1934 – Jack Cohen bought a plot of land at Angela Road, Edmonton, North London to build a new headquarters and warehouse. It was the first modern food warehouse in the country and introduced new ideas for central stock control
- 1947 – Tesco Stores (Holdings) Ltd floats on the Stock Exchange with a share price of 25p
- 1956 – The first Tesco self-service supermarket opens in a converted cinema in Maldon
- 1960 – Tesco takes over a chain of 212 stores in the North of England and adds another 144 stores in 1964 and 1965
- 1961 – Tesco Leicester enters the Guinness Book of Records as the largest store in Europe

A Tesco store from the early 1930s demonstrating Cohen's enthusiasm for modernity

Tesco first self-service store. St Albans

Tesco c 1960s green shield stamps and stack-it-high- sell-it-cheap

(images sourced: http://www.tesco.ie/about/tescoplc.htm)

Despite achieving a "first" with food warehousing and stock control, it is clear that Cohen was not particularly innovative, it took him thirty-seven years to set up his first small-scale and clearly low-investment version of American precedent. Even his imitation of the American model was not his own idea. Bevan confirms that the trips that Cohen and Sainsbury made to America, which led them to pioneer the supermarket format in Britain, were sponsored by the British Government "to educate British businessmen about the latest trends on the other side of the Atlantic" (Bevan, 2005: 8) Cohen's style of innovation differed markedly from Sainsbury's more professional approach. Sainsbury carefully evolved a fully-fledged prototype, located in a well-

established Croydon Store (1950) [237] before rolling it out. Despite the fact that Cohen did not open his first self-service store until 1956 his "first attempts to emulate the American model involved simply turning his counters back-to front and piling them with produce. That was his classic seat-of-the-pants style." (Bevan, 2005: 8)

Sainsbury: first supermarket store opening Croydon 1950
(www.museumindocklands.org.uk/ NR/rdonlyres/E87..)

Tesco Phase One: Sensory Implications

The sensory implications of Tesco's first stages of development match the typical pattern of British food retailing that are shared with the majority of Western countries, including, and particularly, the USA. In summary they are:

- Greater reliance on branded products that separate the consumer from the majority of the sensory information chain
- The increasing promotion of processed food which separate the consumer from the majority of the sensory information chain
- The increasing tendency to stack packaged foods on shelves, or in refrigerated containers so that the consumer is required to make a decision that is the equivalent of selecting a shrink wrapped book from a shelf based on the information that can be gleaned its cover or spine without being able to sample the pages. This tendency separates consumers from the majority of the sensory information chain
- The use of neon light and metal fittings, which give the impression of a factory system designed to speed the selection and purchasing process. The implicit and explicit encouragement not to linger limited opportunity for sensory reflection
- The emphasis on price encourages consumers to make price their primary evaluation criterion along side appearance thus limiting multi-modal sensory engagement while

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237 Sainsbury describes the transition form store to supermarket as a story that involves moving from austerity, and compromise, to innovation but makes no mention of the encouragement of the Government: "World War II and Post-war (1939-1969) The World War II years were extremely difficult for Sainsbury's. The company's trading area was badly affected by enemy bombing and evacuation. Moreover, the company's trade was built on its reputation for high-quality fresh foods like meat and dairy produce, so the rationing regulations seriously curtailed its sales. By 1942 turnover had fallen to half its real pre-war value. The British people suffered shortages of food and raw materials during the immediate post-war years, which were even more acute than those of wartime. It therefore took both courage and ingenuity for Sainsbury's to become pioneers of a new 'American' style of food retailing. The first self-service Sainsbury's store opened in June 1950 in Croydon. The experiment proved extremely popular with shoppers frustrated by the queues and shortages of post-war Britain. Over the next three decades Sainsbury's replaced their counter service stores by modern supermarkets. During the 1960s the scale of the company increased rapidly as its trading area expanded, particularly in the Midlands and the West Country. It became necessary to decentralise the distribution system away from the Blackfriars headquarters through the establishment of a network of regional depots. Close centralised control of the company's administration and trading standards was retained through the development of increasingly sophisticated computerised stock control, in which Sainsbury's established an early leadership amongst food retailers." (Information is correct at 02 August 2006)
(http://www.j-sainsbury.co.uk/index.asp?pageid=188&caseid=postwar#postwar)

accentuating the rational (price) and the a managed instinctual response (size for money)

Phase Two: Pile it High- Sell it Cheap

The style of supermarket that Cohen developed was clearly targeted at low-income consumers and the 'pile-it-high-sell-it-cheap' strategy was informed by Cohen's preparedness to buy items that were less than fresh. The Tesco stores of the late fifties and early sixties were similar to the c 'price-led approach of contemporary discount stores like Lidl and Aldi, who buy end-lines[238] and present the stock on the palate on which it was delivered. These kind of business strategies are known variously as "no-frills' or "deep-discounters." There was little to no investment in design except in the form of large typographic price announcements printed in colour on coloured paper. The price led marketing strategy was reinforced by his decision to use Green Shield Stamps to build customer loyalty. Tesco helped to establish the supermarket by signing up to 'Green Shield Stamps' in 1962. Green Shield Stamps were an American concept created to encourage customer loyalty in Britain they provided a private enterprise version of the co-ops dividend. In reality they only appeared to give customers dividend but they helped to build the habit of supermarket shopping by encouraging customers to fill the book in which they had to stick their stamps before they could be redeemed for gifts. Cohen's decision to use stamps was prompted by a decision by another supermarket chain, Price-Rite to adopt the American Pink Stamps. Immediately prior to this Cohen had joined Alan Sainsbury and other food retailers in trying to stop Price-Right introduction of the stamps. Sainsbury continued to oppose them and used newspaper advertising to voice its opposition. Bevan quotes a contemporary leaflet: "It would cost £2 million a year for Sainsbury to give trading stamps...it would be impossible for Sainsbury to maintain their high standards of quality and freshness and give trading stamps without raising prices." (Bevan, 2005: 28) While Sainsbury tried to maintain the dignity of the old-fashioned grocer and developed it own label brands Tesco proved to understand that a substantial proportion of the future of food profit lay in the hands of the less-well-off, who took to the stamp concept, and its cheap gifts, with the kind of enthusiasm that they would display for the football pools, bingo, or fairground and arcade games. (Owen 2003, Seth 1999)

A 1960s Tesco showing the emphasis on in-store printed promotions of discount and price led marketing. (http://www.tescocorporate.com/page.aspx?pointerid=D01B1F9C28E346B38DA0479EF0BE8FC3thttp)

238 An 'end line' is a product that has either been discontinued or has reached the end of its shelf life.

While Tesco maintained its "no-frills" approach to discounting it began to expand dramatically, "In the 1960s (it) was buying up literally hundreds of grocery stores and small grocery chains around the country.17 It introduced 'Home 'n' Wear' departments into larger stores to carry higher-margin non-food merchandise, including clothing and household items, and opened its first 40,000ft 'superstore' in Crawley, Sussex." (http://www.corporatewatch.org/?lid=252#his)

Tesco Phase Two: Sensory Implications

- Tesco's expansion, alongside that of its competitors began to dramatically eradicate traditional grocers and thus removed sensory knowledge from the shopping experience and replaced it with price focused management

- The reliance on imports introduced much greater reliance on factory farming standards and encouraged the proliferation of wrapped and pre cut meat products. This separated the consumer from discussion with the butcher and the green grocer about source and quality, eradicating, or diminishing audio exchange and tactile evaluation

- The further extension of new branded products and frozen meat and vegetables extended the pressure on consumers to depend on visual judgment

- The increasing number of brands that were predicated on 'instant' preparation changed the expectations of consumers and began to impose American style convenience that proposed food as instant gratification that minimalized sensory experience of preparation and consumption

Phase Three: Operation Check-Out

The relation ship between Tesco and Green Shield Stamps also helped to launch the next big phase of supermarket expansion based on low prices. Cohen's strategy of discounting based on the arbitrary supply of cheap sources made it difficult to create a consistent and coherent brand management solution. Compared to Sainsbury and other competitors like Safeway[239] Tesco looked cheap and nasty its management focus on discount led it to miss a shift consumer interest in quality. Despite the economic recession that dominated the 1970s Tesco looked out of date. Management consultants were appointed and Ian MacLaurin, a professional manager, replaced Jack Cohen in 1973. Corporate watch suggest that, 'under the leadership of Ian MacLaurin...Tesco decided to try something dramatic and different: to become an 'aspirational mass retailer'." (http://www.corporatewatch.org) Under MacLaurin's lead Tesco began to open petrol stations on its major sites in 1974, closed/sold the less profitable stores and began to invest in more in design.

In 1977 Tesco abandoned its association with Green Shield Stamps and used the money (£20 million per annum) to fund "Operation Check-Out which was the start of a comprehensive value strategy which helped to destroy the 'retail price maintenance law' designed to protect brand status and manufacturers profit margins by ensuring that traders could not undercut the

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239 Safeway was American owned and had launched in the UK in 1963. It became wholly independent UK operation and was bought by Morrison's in 2005

brands recommended price. Although Tesco was sued by its competitors no charges were made and the law was scrapped opening the way for the supermarkets to undercut smaller rivals on the basis of their superior purchasing power, or to fund 'loss-leader' campaigns designed to attract new customers. [240](http://www.corporatewatch.org)

Cleaning up its brand strategy, pricing and supply policy clearly paid off, as according to Tesco their annual sales increased from £1 billion in 1979 to 2 billion in 1882 opening the way for the next phase of competitive innovation. (www.tescocorporate.com)

Tesco Phase Three: Sensory Implications

- The impact of the new management strategy had two negative impacts on sensory engagement opportunity, design authority and price coherence
- Design authority came through greater investment in information design and corporate branding that helped to build greater consumer trust in the Tesco brand and encouraged them to take less time in evaluating what they were buying

- 'Operation-Checkout' helped to transform the shopping into an almost entirely price led experience in which consumers focused on bargain hunting rather than sensory evaluation

- The development of new 'convenience' and 'instant' brands also introduced a constant visually led novelty factor into the shopping experience. Increasingly sophisticated television advertising encouraged consumers to believe, for example that 'smash' meant 'mash' and that potatoes were a cumbersome and retrograde inconvenience, heavy to carry home and time consuming to prepare. Cadbury's 'Smash' introduced in 1974 was highly successful, helped by the huge popularity of a television campaign devised by the BMP advertising agency: "The spots featured (tin robots) chortling as they heard how the "Earth people" peeled their own potatoes, "boiled them for 20 of their minutes," then "smashed them all to bits" - instead of using Smash instant mash." (http://news.bbc.co.uk/1/hi/entertainment/572903.stm) Multi-modal sensory opportunity was thus further undermined and marginalized by design, art direction and mediation dominance and sophistication

Phase Four: Clone the Competition

Sainsbury has continued to dominate the sector in the 1970s and in the 1980s it was quick to invest in computer stock control and bar scanning innovations. Its own-brand and Corporate image strategy was also a much more significant presence in the business model than Tesco's. So MacLaurin "assembled a cohesive management team which had developed uniform policies on prices, stock planning, buying and own label performance." (Owen, 2003: 7) MacLaurin based much of his business strategy on imitating Sainsbury. MacLaurin had created a vision that involved taking Tesco up market and Sainsbury was the obvious benchmark. Terry Leahy's

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240 A loss-leader campaign is a marketing strategy in which brands are sold at a loss, or at a very low and unsustainable margin that was subsidized by extra consumers attracted by the 'bargain' who would then spend on other lines which often has slightly inflated prices.

(currently, 2006, the CEO of Tesco) moved straight from a management studies degree to Tesco (1979) and his first position of responsibility with Tesco was, to 'copy whatever Sainsbury did' (Barwise, 2004: 90). The strategy of imitation did not extend to the same level prioritization of the investment in design, quality control and communication that was part of the reason for Sainsbury's continued success. Owen confirms that the "recession at the start (of the 1990s hit Tesco hard...it was clear by the summer of 1992 that sales growth was slowing. Some commentators argued that Tesco was being squeezed between the discounters on one side and higher-quality competitors such as Sainsbury and Safeway on the other." He quotes "Lex in the Financial Times: "the risk is that Tesco will have neither brand-image nor the price competitiveness to compete in the mature market." (Owen, 2003: 12)

Tesco Phase Four: Sensory Implications

- Scanning encouraged the development of pre-cut potions and vegetable selections in bags as it made it easier to scan bagged rather than raw produce and also offered better profit margins and quality control, as the packaging was done at source. This comprehensively removed the consumer from multi-modal sensory decision-making

- Produce was increasingly grown, harvested, bagged and processed by machine eradicating sensory knowledge from the farm

- The proliferation of own brands increased the number and range of packaged goods in the supermarket and this meant that consumers were increasingly having to make decisions based on visual judgment alone

- The difference between one supermarket and another was becoming increasingly minimal leaving the decisions making to rational decision making based on price/quality or subjective but visually led impressions of brand image

- Promotion of the supermarket brand was increasingly achieved by television advertising which meant that decisions were made on the basis of brand promise rather than sensory experience

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Phase Five: We Are Watching You

Leahy was appointed Marketing Director in 1992 and 'declared it was time to leave Sainsbury behind and focus not on them but customers' (Barwise, 2004: 91). He commissioned focus groups to discover what Tesco's customers thought of the brand and confirmed that value and service were felt to be lacking. According to Bevan Leahy recommended "a three pronged strategy" to the board, "first sop copying Sainsbury; second listen to customers; third build a merchandising offer based on what those customers want." (Bevan, 2004: 131) The board signed off on Leahy's recommendations and as their website history section confirms the major innovations happened in relatively quick succession:

- 1993: Tesco Value [241] is launched
- 1993: 'First Class Service' is launched
- 1994: Tesco becomes the first retailer to offer customers a service commitment at the checkouts through 'One in Front'
- 1995: 'Would I Buy It' initiative is launched to ensure that products are always of the highest quality for customers
- 1995: Tesco Clubcard is launched

The return to basics strategy worked despite analyst's pessimism (Owen 2003) and in 1995 Tesco overtook Sainsbury for the first time to become the market-leading food retailer. Further refinements of the service strategy continued and in 1996 Tesco introduced 'Customer Assistants,' "to make shopping even easier for customers" and commenced 24 hour opening in larger stores. At the same time as it was improving its customer relationships Tesco took their competitive strategy to the heartlands of the convenience store opening, in 1994, the first Tesco Express, a town/city centre mini-mart version of Tesco that was soon taken to street corners and petrol stations around the country.
Leahy role was acknowledged and he was made CEO in 1997. (www.tescocorporate.com)

Tesco Phase Five: Sensory Implications

- The value range not only extended the dominance of packaged branded food on offer in Tesco but also reduced it to very low quality food, plastic cheese that has relatively little sensory quality even if used as a cooking ingredient. High proportions of salt and chemical flavors confirmed that the value-lines were a strategy of offering very little real food for relatively little prices, They offered a kind of dietary equivalent of fast food

- The emphasis on customer turn-around, like all of Tesco's well-publicized "we listen to customers" initiatives was intended to significantly benefit Tesco as well as the customer. By reminding customers that the supermarket experience was supposed to be about fast in and fast out Tesco stood to deal with more customers per 24 hours, thus increasing their profitability and confirming that supermarkets were no places where their was time for the luxury of multi-modal sensory experience

- The Club Card with it emphasis on points earned for pounds spent has two clear benefits for Tesco. It allowed the supermarket to measure what customers were buying and when and it also emphasized that food shopping was all about the costs rather than the experience. Each financial incentive generally moves the consumer further away form a sensory definition of food and locks them into a financial value evaluation.

- The Metro concept allowed Tesco to bring its values of efficiency and monetary value to the consumer's doorstep and their places of work. Along with 24 hour opening the

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241 The 'value-line' 'own-brand' "value" range that was an attempt to respond to the deep recession of the early 1990s with a no-frills version of all the 'essential' brands from frozen chips to cheese.

culture of uniformity and sensory absence created by Tesco proliferated as each step of the expansion programme made it increasingly difficult for competitors to compete and thus bring difference to the market place.

- The emphasis on value was achieved by paying less for the raw materials that were increasingly processed for Tesco as 'own brands.' Tesco developed and has maintained a reputation for ruthless business strategy which meant that its suppliers that were forced to mechanize and/or use low cost labour in conditions that did not encourage, or typically allow sensory engagement. These conditions encouraged the use, or development of corporate agricultural species that were capable of substantial yield under forced conditions, reducing the time and turning nurture into the equivalent of instant cooking. "Pour and stir" or "peel and heat" cooking culture is analogous to the conditions in which the raw materials are produced and processed, both are almost entirely lacking in multi-modal sensory opportunity

Phase Six: Market Dominance

Towards the end of the twentieth century Tesco began to grow the number of stores that it operated, at home and overseas,[242] and significantly expanded the range of services that it offered. At the same Tesco became more adept at tracking its existing customer base and the competition, through its Clubcard[243] and its 'price-watch' strategy. It is arguable that Tesco was doing nothing radically new and was still highly dependent on precedent. In the UK Virgin successfully demonstrated how a new opportunity can be created by making improvements in an existing sector like personal finance or insurance. The USA continued to be an important source of ideas and methods, Wal-mart, for example, provided a source of lessons in saturating a town, or city in order to cripple the competition and a master class in ruthless negotiation through its strategies for driving down prices by last minute haggling over the price of crops or other food sources that were increasingly sourced internationally.

Perhaps the main difference between Tesco and its UK competitors was the precise and effective way in which it grew change. It appeared that nothing was left to chance. Each new development was carefully studied, evaluated, priced, planned, prepared and then introduced with maximum publicity. The criteria that Tesco appears to have concentrated on can be explained by its decision to become research led and can be summarized as:

- Monitor customer's preferences and shopping habits to see what they like and do not like
- Monitor the competition to see what innovations or successes they are making/having
- Monitor the competition to identify any vulnerabilities that can be exploited for competitive advantage
- Monitor the wider services market place to identify where there are opportunities for brand improvement

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242 Tesco entered Thailand and Taiwan in 1998 and South Korea in 1999

243 Tesco introduced 'Clubcard Deals' in which consumers were able to trade their coupons for various discounted offers, like away day holidays or entrance to leisure destinations, or food types that their purchasing habits indicated they preferred. These offers extended the opportunity to track their customers habits/preferences.

- Monitor the world commodities market to identify food price trends and buy at the most competitive time
- Monitor trends and innovations in packaging, distribution, processing and production and adopt these rapidly if they offer a competitive advantage that leads to short, or mid term enhancement of profit and market dominance
- Monitor trends in lifestyle choice and create brand offers to engage with these
- Monitor political and financial strategy and manage for damage limitation through anticipation
- Be clear about how you communicate your brand values to your consumers and the financial markets and listen carefully to their response
- Invest in technology that allows monitoring to become more effective and efficient

Tesco Phase Six: Sensory Implications

- Tesco's concern to monitor everything before making a decision demonstrates its commitment to a deeply rational scientific methodology that is ultimately focused on offering less and receiving more. Historically this is precisely the cultural model that has led to sensory marginalization

- The emphasis of brand improvement has typically been led by price and this allows little space for sensory experience enhancement

- Response to market trends that might offer some prospect of multi-modal sensory enhancement typically end up offering none due to packaging and price led strategies

- Tesco becomes more efficiency orientated with just in time delivery and overnight shelf filling so that customers are encouraged to respond by buying more based on visual approval

- Tesco stores tend to become more rather than less industrial with metal and plastic racking and an emphasis on wipe clean surfaces. The recent (2004-2005) introduction of in store plasma screens emphasizes the visual nature of supermarket culture and allows Tesco to use its media space for profit. The screens feature Tesco's own advertisements and offer the facility for brand suppliers to buy promotional space. In-store media has become world-wide trend for supermarkets

- Tesco's competitive strategy continues to be price and variety led. Variety is achieved by brand extension or new own-brands like the 'finest' range introduced in 1998 to respond to a growing consumer interest in celebrity chef cuisine and luxury restaurant brands. These and other brands also acknowledged the increasingly diverse demographic divisions of the consumer market by attempting to appeal to the group that marketers have labeled as 'singletons,' people who prefer to live alone and thus want dinner for one. Demonstrating the cloning mentality of Tesco 'Finest' packaging was modeled on Conran's Bluebird Café, part of the Design museum

Phase Seven World Domination

In the past decade Tesco has moved from being a contender to Sainsbury to become one of the worlds most efficient businesses, accounting for 31.4 percent of Britain's retail food market (Flexnews, October, 2006)and displaying revenue growth of above 10 percent (McDonald 2006)[244] and ranking as the world's forth largest retail business (Businesswire, 2006) with an annual turnover of 43.1 billion. (tescoorporate.com 2006) [245]Premium quality private label foods and highly efficient logistics, each innovative in its own right, have helped generate high profits. (Coles 2006)

The increasingly seamless expansion of scale and profitability of Tesco suggests that it will be a main source of competitor imitation. The Tesco formula is readily available for imitation, not least because it is based on competitor imitation and consumer and other trend monitoring. The formula is a deeply rational one that promotes efficiency and price-led perception of food value at every level. For example a recent report confirms that "Tesco has installed heat sensors in its supermarkets that can identify in-store bottlenecks as customers move around." (Computer Weekly 2006) Tesco's efficiency obsession is major factor in corporate profit: Record efficiency savings of £330 million were delivered by our Step–Change programmes, which bring together many initiatives to make what we do better for customers, simpler for staff and cheaper for Tesco. (Leahy, 2006,tescoorporate.com)

The priority of achieving price-led innovation is increasingly subsidized by Tesco's ability to force suppliers into efficiencies of their own, which insure that they are forced into increasing dependence on industrial agricultural techniques of cultivation and sorting that means that up to 40 percent of fruit and vegetable harvests are discarded because they do fit the ideal measure of size and un-blemished appearance that supermarkets insist that supermarkets require. Tesco's expansion globally means that it has greater access to sources of supply and demand where the economics and legislative conditions allow for additional profits to be made through their relative ability to absent themselves from the kind of basic level of ethical responsibility that Western countries demand.

Hopes that Tesco may be embracing more sensitive polices towards the environment through its recent announcements about turning 'green' with measures to reduce packaging and the construction of energy efficient buildings are in fact a reflection of Tesco's cost saving strategies and are based on the increasing costs of energy and materials. "Huge oil price increases are driving plastic bag price increases, "In May, Tesco committed itself to reducing the number of bags it uses by 25 percent over the next two years. The company also announced all its bags would be biodegradable beginning in September. Sir Terry Leahy, said, "We have had a team looking at carrier bags, trialing different ideas in our stores and talking to customers about what we could do to encourage them to use fewer bags and to recycle the ones they do use. We have to move the emphasis away from trying to force change and onto rewarding positive behavior. In other words, a more carrot than stick approach." (Guardian, August, 2006)

Tesco's dominating presence in the UK is a major factor in the deterioration of multi-modal sensory opportunity. Unraveling Tesco's current business and marketing strategies and their

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244 Tesco is still a small player when compared to Wal-Mart, which dominates up to 85 percent of the USA market and has turnover of over $ 246 billion pa.

245 Tesco's turnover is still considerably less than the market leader Wal-Mart which delivered nearly four times that figure at $315, 654 (Fortune, 2006)

historical and contextual basis it become clear that Tesco reflects and reinforces the following norms of supermarket practice in 2006:

- The dominance of shopping opportunities for entire communities creating 'food desserts' (Anderson 2006, Wrigley 2002)

- Increasing reliance on global sourcing and shipping driven by the constant quest for lower production costs and efficiencies of scale (coporatewatch.org, 2006)

- Increasing tendency to make suppliers bear the costs of storage and wastage: "Wal-Mart's "Inventory Deload" and "Remix" initiatives are by far the most high-profile examples of what we expect will be the focus of a growing number of successful retailers, i.e., decreasing inventory investment. For those not familiar, the two Wal-Mart programs address inventory efficiencies from different vantage points: Deload is a broad-based effort to reduce inventory levels at both distribution centre and store. Project Remix focuses on the sales velocity of individual SKUs, with dual goals: a) rationalizing assortment, and; b) reducing distribution costs and improving service levels." (Bishop, 2006) ". More savings have come from the way we handle products. Over 15,000 of our product lines are now delivered to stores in shelf–ready packaging, which makes stock replenishment easier, quicker and cheaper" (Leahy, 2006, tescocorporate.com)

- The tendency to negate criticism and respond to consumer concerns about ethics, health and environment by producing own-versions that threaten to diminish rather than support standards. (e.g. Organic. Tesco was one of the first supermarkets to stock an organic selection (1992) and has expanded its interests in organic sourcing and promotion in line with consumer/market trends. It typically sources organic produce in areas of the world where the environmental cost of shipping out-way the benefits of soil cultivation and chemical reduction. Supermarkets tend to make no or ambiguous policy statements about its position in relation to the concern about over-stretching short-term organic production capability. Claims of supporting, or initiating health conscious policies are frequently token gestures and rarely represent genuine responsibility. A recent report October 2006 titled: 'Capitalizing on Natural & Fresh Food & Drink Trends' confirmed that consumer need is not really matched by industry response: "Consumer interest in health is up around 80% of US and European consumers report that they are concerned about food and health issues and two-thirds have taken active steps to eat more healthily in the past year alone. Eating fresh food is the key this is believed to be important by a staggering 90% of people. Increasing consumer interest in fresh food is not matched by more new product launches in fact whilst 7% of new products were marketed as fresh in 2000, this had fallen to just 4% in 2006." (http://www.marketresearch.com/email.asp?progid=7976&productid=1354150)

- The increasing emphasis on one-stop-shopping has seen pushed supermarkets into increasing imitation of the Wal-Mart approach of combining food with consumer durables which increase the tendency for visually led impulse buys in all sectors: At

Tesco Superstores, customers can find everything they need for their weekly shopping and at our Extra stores customers can not only find our full range of food and convenience lines, but also a comprehensive range of non–foods, including health and beauty, clothing, electricals, toys and homewares. (Leahy, 2006, tescocorporate.com)

- The cost saving strategy means that the supermarkets tend to treat design innovation as a measure of efficiency rather than pleasure which leaves the emphasis on managing consumer flow rather than creating pleasure zones: The strategy that Tesco borrowed from Wal-Mart is being increasingly rejected in the USA where "Wal-mart, the ultimate "cookie-cutter" retailer is flirting with 'mass-customization': "Wal-Mart is also looking to better focus its marketing on local needs. The company has increased the size of local marketing teams and given them increased authority to determine products to promote." (Anderson 2006) Tesco claims to be acknowledging this trend: "Instead of offering a standard product range everywhere, we have put a lot of effort into tailoring our offer for local customers. For example, our new Extra store in Slough, Berkshire features over 900 speciality Asian products, from new vegetarian and Halal ready meals to extensive ranges of bulk–pack rice, and even Bollywood DVDs. This is currently one of our highest turnover Extras and the range has now been introduced in many more stores. It isn't just in our big stores where we're adapting our offer for local customers - in Express stores, we've also begun to adapt our ranges to suit different types of location." (Leahy, 2006, tescocorporate.com)

- 'Provisioning' is a word that is increasingly being used to describe the key function of a supermarket, "Some marketers...argue that the regular trip to the supermarket isn't shopping at all, simply provisioning, a completely different activity." (Hine, 2003:104) The concept of provisioning more accurately reflects the culture of fast in and fast out in a context where shopping is increasingly defined by opportunities for experience

- Innovation in design is increasingly driven by responses to increasing costs of fuel and packaging. (Leahy, 2006)

- Innovation in technology is increasingly driven by monitoring prices, consumer habits and contextual threats, or opportunities, and the desire to exploit the profit potential of the supermarket's role as a media-space[246] Tesco became the first major supermarket to roll out an in-store TV network in May 2004, when it invested millions of pounds in its development and unveiled plans to carry the channel in 300 of its biggest stores. However, the roll-out has stalled at 100 stores and no more screens have been installed in new large-format Tesco Extra stores. According to insiders, the chain is considering taking the channel out of its revenue generation team and plans to put greater emphasis on activity such as trolley stickers and window banners. (Quilter, 2006)

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246 See refs to Unilever's 'consumer innovation model' above, as an indication of how the Tesco strategy is beginning to impact on suppliers as well as supermarkets

- The insistence on aesthetic symmetry continues to favour agri-industry standards of fresh food production and is defended on the grounds that is what customer's want: "After nine years of pounding the floors in Safeway, there was one thing that stuck very clearly in my mind and that is when we sold our produce, as we always did both packaged and loose, when you looked at what was left in the loose sectors at the end of the day, invariably it was the irregular shapes, the blemishes - things that people don't want to buy." (Kevin Hawkins (director general, British Retail Consortium, quoted Sunday telegraph Febuary, 23rd 2006)

- Criticism of agri-industry standards and their impact on taste and variety is being countered by the tendency to introduce one or two flavour/texture led brands at a premium price: "we launched the first two Finest potato lines - Exquisa and Smile last year. These varieties were specifically selected to offer customers an enhanced taste." (Leahy, 2006, tescocorporate.com)

- Own-brands are increasingly replacing external suppliers brands, or are being used to force price reductions in established brands: "Finest is the premium Tesco brand with over 1,500 products across food and non–food and the majority of our customers regularly buy Finest. In 2005, we introduced over 200 new Finest products and saw sales grow rapidly, particularly at Christmas." (Leahy, 2006, tescocorporate.com)

- Ready-meals are beginning to dominate food supply and consumption further marginalizing, or eradicating consumer's involvement in the sensory rituals involved in locating and preparation, while reinforcing the increasingly dominant culture of "instant convenience": "The ready meals market across Europe and the US has grown steadily in recent years. In 2005, the market was worth $29.2bn. However, by 2009 it is expected to grow to the value of $32.6bn." (MarketResearch.com 11/20/2006 - 1)

- Support for healthier options, organic and ethical concerns is driven by consumer demand, or limited government pressure, rather than management belief in the rightness of responsible supply and demand policies. [247]

- While the supermarket sector responds to consumer demand for fresh/organic food it is also supporting the agri-industry moves to take over this trend with the production of processed 'Phood': "pharmaceutical-benefit foods (i.e., "phoods") and beverages including traditional (e.g., regular oatmeal, whole-grain breads), fortified (e.g., orange juice with calcium), and "designer" (e.g., protein bars, smart spreads) products. The combination of more permissible FDA-approved health claims on food packages, media attention to the link between diet and health, and new product/ingredient/technological development is spurring rapid growth in this market, which encompasses products

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247 "organics in the US and Europe grew from a US$18bn (EUR15bn) market in 2000 to US$32bn (EUR25bn) in 2005." (http://www.marketresearch.com/email.asp?progid=7978&productid=1353154)

fortified with glucosamine and/or calcium to promote joint and bone health, those containing omega-3 fatty acids and/or plant sterol/stanol esters for heart health and other benefits, soy protein-enhanced foods, and "vitamin waters" and other functional beverages—among many others. Also covered are products enhanced with cutting-edge ingredients and nutrients, such as lutein for eye health, glucosamine for joint health, or probiotics/prebiotics to strengthen the immune system; as well as certain "inherently healthy" products, such as whole-grain/functional cereals and wellness teas. (Packaged Facts, 2005) Another term is 'Nutraceuticals,' which "are defined as foods or beverages that provide medical or health benefits, including the prevention and treatment of disease...Natural and fresh products, with their perceived product safety and health benefits, are becoming more popular. The number of European natural food buyers is set to grow from 153 million in 2002 to 245 million in 2007. Consumer demand for better quality and tasting food and drinks has lead to steady growth in fresh foods market, which will grow to exceed ?200 billion between 2002 and 2007." (Business Communications Company Inc, 2003)

Tesco Phase Seven: Sensory Implications

The sensory implications of supermarket dominance are likely to continue to limit multi-modal sensory opportunity except where it can be recast as luxury experience. There is increasing evidence of token gesture in this direction but they remain limited in numbers and conceptual grasp. This is partly due to the fact that there is considerable confusion over what constitutes 'fresh,' 'natural,' and even 'organic' but it is also informed by the fact that the management culture of supermarkets seems to find it hard to grasp what food empathy is about once it falls outside of conventional marketing theory. The attitude of supermarkets to sensory evaluation is still dominated by their obsession with visual regularity: "a Cox apple that sometimes people think of as an autumn apple, produced with a little bit of russet on it - if it has a piece of russet on it even smaller than a 5p - it is not allowed in the supermarket. It is taken out at the grading stage and put into cider and that is a massive loss. I would say that what you put into the grader, 30 per cent come out. You pull probably another 25 per cent off the tree because you don't think it's good enough. You're pulling off the small ones because the supermarkets say they have to be bigger." (Sir Sandy Bruce-Lockhart (apple and pear farmer) quoted Sunday telegraph February, 23rd 2006) Between the lip service given to health, variety and local taste there are a clear set of priorities which seem, by definition to inhibit the possibility of sensory engagement:

- Efficiency: reviewing the pattern of food retails development over the past one hundred and fifty years it is clear that the supermarkets have picked up the baton from earlier generations of food retailers and made efficiency one of two main differentiators. Because it lies at the heart of supermarket culture it is unlikely to change and until it is rethought it will restrict sensory engagement
- Price: price is the other differentiator that helped to establish the supermarket and again remains at the core of the concept. Emphasis on price means continued and developing investment in agri-indusrial methods of production, processing and distribution all of which militate against sensorial values outside of those that are produced by media images and chemical additives

- Scale: Scale became a factor in the supermarket strategy relatively early on but it has come to mean a number of things to contemporary supermarket management, which include, global, brand extension, number of customers served, etc., all of which would seem to be at odds with the potential of sensory value
- Pre-packaging: In a business culture that is dependent on economies of scale and believes in the supremacy of visual communication, factors like global sourcing, reduction in warehousing and distribution costs mean that pre-packaging has become a major source of efficiency and profit. Locking the food into a packaging culture effectively locks out sensory opportunity
- Convenience: Convenience also means a number of different things to supermarket management all of which are defined in economic terms. Convenience food for example is increasingly associated with processed and/or pre-prepared, ready to eat, or 'instant' packaged food, which limits sensory engagement. Convenience is also deeply associated with speed and the tendency to present the shopping, preparing, and consuming processes, as 'fast-forward' opportunities for time saving reinforces an already established habit of treating these processes, including eating as something that is time-wasting. This tendency is perhaps one of the great opportunities for innovation?

Alternatives: Are Their Food Retailers Who Offer Greater Sensory Opportunity Than the Supermarkets?

The immediate answer is yes, but any argument that these alternatives will, or do, provide a significant alternative to the corporate status quo of sensory marginalization, needs to be approached with caution. Other sections have confirmed that the way that food is created and designed as a commodity by agri-business and corporate food retailing tends to lead to the removal, or artificial replacement of the sensorial qualities that are traditionally associated with food production, retailing and consumption.[248] Food has a rich sensorial heritage and offers an abundance of sensory opportunity in the form of its raw materials, processes and rituals. Comparing contemporary practice to pre-existing traditions provides evidence that mainstream business practice has been aided and abetted by the design professions to eradicate, marginalize, or synthesize much of this implicit value. The food business is thus a rich source of evidence for a culture of sensorial denial. I suggest that this culture prevails in the general strategies that has provided the context for development of the relationship between design and business that operates in the production of products and the retail spaces in which they are purchased.

While it is tempting to believe that the development of alternatives food retailing would automatically reintroduce multi-modal sensory opportunity back into the food chain there are an important set of questions surrounding exactly what can be replaced and what might be added through the development of an alternative food retailing culture? This section will focus on two important questions. The first considers the nature and impact of management culture and the

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248 Questions about intentional marginalization of multi-sensory opportunity, and degrees of intention will be dealt with in other chapters.

second explores the character and contribution of design. These questions will be widened out to consider the following quandaries:

- Does an objective management style restrict the development of multi-modal sensory opportunity in the food chain?
- Is it is possible for the food business to succeed at a business level without adopting the objective style of contemporary management?
- Does the visual orientation of professional design restrict its ability to evolve multi-modal sensory engagement opportunity
- Is professional design a necessary component of an alternative multi-sensory food chain?
- Does design need to learn sensory skill and awareness from the professional and tacit knowledge of food producers, preparers and retailers?
- Is there a need to conduct a programme of aesthetic education to reconnect everyone involved in the food chain to their multi-modal sensory ability?

A simple and deliberately selective comparison between the two of the types of UK food retail outlets, used to confirm and test the conclusions of this study offers obvious evidence of the denial of multi-modal sensory opportunity in the corporate supermarket environment.

La Fromagerie	**Tesco**
The majority of the food on display is not packaged	The majority of the food is packaged
The majority of the food is fresh	The majority of the food is processed
The display strategy emphasises the distinct characteristics of food	The display strategy is designed to emphasize brands and price
Access is based on a encouraging involvement through sensory engagement	Access is based on efficiency of flow and management of consumer decisions
Choice is determined by sensory characteristics, rarity, labels, staff knowledge and slow values	Choice is determined by price, image and flow management
Ambiance is achieved by a mixture of careful placement, sensory opportunity hand written labels, staff passion for food and source, and personal touches to the design strategy including mirror balls	Ambiance is almost entirely ascetic and mechanical, knowledge is communicated by labels, passion is limited to efficiency and profit

Because both examples exist within the terms of economic progress defined by capitalism it is not assumed that either evacuate the emphasis on business efficiency sufficiently to offer

an exemplar of multi-sensory opportunity. My research suggests that capitalism has encouraged a set of priorities that, while not totally against sensorial engagement, tend to limit its development for the following reasons:

- Capitalism is concerned with the efficient achievement of profit.
- Capitalism has become associated with control and businesses that exemplify contemporary mainstream capitalist achievement tend to see sensory engagement as representing a threat, or disruption to control.
- Sensorial engagement is associated with pre-capitalist systems in which sensorial engagement is associated with "idleness" and "sloth",[249] both of which are indicators of ignorance.
- Design has evolved primarily as a business service industry, which means that its perceived purpose is centred on the delivery of efficient sources of profitability for the businesses that it services. This means that it is likely to contribute to focus on the development of functions and/or aesthetics that are predicated on the rapid, if short-term, financial gains offered through style led visual encounter.
- Sensory interest is associated with aberrant behaviour, through the histories and theories of examples of practice like psychology that are associated with defining deviant behaviour. Norms of behaviour, as in capitalist norms, are implicitly offered as the benchmark against which examples of behaviour, or interest that challenges that norm is used as an example of failure to comply.
- Capitalism has a wide range of exemplary case history that confirms that confirms that the suppression of sensorial tradition is more profitable than maintaining it.

These norms and implicit beliefs can be summarised in the following quote: "When the economists were done, what had been only a humdrum, or chaotic world, became an ordered society with a meaningful life history of its own." (Heilbroner, 1999: 16) My analysis of the corporate sector suggests that this tendency will become more rather than less dominant, but others disagree: "As global competition for hearts, minds, and wallets intensifies, it will no longer be a question of whether a business should practice responsible consumerism. This will be expected and demanded—while becoming another point-of-entry hygiene factor. What will increasingly differentiate brands are the quality and sustainability of this responsible consumerism. Brands whose organizational purpose, vision, and values are driven by this are set to flourish. Those that are simply looking to promote an ethical veneer will be quickly outed and become obsolete." (Davis, October 2006)

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249 (Perelman, 2000: 16)

Appendix M: The Culture of Supermarket Management

Lasch argues "modern technology has the same effect of culture that it had on production, where it serves to assert managerial authority over the labour force. The study of mass culture thus leads to the same conclusion prompted by the mechanization of the workplace: that much-advanced technology embodies by design (in both senses of the word) a one-way system of management and communication. It concentrates economic and political control – and increasingly, cultural control as well – in a small elite of corporate planners, market analysts, and social engineers. It invites popular "input" or "feedback" only in the form of suggestion boxes, market surveys and public opinion polls. Technology thus comes to serve as an effective instrument of social control..." (Lasch, 1985: 26) This and other quotes that have been used throughout this project highlight the increasing tendency for management to isolate themselves from the day today realities of the service that their business is intended to provide. It was precisely this tendency for the bureaucratic mindset to allow the disenchantment of experience that Weber identified.

Weber also pointed out the influence of the protestant work ethic on the values that bureaucrats were inclines to promote and protect. This has proved to be true in the corporate food sector as the quote below reveal:

- "In order to meet Tesco's chief executive, visitors form the capital have to trail through northeast London...to Cheshunt. They drive past a tatty row of shops just before turning into a 1960s sprawling office complex. Parking nearby in a gloomy oversized car park does not lift the spirits. Once signed in by the security staff, visitors wait in the gloom entrance hall with the lowest of low pile carpets on the floor." (Bevan, 2005:23)
- Bevan point out Terry Leahy's resistance to the general culture of socializing and sport but confirms that most "of the (Tesco) Directors are sports mad."[250] Cultural differences between Tescos and the other three supermarkets may be expressed in the degrees of luxury of corporate lifestyle and the level of luxury in their corporate head quarters but Bevan suggests that: "Differ thought they may, the executives of these four companies share one characteristic – they are fiercely competitive, and they have become m ore so in the past decade." (Bevan, 2005: 23)
- Bevan describes Tesco's buying director John Gildersleeve and his team as tough but significantly more pleasant to do business with than their main competitor. She quotes a former supplier, "Sainsbury were hateful to do business with, far nastier than Tesco or the others, when Tesco overtook Sainsbury we all cheered." Bevan confirms that in the twenty-first century Tesco began to adopt "a 'stand-and deliver' style of negotiation. Tesco directors may take their counterparts at their suppliers to exotic locations to play golf and whisper sweet nothings, but down the line Tesco buyers grant them no quarter on pricing. Bevan cites Wal-Marts takeover of Asda in 1999 as the reasons for Tesco's tougher attitude. She also cites that Wal-mart has a generally softer approach buys 80% of its food regionally and in the UK at least supports small producers. (Bevan, 2005: 124)

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250 Bevan cites that Tim Mason, Tesco's marketing director, "regularly takes part in triathlons. (Bevan, 2005: 24)

- "Mackey flies commercial and likes to rent the cheapest car. A half-dozen times a year, his two senior operating executives -- A.C. Gallo and Walter Robb, each of whom runs half the country for Whole Foods, from Boston and San Francisco, respectively -- come to Austin and stay at Mackey's house. They make their own beds, and talk shop at 6:45 a.m. over soy yogurt and fruit." (Fishman, 2004: 70)
- Cargill's CEO, McVay boasts: "We are productive, inventive, and efficient. Spartan, if you will but good citizens."[251] (Miller, 2005: 117)

The supermarket has become a multi-billion dollar industry that dictates food prices, availability and the conditions and values of production and consumption. It is a highly competitive industry with high levels of risk in which the executives who deliver strategy have at least nine potentially critical audiences to impress, or overcome:

- The Board of Directors
- Shareholders
- Market Analysts
- The Media
- Consumers
- Action groups
- Politicians
- Enforcers of legislation
- Competitors

It is inevitable the scale of operation breeds and reinforces a culture of management that is "fiercely competitive" (Bevan, 2005: 23) The language and lifestyle of top executives who dominate food retail has many similarities with the leaders of other sectors of agri-industry. In brief these similarities are:

- Competitive
- Frequent use of competitive/aggressive language, such as "win the game"
- Tendency to compete in sports/endurance events
- Spartan headquarters
- Lack of flamboyant dress
- Male dominated
- Tendency to drive modest personal cars
- Leading lives that are dominated by work
- Tendency to recruit like-minded individuals
- Profit and target obsessed
- Precedent driven
- Efficiency focused
- Will only change strategy under extreme duress

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251 "The God of Calvanism demanded of his believers...a life of good works combined into a unified system...The moral conduct of the average man was this deprived of its plan-less and unsystematic character and subjected to a consistent method of conduct as a whole." (Webber, 2002: 72)

What is rarely evident is a passion for engagement in the complex potential of appreciating and promoting the sensory characteristics of food, or concern for the ethical and environmental circumstances in which it is produced. The recent embrace of environmental and ethical issues and the softening of the totalitarian machine aesthetic rather than challenging these generalizations seems to reinforce them. The recent shifts in strategy reflect the competitive and profit driven nature of supermarket and food business management. These kind of concerns only become a matter of a particular concern if they are a necessary component of a competitive or damage limitation strategy, they are simply accommodated to fit the dominant concern to achieve the most profitable form of food. The expertise to provide this is then hired in with the same kind of relative disinterest that is applied to any of the commodities that are developed or selected for sale. Decisions typically begin with will they like it rather than do we like it, the managers role is to ensure that if a product is needed that it will be available in the right quantity at the right price.

In much the same way as the coalition of religion and business in the nineteenth century informed paternalism there is a tendency for the isolationism of management to inform paternal gestures which depend on their own interpretation of the status quo. Mackey's CEO of WFM's reveals an arrogance and an unquestioning assumption that his approach to management is better considered and a more appropriate for the times we live in. The 'visible hand' is clearly not an open invitation but a justification of what sounds suspiciously like megalomania. In this respect Hayek's belief in an almost cannibalistic deep order[252] to economic experience makes complete sense: "For Hayek, market competition generates a particular kind of order--an order that is the product "of human action but not human design" (a phrase Hayek borrowed from Adam Smith's mentor Adam Ferguson).[253]

Superheros?

Books about the management of Corporate change follow a long established American tradition of depicting the leader, or CEO, as the hero who develops a vision, and then shares this with the management team, who set out to deliver it (. (Barwise P (2004) Kotler P (1999)

"The manager as a species does not belong to an organization but to a class system or ideology that is self-perpetuating and self-reinforcing". (Edwards J D (2005) The construction of consensus is generally regarded as a primary management goal. 'The engineering of consensus assaults human perception at both conscious and unconscious levels, especially the latter. Once

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252 This "spontaneous order" is a system that comes about through the independent actions of many individuals, and produces overall benefits unintended and mostly unforeseen by those whose actions bring it about. To distinguish between this kind of order and that of a deliberate, planned system, Hayek (1968b, pp. 72-76) used the Greek terms cosmos for a spontaneous order and taxis for a consciously planned one. Examples of a cosmos include the market system as a whole, money, the common law, and even language. A taxis, by contrast, is a designed or constructed organization, like a firm or bureau; these are the "islands of conscious power in [the] ocean of unconscious cooperation like lumps of butter coagulating in a pail of buttermilk" (D. H. Robertson, quoted in Coase, 1937, p. 35)

253 Most commentators view Hayek's work on knowledge, discovery, and competition as an outgrowth of his participation in the socialist calculation debate of the 1920s and 1930s. The socialists erred, in Hayek's view, in failing to see that the economy as a whole is necessarily a spontaneous order and can never be deliberately made over in the way that the operators of a planned order can exercise control over their organization. This is because planned orders can handle only problems of strictly limited complexity. Spontaneous orders, by contrast, tend to evolve through a process of natural selection, and therefore do not need to be designed or even understood by a single mind." (Klein, 2005)

the group or collective unconscious is programmed into what has been called culture, virtually any bill of goods can be sold at conscious levels. Psychological indoctrination also exists through language, cultural assumptions, and highly malleable perspectives towards the self, the world, and perceived relationships with what is casually accepted as reality.' (p 4, Key W B (1992)

It is argued that Corporate change is partly facilitated by the existence of a set of shared values within the business (Gardener H (2004) This is seen as strength but the writer proposes that it as a weakness.

There are three obvious routes into supermarket management

1) Internal promotion/training
2) Business School
3) Transfer from another management sector

All of these routes are likely to produce managers who do not question the broad business strategy because it evolves from a value system that they already ideologically identify with. A brief analysis of the curricula that some of the leading business school offers undergraduate and MBA level confirms a number of important characteristics that confirm that graduates would find a fit with the existing business model of the UK supermarket:

- Benchmark led
- Precedent driven
- 'Hero' leadership style orientated
- Objectively focused on profit/performance rather than emotion
- Systems driven
- Team focused
- Ethics are a PR concern, informed by threat, rather than desire.

Example from the Business School of the University of Bath: BSc in International Management and Modern Languages: Programme Overview

Year One: Core Management Units

These introduce students to Business Economics, Personal Computing, the Financial Management of the Organisation and Quantitative Methods.

Year Two*: *Core Management Units

These concentrate on Marketing and Organisational Behaviour as well as offering free choice from a range of management options in semester two.

The Final Year*: *Core Management Units

There is a choice of around 30 different management options such as: Ecological Thinking, Integrated Marketing Communications, International Business and the Americas, Investment Banking, Japanese Business, Managing Change, Organisational Leadership, Strategic Analysis and Supply Management.

Further analysis of the types of people who are drawn to management training can be derived from the profiles of skill/experience that Supermarket websites develop to attract recruits. This example from the Tesco Careers Website (23-3-05) is typical and needs to be read carefully in order to identify the emphasis on systems that are already embedded rather than the spin on "creative thinking"

"Every day, more than 11 million people visit our stores knowing they can pick what they want, when and where they want it.

From our customers' point of view it looks simple. But to offer such an amazing choice, we've developed one of the most sophisticated retail supply chains. Our progressive approach to logistics has played a critical role in helping Tesco become the UK's number one retailer and we play an important role in supporting an ambitious international expansion programme.

At the forefront of logistics management, our Distribution Centres are recognised as world-leaders in store replenishment, warehouse operations and supplier collaboration. We develop systems, processes and tools to manage the flow of products from suppliers to customers, and cross most functions including buying, warehouse replenishment, logistics, store operations and even store design.

Our aim is to create simpler, more cost-effective operations, without compromising service or quality. We work together to ensure maximum customer service at minimum cost.

The careers we offer are unusually varied, so our people have backgrounds as diverse as merchandising, marketing and buying, as well as IT, store or warehouse operations management and finance. Operational roles range from Warehouse Operatives, Drivers and Admin Support Staff, through our Management Teams delivering our operational and people routines, to the distribution centre General Manager, who will balance the people, operational, customer and financial needs to drive an effective operation.

In our support teams, we tackle lots of diverse projects, which need a combination of Project Managers and Programme Managers, Analysts and Strategists to deliver best practice results time and again. Good communication, interpersonal skills and creative thinking are vital qualities.

Join Supply Chain and you'll find yourself in a dynamic and supportive team environment with great growth opportunities - not just in the logistics operation, but across the business."

The table below suggests that the emphasis in management selection and promotion is biased towards 'left-brained' candidates who feel comfortable working in an environment where logic and predictability rule.

Critical Thinking	Creative Thinking
analytic	generative
convergent	divergent
vertical	lateral
probability	possibility
judgment	suspended judgment
focused	diffuse
objective	subjective
answer	an answer
left brain	right brain
verbal	visual
linear	associative
reasoning	richness, novelty
yes but	yes and

(Copyright 1998 by Robert Harris, w w w . v i r t u a l s a l t . c o m)

This emphasis suggests an important source for developing an understanding of management's resistance to radical design innovation. While there is evidence of new thinking and the recognition of the need for creative engagement in the writing and consultancy of a number of well respected management 'gurus' on closer analysis 'creativity' is often, at best, a compromised embrace of a hybrid of old theory and ideas borrowed from elsewhere. Rather than being restricted to the description of the kind of original thinking associated with cutting edge design, or art (Kelly, 2002, Lawson, 2002) 'Creative' is a word that is used in a relative sense relating to deviations from the norms of that sectors lack of experimentation. As the career of Terry Leahy (see below) demonstrated management is often about imitation as a route to innovation, or in the words of Ridderstrale & Nordström, 'karaoke capitalism' (Ridderstrale J & Nordström K (2005).

Management is therefore not entrepreneurial in the sense of a leap of faith but an incremental process based on rigorous and logical analysis of precedent and status quo push and pull. The rational approach to management is summarized in the theory of Herbert Simon who was concerned with clarifying the most efficient way to make a decision. Faced with the problem of defining how individuals made decisions where limited knowledge of the full range of

choice prevailed Simon labeled the activity "substantive rationality". Simon was interested in how an individual could achieve substantive rationality without knowledge of the full range of choice. Simon concluded that the decision-making is an incremental process, which starts by determining a level that sustains welfare. Achievement of this level concludes the first phase of the decision and allow more options to be considered and achieved He called this process "procedural rationality" (Simon 1978) Simon's theories had a major influence on the development of management theory through their tendency to 'cut to the quick' by removing the confusion of emotional value. When Simon moved into the sphere of artificial intelligence in the late stage of his career he concluded that computers freed humans to rediscover their sensory capability. Machines could, now make the rational decisions.

Typologies

The type of person who is drawn to management may well display a 'managerialist mindset (that) involves a set of beliefs and assumptions that transcends organizational type' (p.4, Edwards J D (2005) "Managers are people who do things right, apparently without regard for the content of whatever it is they do" (p7 Bennis & Nanus (1985) One of the problems that a business on the scale of Tesco's has to grapple with is the difference between management and leadership. Contemporary theory advocates that most large Corporations should be led rather than managed because leadership allows for more innovation. According to the theory the leader provides the vision and others find ways of delivering it, this approach typically involves an unquestioning belief in the infallibility of leaders: "leaders are people who do the right things." (p7 Bennis & Nanus (1985) In practice whatever the CEO chooses to define his role, as the nature of the organizational culture will determine how much freedom for innovation actually exists. This in turn will be influenced by the history of the business. While Tesco have moved up market from their, 'stack it high and sell it cheap', starting point, (partly by expanded into all sorts of merchandise and services), there is evidence to suggest that they are still led by a vision that is predicated on selling more groceries via a price led strategy. While this policy prevails the emphasis will remain fixed on finding ways of reducing operating costs at all levels to ensure that the price of individual commodities has a margin that allows competitive discounts to be offered to consumers. Management innovation is therefore likely to be limited to paring overheads and/or achieving greater efficiency at some level of the operation. The track record of Terry Leahy (discussed in more detail below) as a Tesco employee suggests that the UK's leading supermarket is short on opportunities for innovation unless they are directed from the upper echelons of management. Leahy switched from his initial remit of 'copying Sainsbury' to his focus on customer service only when he moved up the ladder. His first major innovation in "listening to the customer" (The Tesco Clubcard) was only achieved after he became deputy-managing director. As an innovation it had to overcome resistance in the industry but it was hardly radical, given that its premise was, and remains, customer-spending tracking. "Having a barcode stamped on your backside." (www.corporatewatch.co.uk)

The culture of management is often accused of avoiding risk as risks are quite simply risky and therefore leave the manager exposed to the stigma of failure. (Zaleznik, A (1990)

Terry Leahy; CEO Of Tesco

It is clear that promotion made Leahy more confident and more able to change corporate strategy but it is also clear that he has promoted a culture of imitation or relative innovation

rather than taking risks.[254] Terry Leahy's (CEO of Tesco) career profile is telling. His first position of responsibility with Tesco, in 1979, was to 'copy whatever Sainsbury did' (Barwise, 2004: 90). The contemporary CEO, Ian MacLaurin, had created a vision which involved taking Tesco up market and Sainsbury was the obvious benchmark. Leahy was appointed Marketing Director in 1992 and 'declared it was time to leave Sainsbury behind and focus not on them but customers' (Barwise, 2004: 91). It was Leahy's customer centred approach that has led to the dramatic increase in Tesco's market share and informed the decision to make him CEO in 1997. 'You really have to believe the customer. This is where I think many organizations fall down. Because they only pay lip-service to the consumer, they never really find out where their business is.' (Sir Terry Leahy, chief executive of Tesco plc, addressed the Guardian's public services summit on 2nd February. Friday February 4, 2005)

A Listening Culture

While the policy and concept of listening to the customer may sound like a sensitive response it is actually a combination of the kind of strategies that were pioneered in America in the 1920's to allay public and political suspicion of large corporate business's and a very simple market research loop that replicates the local knowledge of consumer taste (that was held in the head of the local grocer) with digital data. (Tesco were the first UK store to introduce customer loyalty cards that involved issuing customers with a swipe card free of charge. Customers were offered incentives to use the card by the allocation of points for each pound that they spent in the store and "money off vouchers." Terry Leahy promoted the strategy in 1995 while he was holding the post of deputy managing director. For Tesco this innovation enabled them to create very precise database of customer habits that has now gained market value in its own right as source of spending patterns that Tesco is prepared to sell to other business's. Listening to the customer does not in any way suggest that the business understands the customer to be any more than "so many units of consumption, a set of impersonal figures on a chart." (Marchand, (2002: 8) that this kind of closed loop data can militate against new thinking as Henry Ford is quoted as saying "If I had listened to what people said they want I would have designed a faster horse."

Managing Change in the Food Retail Sector

The shift in Tesco's status from follower to leader has been achieved through a strategy of imitation. Starting with its dominant competitor and then moving beyond the competition through recording and responding to consumer need is classic marketing strategy. The root to market dominance that Leahy would have learnt when a business student at the University of

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[254] The contemporary manager is not expected to have deep empirical knowledge about the history or craft of the business; their skills are primarily focused on one aspect of the logistical, financial, marketing, human-factors aspects of the business. While the manager is expected to buy into the particular brand that they are employed to manage their skills are essentially interchangeable with others employed in the wider corporate world. While it is assumed that the manager will have appropriate skills they are not expected to be passionate about food they are there to ensure that the corporate vision is delivered effectively and efficiently. The manager who is likely to succeed will therefore have an affinity with dispassionate decision-making. Management is about objectivity not an ability to empathise with aesthetic subtleties. Edwards quotes economic theorist, Kenneth Meier on the subject of the primary goal of business management. 'To Meier, economics (at least the applied variety) has only one value and that is efficiency. Other values espoused by economists such as cost-effectiveness, competition, and entrepreneurship are simply code words for this basic value'.(Edwards, 2005: 16) The holy grail of management in the supermarket seems to be still wrapped up In Taylor's quest for the "one best way" to fulfil a task through efficient organisation of the activities and actions involved. (Taylor F W (1911)(1998)

Manchester Institute of Science and Technology is, as he puts it, to understand and respond to a view that the "the consumer is King." (Barwise, 2004)[255]

Innovation

There seems to be little doubt that UK supermarkets are led and managed cautiously. Decisions are based on what is perceived to be evidence of customer preference, or competitor success, rather than on innovation based on the possibility of informed origination. Many claim, including Leahy, that Tesco has succeeded through a programme of continuous innovation, 'relentless innovation to improve performance on the generic category benefits is an essential element of sustained business success' (Barwise, 2004: 94).

The definition of Tesco's approach to innovation suggests that it is centred on systems of data gathering. The Tesco careers website confirms that in the management jargon of the 1990's the business is committed to 'organisational learning'. Theorists who challenge the incremental model of innovation argue that the only way for a business to move forward is 'learning by forgetting' (Peters, 1999: 88), or perhaps 'alternative remembering' in which the palate of evidence is expanded to include memories of retail in which the retailers knowledge and respect for the origins and quality of the food on display looks back or side ways to cultures where this knowledge was, or still is intact?

'Forgetting', combined with, 'alternative remembering' offers possibly, one of the key opportunities for sensory innovation, but there is a lot of evidence to suggest that the major UK supermarkets spend a lot of time remembering and recording techniques in template detail. The template effectively becomes the blueprint for the brand and brand management is one of the areas where the delicate balance between innovation and predictability is most carefully managed. There seems to be a view that too much design change could lead consumers to worry that the store is spending money that could be applied to price cutting on aesthetics. The same conservative outlook proposes that creating an experience in which the store and the brands it sells are familiar and reassuring is the right way to ensure customer loyalty.
For Terry Leahy this means keeping the template simple and targeted towards a consumer stereotype, 'the middle market' renowned for its cautious approach to innovation. So even when the range of commodities and store types is constantly evolving the template remains broadly predictable allowing rapid roll out of a new outlet that is 'on brand'.

Leahy says "In overall terms we should aim to be positively classless, the best value offering the best shopping trip. This will be achieved by having a contemporary business and therefore one that remains relevant by responding to changing needs. We should aim to be the natural choice of the middle market by being relevant to their current needs and serving them better, i.e. customer focused." (Barwise, 2004: 91-9)

Leahy is clearly a leader of the type favoured by the kind of management theorists who dominated the 1980's in so far as his strategies are customer focused and led by benchmarks. Writers like Bennis, Peters, Drucker have all subsequently revised their positions on

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255 "The literature on entrepreneurship recognizes a variety of entrepreneurial roles, and the question arises what roles are played when and by whom...A central them is the relationship between discontinuity in radical innovation (exploration) and continuity, in application (exploitation). Use is made of a concept of a 'cycle of discovery,' which seeks to explain how exploration leads on to exploitation, and how exploitation may yield exploration, in a step-by-step development towards radical innovation. Parallel to this there are processes of organizational development" Nooteboom B (2003)

benchmarking, recognizing that it leads to a stifling of the competitive edge when business worked according to predicable strategies benchmarks could be seen to work.

Leahy makes it very clear that the kind of innovation he favors is averse to risk and distinctly lacking in sympathy for anything that does not fit the classic efficiency based model of customer management. 'Innovation for innovations sake is nonsense, but relentless innovation to improve performance on the generic category benefits is an essential element of sustained business success' (Barwise, 2004: 93-94)

Bibliography

A

Aaker D A (1995) Building Strong Brands, Free Press

Aaker D A (1991) Managing Brand Equity, Free Press

Aaker D, Kumar V & Day G (1995). Marketing Research, 5th Edition, Chichester Wiley.

Aaker D (1996) Measuring brand equity across products and markets. California Management Review, Spring, Vol. 38, No. 3, p102-120.

Aaker D & Biel A (Eds.) (1990) Brand Equity and Advertising, Lawrence Erlbaum Associates

Abernathy W (1978) The Productivity Dilemma: Roadblock to Innovation in the Automobile Industry. Baltimore: Johns Hopkins University Press

Abram D (1997) The Spell of the Sensuous: Perception and Language in a More-Than-Human World, Vintage Books

Abram S (1996) Reactions to tourism: a view from the deep green heart of France. In Ackerman D (1991) A Natural History of the Senses, Vintage

Abrams M H (1965) The Mirror and the Lamp: Romantic Theory and the Critical Tradition (Galaxy Books), Oxford University Press

Ackerman D (2004) An Alchemy of Mind: The Marvel and Mystery of the Brain, Scribner

Ackoff R (1981) Creating the Corporate Future, Wiley

Addison W S R (2003) The Wal-Mart Decade: How A New Generation Of Leaders Turned Sam Walton's Legacy Into The Worlds + 1 Company, Portfolio

Adorno T W (1997) Aesthetic Theory, Athlone

Adorno T & Horkheimer M (1997) The Dialectic of Enlightenment, Verso

Adrian, E.D. (1928). The Basis of Sensation, Christophers, London.

Adriano, D. (1999). It's no false dawn - Sainsbury chief. Farmers Weekly. January 15. p12.

Aftel M (2004) Essence and Alchemy, Gibbs Smith

Aftel M (2005) Scents & Sensibilities: Creating Solid Perfumes for Well-Being, Gibbs Smith, Publisher

Aglietta M (1976) A Theory of Capitalist Regulation: The US Experience, London, New Left Books, 1979

Agrawal A & Gibson C C (1999) Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation, World Development 27, no. 4 (April 1999): 629–649

Ahmed S & d'Astous A (1993) "Cross-national evaluation of made-in concept using multiple cues," European Journal of Marketing. Vol. 27, Iss. 7 p39-52Aidley D J (1998) The Physiocology Of Excitable Cells, Cambridge University Press

Ajzen I and Fishbein M (1980) Understanding attitudes and predicting social Behavior, London. Prentice-Hall

Albo G, Langille D & Panitch L (Editors) (1993) A Different Kind of State? Oxford University Press

Alavoine-Mornas F (1997) Fruit and Vegetables of Typical Local Areas: Consumers' Perception and Valorization Strategies Through Distributors and Producers. 52nd Seminar of the European Association of Agricultural Economists, EU Typical and Traditional Productions: Rural effects and Agro-industrial Problems. Parma, 19-21 June.

Albaum, G. and Peterson, R. (1984). Empirical Research in International Marketing:1976-1982. Journal of International Business Studies, 15(spring/summer): 161-173.

Allee V (1997) The Knowledge Evolution: Expanding Organizational Intelligence. Butterworth-Heinemann

Alexander C (2004) A Pattern Language: Towns, Buildings, Construction, Centre for Environmental Construction

Alexander C (2004) A Vision of the Living World: The Nature of Order: Book 3, Centre for Environmental Construction

Alexander C (2003) The Luminous Ground: The Nature of Order: Book 4, Centre for Environmental Construction

Alexander C (2003) The Process of Creating Life: The Nature of Order: Book 2, Centre for Environmental Construction

Alexander C (1979) The Timeless Way of Building, Oxford University Press

Alexander C (2004) The Phenomenon of Life: The Nature of Order: Book 1, Centre for Environmental Construction

Alexander C (1964) Notes on the Synthesis of Form, McGraw Hill

Alexander J (1999) Rituals for sacred Living, Godsfield Press

Alperovitz G (2006) America Beyond Capitalism: Reclaiming our Wealth, Our Liberty, and Our Democracy, Wiley

Altieri M A (1995) Agroecology: The Science of Sustainable Agriculture, Westview Press; 2nd edition

Altman D (1999) Art of the Inner Meal: Eating as a Spiritual Path. San Francisco: Harper, San Francisco

Andersen O (2002) Making Sense of Aristotle: Essays in Poetics, Duckworth Publishing

Amoore J E (1963b) The Stereochemical Theory Of Olfaction. Nature, 199, 912-913Anderson, L. (1997) Argyris and Schön's theory on congruence and learning http://www.scu.edu.au/schools/sawd/arr/argyris.html

Anderson G (8-12-2006) Whole Foods and Central Market Experiment, www.retailwire.com

Anderson D R (1987) Creativity and the Philosophy of C.S Peirce, Springer

Anderson A K, Christoff K & Stappen I (2003) Dissociated Neural Representations Of Intensity And Valence In Human Olfaction. Nature Neuroscience 6(2), 196-202

Anderson K & Zemke R (1998) Tales Of Knock Your Socks Off Service: Inspiring Stories Of Outstanding Customer Service, Amacom

American Cancer Society (27 June 2001) "Obesity Linked to Cancer, Other Chronic Disease Risk Overeating and Inactivity Lead to Obesity and Chronic Diseases." ACS News Center. Accessed 11th November 2005

American Heritage Dictionary of the English Language (The) (3rd ed.) (1992) Houghton Mifflin Company: Boston

Anderson J (1980) Cognitive Psychology & Its Implications, H Freeman & Co

Apollonio U (2001) Futurist Manifestos, MFA Publications

Appadurai A (1986) The Social Life of Things: Commodities in Cultural Perspective, Cambridge University Press

Appignanesi R & Garratt C (1995) Introducing Postmodernism, Totem Books

Apple M W (2004) Ideology and Curriculum, Falmer Press

Aristotle De Anima, Books II and III.

Aristotle De Anima, Books II and III.

Argyris C & Schön D (1978) Organizational learning: A theory of action perspective, Reading, Mass: Addison Wesley.

Argyris C and Schön D (1974) Theory in practice: Increasing professional effectiveness, San Francisco: Jossey-Bass

Arrighi G (1994) The Long Twentieth Century: Money, Power, and the Origins of Our Times, Verso

Arnheim R (1935) Principles Of Visual Thinking, University Of California Press

Arnold M (1869) Culture and Anarchy Aylott, R., Mitchell, V. (1999), "An exploratory of grocery shopping stressors", British Food Journal, Vol. 101 No.9

Asendorf C (1993) Batteries of Life: On the History of Things and Their Perception in Modernity, trans. Don Reneau, University of California Press

Ashley D (1990) Habermas and the Project of Modernity: In Theories of Modernity and Postmodernity. Bryan Turner (ed). London: SAGE

Attfield J (1999) Beyond the Pale: Reviewing the Relationship between Material Culture and Design History, Journal of Design History, Vol. 12, No. 4

Attfield J (2000) Wild Things: The Material Culture of Everyday Life, Berg

Atkins P J & Bowler I R (2001) Food in Society: Economy, Culture, Geography, Arnold Publishers

Akins K (1996) Of Sensory Systems and the 'Aboutness' of Mental States, Journal of Philosophy, 93, pp. 337-372.

Atkinson R C Herrnstein, R J Lindzey, G & Luce R D (1988) Stevens' handbook of experimental psychology, second ed. ,Vol I: Perception and motivation. John Wiley & Sons, New York

Attia M & Engel P (1981) Thermal alliesthesial response in man is independent of skin location stimulated, Physiology and Behavior 27, 439-444.Attia, M. (1984) Thermal pleasantness and temperature regulation in man. Neuroscience and Biobehavioral, Reviews 8, 335-343.

Aubert-Gamet V (1997) "Twisting servicescapes: diversion of the physical environment in a re-appropriation process", International Journal of Service Industry Management, Vol. 8 No.1, pp.26-41

Avery D T (2000) Saving the Planet With Pesticides and Plastic: The Environmental Triumph of High-Yield Farming, Hudson Institute

Aynsley J (1993) Nationalism and Internationalism: Design in the 20th Century, Victoria & Albert Museum

Ayres A J (2005) Sensory Integration and the Child: 25th Anniversary Edition, Western Psychological Services

B

Bachelard G (1994) The Poetics of Space, Beacon Press; Reprint edition Bahn P (1998) The Cambridge Illustrated History of Prehistoric Art, Cambridge University Press

Bailey S (1991) Taste: The Secret Meaning of Things, Faber & Faber

Bailey S (1979) In Good Shape: Style in Industrial Products 1900 to 1996, Design Council

Bainton R H (1995) Here I Stand : A Life of Martin Luther, Plume; Reprint edition

Bakan J (2005) The Corporation: The Pathological Pursuit of Profit and Power, Free Press

Baker S (2003) New Consumer Marketing: Managing A Living Demand System, John Wiley &Sons

Bakhtin M (1968) Banquet Imagery in Rabelais (p. 278-302): in Rabelais and His World, trans. Helene Iswolsky. Cambridge: MIT Press.

Bambrough R, Creed J L & Wardman A E (2003) The Philosophy of Aristotle, Signet Classics; Reissue edition

Banham R (1970) Theory and Design in the First Machine Age, Architectural Press

Banks W P (1991) Perception Annual Reviews of Psychology 42, 305-331

Baritz (1960) The Servants of Power: A History of of the Use of Social Science in American Industry (Middletown, Conn: Wesleyan University Press

Barber B (1996) Jihad Vs MacWorld: How Globalism And Tribalism are Reshaping the World, Ballantine Books

Barker L M (1982) The Psychobiology of Human Food Selection, Westport CT: AVI Publishing

Barlow H B & Mollon J D (1982) The Senses, Cambridge University Press

Barnard C I (1938) The Functions of the Executive. Harvard University Press: Cambridge, MA "

Banes S (1 Oct 1980-7 Oct 1980) 'Consciousness Razing, Village Voice (New York), p. 110

Barnes H (1997) A Life of the Spirit: Rudolph in the Crosscurrents of Our Time, Steiner Books

Baron-Cohen, S. (2002) - Review of Duffy's ""Blue Cats and Chartreuse Kittens: How Synesthetes colour their world, Cerebrum, The Dana Press, pp. 74-79Bartells R (1988) The History of Marketing Thought, Gorsuch Scarisbrick Publishers Barthes R (1993 Mythologies, Vintage Paperback

Barthes R. (1964) Elements of Semiology, Jonathan Cape (1967)

Barthes R (1973) S/Z. London: Cape

Barthes R (1984) Camera Lucida, Flamingo

Barthes R (1977) Image-Music-Text, Fontana

Barthes R (1985) The Fashion System, Jonathan Cape

Barthes R (1979) Toward a Psychosociology of Contemporary Food Consumption (Featured in Forster R & Ranum O (Editors) Food and Drink in History, The Johns Hopkins University Press)

Barthes R (1991). The Responsibility of Forms: Critical Essays on Music Art and Representation, Trans. Richard Howard. Berkeley and Los Angeles: University of California Press

Bartoshuk L M (1988) Taste: In Stevens' handbook of experimental psychology, second ed, Vol I: Perception and motivation. John Wiley & Sons, New York

Bartoshuk L (1993) "The Biological Basis of Food Perception and Acceptance," Food Quality and Preference 4:21-32.

Barlow H B & Mollon J D (1982) The Senses, Cambridge University Press

Baron R.A. &Bronfen M I (1994) A Whiff of Reality: Empirical Evidence Concerning the Effects of Pleasant Behaviour on Work-Related Behaviour, Journal of Applied Social Psychology, 24, (1994) (pps, 1179-1203)

Barnes J (2003) The Cambridge Companion to Aristotle, Cambridge University Press

Barwise P (2004) Simply Better: Winning and Keeping Customers by Delivering What Matters Most, Harvard Business School Press

Basalla G (1988) The Evolution of Technology, Cambridge University Press

Basso P (2003) Modern Times, Ancient Hours: Working Lives in the Twenty-First Century, Verso

Bateson G (1973) Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology, Granada

Batterson M (2002) Spiritual Temperaments: The Sensual Type, NCC

Baudrillard J (1996) The System Of Objects, Verso

Baudrillard J (1989) America, Verso
Baudrillard J (1994) Simulacra and Simulation (The Body in Theory: Histories of Cultural Materialism), University of Michigan Press
Baudrillard J (1984) The Precession of Simulacra: In Brian Wallis (Ed.): Art After Modernism: Rethinking Representations, Vol. 1. New York: Museum of Contemporary Art (reprinted from Art and Text 11 (September 1983): 3-47
Baudrillard J (1988) Selected Writings, Polity Press
Bayly C A (2004) The Birth of the Modern World, 1780-1914: Global Connections and Comparisons, Blackwell
Bazerman C. & Paradis J (1991) Textual Dynamics of the Professions: Historical and Contemporary Studies of Writing in Professional Communities, Uuniversity of Wisconsin Press
Beardsworth A & Kiel E (1993) "Contemporary Vegetarianism in the UK: Challenge and Incorporation?" Appetite. Vol. 20. p229-234.
Beebe-Center J G (1932) The Psychology of Pleasantness and Unpleasantness, Van Nostrand, Princeton N.J.
Bech-Larsen T (1994) Functional and Environmental Aspects of Packaging - Any Influence on Food Choice? Third International Multidisciplinary Conference on Food Choice, McMaster University, Hamilton, Ontario. pp.183-202.
Becker T (1999) Country of Origin as a cue for quality and safety of fresh meat. The socio-economics of origin labelled products in agrifood supply chains: spatial, institutional and co-ordination aspects. 67th EAAE Seminar, Le Mans, October 28-30.
Beebe-Center J G (1932) The psychology of pleasantness and unpleasantness. Van Nostrand, Princeton N.J.
Beck U (1992) Risk Society: Towards a New Modernity (Theory, Culture and Society Series) Sage Publications
Beeston (1953) A Brief History of Food and Drug law in Great Britain Bennis W (2003) On Becoming A Leader: The Leadership Classic--Updated And Expanded, Perseus Publishing; Rev edition
Begg D (1994). Economics. 4th ed., London: McGraw-Hill
Bedbury S & Fenichell S (2003) A New Brand World: 8 Principles For Achieving Brand Leadership In The 21st Century, Penguin
Beharrell, B. and Denison, T. (1995). Involvement in a routine food shopping context. British Food Journal 97(4): 24-29.
Beharrell, B, and Denison, T. (1991). Food Choice in a Retail Environment. British Food Journal. 93:7. p24-30.
Belasco W (2001) Food Nations; Selling Taste in Consumer Societies (Hagley Perspectives on Business and Culture), Routledge
Belitz H D (2004) Food Chemistry, Third Edition, Springer Bell C (1997) Ritual: Perspectives and Dimensions, Oxford University Press
Belk R. (1995). Collecting in a consumer society. London: Routledge.
Bell D (1996) The Cultural Contradictions of Capitalism, Harper Collins
Bell C M (1997) Rituals: Perspectives And Dimensions, Oxford University Press
Bell D & Valentine G (1997) Consuming Geographies: We Are What We Eat, Routledge
Belting H (1987) The End of the History of Art, University of Chicago Press
Benjamin W (1996) Walter Benjamin: Selected Writings, Volume 1, 1913-1926, Belknap Press

Benjamin W (2005) Walter Benjamin: Selected Writings, Vol. 3, 1935-1938, Belknap Press
Benjamin W (2003) Walter Benjamin: Selected Writings, Vol. 4, 1938- 1940, Belknap Press
Benjamin W (2002) The Arcades Project, Belknap Press
Benjamin W (1999) Walter Benjamin: Selected Writings, Volume 2, part 1, 1927-1930, Belknap Press
Benjamin W (1986) Reflections, Schoken
Benjamin W (2005) Walter Benjamin: Selected Writings, Volume 2, part 2, 1931-1934 (Walter Benjamin), Belknap Press
Benjamin W (1969) Illuminations, Schocken
Beniger J R (1986) The Control Revolution: Technological and Economic Origins of the Information Society, Harvard University Press
Bennett T I (2002) The Sensory World: An Introduction To Sensation And Perception, Brooks & Cole Bennett H Z (1993) Zuni Fetishes, Harper San Francisco
Bennett O (2001) Cultural Pessimism: Narratives of Decline in the Postmodern World, Edinburgh
Bennis W (2003) On Becoming A Leader: Perseus Publishing; Rev edition
Bennis W (2003) Leaders: Strategies for Taking Charge, Collins, 2nd Edition
Bentham J (2005) An introduction to the Principles of Morals and Legislation, Oxford University Press
Benton C (2003) Art Deco: 1910-1939 by Charlotte Benton, Bulfinch; 1st North edition
Berelson B & Steiner G (1964) Human Behaviour: An Inventory of Scientific Findings, Harcourt Brace Jovanovich
Berendt J-A (1988) Nada Brahma: The World is Sound Music and the Landscape of Consciousness, East-West Publications
Berger P & Luckmann T (1967) The Social construction of Reality: A Treatise in the Sociology of Knowledge, Penguin.
Berger P & Kellner H (1974) The Homeless Mind, Modernization and Consciousness, Vintage Books
Berger J (1977) Ways of Seeing, Penguin
Bergeron B (2001) The Eternal E Customer, Mcgraw Hill
Berleant A (2004) Re-thinking Aesthetics: Rogue Essays On Aesthetics And The Arts, Ashgate Publishing
Berlin I & Hardy H (2001) The Roots of Romanticism, Princton University Press (1965)
Berman M (1985) All That is Solid Melts into Air: The Experience of Modernity, London, Verso,
Berners-Lee T & Fischetti M (2000) Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web, Collins
Bernbach B (1989) Bill Bernback Said, DDB Needham Worldwide
Besecke K (2001) Speaking of Meaning in Modernity: Reflexive Spirituality as a Cultural Resource, Sociology of Religion 62 (2001): 365–381
Betty Crocker Editors (1999) Betty Crocker's Best Bread Machine Cookbook: The Goodness of Homemade Bread the Easy Way, Betty Crocker
Bickers R (1971) Marketing in Europe, Gower Press Bijker W (1989) The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology, MIT Press
Bingman M B, Ebert O & Bell B (2000) Outcomes of participation in adult basic education: The importance of learners' perspectives. Cambridge, MA: National Center for the Study of Adult Learning and Literacy

Black J (1999) Eighteenth-Century Europe (Palgrave History of Europe), Palgrave Macmillan; 2nd edition

Blesser B & Ruth-Salter L (2007) Spaces Speak Are You Listening: Experiencing Aural Architecture, Massachusetts Institute of Technology

Blom P (2004) Encyclopedie: The Triumph of Reason in an Unreasonable Age, Fourth Estate

Bloomer K C (2000) The Nature of Ornament: Rhythm and Metamorphosis in Architecture (Norton Books for Architects & Designers), W. W. Norton & Company

Bloomer K C & Moore C W (1997) Body, Memory, and Architecture (Yale Paperbound), Yale University Press

Blythman J (2004) The Shocking Power of British Supermarkets; Paperback, Fourth Estate

Bocock R (1993) Consumption, Routledge

Boden, M. (1990). The Creative Mind: Myths and Metaphors. New York: Basic Books

Bohm D (1980) Wholeness and the Implicate Order, Routledge

Bohm D & Nichol L (2002) The Essential David Bohm, Routledge

Bohme J & Waterfield R (Editor) (2001) Jacob Boehme (Western Esoteric Masters Series), North Atlantic Books

Bogdashina O (2003) Sensory Perceptual Issues in Autism: Different Sensory Experiences, Different Perceptual Worlds, Jessica Kingsley Publishers

Bogdashina O (2004) Communication Issues in Autism and Asperger Syndrome: Do We Speak the Same Language? Jessica Kingsley Publishers

Boland R J Jr. (2004) Managing as Designing, Stanford University Press

Bolman, L. G., & Deal, T. E. (1997). Reframing organizations: Artistry, choice, and leadership, Jossey-Bass

Bonnet J-C (1997) Carême, or the Last Sparks of Decorative Cuisine (Pp. 155-82): in Taste and Nostalgia, ed. Allen S. Weiss. New York: Lusitania Press Bone, P.F. And Ellen, P.S. (1999) Scents In The Marketplace: Explaining A Function Of Olfaction. Journal Of Retailing 75(2), 243-262

Boring E G (1942) Sensation and perception in the history of experimental psychology, Appleton Century Crofts Inc.

Boorstin D J (1983) The Discoverers, Random House

Booth N M (1997) Perfumes, Splashes & Colognes : Discovering and Crafting Your Personal Fragrances, Storey Publishing, LLC

Boissevain, J. (Ed). Coping with Tourists: European Reactions to Mass Tourism. Beghahan Book, Providence, RI. p174-203.

Bourdieu P (1990) Distinction: A Social Critique of the Judgement of Taste, Routledge, imprint of Taylor & Francis Books Ltd

Bourdieu P (1989) Outline of a Theory of Practice, Cambridge University Press.

Bowbrick P (1992) The Economics of Quality, Grades, and Brands, Routledge

Bowker J (2002) The Cambridge Illustrated History of Religions, Cambridge University Press

Bowlby R (2001) Carried Away, Columbia University Press

Bowring, J. (1838) The works of Jeremy Bentham published under the superintendance of his executor (1838-1843). Republished in 1962, Russell & Russell inc., New York

Boxer A (1991) Whatever happened to British Food? Sunday Times, 22 September

Bradley N L (2002) The Farm as Natural Habitat: Reconnecting Food Systems With Ecosystems, Island Press

Bradshaw P F (2002) The Search for the Origins of Christian Worship: Sources and Methods for the Study of Early Liturgy, Oxford University Press; 2nd edition
Branzi A (1988) Learning from Milan: Design and the Second Modernity, MIT Press
Branzi A (1997) Domestic Animals: The Neo Primitive Style, MIT Press
Braudel F (1984) The Perspective of the World: Civilization and Capitalism 15Th-18th Century, Vol. 3, Vol. 3, The Perspective of the World, University of California Press
Braudel F (1992) The Wheels of Commerce: (Civilization and Capitalism : 15th-18th Century), University of California Press
Braudel F (1992) The Structures of Everyday Life: The Limits of the Possible (Civilization and Capitalism: 15th-18th Century), University of California Press
Braund D C (1995) Fish from the Black Sea: Classical Byzantium and the Greekness of Trade, Harvey and Dobson
Brickley J, Smith C W, Zinnerman J (2006) Managerial Economics & Organizational Architecture McGraw-Hill/Irwin; 4 edition
Brillat-Savarin J A (1994) The Physiology of Taste (Penguin Classics), Penguin Books Ltd
Broadbent G (1973) Design in Architecture, London John Wiley and Sons Ltd
Brickley J, Smith C W, Zinnerman J (2006) Managerial Economics & Organizational Architecture McGraw-Hill/Irwin; 4 edition
Broadbent M (1991) The New Great Vintage Wine Book, New York: Knopf
Brooking A (1996) Intellectual Capital, Core Assets For The Third Millennium. International Thomson Business Press
Brockman J (1995) The Third Culture, Simon & Schuster
Broehl Jr. W G (1998) Cargill: Going Global, Dartmouth College Press
Bronfenbrenner U (2004)Making Human Beings Human: Bioecological Perspectives on Human Development, Sage
Bronfenbrenner U (2006) The Ecology of Human Development: Experiments by Nature and Design, Sage
Bronowski J (2004) The Common Sense of Science (Harvard Paperbacks), Harvard University Press.
Brooks C W W (1983) Sensory Awareness And The Rediscovery Of Experiencing, Erickson
Brosterman N (2002) Inventing Kindergarten, Harry N. Abrams
Brown R H (1995) Postmodern Representations, Chicago: University of Illinois Press
Brown S (1995) Post-modern Marketing, Routledge
Brown D P (2006) Noise Orders : Jazz, Improvisation, and Architecture, Univ Of Minnesota Press
Brownell K D (2003) Food Fight : The Inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do About It, McGraw-Hill
Browne J C (2003) The Sweet Potato Queens Big Cookbook (and Financial Planner), New York: Three Rivers Press
Bruce S & Crawford B (1995) Cerializing America: The Unsweetened Story of American Breakfast Cereal, Boston, Faber and Faber
Buchanan R (Editor), Margolin V (Editor) (1995) Discovering Design: Explorations in Design Studies, University Of Chicago Press
Buck L & Axel R (1991) A Novel Multigene Family May Encode Odorant Receptors: A Molecular Basis For Odor Recognition. Cell, 65, 175-187

Bruner J S (1966) Culture and Cognitive Growth: In J S Bruner, R R Olver & P M Greenfield (Eds.): Studies in Cognitive Growth, Wiley

Bull M & Back L (2004) The Auditory Culture Reader (Sensory Formations) Berg Publishers

Bunge, M. (1989). From Neuron to Mind. NIPS, 4, 206-209

Buck-Morss S (1991) The Dialectics of Seeing: Walter Benjamin and the Arcades Project (Studies in Contemporary German Social Thought), The MIT Press; Reprint

Burk, M. (1968). Consumption Economics: A Multidisciplinary Approach. New York: John Wiley & Sons, Inc.

Bullock A Stallybrass O & Trombley S (1988) Modern Thought: The Fontana Dictionary, 2nd Edition

Bunting M (2004) Willing Slaves: How the Overwork Culture Is Ruling Our Lives, HarperCollins

Burke K (1945) A Grammar of Motives. Berkeley: University of California Press (1969)

Burke P (1994) Popular Culture in Early Modern Europe, Ashgate Publishing

Burnett J (1989) Plenty and Want: A Social History of Diet in England from 1815 to the Present Day, Routledge

Burnett J (1978) A Social History of Housing, David & Charles

Burney I & Blackwell L (1990) The Retail Future, Trefoil

Burt, S. (2000), "The strategic role of retail brands in British grocery retailing", European Journal of Marketing, Vol. 34 No.8, pp.875-90.

Buttel F, Larson O & Gillespie G (1990) The Sociology of Agriculture, Greenwood Press

Butt J (1887) Scottish Textile History, Aberdeen University Press

Bynum F W & Porter R (1993) Medicine and the Five Senses, Cambridge University Press

C

Cabanac M (1971) "Physiological role of pleasure," Science, 173, 1103-1107.

Cabanac M Massonnet B, & Belaiche R (1972) Preferred skin temperature as a function of internal and mean skin temperature. Journal of Applied Physiology 33, 699-703.

Cache B & Speaks M (1995) Earth Moves: The Furnishing of Territories, The MIT Press

Cahn W (1969) Out of the Cracker Barrel: From Animal Crackers to ZuZu's, Simon & Schuster:New York

Cain W S (1988) Olfaction: In Stevens' handbook of experimental psychology, second ed. ,Vol I: Perception and motivation. John Wiley & Sons

Calkins E (1903) Modern Advertising, New York: Appleton

Campbell J (1995) Molyneux's Questio, Philosophical Issues, 7 (Perception): 301-318.

Campbell C B (1997) The Shopping Experience, Sage

Campbell C (1989) The Romantic Ethic and the Spirit of Mass Consumption, Blackwell

Cannadine D (1983) The Context, Performance and Meaning of Ritual: The British Monarchy and the Invention of Tradition, c1820-1977, Routledge

Caplan P (1994) Feasts, Fasts, famine: Food for Thought, Berg

Capra F (1982) The turning point: Science, Society and the Rising Culture, Bantam Books

Chandler A D Jr. & Mazlish B (2005) Leviathans: Multinational Corporations and the New Global History, Cambridge University Press

Carman T (2004) The Cambridge Companion to Merleau-Ponty (Cambridge Companions to Philosophy), Cambridge University Press

Carpenter R H S (1990) Neurophysiology, Edward Arnold, 2nd Ed.

Carstensen F V & Rothstein M (1993) Outstanding in His Field: Perspectives on American Agriculture in Honour of Wayne D. Rasmussen (The Henry a. Wallace Series on Agricultural History a) Iowa State

Cascardi A (1996) The Critique of Subjectivity and the Re-enchantment of the World, Revue Internationale de Philosophie 50, no. 196 (1996): 243–263;

Castell J (2006) Big Ideas for Small Retailers, Management Books 200

Castle T (1995) The Female Thermometer: Eighteenth-Century Culture and the Invention of the Uncanny, Oxford University Press

Chalmers D (1996) The Conscious Mind, Oxford University Press

Chalmers D (1995) Facing Up To The Problem of Consciousness, Journal of Consciousness Studies, 2 (3), pp. 200-19

Chandler A D Jr. (1993) The Visible Hand: The Managerial Revolution in American Business, Belknap Press

Chandler A D Jr. (1969) Strategy and Structure: Chapters in the History of the American Industrial Enterprise, The MIT Press

Chandler A D Jr. (2005) Shaping the Industrial Century: The Remarkable Story of the Evolution of the Modern Chemical and Pharmaceutical Industries, Harvard University Press

Charles S (2005) Hypermodern Times, Polity Press

Chase S (1925) The Tragedy of Waste, New York, Macmillan

Christensen C M, Roth E A, Anthony S D (2004) Seeing What's Next: Using Theories of Innovation to Predict Industry Change, Harvard Business School Press

Chu S & Downes J J (2000) Odour-Evoked Autobiographical Memories: Psychological Investigations Of The Proustian Phenomena. Chemical Senses 25, 111-116

Critser G (2004) Fat Land: How Americans Became the Fattest People in the World Mariner Books

Chetthamrongchai, P., Davies, G. (2000), "Segmenting the market for food shoppers using attitudes to shopping and time", British Food Journal, Vol. 102 No.2., .

Chicago, Judy (1979-80) The Complete Dinner Party. 2 vols. New York: Anchor/Doubleday

Chisnall P (1995) Consumer Behaviour. 3rd ed., McGraw-Hill Book Company

Chomsky N (1957) Syntactic Structures, Mounton

Chomsky N (1966) Cartesian Linguistics, NY, Harper Row

Chomsky N (1975) The Logical Structure of Linguistic Theory, NY, Plenum Press

Choo C W (1998) Information Management For The Intelligent Organization: The Art Of Scanning The Environment. Asis Monograph Series

Choo C W (1996) The Knowing Organization: How Organizations Use Information To Construct Meaning, Create Knowledge And Make Decisions, International Journal Of Information Management, Vol 16, Nº 5, Pp 329-340

Chow R (2002) The Protestant ethic and the Spirit of Capitalism, Columbia University Press

Christensen C M, Roth E A, Anthony S D (2004) Seeing What's Next: Using Theories of Innovation to Predict Industry Change, Harvard Business School Press

Christensen J (2000) Romanticism at the End of History, Johns Hopkins University Press

Christensen C M (2003) The Innovator's Solution: Creating and Sustaining Successful Growth, Harvard Business School Press

Chung J (Editor) 2002 The Harvard Design School Guide To Shopping/ Harvard Design School Project On The City, Taschen

Cieraad I (2000) At Home: An Anthropology of Domestic Space, Syracuse University Press
Civitello L (2003) Cuisine and Culture: A History of Food & People, Wiley
Clark K (2005) Civilization, John Murray Pubs Ltd
Clark D (2003) Descartes's Theory of Mind, Oxford University Press
Clarke I (2000) "Retail power, competition and local consumer choice in the UK grocery sector", European Journal of Marketing, Vol. 34 No.8, pp.975-1002.
Classen C (1998) The Colour of Angels: Cosmology, Gender and the Aesthetic Imagination, Routledge
Classens C, Howes D & Synnott A (1994) Aroma: The Cultural History of Smell, Routledge
Classens C (2005) The Book of Touch, Routledge
Classens C (1993) World of Senses: Exploring the Senses in History and Across Cultures, Routledge
Clegg G L (1969) The Design of Design, Cambridge, Cambridge University Press
Clifford J (1998) The Predicament of Culture, Harvard University Press
Clifford J & Marcus G E (eds) (1986) Writing Culture: The Poetics and Politics of Ethnography. Berkeley: University of California Press.
Clow A (1992) Chemical Revolution; A Contribution to Social Technology (Classics in the History and Philosophy of Science), Taylor & Francis
Coady, C. A. J. (1974) The Senses of Martians, Philosophical Review, 83, pp. 107-125.
Coats C D (1991) Old MacDonald's Factory Farm: The Myth of the Traditional Farm and the Shocking Truth About Animal Suffering in Today's Agribusiness Crossroad Publishing Company
Cody J, Ford J & Hayward K (1998) The Story of Improvement, Focus on Basics
Cohen I (2003) A Consumers Republic: The Politics Of Mass Consumption In Postwar America, Knopf
Cohen J & Stewart I (1997) Figments Of Reality, Cambridge University Press
Cohen A (1982) Belonging: the Experience of Culture, In Cohen A (ed.). Belonging: identity and social organisation in British Rural cultures. Manchester University Press
Cohen S M, Curd P & Reeve C D C (2000) Readings in Ancient Greek Philosophy, Hackett
Colborn T, Dumanoski D & Meyers J P (1997) Our Stolen Future : How We Are Threatening Our Fertility, Intelligence and Survival, Plume
Cowan R S (1985) More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave, Basic Books
Collins J H (1924) The Story of Canned Foods, New York, E.P. Dutton & Company
Collins B & Ollerenshaw P (2004) The European Linen Industry in Historical Perspective (Pasold Studies in Textile History), Oxford University Press (USA)
Condillac E (2001) Essay on the origin of Human Knowledge, (trans/edit) H Aarsleff, NY, Cambridge University Press
Conrads U (1990) Programs and Manifestoes in Twentieth Century Architecture, MIT Press
Cook J A (2001) The Arts of Deception: Playing with Fraud in the Age of Barnum, Cambridge University Press
Cooper E (2005) Life on a Dollar a Day, World Resources 2005
Corbin A (1988) The Foul and the Fragrant, Harvard University Press
Corn J J (1996) Yesterday's Tomorrows: Past Visions of the American Future, The Johns Hopkins University Press

Corso J F (1967) The experimental psychology of sensory behavior. Holt, Rinehart & Winston Inc.

Corstjens J & Corstiens M (1999) Store Wars: The Battle For Mindspace And Shelfspace, John Wiley And Sons

Cortada J W (1998) Rise Of The Knowledge Worker: Resources For The Knowledge-Based Economy, Butterworth-Heinemann

Cortada J W. & Woods J A (1999) The Knowledge Management Yearbook 1999-2000. Butterworth-Heinemann, "

Cottingham J (1992) The Cambridge Companion to Descartes (Cambridge Companions to Philosophy) Cambridge University Press

Cowan A (2006) The City and the Senses: Urban Culture Since 1500 (Historical Urban Studies), Ashgate

Counihan C (2002) Food in the USA, Routledge

Counihan C (1999) The Anthropology of Food and Body, Routledge

Counihan C (1997) Food and Culture, Routledge

Couprie D L, Hahn R, & Naddaf G (2002) Anaximander in Context: New Studies in the Origins of Greek Philosophy (Suny Series in Ancient Greek Philosophy), State University of New York Press

Cowan R S (1997) A Social History of American Technology, Oxford University Press, USA

Development in Early Modern Science: Free Fall and Compounded Motion in the Work of Descartes, Galileo and Beeckman (Sources & Studies in the History of Mathematics & the Physical Sciences) Springer-Verlag New York Inc

Crawford I (1997) The Sensual Home, Quadrille

Crawley J E (2003) The Invention of Comfort: Sensibilites and Design in Early Modern Britain & early America, John Hopkins University Press

Crick F (1995) The Astonishing Hypothesis: The Scientific Search for the Soul, Scribner

Crick F (1979) Thinking About The Brain, Scientific American, September

Critser G (2004) Fat Land: How Americans Became the Fattest People in the World Mariner Books

Cronon W (1991) Nature's Metropolis: Chicago and the Great West, Norton

Cross G & Szostak (1995) Technology in American Society: A History, Englewood Cliffs, N J, Prentice-Hall

Cross G (2002) An All-Consuming Century: Why Commercialism Won in Modern America, Columbia University Press

Cross N (1975) Design and Technology, Milton Keynes, Open University Press

Csikszentmihalyi M (1997) Creativity: Flow and the Psychology of Discovery and Invention, Harper Perennial

Crystal Palace and the Great Exhibition: Art, Science, and Productive Industry : A History of the Royal Commission for the Exhibition of 1851

Cule J (2000) The Timetables of Medicine : An Illustrated Chronology of the History of Medicine

Cummings N (2000) The Value Of Things, Birkhauser

Curtin D W (1992) Cooking, Eating, Thinking: Transformative Philosophies of Food, Indiana University Press

Curran (1951) British Food and Drug law: A History

Curtis R (2004) Ancient Food Technology, E J Brill Curran (1951) British Food and Drug law: A History

Curtis P (2005) Children's Food Bill back before Parliament, The Guardian, June 22nd
Cyril (1985) Guide to Philosophy, Dover Cytowic R E. (1989) - Synesthesia: A Union of the Senses, New York: Springer-Verlag. "
Cytowic R E (1993) The Man Who Tasted Shapes, London: Abacus.
Cytowic R E (1995) "Synesthesia: Phenomenology and Neuropsychology - A Review of Current Knowledge," in Psyche, Volume 2, No. 10.
Cytowic R E (1998) The Man Who Tasted Shapes, The MIT Press

D
Dalton (2005) Reputation Management: A Holistic Business Tool, wwwlspr.com
Dalby (2000) Empire of Pleasures, Routledge
Damasio A (2005) Descartes' Error: Emotion, Reason, and the Human Brain, Penguin
Damasio A (2000) The Feeling Of What Happens, Harvest Books
Damerow P (2004) Exploring the Limits of Pre-classical Mechanics: A Study of Conceptual David P (1990) The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox, American Economic Review. vol. 80, no. 2, May , pp. 355-61Development in Early Modern Science: Free Fall and Compounded Motion in the Work of Descartes, Galileo and Beeckman (Sources & Studies in the History of Mathematics & the Physical Sciences) Springer-Verlag New York Inc.
D'Andrade R (1995) Moral Models in Anthropology. In Current Anthropology. V 36(3): 399-407.
Daniels S (1993) Fields of Vision: Landscape Imagery and National Identity in England and the United States, Polity
Dant T (1999) Material Culture in the Social World: Values, Activities, Lifestyles, Open University Press Danziger P (2005) Let Them Eat Cake: Marketing Luxury to the Masses - As well as the Classes, Kaplan Business
Danziger K (1990) Constructing the Subject, Cambridge University Press
Darnton R (1979) The Business of Enlightenment: Publishing History of the Encyclopédie, 1775-1800, Belknap Press
Day J D & Wendler J C (1998) The McKinsey Quarterly, Number 1, pp. 4–1
Danto A C, Carroll N, Rollins M, & Davis W (2001) Symposium on 'The historicity of the eye', in The Journal of Aesthetics & Art Criticism, vol 59, Winter 2001
Data Monitor (Edit) (2001) Market Rhapsody: Sensory Science/Flavours And Consumer Preferences, Marketresearch.Com, 0ct 2001
Daunton M J & Hilton M (2001) The Politics of Consumption: Material Culture and Citizenship in Europe and America, Berg Publishers
Davenport, T H & Prusak L (1998) Working Knowledge: How Organizations Manage What They Know. Harvard Business School Press
Davidson R J (2002) Handbook of Effective Sciences, Oxford University Press
Davidson A (1999) Oxford Companion to Food, Oxford University Press
Davidson A (2006) The Oxford Companion to Food: Second Edition, Oxford University Press
Davies J T & Taylor F H (1959) The Role Of Adsorption And Molecular Morphology In Olfaction: The Calculation Of Olfactory Thresholds. Biol. Bull. Marine Lab, Woods Hole, 117, 222-238
Davis S & Meyer C (1998) Blur - The Speed Of Change In The Connected Economy. Ernst & Young Center For Business Innovation
Dawkins R (1996) The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe

Without Design, W. W. Norton
Dawkins R (2006) The Selfish Gene, Oxford University Press, reprint with new introduction (1976)
Daley J (1969) A Philosophical critique of Behaviourism in Architectural Design: Design Methods in Architecture, Lund Humphries
Dean C (2005) Inspired Retail Space: Attract Customers, Build Branding, Increase Volume, Rockport Publishers
Debord G (1995) The Society of the Spectacle, Zone BooksDe Chernatony (2001) Would a brand Smell any Sweeter by a Corporate Name?, Journal of marketing Management 17
De Certeau M & Rendall S (2002) The Practice of Everyday Life, University of California Press
De Chernatony L & MacDonald M (1992) Creating Powerful Brands in Consumer, Service and Industrial Markets, Butterworth Heinemann.
De Grazia V (1996) The Sex of Things: Gender and Consumption in Historical Perspective, University of California Press, Belknap Press
De Grazia V (2006) Irresistible Empire: America's Advance Through Twentieth-Century Europe
DeLanda M (2000) A Thousand Years of Nonlinear History, Zone Books
DeLanda M (1997) 'Deleuze and the Genesis of Form', presented at Concordia University, Montreal, Canada, published in Art Orbit, #1, Stockholm: Art Node, March 1998
DeLanda M (1999) 'Deleuze, Diagrams and the Open-Ended Becoming of the World', in Elizabeth, Deleuze G. & Guattari F (1987) A Thousand Plateaus, University of Minnesota Press
Delamont S (1995) Appetites and Identities: An introduction to the social Anthropology of Western Europe, Routledge
Delcourt P & Delcourt H (2001) Living Well in the Age of Global Warming: 10 Strategies for Boomers, Bobos, and Cultural Creatives, Chelsea Green Publishing
Deleuze G (1990) The Logic of Sense, The Columbia University Press
Friedberg A (1993) Window Shopping: Cinema and the Postmodem, The University of California Press (Berkeley, California)
Deleuze G (1994) Cinema: The Time-image, The University of Minnesota Press
Deleuze G (1993) The Fold.-Leibniz and the Baroque, Tom Conley (trans), The University of Minnesota Press
Deleuze G & Guattari F (2004) A Thousand Plateaus: Capitalism and Schizophrenia, Continuum International Publishing Group
Denhardt R B (1993) Theories of Public Organization, (2nd ed.). Wadsworth Publishing Company: Belmont, CA.,
Denhardt, R B (1993) The Pursuit of Significance: Strategiès for Managerial Success in Public Organizations. Wadsworth Publishing Company: Belmont, CA
Dennett D (1997) Kinds Of Minds: Towards an Understanding of Consciousness, Basic Books
Denora T (2000) Music In Everyday Life, Cambridge University Press
Derrida J (1978) Writing and Difference, Routledge & Kegan Paul
Derrida J (1981) Positions, Athlone Press
Derrida J (1976) Of Grammatology, Johns Hopkins University Press
Descartes R (1967) The Philosophical Writings of Descartes, Volume 11, Cambridge University Press
Descartes R (1997) Key Philosophical Writings, Ware
Desmond J (2002) Consuming Behaviour, Palgrave/Macmillan

DeSilva C (Ed.) (1996) In Memory's Kitchen: A Legacy From the Women of Terezín, trans. Bianca Steiner Brown, Northvale, N.J.: J. Aronson

de Vries J & van der Woude A (1997) The First Modern Economy: Success, Failure, and Perseverance of the Dutch Economy, 1500-1815, Cambridge University Press

Dewey J (1997) Experience and Education, Free Press

Dewey J (1997) How We Think, Dover

Dewey J (1997) Democracy and Education, Dover

Dewey J (2000) Experience and Nature, Dover

Dewey J (2005) Art as Experience, Pedigree

Dicker J (2005) The United States of Wal-Mart, Tarcher

Drucker P (2003) The Best of Sixty Years of Peter Drucker's Essential Writings on Management, Collins

Drucker P (2006) The Effective Executive: The Definitive Guide to Getting Things Done, Collins

Dreyfus H & Rabinow P (1983) Michel Foucault: Beyond Structuralism and Hermeneutics. 2nd. Ed., Chicago: University of Chicago Press.

Dodgshon R (1987) The European Past: Social Evolution and Spatial Order, Macmillan

Doray B & Macey D (1990) From Taylorism To Fordism: A Rational Madness, Free Asssn Books

Dorst K (2003) The Problem of Design Problems, In Expertise in Design Cross N & Edmonds E, Sydeny, Creativity and Cognition Studios Press (p 135 – 147)

Dorst K (1997) Describing Design: A Comparison of Paradigms, Delft, Technical University of Delft

Doty R L (1995) Handbook Of Olfaction And Gustation, Marcel Dekker Douglas M (2003) How Institutions Think, Syracuse University Press

Douglas M (2003) Natural Symbols, Routledge, 2nd edition (1970)

Douglas M (1996) The World of Goods, Routledge

Douglas M (1975) Implicit Meanings, Routledge/Kegan-Paul

Douglas M (1984) Food in the Social Order: Studies of Food and Festivities in Three American Communities, Russell Sage Foundation

Douglas M (1966) Secular Defilement, Pp. 29-40 in Purity and Danger: an Analysis of Concepts of Pollution and Taboo, Routledge & Kegan Paul

Douthwaite R (1993) The Growth Illusion: How Economic Growth Has Enriched the Few, Impoverished the Many and Endangered the Planet, Green Books

Douthwaite R (1996) Short Circuit: Strengthening Local Economies for Security in an Unstable World, Lilliput Press Doyle, S.A.,

Dowling J E (2000) Creating Mind: How the Brain Works, W W Norton & Co Inc (Np); New Ed edition

Broadbridge A (1999) 'Differentiation by design: the importance of design in retailer repositioning and differentiation,' International Journal of Retail & Distribution Management, Vol. 27 No.2, pp.72-82

Dreyfuss H (2003) Designing for People, Allworth Press Durkheim E (1995) Elementary Forms Of The Religious Life: Newly Translated By Karen E. Fields, Free Press, Reprint (1912)

Driver C (1983) The British at Table 1940-1980, Chatto and Windus

Drobnick J (2005) The Smell Culture Reader, Berg

Drummond J & Wilbraham A (1939) The Englishman's food: A History of Five Centuries of English Diet, Jonathan Cape

Dube S (2002) Introduction: Enchantment and Modernity, South Atlantic Quarterly 101, no. 4 (Fall 2002): 729–755

Duncker K (1940-1941) On Pleasure, Emotion, & Striving, Philosophical & Phenomenological Res.1, 391-430

Dunne A & Raby F (2001) Design Noir: The Secret Life of Electronic Objects, August/Birkhauser

Dunne A (1999) Hertzian Tales, RCA

During S (2002) Modern Enchantments: The Cultural Power of Secular Magic (Cambridge, Mass., 2002), 65–66

Durgee J F (2001) Soul Branding: How to do it, Design Management Journal, Winter 2001, Vol 12, No 1

Durkheim E (1995) Elementary Forms Of The Religious Life, Free Press

Durkheim E (1997) The Division of Labour in Society, Free Press

Dyson J R (2001) Knowledge, Space Economy, Routledge

Dyson G M (1938) The Scientific Basis Of Odour, Chem. Ind., 57, 647-651

E

Eagleton T (1990) The Ideology of the Aesthetic, Blackwell

East R (1990) Changing Consumer Behaviour, Cassell Educational Limited

Eastlake C (1986) Hints on Household Taste: Classic Handbook of Victorian Interior Decorating, Dover Publications

Ecologist (The) (1996) "Free Trade & Farm Fallacies," The Ecologist Magazine, (Vol. 26, no.6, Nov/Dec '96)

Eco, Umberto (1976): A Theory of Semiotics. Bloomington, IN: Indiana University Press/London: Macmillan

Eco U (1976) A Theory of Semiotics, Indiana University Press

Eco U (1984) Semiotics and the Philosophy of Language. Bloomington, IN: Indiana University Press

Economist (1998) Moreover: A taste for tradition. The Economist. London. Apr 25, Vol. 347 Iss. 8065

Edvinsson L & Malone M S (1998) (Contributor) - Intellectual Capital: Realizing Your Company's True Value By Finding Its Hidden Roots. Harper Business

Ehrlich E (1998) Miriam's Kitchen: A Memoir New York: Penguin Books

Ekelund R B & Tollison R D (1981) Mercantilism as a Rent-Seeking Society: Economic Regulation in Historical Perspective, Texas A&M University Press

Ekelund R B & Hébert R F (1997) A History of Economic Theory and Method, New York: McGraw-Hill

Epstein M J & Birchard B (2000) Counting What Counts: Turning Corporate Accountability to Competitive Advantage, Perseus Books Group

Eisenstein E (1980) The Printing Press as an Agent of Change, Cambridge University Press; New Ed edition

Eidia P & Eidia M (1991) The Starving Artists' Cookbook, New York: Eidia (idea) Books

Eiseley L (1973) The Man Who Saw Through Time, Scribner

Eisler B (2000) Byron: Child of Passion, Fool of Fame, Vintage

Eisner E W (1998) The Enlightened Eye. Qualitative inquiry and the enhancement of educational practice, Upper Saddle River, NJ: Prentice Hall.

Eisner E W (1985) The Art of Educational Evaluation. A personal view, Barcombe: Falmer.
Ekuan K (1980) The Aesthetics of the Japanese Lunchbox MIT Press (2000)
Elias N (1978) The Civilising Process, Vol. 1, Basil Blackwell
Elias N (1978) The History of Manners, Vol. 11 State Formation and Civilisation, Basil Blackwell
Elam K (2004) Grid Systems: Principles of Organizing Type, Princeton Architectural Press
Elgin D (1998) Voluntary Simplicity: Toward a Way of Life That Is Outwardly Simple, Inwardly Rich, Harper Paperbacks; Revised edition (1981)
Elliot P (1972) The Sociology of the Professions, London, Macmillan
Ellis H (1960) British Railway History: An Outline From the Accession of William Iv to the Nationalization of Railways, 1877-1947, George Allen and Unwin
El-Khoury R (1997) Delectable Decoration: Taste and Spectacle in Jean Francois De Bastide's La Petite Maison, Pp. 49-62 in Taste and Nostalgia, ed. Allen S. Weiss. New York: Lusitania Press
Eltringham, H. (1933) - The Senses of Insects, London: Methuen
Ekman P & Davidson R J (1994)The Nature of Emotion: Fundamental Questions (Series in Affective Science), Oxford University Press
Émigré magazine issue 51 (2001): "First Things First Revisited"
Emerson H (1911) Efficiency as a Basis for Operation and Wages. New York: The Engineering Magazine
Ennis D M & Mullen K (1986) "Theoretical Aspects of Sensory Discrimination," Chemical Senses 11, 513-522.
Epstein M J (1995) Measuring Corporate Environmental Performance: Best Practices for Costing and Managing an Effective Environmental Strategy, McGraw-Hill
Epstein M J & Birchard B (2000) Counting What Counts: Turning Corporate Accountability to Competitive Advantage, Perseus Books Group
Epstein M J (1996) 'Consuming Performances: Eating Acts and Feminist Embodiment', The Drama Review 40 (4 (T152)):20-36
Eraut M (1994) Developing Professional Knowledge and Competence, London: Falmer.
Etzioni, A. (1968) The Active Society. The theory of societal and political processes, New York: Free Press.
Evans J S B T (1992) Bias in thinking and judgement: In M. T. Keane & K. Gilhooley (Eds.), Advances in the Psychology of Thinking (Vol. I, pp. 95-126). London: Harvester Wheatsheaf
Evans N (1985) The East Anglian Linen Industry: Rural Industry and Local Economy, 1500-1850, Gower Publishing Company
Ewen S (2001) Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture, Basic Books
Ewen S (1990) All Consuming Images: The Politics of Style in Contemporary Culture, Harper
Ewen S & Ewen E (1992) Channels of Desire: Mass Images and the Shaping of American Consciousness, University of Minnesota Press; 2nd edition

F

Falkman M A (1999) Recapping the past, unwrapping the future, Packaging Digest
Fantino, M. (1984) Role of Sensory Input in the Control of Food Intake, Journal of the Autonomic Nervous System 10: 347-326.
Farbman A I (1992) Cell Biology Of Olfaction, Cambridge University Press

Faraone C A & Obbink D (1997) Magika Hiera: Ancient Greek Magic and Religion, Oxford University Press, USA; Reprint edition

Feather J (1989) A History of British Publishing, Routledge

Feeley-Harnik G (1981) The Lord's Table: the Meaning of Food in Early Judaism and Christianity, Smithsonian Institution Press

Fenn R K (2003) The Blackwell Companion to Sociology of Religion, Blackwell Publishers

Feyerabend P (1993) Against Method, Verso

Ferguson E (1977) The mind's eye: Nonverbal thought in technology. Science, 197, 827-836

Ferguson P P (2004) Accounting for Taste: The Triumph of French Cuisine, University Of Chicago Press

Ferris D S (Editor) (2004) The Cambridge Companion to Walter Benjamin, Cambridge University Press

Ferris H (2005) The Metropolis of Tomorrow, Dover Publications

Ficino M (1989). Marsilio Ficino: Three Books On Life, ed. Carol V. Kaske and John R. Clark.. Binghampton, NY: Medieval and Renaissance Texts and Studies.

Fine B and Leopold E (1993) The World of Consumption, Routledge

Fine B, Heasman M & Wright J (1996) Consumption in the Age of Affluence: The World of Food, Routledge

Finger M & Asún M (2000) Adult Education at the Crossroads: Learning our way out, London: Zed Books.

Finlayson J G (2005) Habermas: A Very Short Introduction, Oxford University Press

Finke, R A (1989). Principles of Mental Imagery, MIT Press

Finke R A (1990). Creative Imagery: Discoveries and Inventions in Visualization, Lawrence Erlbaum Associates

Fish S E (1998) The Experience of Bacon's Essays, In Self-Consuming Artifacts: The Experience of Seventeenth Century Literature, Duquesne University Press

Fisk A D & Rogers W A (1997) Handbook of Human factors and the Older Adult, Academic Press

Fiumara G & Fiumara C (1990). The Other Side of Language: A Philosophy of Listening. Trans. Charles Lambert. London and New York: Routledge

Fiashman C (2006) The Wal-Mart Effect: How the World's Most Powerful Company Really Works--and How It's Transforming the American Economy, Penguin Press

Ford H (1923) My Life and Work. London: William Heinemann

Fosdick R B (1952) The Story of the Rockefeller Foundation. New York: Harper & Row

Frab P & Amelagos G (1980) Consuming Passions: The Anthropology of Eating, Houghton Mifflin

Frayling C., The RCA: One Hundred and Fifty Years of Art & Design, RCA 1990

Frayling C., Design of the Times, One Hundred Years of the RCA, Richard Dennis, 1996

Freeman S (2006) Interview with the manager of La Fromagerie May 12th 2006-08-20

Freema W J (1991) The Physiology of Perception, Scientific American 264 (2), 78-85

Fried M (1968) ' Art and Objecthood', Pp. 116-47 in Minimal Art: a Critical Anthology, ed. Gregory Battcock. New York: Dutton

Friedman B M (2005) The Moral Consequences of Economic Growth, Knopf

Freidman M (1970) Article on the Responsible Economics, New York Times

Friedman M (2002) Capitalism and Freedom, University of Chicago Press (1962)

Friedman M (2005) Rethinking the Social Responsibility of Business, (A Reason debate featuring Milton Friedman, Whole Foods' John Mackey, and Cypress Semiconductor's T.J. Rodgers) Reason magazine

Freud S (1911) Fomulations on the Two Principles of Mental Functioning, Hogarth Press

Freud S (2005) Civilization and Its Discontents, W. W. Norton & Company (1930)

Frieden J A (2006) Global Capitalism: Its Fall and Rise in the Twentieth Century, W. W. Norton

Fromartz S (2006) Organic, Inc.: Natural Foods and How They Grew, Harcourt

F T (2000), "Success of the new unorthodoxy: management online retailing", Financial Times

Fry T (1993) Heidegger and the Televisual, The Southwood Press

Flandrin J-L (2000) Food: A Culinary History (European Perspectives), Penguin

Florida R (2004) The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life, Basic Books

Floud R & McCloskey D (1994) The Economic History of Britain since 1700, Cambridge University Press

Fogarty W (2005, June 2) Interview with the Co-ordinator of Slow Food UK at Borough Market, Southwark, London, UK

Food Deserts, Institute of Human Nutrition, Southampton University, http://www.geog.soton.ac.uk

Food Research Institute (1995) Food Safety 1995 (Food Science & Technology) CRC

Ford H (1923) My Life and Work, BiblioBazaar (2006)

Forty (1986) A Objects of Desire: Design and Society 1750-1980, Thames & Hudson

Forty A (2001) The Art of Forgetting (Materializing Culture), Berg Publishers

Foster H (1996) The Return of the Real, The MIT Press

Foster H (1988) Vision and Visuality (Discussions in Contemporary Culture, No 2), New Press

Foster H (1988) Postmodern Culture, Pluto Press Foucault M (1970) The Order of Things, Tavistock

Foucault M (1974) The Archaeology of Knowledge, Tavistock

Fox S R (1997) The Mirror Makers: A History of American Advertising and Its Creators, University of Illinois Press

Fox N (2004) Against the Machine: The Hidden Luddite Tradition in Literature, Art and Individual Lives, Shearwater Books

Foxall G (1982) Co-operative marketing in European Agriculture, Gower

Foxall G (1991). Consumer Behaviour - a practical guide. London, Routledge.

Foxall G (1991). Consumer Behaviour, a Practical Guide. London: Routledge.

Foxall G & Goldsmith R (1994) Consumer Psychology for Marketing, Routledge.

Foxall G (1980) Consumer Behaviour: A Practical Guide, Routledge

Fuat A & Shultz C (1997) From Segmentation to Fragmentation: Markets and Marketing Strategy in the Post-Modern Era, European Journal of Marketing. Vol. 31, March, p183 -207

Fromartz S (2006) Organic, Inc.: Natural Foods and How They Grew, Harcourt

G

Gail A Eisnitz (1997) Slaughterhouse: The Shocking Story of Greed, Neglect, and Inhumane Treatment Inside the U.S. Meat Industry. Prometheus Books

Galanter E (1962) Contemporary psychophysics in: New directions in psychology, Rinehart & Winston

Ganeri J (2000) "Cross-Modality and the Self," Philosophy and Phenomenological Research, 61(3): 639-657.

Gazzangia M & Mangum M (1998) Fundamentals of Cognitive Neuroscience, WH Norton & Co

Gans H J (1999) Popular Culture and High Culture: An Analysis and Evaluation of Taste, Basic Books

Ganson T (2000) The Philosophical Review; 1/1/2000

Gardner H (1993) Creating Minds, NY: Basic Books Gardner H (1993). Multiple Intelligences: The Theory in Practice, NY: Basic Books

Gardner H (1983) Frames of Mind. New York: Basic Books.

Gardner H (2004) How Education Changes: Considerations of History, Science and Values. In M. Suarez-Orozco and D. Qin-Hilliard (Eds.), Globalization: Culture and education in the new millennium. Berkeley: University of California Press.

Gardner H (1982) Art, Mind and Brain. New York: Basic Books.

Gardener H (2004) Changing Minds: The Art and Science of Changing Our Own and Other People's Minds, Harvard Business School Press

Gardner H (2005) Multiple Lenses on The Mind: Presented at the ExpoGestion Conference, Bogota, Colombia, May 25, 2005.

Gardener H (2004) Changing Minds: The Art and Science of Changing Our Own and Other People's Minds, Harvard Business School Press

Guardian 4-2-05 (Sir Terry Leahy, chief executive of Tesco plc, addressed the Guardian's public services summit on 2nd February. Friday February 4, 2005)

Galbraith J (1967) The New Industrial State, Houghton Miffin

Garnsey P (1999) Food and Society in Classical Antiquity, Cambridge University Press

Gell A (1997) Magic, Perfume, Dream, (in Symbols and Sentiments: Cross-Cultural Studies in Symbolism), ed. Ioan Lewis, Academic Press

Geldard F A (1963). Fundamental of Psychology, 2nd printing ,John Wiley & Sons

Geldard F A (1972) The Human Senses (2nd edition). John Wiley & Sons Inc.

Gelb M (2004) Da Vinci Decoded: Discovering the Spiritual Secrets of Leonardo's Seven Principles, Delacorte Press

Gellner E (1980) Society and Western Anthropology. New York: Columbia University Press

Gennep A V (1960) The Rites of Passage, trans. Monika B. Vizedom and Gabrielle L. C. Caffe. Chicago: University of Chicago Press

Gendling E T (1982) Focusing, Bantam

Gendling E T (1997) Experiencing and The Creation of Meaning: A philosophical and Psychological Approach to the Subjective, NorthWestern University Press

Gerrard B & Hillard J (Eds.) (1992) The Philosophy and Economics of J M Keynes, Edward Elgar Publishers

Gersick K E, Davis J E, Hampton M M, Lansberg I (1997) Generation to Generation: Life Cycles of the Family Business, Harvard Business School Press

Ghemawat P (2005) Strategy and the Business Landscape (2nd Edition), Prentice Hall; 2 edition

Gibson J J (1968) The Senses Considered as Perceptual Systems. London: George Allen & Unwin Ltd.

Gideon S (1969) Mechanization Takes Command, W W Norton & Co Inc; New Ed edition

Giddens A (1990) The Consequences of Modernity, Polity in association with Blackwell,

Giddens A (1991) Modernity and Self-Identity: Self and Society in the Late Modern Age, Polity
Giedion S (1948) Mechanization takes command, a contribution to anonymous history. New York, Oxford University Press Press
Gilbreth F B and Gilbreth L M (1917) Applied Motion Study, New York: Sturgis Walton
Gilbreth F B & Gilbreth-Carey E (2003) Belles on Their Toes, Harper Perennial
Gilbreth F B & Gilbreth-Carey E (2002) Cheaper by the Dozen, Harper Perennial Modern Classics
Gilman R (1992) Design for a Sustainable Economics, Dancing Towards the Future, The Context Institute
Gislason S J MD (2004) The Book of Brain, Alpha Books
Gilsenan M (2000) "Signs of Truth: Enchantment, Modernity, and the Dreams of Peasant Women," Journal of the Royal Anthropological Institute 6, no. 4 (December 2000): 597–615
Ginzburg C (1992) The Cheese and the Worms: The Cosmos of a Sixteenth-Century Miller, The Johns Hopkins University Press
Gribing J (2004) The Scientists: A History of Science Told Through the Lives of Its Greatest Inventors, Random House Trade Paperbacks
Gladwell M (2002) The Tipping Point, Abacus
Gladwell M (2006) Blink: The Art of Thinking Without Thinking, Penguin Books
Gleick J (1999) Faster: The Acceleration of Everything, New York, Random House
Gobe Marc (2001) Emotional Branding, Winsor Books
Goethe 1823 quoted in A Zajonc, Goethe and the Science of his time: An Historical Introduction, in Goethe's Way of Science: A Phenomenology of Nature, D. Seamon and A. Zajonc, eds. (New York: State University of New York, 1988, (p 27)
Goffman E (1959) The Performance of Self in Everyday Life, Garden City, Doubleday
Gofton L (1992) Machines for the Suppression of Time: Meaning and Explanations of Food Change, British Food Journal Vol. 94, No 7. p31-37.
Gombrich E H (1994) Gombrich On the Renaissance - Volume 1 : Norm and Form (Gombrich on the Renaissance), Phaidon Press; 4th edition
Gombrich E H (1994) The Sense of Order : A Study in the Psychology of Decorative Art (The Wrightsman Lectures, V. 9), Phaidon Press; 2nd edition
Gombrich E H (1995) The Story of Art, Phaidon Press; 16th edition
Gordon R (1997) The Alarming History of Medicine, St. Martin's Press
Goode S (November 1st, 2002) A poultry era in American history - for the people - history of the first TV dinner, 'Insight on the News' bulletin
Godfeys (1854) issue of Godey's. (June) (Popular American Ladies Journal)
Goody J (1982) Cooking, Cuisine and Class, Cambridge University Press
Golembiewski R T & Kuhnert K W (1991) Barnard and Transformational Leadership: Testing Several Possible Linkages, Unpublished paper prepared for delivery at Barnard Society Meeting, Academy of Management, Miami
Goody J (1982) Cooking, Cusine and Class: A Study in Comparative Sociology, Cambridge University Press
Gordon J S (2004) An Empire of Wealth: The Epic History of American Economic Power, HarperCollins
Goudzwaard B (1984) Idols Of Our Time, Inter-Varsity Press Illinois
Gould S J (1996) Full House: The Spread of Excellence from Plato to Darwin, New York, Harmony Books

Gould S J (1994) Hens Teeth and Horse Toes, W. W. Norton & Company; Reissue edition

Gouldner A W (1976) The Dialectic of Ideology and Technology, Seabury Press

Gouk P (1999). Music, Science and Natural Magic in Seventeenth-Century England, Yale University Press

Gray J A, Chopping S, Nunn J, Parslow, D., Gregory L, Williams S, Brammer M J &Baron-Cohen, S. (2002) Implications of Synaesthesia for Functionalism: Theory and Experiments, Journal of Consciousness Studies, Volume 9. No. 12, pp. 5-31.

Gray R (2001) "Cognitive modules, Synaesthesia and the Constitution of Psychological Natural Kinds," Philosophical Psychology, Volume 14, No.1, pp. 65-82.

Gray R (2001) Synaesthesia and Misrepresentation: A Reply to Wager, Philosophical Psychology, Volume 14, No.3, pp. 339 - 346.

Green D M (1988). Psychophysics and perception In: Stevens' handbook of experimental psychology

Greenspan S I (2006) Engaging Autism: Helping Children Relate, Communicate and Think with the DIR Floortime Approach, Da Capo Lifelong Books

Greenspan S I & Shanker S G (2004) The First Idea: How Symbols, Language, and Intelligence Evolved from our Primate Ancestors to Modern Humans, Da Capo Press

Green, D M (1988) Psychophysics and perception: In Stevens' handbook of experimental psychology, second ed., Vol I: Perception and motivation (pp 327-376). John Wiley & Sons

Green N (1990) The Spectacle of Nature: Landscape and Bourgeois Culture in Nineteenth Century France, Manchester University Press

Greenhaulgh P (1990) Modernism in Design, Reaktion

Greenwood D (1989) Culture by the Pound: An Anthropological Perspective on Tourism as Cultural Commoditisation. In Smith, V (ed.) Hosts and Guests, Blackwell

Gregory, R. (1974) Recovery from Early Blindness: A Case Study, In his Concepts and Mechanisms of Perception, Duckworth

Gregson N & Crewe L (2003) Second-hand Cultures, Berg Publishers Grew R (2000) The History of Food and Global History, Westview Press

Greimas A. (1983): Structural Semantics, University of Nebraska Press

Grenz S J (1996) A Primer on Postmodernism, Wm. B. Eerdmans Publishing Company

Grice, H. P. (1962) Some Remarks About the Senses, in Analytical Philosophy, First Series, edited by R. J. Butler, Basil Blackwell, pp. 133-153.

Grocer (1999), "A bright new dawn", (The) Grocer, pp.28-30

Grocer (1997), "Store architecture", (The) Grocer, pp.28-31

Groff G & Gardner L (1994) What Museum Guides Need To Know : Access For Blind And Visually Impaired Visitors, American Foundation For The Blind

Grosz E (2000) Becomings: Explorations in Time, Memory and Futures, Cornel University Press

Guattari F & Chaosmosis A (1995) An Ethico-Aesthetic Paradigm, The University of Indiana Press

Guérer A L (1992) Scent: The Mysterious and Essential Powers of Smell, Random House

Guttenplan S (2000) Mind's Landscape: An Introduction to Philosophy of Mind, Blackwell Publishers

Geurts K L (2003) Culture And The Senses: Embodiment, Identity And Well Being In An African Community, University Of California Press

Guerrero L, Guardia M D, de Felipe I & Briz, J (1998) The Importance of Food Origin: Understanding the Consumption of Regional Products: In Matforsk: AIR-CAT Workshop. Consumer Preferences for Products of the Own Region/Country and Consequences for Food Marketing, Volume 4, Number 3., Norway, p14-17.
Gunter B & Furnham A (1992) Consumer Profiles, An Introduction to Psychographics, Routledge
Gulick L (May/June 1983) "The Dynamics of Public Administration Today as Guidelines For the Future," Public Administration Review, 43
Gulick L (1992) Notes on the Theory of Organization, In Shafritz, Jay M. and Ott, J. Steven (Eds.), Classics of Organization Theory (3rd ed.), Brooks/Cole Publishing Company: Pacific Grove, CA
Guss D M (1990) To Weave And Sing: Art And Symbol And Narrative In The South American Rain Forest, University Of California Press
Gunther M (2006) The Green Machine, Fortune magazine (August 7th)
Guthman J (2004) Agrarian Dreams: The Paradox of Organic Farming in California, University of California Press

H

Habermas J (1985) The Theory of Communicative Action, Volume 1: Reason & the Rationalisation of Society, Beacon Press
Habermas J., Theory and Practice, trans. J. Viertel (Boston: Beacon Press
Habermas (1991) Habermas, J, Modernity, an Incomplete Project in Foster H [ed], The Anti-Aesthetic: Essays on Post-Modern Culture, Seattle Bay Press, 1991.
Hahn R (2001) Anaximander and the Architects: The Contributions of Egyptian and Greek Architectural Technologies to the Origins of Greek Philosophy (S U N Y Series in Ancient Greek Philosophy), State University of New York Press
Haidt J (2005) The Happiness Hypothesis, Basic Books
Hainer R M (1968) 'Rationalism, pragmatism and existentialism' in E. Glatt and M. W. Shelly (eds.) The Research Society, New York: Gordon and Breach
Haines M (1999) Marketing for Farm and Rural Enterprise, Miller Freeman UK Ltd.
Han C (1988) The Role of Consumer Patriotism in the Choice of Domestic Versus Foreign Products, Journal of Advertising Research, 28(June/July):25-32.
Hansen T & Skytte H (1998) "Retailer buying behaviour: a review," International Review of Retail, Distribution and Consumer Research, Jul, Vol. 8, No. 3, p277-302.
Hartley D (1954) Food in England, Macdonald Hall E T (1966) The Hidden Dimension, Anchor, reissue, 1990
Hall J A & Jarive I C (1992) Transition to Modernity. Essays on power, wealth, and belief. Cambridge: Cambridge University Press Hall S (1972-1979) Culture, Media, Language: Working Papers in Cultural Studies, 1972-1979. London
Haliweil B (2004) Eat Here: Homegrown Pleasures in a Global Supermarket, W. W. Norton & Company
Hamilakis Y & Pluciennik M (2006) Thinking Through the Body: Archaeologies of Corporeality, Springer
Hamel G (2000) Leading The Revolution, Harvard Business Press
Hamilakis Y, Pluciennik M, Tarlow S, Howes D (1991) The Varieties of Sensory Experience: A Sourcebook in the Anthropology of the Senses, University of Toronto Press

Handy C (1996) Gods of Management: The Changing Work of Organizations, Oxford University Press; Reprint edition

Handy C (1976) Understanding Organizations, Penguin

Handy C (1999) Inside Organizations, BBC/Penguin

Harrison S (2005) What's Next After Now?: Post-Spirituality and the Creative Life, Sentient Publications

Harrison J E (1913) Ancient Art & Rituals, Kessinger Pub Co

Hanks D (2005) American Streamlined Design: The World of Tomorrow, Flammarion

Harris M (1998) Good to Eat: Riddles of Food and Culture, Waveland Press

Harris J (1979) Oral and Olfactory Art, Journal of Æsthetic Education, 13:4, October

Harrison, J. E. (2001) - Synaesthesia: the strangest thing, Oxford: Oxford University Press

Harries K (1998) The Ethical Function of Architecture, MIT Press

Harris M (1998) Good to Eat: Riddles of Food and Culture, Waveland Press

Harris-White B & Hoffenberg R (1994) Food: Multidisciplinary Perspectives, Blackwell Publishing

Harrison J E (1913) Ancient Art & Rituals, USA Kessinger Pub Co Harrison S (2005) What's Next After Now: Post-Spirituality and the Creative Life, Sentient Publications

Hartley J H (2005) Creative Industries, Blackwell Publishing Professional

Harvey D (2007) A Brief History of Neoliberalism, Oxford University Press

Harvey D (1989) The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change, Blackwell Publishers

Harvey D (1996) Justice, Nature and the Geography of Differences, Blackwell Publishers

Harvey D (2001) Spaces of Capital; Towards a Critical Geography, Routledge

Harvey D (2003) Paris, Capital of Modernity, Routledge

Hassler D & Gregor L (Eds.) (1998) A Place to Grow: Voices and Images of Urban Gardeners. The Pilgrim Press

Hassler D & Gregor L (Eds.) (1998) A Place to Grow: Voices and Images of Urban Gardeners. The Pilgrim Press

Hatch P, McDonagh D & Balte T (Editors) (2006) Realize - Design Means Business, Industrial Designers Society of America

Hawken P, Lovins A B & Lovins L H (2004) Natural Capitalism: The Next Industrial Revolution, Earthscan Publications

Hawkins J (2004) On Intelligence, Times Books

Hayek F A (1978) The Constitution of Liberty, University of Chicago Press (1966)

Hayek F A (1994) The Road to Serfdom, University of Chicago Press (1944)

Hazleton, R. (1996). Real Ethics in a Real World: Business Ethics Resource, 10(1), 1, 3-4

Heath D (2006) Introducing Romanticism, Totem Books

Hegel G.W. F. (1988) Æsthetics: Lectures on Fine Art, vol. II, trans. T. M. Knox, Oxford: Clarendon Press

Hegenbart S (1996) The Changing Face of Shelf Life, Food Production Design, April 1996

Hegenbart S (1996) How Fresh is that Food in Your Fridge? Weeks Publishing Company

Heil, J. (1983) - Perception and Cognition, Berkeley: University of California Press, (Chapter 1).

Helmoltz, H.L.F. Von, Physiological Optics 3 ed.(1866) Engl transl. ed.by J. P. C. Southall, NY: Dover (1962)

Heraclitos (5th cent. B. C.) after Jeanni

Herzberg B (1991) "Michel Foucault's Rhetorical Theory." Contending with Words: Composition and Rhetoric in a Postmodern Age. Ed. Patricia Harkin and John Schilb. New York: MLA: 69-81
Heidegger M (1971) Poetry, Language, Thought, Harper and Row
Heiser C B Jr. (1990) Seed to Civilization: The Story of Food, Harvard University Press
Heilbroner R (1999) The Worldly Philosophers: The Lives, Times And Ideas Of The Great Economic Thinkers, Touchstone
Heilbroner R (1994) 21st Century Capitalism W W Norton & Co
Heilbroner *R L (1996)* The Crisis of Vision in Modern Economic Thought, Cambridge University Press
Heller R (1998) Managing Change, Dorling Kindersley
Heller S (2003) Citizen Designer: Perspectives on Design Responsibility Watson-Guptill Publications
Hendee W D (Editor) (1997) The Perception Of Visual Information, Springer Verlag
Herman A (1997) The Idea of Decline in Western History, Free Press
Herren R V (2000) The Science of Agriculture: A Biological Approach, Thomson Delmar Learning; 2nd Edition
Hertz N (2003) The Silent Takeover: Global Capitalism and the Death of Democracy, Collins
Heskett J (2002) Toothpicks and Logos: design in Everyday Life, Oxford University Press
Heskett, J, 1980, Industrial Design, Thames & Hudson
Hewison R (1987) The Heritage Industry: Britain in a Climate of Decline, Methuen
Heynen H (2000) Architecture and Modernity: A Critique, MIT Press
Hichwa, R.D. (2001) "Neural Mechanisms Of Anhedonia In Schizophrenia," Journal Of The American Medical Association (Jama) 286, 427-435
Hicks S R C (2004) Explaining Postmodernism: Skepticism and Socialism from Rousseau to Foucault, Scholargy Publishing, Inc
Hill S & Wilkins J (2006) Food in the Ancient World, Blackwell Publishing
Hill B (1984) The Common Agricultural Policy Methuen
Hine T (2002) I Want That: How We All Became Shoppers , Harper Collins
Hines T (1997) The Total Package: The Secret History And Hidden Meanings Of Bottles, Cans And Other Persuasive Containers, Back Bay Books
Hirschman, E.C. and Holbrook, M.B. (1982). Hedonic Consumption: Emerging Concepts, Methods and Propositions. Journal of Marketing, 46 : 92 - 101.
Hirst C (13-11-04) Snail porridge? It's a matter of taste, The Independent, Chttp://enjoyment.independent.co.uk
Hobbes T (1651) Leviathan. Cambridge University Press, (1904)
Hobsbawn E & Ranger T (1983) The Invention of Tradition, Cambridge University Press
Hobhouse H (2006) Seeds of Change: Six Plants that Transformed Mankind, Shoemaker & Hoard
Hofstede G (1980) Culture's Consequences: International Differences in Work-Related Values, Sage Publications Hofstede G (1984) Cultural Consequences, Sage.
Hofstede G (1991) Cultures and Organizations: Software of the mind, McGraw-Hill Book Company
Hoggart K, Buller H & Black, R. (1995) Rural Europe - Identity and Change, Arnold
Hogan D (1997) Selling 'Em by the Sack: White Castle and the Creation of American Food (New York: New York University Press

Hogarth W (1998) The Analysis of Beauty, Cambridge University Press
Holland J H (1999) Emergence: From Chaos to Order, Perseus Books Group
Hollier D (1989) Against Architecture: The Writings of Georges Bataille, The MIT Press
Homi K (1994) The Location of Culture, Routledge
Honore C (2004) In Praise of Slow: How a Worldwide Movement is Challenging the Cult of Speed, Orion Books
Honour H (2001) Romanticism, Westview Press
Hood J (2005) Selling the Dream: Why Advertising Is Good Business, Praeger Publishers
Hook P & Heimlich J E (2004) A History of Packaging, Ohio State University
Hoopes J (2003) False Prophets: The Gurus Who Created Modern Management and Why Their Ideas Are Bad for Business Today, Perseus Publishing
Honore C (2004) In Praise of Slow: How a Worldwide Movement Is Challenging the Cult of Speed, Orion
Hope J (1997) The Secret Language of the Soul: A Visual Guide to Enlightenment and Destiny. Duncan Baird Pub
Hopkins, R. (1998) - Picture, Image and Experience, Cambridge University Press
Horkheimer M & Theodor W. Adorno, Dialectic of Enlightenment, trans. John Cumming, New York: Continuum, 1989
Horrell S (2000) Living Standards in Britain 1900-2000: Women's Century, National Institute Economic Review: 62
Horowitz R (2005) Putting Meat on the American Table: Taste, Technology, Transformation,
Hounshell D (1985) From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States (Studies in Industry and Society) The Johns Hopkins University Press
Howard M (2006) The Oxford History of Twentieth Century, Oxford University Press
Howard J (1989) Consumer Behaviour in Marketing Strategy, Prentice Hall.
Howard J & Sheth J (1969) The Theory of Buyer Behaviour, Wiley
Howes D (2005) Empire of the Senses: The Sensual Culture Reader, Berg
Howes D (2003) Sensual relations: Engaging the Senses in Culture and Social Theory, University of Michigan Press
Howes, D. (ed.) (1991) The Varieties of Sensory Experience: A Sourcebook in the Anthropology of the Senses, Toronto: University of Toronto Press
Howe N & Strauss W (1992) Generations: The History of America's Future, 1584 to 2069, Harper Perennial
Howkins A (1986) The Discovery of Rural England, In Colls, R. and Dodd, P. (eds.) Englishness, Politics and Culture. 1880-1920. Croom Helm: 62-88.
Hudson P (1989) Regions and Industries: A Perspective on the Industrial Revolution in Britain, Cambridge University Press
Hufford M (1998) 'Tending the Commons: Rampsuppers, Biodiversity, and the Integrity of the Mountains', Folklife Center News 20(4):3-11.
Hughes J (1986) The Vital Few: The Entrepreneur and American Economic Progress, Oxford University Press, USA
Hughes H C (1999) Sensory Exotica: A World Beyond Human Experience, MIT Press
Hughes D & Bird K (1997) Ethical Consumerism: The Case of 'Fairly Traded' Coffee, Business Ethics: A European Review. Vol. 6, No 3. p59-167. Blackwell Business

Hui Y H & Scott Smith J (2004) Food Processing: Principles and Applications, Blackwell Publishing Professional

Humprey C & Vitebsky P (1997) Sacred Architecture, Duncan Baird Publishers 1997

Humphery K (1998) Shelf Life: Supermarkets and the Changing Cultures of Consumption, Cambridge University Press

Husén T (1974) The Learning Society, London: Methuen

Hutchins R M (1970) The Learning Society, Harmondsworth: Penguin

Humby C, Hunt T & Phillips T (2003) Scoring Points: How Tesco Is Winning Customer Loyalty, Kogan Page

Humphery K (1998) Shelf Life: Supermarkets and the Changing Cultures of Consumption, Cambridge University Press

Huxtable A L (1997) The Unreal America: Architecture and Illusion, The New Press

Hvattum M (2004) Tracing Modernity: Manifestations of the Modern in Architecture and the City, Routledge

I

Ilbery B & Kneafsey M (1999) Niche Markets and Regional Speciality Foodstuffs in Europe: Towards a Research Agenda, Environment and Planning. Vol. 31 p2207-2222.

Ilbery B, Kneafsey M & Bamford M (2000) Protecting and Promoting Regional Speciality Food and Drink Products in the European Union, Outlook on Agriculture, Vol. 29. No. 1: 31-37.

Illouz E (1997) Consuming the Romantic Utopia, Love and the Cultural Contradictions of Capitalism, University of California Press

Innes C (2005) Designing Modern America: Broadway to Main Street, Yale University Press

Isakower O (1939) On the Exceptional Position of the Auditory Sphere."" International Journal of Psycho-Analysis, 20, 340-8.

Israel L J (1994) Store Planning/Design: History, Theory, Process, John Wiley & Sons Ltd

Israel P (1998). Edison: A Life of Invention. Chichester: Wiley

J

Jacob S, Mcklintock M K, Zelano B & Ober C (2002) Paternally Inherited Hla Alleles Are Associated With Women's Choice Of Male Odor. Nature Genetics 30, 175-179

Jacob M J, Brenson M & Eva M. Olson (1995) Culture in Action: a Public Art Program of Sculpture Chicago. Seattle: Bay Press

Jackson D M (2003) Sonic Branding: An Introduction, Palgrave/Macmillan

James W (2001) Food Nations: Selling Taste In Consumer Societies (Hagley Perspectives On Business And Culture), Routledge

James A (1997) How British is British Food? In Food, Health and Identity, Routledge

Jameson F (1992) Postmodernism, Or, the Cultural Logic of Late Capitalism (Post-Contemporary Interventions Series), Duke University Press; Reprint edition

Jameson F (2002) A Singular Modernity: Essay on the Ontology of the Present, Verso

Jango-Cohen (2005) The History Of Food (Major Inventions Through History), Twenty-First Century Books

Jankowski J & Kessler G (1998) Shelf Space: Modern Packaging Design, 1945-1965, Chronicle Books

Jasanoff (2005) Designs on Nature: Science and Democracy in Europe and the United States, Princeton University Press

Jenks C (2002) The New Paradigm in Architecture: The Language of Postmodernism, Yale University Press

Jenks C (2005) Iconic Building, Ritzolli

Jenks C & Smith J (2006) Qualitative Complexity: Ecology, Cognitive Processes and the Re-Emergence of Structures in Post-Humanist Social Theory. Routledge

Jenkins R (2000) Disenchantment, Enchantment, and Re-enchantment: Max Weber at the Millennium, Max Weber Studies 1, no. 1 (November 2000): 11–32

Jervis J (1999) Exploring the Modern, Blackwell

Johansen T K (1998) Aristotle on the Sense-Organs, Cambridge University Press

Johns M (2002) Moment of Grace: The American City in the 1950s, University of California Press

Johnson S J (2000) American Modern, 1925-1940: Design for a New Age, Harry N. Abrams

Johnson S (2006) Everything Bad is Good for You, Riverhead Trade

Johnson S (2005) Mind Wide Open, Scribner

Johnson Mark (1987) The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason, University of Chicago Press

Jordan P, Thomas B, Lyall-McClelland I, Weerdmeester B (1996) Usability Evaluation In Industry, CRC

Jones C A (2006) Sensorium: Embodied Experience, Technology, and Contemporary Art MIT Press

Jones E M (1999) Behaviorism, Advertising, and the Rise of the American Empire, (featured in Libido Dominandi: Sexual Liberation and Political Control) Fidelity Press.

Jones E M (1999) The Torches of Freedom Campaign

Jones G & Morgan N (Eds.) (1994). Adding Value: Brands and Marketing in Food and Drink, Routledge

Jones M & MacLeod G (1999) "Towards a Regional Renaissance? Reconfiguring and Rescaling England's Economic Governance," Transactions of the Institute of British Geographers. Vol. 24, No. 3, p295-313.

Jordan P, Thomas B, Lyall-McClelland I & Weerdmeester B (1996) Usability Evaluation In Industry, CRC

Jordan P (2002) Designing Pleasurable Products, CRC

Jordan M (1977) Eastern Wisdom: The Philosophies and Rituals of the East, Carlton Books Ltd

Julier G (2000) The Culture of Design, Sage

K

Kaas K (1982) Consumer Habit Forming, Information Acquisition, and Buying Behaviour. Journal of Business Research, 10: 3-15.

Kabat-Zinn J (2005) Coming to Our Senses: Healing Ourselves and the World Through Mindfulness, Hyperion

Kahneman L (2000) Choices, Values & Frames, Cambridge University Press

Kahn B E & Mcalister L M (1997) Grocery Revolution: The New Focus On The Consumer, Prentice Hall

Kahn D (1999). Noise Water Meat: A History of Sound in the Arts, MIT Press

Kahn D & Whitehead G eds. (1992). Wireless Imagination: Sound, Radio, and the Avant-Garde, MIT Press

Kamper D & Wulf C (1989) Looking Back on the End of the World, Semiotext

Kammen M (2000) American Culture, American Tastes: Social Change in the Twentieth Century, Basic Books

Kane P (2004) The Play Ethic: A Manifesto for a Different Way of Living, Macmillan Kanigel R (1997) Frederick Winslow Taylor and the Enigma of Efficiency, Viking Press

Kant I (1974) Anthropology From a Pragmatic Point of View, Trans. Mary J. Gregor, Martinus Nijhoff

Kao J (1997) Jamming: The Art and Discipline of Corporate Creativity' Collins (reprint)

Kapferer (19997) Strategic Brand Management, Kogan Page

Kaplan R S & Norton D P (1996) Balanced Scorecard, Translating Strategy Into Action. HBS Press

Kaplan R S & Norton D P (2000) Having Trouble With Your Strategy? Then Map It, Harvard Business Review, September-October 2000

Kaprow A [1966]. Assemblage, Environments & Happenings, H. N. Abram Kassarjian H (1971) Personality and Consumer Behaviour: A Review, Journal of Marketing Research, 8: 409-418.

Kauffman S (1996) At Home in the Universe: The Search for the Laws of Self-Organization and Complexity, Oxford University Press, USA; Reprint edition

Kammen M (1999) American Culture, American Tastes: Social Change in the Twentieth Century (New York)

Keat R et al. (Eds.) (1994) The Authority of the Consumer, Routledge

Keen S (2002) Debunking Economics: The Naked Emperor of the Social Sciences, Zed Books

Keeley B L (2002) Making Sense of the Senses: Individuating modalities in humans and other animals, Journal of Philosophy, 99: 5-28.

Kelley, D. (1986) - The Evidence of the Senses: A Realist Theory of Perception, Louisiana State University.

Kelly T (2002) The Art of Innovation, Profile Business

Kelly T (2005) The Ten Faces of Innovation: IDEO's Strategies for Defeating the Devil's Advocate and Driving Creativity Throughout Your Organization, Currency

Kenny A (2000) The Oxford History of Western Philosophy, Oxford University Press

Kenwood A G & Lougheed A L (1992) The Growth of the International Economy 1820-1990, Routledge

Keynes J M (1997) The General Theory of Employment, Interest, and Money, Prometheus Books

Kidder T (1981) The Soul of a New Machine, Little Brown

Kirschenmann F (2006) Farming Food and Health, Gleanings A Report from the Glynwood Center (Summer 2006)

Key Note (1997), Supermarkets and Superstores, Key Note, London., .

Killeen P R (1962) Incentive theory: In Nebraska Symposium on Motivation, 1981. Response Structure and

Kim W K & Mauborgne R (2005) Blue Ocean Strategy: How to Create Uncontested Market Space and Make Competition Irrelevant, Harvard Business School Press

Kimbrell A (2002) Fatal Harvest: The Tragedy of Industrial Agriculture, Foundation for Deep Ecology

Kinsey J (1988) Marketing in Developing Countries, Macmillan Education Ltd.

Kiple K F & Ornelas K C (2000) The Cambridge World History of Food, Cambridge University Press

Kirschenmann F (2006) Farming Food and Health, Gleanings A Report from the Glynwood Center (Summer 2006)

Kirshenblatt-Gimblett, Barbara (1989) 'Edible Art', Artforum (November): 20-23.

Klees E (1999) Entrepreneurs In History: Success vs. Failure, Cameo Press, NY

Klein, Jennie (1999) "Feeding the Body: the Work of Barbara Smith," Performing Arts Journal 21(1): 24-35.

Klein N (2002) Fences and Windows: Dispatches from the Frontlines of the Globalization Debate, Flamingo

Klingner D E & Nalbandian (1993) J. Public Personnel Management: Contexts and Strategies. Prentice Hall: Englewood Cliffs, NJ

Kloppenburg J P (2005) First the Seed: The Political Economy of Plant Biotechnology (Science and Technology in Society), University of Wisconsin Press

Knobloch F (1996) The Culture of Wilderness: Agriculture As Colonization in the American West, University of North Carolina Press

Knowles, M. (1989). The Making Of An Adult Educator, San Francisco: Jossey-Bass

Koch C (2004) The Quest for Consciousness: A Neurobiological Approach, Roberts and Co.

Koehn N F (2001) Brand New: How Entrepreneurs Earned Consumers' Trust from Wedgwood to Dell, Harvard Business School Press

Koffka, K. (1935). Principles of Gestalt Psychology. Harcourt, Brace & Co., New York.

Kohles R & Uhl J (1998) Marketing of Agricultural Products, 8th ed, Prentice Hall

Komisar R (2001) The Monk and the Riddle: The Art of Making a Living While Creating a Life, Harvard Business School

Kolb B (2000) Experience and the Developing Brain, Education Canada, Volume 39, Number 4, Winter

Kolb D A (1983) Experiential Learning: Experience as the Source of Learning and Development, Financial Times Prentice Hall Kotler P & Amstrong G & Saunders J & Wong V (1996) Principles Of Marketing. Prentice Hall

Korsmeyer C (2005) The Taste Culture Reader: Experiencing Food and Drink (Sensory Formations), Berg Publishers

Korsmeyer C (1999) Making Sense Of Taste: Food And Philosophy
Cornell University Press

Kotler P (1999) Marketing Management, 10th Edition, Prentice Hall

Korzybski A (1933) Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics, Lancaster, PA: Science Press

Kotler P (2002) Marketing Management, Prentice Hall

Kotler P (1999) Kotler on Marketing: How to Create, Win, and Dominate Markets, Free Press

Kramer, R. (1978) Maria Montessori, Blackwell

Krantz, J & Gilmore, T N (February 1990) p183-204 The Splitting of Leadership and Management as a Social Defense, Human Relations 43

Kress G & Van Leeuwen T (1996) Reading Images: The Grammar of Visual Design, Routledge

Kristeva J (1980) Desire in Language: A Semiotic Approach to Literature and Art, Columbia University Press

Krog G V & R J (1995) Organizational Epistemology, Macmillan Press Ltd

Krohn L & McCoy M (1989) Beyond Beige: Interpretive Design for the Post Industrial Age, Design Issues, Spring, 1989, Vol 5, Number 2
Krugman (1979) Low Involvement Theory in the Light of New Brain Research: In Attitude Research Plays for High Stakes, American Marketing Association Proceeding Series, Maloney, J.C. and Silverman, B. (eds) : 16 -24. Chicago.
Kuhn T (1996) The Structure of Scientific Revolutions, University Of Chicago Press; 3rd edition
Kurlansky M (2003) Salt: A World History, Penguin
Kummer C (2002) The Pleasures of Slow Food: Celebrating Authentic Traditions, Flavors, and Recipes, San Francisco: Chronicle Books
Kundera M (1996) Slowness, London, Faber & Faber
Kwint M & Breward (1999) Material Memories: Design and Evocation (Materializing Culture), Berg Publishers

L

Laing S (1992) The Politics of Culture: Institutional Change, Routledge
Landes D S (1999) The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor, W. W. Norton & Company
Landreth H & Colander D C (2002) History of Economic Thought, Boston: Houghton Mifflin
Lannon J (1986) How People Choose Food: the Role of Advertising and Packing, in Ritson, C. et al (eds.). The Food Consumer, John Wiley and Sons Ltd.
Latacz-Lohmann U & Foster C (1997) From 'Niche' to 'Mainstream': Strategies for Marketing Organic Food in Germany and the UK, British Food Journal, Vol. 99, no. 8: 276.
Latour B (2004) Politics of Nature: How to Bring the Sciences into Democracy, Harvard University Press
Lake M (1990) Scents And Sensuality: The Essence Of Excitement. John Murray 1990
Lakoff G & Johnson M (1980) Metaphors We Live By, Chicago, University of Chicago Press
Lambrech B (2002) Dinner at the New Gene Cafe: How Genetic Engineering Is Changing What We Eat, How We Live, and the Global Politics of Food, St. Martin's Press
Lancaster J (2006) Making Time: Lillian Moller Gilbreth – A Life Beyond 'Cheaper by the Dozen', Northeastern University Press
Lancaster K (1991) Modern Consumer Theory, Edward Elgar Lancaster G & Massingham L (1993) Marketing Management, McGraw-Hill
Lane R D & Nadel L (2002) Cognitive Neuroscience of Emotion (Series in Affective Science), Oxford University Press
Langford J & McDonagh D (2003) Focus Groups: Supporting Effective Product Development, CRC
Lappe F M (1985) Diet for a Small Planet (20th Anniversary Edition), Ballantine Books
Lappe F M (2003) Hope's Edge: The Next Diet for a Small Planet, Tarcher; Reprint edition
Lasch C (1985) The Minimal Self: Psychic Survival in Troubled Times, W. W. Norton & Company
Lash S (1990) Sociology of Postmodernism. London: Routledge.
Latour B (1988) The Pasteurization of France, Cambridge: Harvard
Latour B (1993). We Have Never Been Modern. Cambridge, MA: Harvard University Press.
Laurel G (2000) Lillian Gilbreth and the Mental Revolution at Macy's, 1925-1928., Journal of Management History 2000 6(7): 285-305
Laurillard D (2001) Re-Thinking University Education, Routledge

Lawrence F (2004) Not on the Label: What Really Goes into the Food on Your Plate, Penguin Books Ltd

Lawrence W (1996) Greek Architecture, Yale University Press: Fifth Edition

Lawson B (1997) How Designers Think, Architectural Press (3rd Edition)

Lawson B (2004) What Designers Know, Architectural Press

Lawson H & Appignanesi L (1989) Dismantling Truth: Reality in the Post-Modern World, Weidenfeld and Nicolson

Leach N (1999) The Anaesthetics of Architecture, The MIT Press

Lefebvre L (2004) Crave: See Touch Smell Hear Taste, Regan Books

Le Corbusier (1985) Towards a New Architecture, Dover Publications

Lea S E G, Tarpy R M & Webley P (1987) The individual in the economy, Cambridge Univ Press

Leach W R (1994) Land of Desire: Merchants, Power, and the Rise of a New American Culture, Vintage Leach N (1997) Rethinking Architecture: A Reader in Cultural Theory, Routledge

Lears T J (1994) A Cultural History of Advertising in America (New York, 1994)

Lears T J (1981) No Place of Grace: Antimodernism and the Transformation of American Culture, 1880–1920 (New York) Fables of Abundance:

Lears T J (2003) Something for Nothing: Luck in America (New York, 2003) Leavitt S A (2002) From Catharine Beecher to Martha Stewart: A Cultural History of Domestic Advice, University of North Carolina Press

Leete A R & Firnhaber (2004) Shamanism in the Interdisciplinary Context, Brown Walker Press

Lefebvre H (1991) The Production of Space, Blackwell Publishers

Leitch V B (1992) Cultural Criticism, Literary Theory, Poststructuralism, N Y: Columbia UP,

Lempire B (1992) Fashion's Favourite: The Cotton Trade and the Consumer in Britain, 1660-1800, Oxford University Press (USA)

Lenat D B (1983) Toward a theory of Heuristics: In M. Groner, Groner, R., & Bischof, W. F. (Ed.), Methods of Heuristics (pp. 351-404). Hillsdale, NJ: Lawrence Erlbaum Associates

Levenstein H (2003) Paradox of Plenty: A Social History of Eating in Modern America, Revised Edition (California Studies in Food and Culture), University of California Press

Leon M (1988) Characterising the Senses, Mind and Language, Vol. 3, No. 4

Levenstein H (1988) Revolution at the Table: The Transformation of the American Diet, New York, Oxford University Press

Levine M W & Shefner J M (1981) Fundamentals of Sensation and Perception, Addison-Wesley, Reading, MA

Levine L (1988) Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America, Cambridge University Press

Levi-Strauss C (1983) The Raw and the Cooked: Mythologiques, Volume 1 (Raw & the Cooked), University Of Chicago Press

Levi-Strauss C (1990) The Origin of Table Manners: Mythologiques, Volume 3 (Mythologiques, Vol. 3), University Of Chicago Press

Lévi-Strauss C (1964) Totemism, Harmondsworth: Penguin

Lévi-Strauss C (1969) The Elementary Structures of Kinship, Eyre & Spottiswoode

Lévi-Strauss C (1972) Structural Anthropology, Harmondsworth: Penguin

Levitt T (1993) The Globalisation of Markets, Harvard Business Review, 61: 92-102.

Levitt S & Dubner S J (2005) Freakonomics: A Rogue Economist Explores the Hidden Side of Everything, William Morrow

Levine M W & Shefner J M (1981) Fundamentals of Sensation and Perception, Addison-Wesley
Levinson D & Ember M (1996) Encyclopaedia of Cultural Anthropology, Henry Holt and Company
Levy P (21 Sep 1993) 'The Granddaddy of Foodie Gatherings', Wall Street Journal
Lewis M (2004) Handbook of Emotions, The Guilford Press
Wal-Mart: The Face of Twenty-First-Century Capitalism
Lewis D & Bridger D (2000) The Soul of the New Consumer- Authenticity: What we Buy and Why in the New Economy, Nicholas Brealey Publishing Ltd.
Lidwell W (2003) Universal Principles of Design: 100 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach Through Design, Rockport Publishers
Lieber J B (2002) Rats in the Grain: The Dirty Tricks and Trials of Archer Daniels Midland, the Supermarket to the World, Four Walls Eight Windows
Liebschner J (2002) A Child's Work: Freedom and Play in Froebel's Educational Theory and Practice, Lutterworth Press
Lilien G, Kotler P & Moorthy K (1992) Marketing Models, New Jersey; Prentice Hall International
Lindstrom M (2005) Brand Sense: Build Powerful Brands through Touch, Taste, Smell, Sight, and Sound, Free Press
Litchenstein N (2005) Wal-Mart: The Face of Twenty-First-Century Capitalism, New Press
Lloyd G E R, Skinner Q, Daston L & Ross D (1996) Adversaries and Authorities: Investigations into Ancient Greek and Chinese Science, Cambridge University Press
Llinas R (1996) Mind-Body Continuum Sensory Processes, MIT Press Sept 1996
Loftin J D (1999) The Big Picture: A Short World History of Religions, McFarland & Company
Lopes, D. M. M. (2000) What Is It Like to See with Your Ears? The Representational Theory of Mind, Philosophy and Phenomenological Research, Vol. LX, No. 2: 439-453
Lorenz C (1990) The Design Dimension: The New Competitive Weapon for Product Strategy and Global Strategy, Blackwell
Loudon I (Editor) (1997) Western Medicine: An Illustrated History, Oxford University Press
Lovegren S (2005) Fashionable Food: Seven Decades of Food Fads, University Of Chicago Press
Low S M & Lawrence-Zuniga D (2003) The Anthropology of Space and Place, Blackwell
Lowe P and Bodiguel M (1990) Rural Studies in Britain and France, Belhaven Press
Lowey R (2002) Never Leave Well Enough Alone, The Johns Hopkins University Press
Loyola I (1999) The Spiritual Exercise of St. Ignatius Loyola, Tan Books & Publishers
Loyola I St. (1997) Personal Writings By Ignatius, Penguin Putnam Inc
Lowy M (1996) Walter Benjamin and Surrealism: A Story of Revolutionary Enchantment, Europe-Revue, 74, no. 804 (April 1996): 79–90
Ludel J (1978) Introduction to sensory processes, W H Freeman & Co. San Francisco.
Ludwig K (1995) Shape Properties and Perception, Philosophical Issues, 7 (Perception): 325-350.
Luegenbiehl H C D (1987) The Role of Values in the Teaching of Design, Engineering Education (January)
Lunt G C (1998) Comparative Invertebrate Neurochemistry, Cornell University Press
Lunt P (2004) Psychology and the Consumer: Knowing Consumers: Actors, Images, Identities in Modern History, Conference at the Zentrum für Interdisziplinäre Forschung in Bielefeld, Germany, (February 26-28, 2004)
Luke B (1999) The Art Of Calm: Relaxation Through The Five Senses, Seward

Lurz K A & Lutz R J (1997) Effects Of Interactive Imagery On Learning: Applications To Advertising, Journal Of Applied Psychology, 62: 55-81

Lycan W (Editor) (1999) Mind and Cognition: An Anthology (Blackwell Philosophy Anthologies), Blackwell Publishers; 2nd edition

Lyotard J-F (1992) The Postmodern Explained, Power Publications

Lyotard J-F (1984) The Postmodern Condition: A Report on Knowledge. Manchester: Manchester University Press

Lyman H L & Merzer G (2001) Mad Cowboy: Plain Truth from the Cattle Rancher Who Won't Eat Meat, Scribner

Lynn G (1997) 'Architecture After Geometry', Architectural Design, Academy Group Ltd

M

Mack G & Hyman A R (2003) Gentle Bridges: Architecture, Art and Science, Princeton Architectural Press

Mackey J (2005) Rethinking the Social Responsibility of Business, (A Reason debate featuring Milton Friedman, Whole Foods' John Mackey, and Cypress Semiconductor's T.J. Rodgers) Reason magazine

MacKenzie D (1999) The Social Shaping of Technology, Open University Press; 2 edition

MacLean G (1999) The Country and the City Revisited: England and the Politics of Culture, 1550-1850, Cambridge University Press

Macmillan J (2003) Reinventing The Bazaar: The Natural History of Markets, WW Norton & Co

Mai L W & Ness M R (1999) Canonical Correlation Analysis of Customer Satisfaction and Future Purchase of Mail-Order Speciality Food, British Food Journal, Vol. 101 No.11: 857-70.

Magee B & Lockley N (Editor) (1998) The Story of Thought: (The Essential Guide To The History of Western Philosophy) DK Publishing / QPB edition

Magdoff F (2000) Hungry for Profit: The Agribusiness Threat to Farmers, Food and the Environment, Monthly Review Press

Mahon B (2003) The Man Who Changed Everything: The Life of James Clerk Maxwell, John Wiley & Sons

Makhno B M (1999) Beasts of Burden: Capitalism - Animals – Communism, Antagonism Press

Malnic B, Hirono J, Sato, T & Buck L.(1999) Combinatorial Receptor Codes For Odors, Cell 96: 713-723

Malnar J M & Vodvarka F (2004) Sensory Design, University of Minnesota Press

Malone, Ro (1981-1982) Autolocomotion: What Bread Does When Left Alone.' High Performance 4, no. 4: 70.

Manning S A & Rosenstock E. H (1968) Classical Psychophysics and Scaling, McGraw-Hill

Marcus I G (1996) Rituals of Childhood: Jewish Acculturation in Medieval Europe. New Haven: Yale University Press.

Marinetti F T (1989) The Futurist Cookbook, trans., Suzanne Brill, Bedford Arts.

Marstine J (2005) New Museum Theory and Practice: An Introduction, Blackwell

Marks L E (1974) Sensory processes, the new psychophysics. Academic Press, New York."

Marks L G R (1974) Skin temperature Modifies the Pleasantness of thermal Stimuli. Nature 244

Martin, M. (1992) Sight and Touch, in T. Crane (ed.) The Contents of Experience, Cambridge: Cambridge University Press.

Masumoto D M (2004) Four Seasons in Five Senses: Things Worth Savoring, W. W. Norton & Company

Mazza E (1999) The Celebration of the Eucharist: The Origin of the Rite and the Development of Its Interpretation, Liturgical Press

McClellan J E. III & Dorn H (1998) Science and Technology in World History: An Introduction (Johns Hopkins Studies in the History of Technology), The Johns Hopkins University Press

McCurday J D (1972) The Sensory Media, Journal of the British Society for Phenomenology, 3: 165-186.

McDougall W (1923) Outline of Psychology, Scribner's

McDonough M & Braungart (2002) Cradle to Cradle: Remaking the Way We Make Things Work, North Point Press

McDonagh D, et al; (2003) Design and Emotion: The Experience of Everyday Things, CRC Press

McGurk H and MacDonald J (1976) "Hearing Lips and Seeing Voices," Nature, 264: 747-748.

McHarg I L (1995) Design with Nature (Wiley Series in Sustainable Design), Wiley, reprint (1962)

Manning S A & Rosenstock E H (1968) Classical Psychophysics and Scaling, McGraw-Hill

Mansfield E (1992) Flexible Manufacturing Systems: Economic Effects in Japan, United States and Western Europe, Japan and the World Economy, vol 2: 1-16

Marsden T (2000) Food Matters and the Matter of Food: Towards a New Food Governance? Sociologia Ruralis, Vol. 40. No 1 January: 20-30.

Marsden T (1995) Beyond Agriculture: Regulating the New Rural Spaces. Journal of Rural Studies, Vol. 11: 285-296.

Mason L & Brown C (1999) Traditional Foods of Britain: An Inventory, Prospect Books

Mathews G (2000) Global Culture/Individual Identity: Searching for Home in the Cultural Supermarket, Routledge

Maturana H R & Varella F J (1987) The Tree of Knowledge: Biological Roots of Human Understanding, Shambhala

Marcus G E & Fischer M M J (1986) Anthropology as Cultural Critique, An Experimental Moment in the Human Sciences, University of Chicago Press

Marks L & Gonzalez R (1974) "Skin temperature modifies the pleasantness of thermal stimuli," Nature 244, 473-475.

Mark LE (1974) Sensory processes, the new psychophysics, Academic Press, New York

McCracken G (1998) Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods, Indiana University Press

McMahon D (2006) Happiness: A History, Atlantic Monthly Press

Margery B L (1946) Beyond the Five Senses, Basil Blackwell

Margolin V (Editor) (1996) The Idea of Design, MIT Press

Margolin V (2002) The Politics of the Artificial, University of Chicago Press

Mau B (2004) Massive Change, Phaidon Press

Margolin V (1989) Design Discourse: History, Theory, Criticism, Chicago University Press

Margolis H (1993). Paradigms and barriers: How Habits of Mind Govern Scientific Beliefs, University of Chicago Press

Marshall S (1993) Waiting for Foucault, Prickly Pear Press

Marshall A (1997) Principles of Economics, Prometheus Books (1890)

Maslow A H (1993) The Farther Reaches Of Human Nature, Arkana

Phenomenology
Mason J & Singer P (1980) Animal Factories, Three Rivers Press
Matthews G A (2000) Pesticide Application Methods, Blackwell Publishing
Marks-Tarlow T (1995) Creativity inside out: Learning through multiple intelligences. Reading, MA: Addison-Wesley.
Matthew H C G & Harrison B (2004) Oxford Dictionary of National Biography Plus Index of Contributors, Oxford University Press
Mathews R (6-2-06) Taking Consumer Insights to the Next Level, (www.retailwire.com)
Mathiason N (2006) Selling What Grows Naturally Becomes a Growth Industry, Business and Media, The Observer, 13-08-06: 4-5Maitland, A. (1996), "Changing eating habits good news for fast food", The Financial Times, pp.8
Malakoff D (1995) What Good is Community Greening? American Community Gardening Association, Philadelphia, PA
Manley D (2000) Technology of Biscuits, Crackers and Cookies (3rd Edition), Woodhead Publishing
Marchand R (1985) Advertising the American Dream: Making Way for Modernity, 1920-40, University of California Press
Marchand R (2001) Creating the Corporate Soul: The Rise of Public Relations and Corporate Imagery in American Big Business, University of California Press
Marcus G E & Fischer M M J (1986) Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences, University of Chicago Press
Marinetti F T (1909) The Futurist Manifesto, (Paris) Le Figaro, February 20
Marsh J G (1994) Primer on Decision Making; How Decision Happen, Free Press
Marx K (2002) The Communist Manifesto, Penguin
Marx K (1999) Das Kapital, Gateway Editions
Marx K & Engels F (1978) The Marx-Engels Reader, W W Norton & Company (R C Tucker, editor)
Maslow A (1998) Towards a Psychology of Being, Wiley (3rd edition)
Maslow, A. H. (1954). Motivation and Personality, HarperCollins
Massumi B (1992) A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari, The MIT Press
Mathews G (2000) Global Culture/Individual Identity: Searching for Home in the Cultural Supermarket, Routledge
Mau B (2004) Massive Change, Phaidon Press
May T (1997) Reconstructing Difference: Nancy, Derrida, Levinas, and Deleuze, The Pennsylvania State University Press
Mayo J M (1993) The American Grocery Store: The Business Evolution of an Architectural Space, Westport: Greenwood Press
Mayo Clinic (2002) Encyclopedia of Foods by Inc. Experts from Dole Food Company, Experts from The Mayo Clinic, and Experts from UCLA Center for Human Nutrition, Academic Press
Mazur T E (1999) Thorstein Veblen at the University of Chicago and the Socialisation of Aesthetics, Design Issues, Spring 1999, Vol 15, No 1
McCracken G (2005) Culture And Consumption II: Markets, Meaning, And Brand Management, Indiana University Press

McDermott J (1992) History in the Present: Contemporary Debates about Capitalism, Science & Society, vol 56, no 3, pp. 291-323.
McDonagh D, Hekkert P, van Erp J & Gyi D (Editors) (2003) Design and Emotion, CRC
McDonough M & Braungart (2002) Cradle to Cradle: Remaking the Way We Make Things Work, North Point Press
McDougall, W. (1923) Outline of psychology. Scribner's, New York.
McGee H (2004) On Food and Cooking: The Science and Lore of the Kitchen, Scribner; Rev&Updtd edition
McHarg I L (1995) Design with Nature (Wiley Series in Sustainable Design), Wiley, reprint (1962)
McGaw J A (1994) Early American technology: making and doing things from the colonial era to 1850, Chapel Hill, Published for the Institute of Early American History and Culture, Williamsburg, Va., by the University of North Carolina Press
McGregor, D. (1985). The human side of enterprise: 25th anniversary edition, McGraw-Hill. (1960)
McKeon R (Editor) (2001) The Basic Works of Aristotle Modern Library, reprint edition
McMahon D (2006) Happiness: A History, Atlantic Monthly Press
McWilliams (2004) Foods: Experimental Perspectives (5th Edition), Prentice Hall
Means H (2001) Money and Power: The History of Business, John Wiley & Sons
Medicus, G. (1987). Toward an Etho-Psychology: A phylogenetic tree of behavioral capabilities proposed as a common basis for communication between current therories in psychology and psychiatry. Ethology and Sociobiology, 8,131S-150S
Meilgaard M, Vance G & Civille, Carr B T (1999) Sensory Evaluation Techniques (3rd Edit), CRC Press
Meikle J (2001) Twentieth Century Limited: Industrial Design in America, 1925-1939,
Meikle J (1997) American Plastic: A Cultural History, Rutgers University Press
Mellanby K (1975) Can Britain Feed Itself? Merlin Press
Meltzoff A (1993) Molyneux's Babies: Cross-modal Perception, Imitation, and the Mind of the Preverbal Infant, in Naomi Eilan, Rosaleen McCarthy, and Bill Brewer (eds.) Spatial Representation: Problems in Philosophy and Psychology, Blackwell
Mennell S (1995) All Manners of Food: Eating and Taste in England and France from the Middle Ages to the Present, University of Illinois Press
Mennell S (1993) The Sociology of Food and Eating, Sage Publications
Merleau-Ponty M (2002) Phenomenology of Perception (Routledge Classics), Routledge; 2 edition
Merleau-Ponty M (2003) Nature: Course Notes from the Collège de France, Northwestern University Press
Merleau-Ponty M (2002) Phenomenology of Perception (trans. Colin Smith) Routledge
Merleau-Ponty M (1969) The Visible & The Invisible, North Western University
Metz C (1982) The Imaginary Signifier, Indiana University Press
Meulenberg M (1993) Food and Agribusiness Marketing in Europe, The Haworth Press, Inc.
Michelson P (2005, January 15) Interview with Geoff Crook in the restaurant that forms part of Patrica Michelson's ethical focused specialist food retail business 'La Fromagerie,' Moxon Street W1U)
Michelson P (2001) The Cheese Room, Penguin reprint, 2005

Mick D G (1986) 'Consumer Research and Semiotics: Exploring the Morphology of Signs, Symbols and Significance', Journal of Consumer Research 13(2): 196-213
Mick D G (1988) 'Schema-theoretics and Semiotics: Toward More Holistic, Programmatic Research on Marketing Communication', Semiotica 70(1/2): 1-26
Mick D G & Buhl C (1992) 'A Meaning-based Model of Advertising Experiences', Journal of Consumer Research 19: 317-38
Mick D G & Politi L G (1989) 'Consumers' Interpretations of Advertising Imagery: A Visit to the Hell of Connotation'. In Elizabeth C Hirschman (Ed.): Interpretive Consumer Research. Provo, UT: Association for Consumer Research, pp. 85-96
Miles, C., & Jenkins, R. (2000). Recency And Suffix Effects With Serial Recall Of Odours. Memory 8 (3): 195-206.
Mill J S (2004) Utilitarianism, Kessinger Publishing
Mill J S (1869) Analysis of the Phenomena of the Human Mind. Edited with additional notes of J S Mill, (1863) On Utilitarianism, in Utilitarianism, Liberty, and Representative Government, Dutton & Co. (1951)
Miller D (2002) Home Possessions, Berg
Miller D (2001) Dialectics Of Shopping, University Of Chicago Press
Miller D (1988) A Theory Of Shopping, Cornell University Press
Miller D (1987) Material Culture and Mass Consumption, Blackwell Publishers
Miller D (1995) Acknowledging Consumption, Routledge. London.
Miller D (1998) The making of the Modern British Diet, Croom Helm
Miller A R (2002) Sensory Systems : Anatomy And Physiology, Academic Press
Miller K (1999) Handbook for Multisensory Worship Volume 1,
Abingdon Press
Miller J F, Mekalanos J J & Falkow S (1989). Coordinate regulation and sensory transduction in the control of bacterial virulence. Science, 243, 916-922
Miller D & Le Breton-Miller I (2005) Managing For The Long Run: Lessons In Competitive Advantage From Great Family Businesses, Harvard Business School Press
Miller J. A (1996) Dimensional Typography, Kiosk Report, Princeton
Miller P & Rose N (1997) Mobilizing the consumer: Assembling the Subject of Consumption, Theory, Culture & Society, 14(1), 1-36
Milmo D (2-1-06) Tesco on the Defensive over MP's fears for small shops, Guardian
Milner, P.M. & White, N.M. (1987). What is physiological psychology? Psychobiology 15. 2-6.
Mincey, R., & Bingman, M. B. (2000). Challenges of Change: The Program Improvement Process of the Knox County Adult Literacy Program. Knoxville: Center for Literacy Studies, University of Tennessee.
Mintel (2000), Non-foods in Grocery Multiples, Mintel International Group, London
Michman R D (1998) The Food Industry Wars, Quorom Books
Misa T J (2004) Modernity and Technology, MIT Press
Monahan S C, Mirola W A, Emerson M O (2000) Sociology of Religion: A Reader, Prentice Hall
Monbiot G (2001) Captive State: The Corporate Takeover of Britain, Pan
Moncrieff JW (1967) The Chemical Senses, John Wiley & Sons
Moneo R (2005) Theoretical Anxiety and Design Strategies in the Work of Eight Contemporary Architects, The MIT Press

Moore M (2001) Stupid White Men: and Other Sorry Excuses for the State of the Nation! New York: HarperCollins

Montanari M (1996) The Culture of Food (The Making of Europe), Blackwell Publishing

Montessori, M. (1995) The Absorbent Mind, New York: Owl Books, reprint (1949)

Montessori, M. (1964) The Montessoria Method, New York: Schocken Books, reprint (1916)

Moore E C (1998) Charles S. Peirce: The Essential Writings, Prometheus Books

Moskowitz, H. R. (1974) Sensation and measurement. D. Reidel Publ. Co, Dordrecht.

Moran D & Mooney M (2002) The Phenomenology Reader, Routledge

Psychology

More C (1997) The Industrial Age: Economy & Society in Britain Since 1700, Longman

Morgan, M. J. (1977) Molyneux's Question: Vision, Touch and the Philosophy of Perception, Cambridge: Cambridge University Press

Morgan D (2005) The Sacred Gaze : Religious Visual Culture in Theory and Practice, University of California Press

Morgan D (1996) The Enchantment of Art: Abstraction and Empathy from German Romanticism to Expressionism, Journal of the History of Ideas 57, no. 2 (April 1996): 317–341

Morgan, G. (1997). Images of organization. Thousand Oaks, Sage.

Morgan, G. (1997). Imaginization: New mindsets for seeing, organizing, and managing. Thousand Oaks, Sage

Morris T (1998) If Aristotle Ran General Motors, Owl Books

Morris J & Bate R (1999) Fearing Food: Risk, Health and Environment, Butterworth-Heinemann

Moser M A & MacLeod D (1996) Immersed in Technology: Art and Virtual Environments, MIT Press

Murray R & McCormack L (2000) "Click on to a shopping trolley; supermarket shopping online is timesaving and convenience, but there are pitfalls", Daily Telegraph

Mountcastle V B (1979) An Organizing principle for Celebral: The Unit Model and the Distributed System, published in Edleman G M & Mountcastle V B (1978) The Mindful Brain, MIT Press

Mueller T (2002) Montessori: Educational Material for Early Childhood and Schools, Prestel

Muller K E (2000) Soul Of Africa: Lost Rites and Traditions, Konemann

Munoz A M (1997) Relating Consumer Descriptive & Lab Data To Better Understanding Consumr Responses: Manual 30, American Soc For Testing June 1997

Munoz A & Civille G V (1992) Sensory Evaluation In Quality Control, Kluwer Academic Publishers

Murcott A (1984) The Sociology of Food and Eating, Gower

N

Nabhan G P (2002) Coming Home to Eat: The Pleasures and Politics of Local Foods W. W. Norton & Company

Naddaf G (2005) The Greek Concept Of Nature (S U N Y Series in Ancient Greek Philosophy), State University of New York Press

Nafe J P (1924) An Experimental Study of the Affective Qualities, American Journal of Psycholology 35: 540.

Nagel T (1974) What Is It Like to be a Bat? Philosophical Review, 83: 435-450

Nakata C & Sivakumar K (1996) National Culture and New Product Development: An Integrative Review, Journal of Marketing, 60: 61-72

Napier F H (1895) The Senses Their Use and Cultivation, Glasgow: Bryce & Murray

Nasr S H (1987) Islamic Art and Spirituality, State University of New York Press
Nattrass B & Altomare M (1999) The Natural Step for Business : Wealth, Ecology & the Evolutionary Corporation (Conscientious Commerce), New Society Publishers
Nead L (2005) Victorian Babylon: People, Streets and Images in Nineteenth-Century London
Nelkin, N. (1990) Categorising the Senses"", Mind and Language, Vol. 5, No. 2, pp. 149-164.
Nemiroff D (1991) Jana Sterbak: States of Being = Corps à Corps. Ottawa: National Gallery of Canada
Nestle M (2003) Food Politics: How the Food Industry Influences Nutrition and Health (California Studies in Food and Culture, 3) University of California Press
Nestle M (2006) What to Eat, North Point Press
Neumeier M (2003) The Brand Gap: How to Bridge the Distance Between Business Strategy and Design, New Riders Press
Nevile J (1990) The Musical Banquet in Italian Quattrocento Festivities, In Food in Festivity: Proceedings of the Fourth Symposium of Australian Gastronomy , eds. Anthony Corones, Graham Pont, and Barbara Santich. Sydney: Symposium of Australian Gastronomy: 125-35
Newton I & Janiak A (Ed) (2004) Isaac Newton: Philosophical Writings, Cambridge University Press
Newman, S. (1999) Philosophy and Teacher Education: A Reinterpretation of Donald A. Schon's Epistemology of Reflective Practice, London: Avebury
Newman, A.J., Atkinson, N. (2000), "The re-branding of Selfridges: a framework for success", Management Case Quarterly, Vol. 5 No.1/2
Nicosia F (1966) Consumer Decision Processes, Prentice-Hal
Niederland W G. (1958) Early Auditory Experiences, Beating Fantasies, and Primal Scene Psychoanalytic Study of the Child, 13: 471-504.
Niehans J (1990) A History of Economic Theory: Classic Contributions, 1720-1980. Baltimore: Johns Hopkins University Press
Nielsen S S (2003) Food Analysis (Food Science Texts Series), Springer; 3rd edition
Nightingale A W (2004) Spectacles of Truth in Classical Greek Philosophy: Theoria in its Cultural Context, Cambridge University Press
Nilson T (1992) Value-Added Marketing: Marketing Management for Superior Results, McGraw-Hill
Nonaka I & Takeuchi H (1995) The Knowledge-Creating Company. Oxford
Norberg-Hodge H, Goering P & Page J (2001) From the Ground Up: Rethinking Industrial Agriculture, Zed Books
Norman D A (2005) Emotional Design, Doubleday
Norman D A (1990) The Design Of Everyday Things. Currency Doubleday
Norman D A (1988) The Psychology of Everyday Things, Basic Books.
Norman D A (1993) Things That Make Us Smart: Defending Human Attributes in the Age of the Machine, Addison Wesley
Norman D A (1993) "Cognition in the Head and the World: An introduction to the special issue on situated action," Cognitive Science, 17, 1-6
Norman D A (1983) Some Observations on Mental Models, In D. S. Gentner, A. L. (Ed.), Mental Models, Lawrence Erlbaum Associates (pp. 7-14)
Norris C (1979) Deconstruction: Theory and Practice. New York: Routledge.
Norris C (1990) What's Wrong with Postmodernism. England: Harvester Wheatsheaf.

North D C (2005) Understanding the Process of Economic Change (Princeton Economic History of the Western World, Princeton University Press
North D C (1990) Institutions, Institutional Change and Economic Performance (Political Economy of Institutions and Decisions), Cambridge University Press
Nye D E (1996) American Technological Sublime, The MIT Press; Reprint edition
Nygard B & Storstad O (1998) "De-globalisation of Food Markets: Consumer Perceptions of Safe Food: the Case of Norway," Sociologia Ruralis, Vol. 38, No. 1: 35-53.

O

Oakeshott I (7-1-07) Minister: Organic Food is no Better, Sunday Times:
O'Brien, P. (1996). 'Path Dependency: Or Why Britain Became an Industrialised and Urbanised Economy Long Before France," Economic History Review, Vol. 49, No. 2: 213.
Oddy D & Miller D (1976) The Making of the Modern British Diet, Croom Helm
O'dell C S., Et Al (1998) If Only We Knew What We Know: The Transfer Of Internal Knowledge And Best Practice. Free Press
Odone C (1996). Britain's Elite is Not a Thing of the Past: It Has Simply Become a Thing of the Stomach. New Statesman. Oct 23, Vol. 127 No. 4408: 24
OECD (1995) Niche Markets as a Rural Development Strategy, OECD
Oey E M (1980) Singapore Feasts, APA Production
Ohmann R (1996) Magazines, Markets and Class at the Turn of the Century, London, Verso
Olins W (1991) Corporate Identity: Making Business Strategy Visible Through Design, Thames and Hudson
Olins W (2000) How brands are taking Over Corporations, in Schulz M, Hatch M and Larsen M (Eds) The Expensive Organization, Oxford University Press
Oliver R (1999) The Shape of Things to Come, in Lewis, D and Bridger, D. (2000). The Soul of the New Consumer- Authenticity -what we buy and why in the New Economy. Nicholas Brealey Publishing Ltd
Ong W J (1981) The Presence of the Word: Some Prolegomena for Religious and Cultural History, University of Minnesota Press
ONS (2000), Monthly Digest of Statistics, Office of National Statistics, London
Orenstein A & Quine W V (2002) Philosophy Now, Princeton University Press
Ortony A (1990) The Cognitive Structure of the Emotions, Cambridge University Press
Orwell G (1947) The English People, Collins
Osborne H (1977) Odours and Appreciation, British Journal of Æsthetics, 17: 1
Owusu-Apenten R (2004) Introduction to Food Chemistry, CRC

P

Pacey A (1991) Technology in World Civilization: A Thousand-Year History, The MIT Press
Pacey A (1989). The Culture of Technology, MIT Press
Pagliano P (1999) Multi Sensory Environments, David Fulton Publications
Pakman M (2000) Thematic Foreword: Reflective Practices: The Legacy Of Donald Schön, Cybernetics & Human Knowing, Vol.7, no.2-3, 2000: 5–8.
Pallasmaa J (2005) The Eyes of the Skin: Architecture and the Senses, John Wiley & Sons; 2 edition
Palmer J A (2001) Fifty Modern Thinkers on Education: From Piaget to the present, Routledge

Palmer J & Dodson M (Eds) (1996) Design and Aesthetics: A Reader, Routledge
Panofsky E (1972) Studies in Iconology Humanistic Themes in the Art, HarperCollins Publishers
Panofsky E (1997) Perspective As Symbolic Form, Zone Books; Reprint edition
Panksepp J (1998) Affective Neuroscience: The Foundations of Human and Animal Emotions (Series in Affective Science), Oxford University Press Perelman M (2006) Railroading Economics: The Creation of the Free Market Mythology, Monthly Review Press
Papadopoulos N & Heslop L (1993) Product Country Images: Impact and Role in International Marketing, International Business Press Papanek V (1971) Design for the Real World: Human Ecology and Social Change, Academy Chicago Publishers (2nd Edition, 1985)
Papanek V (1995) The Green Imperative: Ecology and Ethics in Design and Architecture, Thames & Hudson
Parkin K J (2006) Food Is Love: Food Advertising And Gender Roles in Modern America, University of Pennsylvania Press
Partridge C H (2005) The Re-enchantment of the West: Alternative Spiritualities, Sacralization, Popular Culture, and Occulture, University of Edinburgh Press
Paxman J (1998) The English - A Portrait of a people. Michael Joseph
Pearce F (2006) Ecotopolis Now, New Scientist, 17-6-06: 36-42
Pearman H (2001) Was Mies A Nazi?, Sunday Times, December 22nd
Pelikan J (1985) The Reformation of the Sixteenth Century, Beacon Press
Perella S (1998) Architectural Design Hypersurface, Academy Editions, May, 5/6
Perella S (1998) e-mail to Gary Genosko, Febuary 1998
Perelman M (2000) The Invention of Capitalism: Classical Political Economy and the Secret History of Primitive Accumulation, Duke University Press
Perkins, M. (1983) -Sensing the World, Hackett Pub. Co.
Peter J P, Olson J & Grunert K (1999) Consumerism Behaviour And Marketing Strategy, Mcgraw–Hill Education Europe
Peters T (1999) The Circle of Innovation, Vintage
Peters T (2004) Re-Imagine, Dorling Kindersley
Peters T (1995) The Pursuit Of Wow!, Macmillan
Peat F D (1992) Superstrings and the Search for the Theory of Everything, Abacus
Petroski H (2006) Success through Failure: The Paradox of Design, Princeton University Press
Petrini C (2003) Slow Food: The Case For Taste, Columbia University Press
Petrini C (2001) Slow Food: Collected Thoughts on Taste, Tradition and the Honest Pleasures of Food, White River Junction, VT: Chelsea Green Publishing Co
Peyton J (2005) Fabulous Food Shops, John Wiley and Sons Ltd
Pfaffmann C (1960) "The pleasures of sensation," Psychological Reviews, 4, 253-268.
Pfeiffer J W & Ballew A C (Eds.) (1991) Theories and models in applied behavioral science, 4. San Diego: Pfeiffer & Co.
Pflaffman, C. (1982) Taste: A model of incentive motivation. In: The Physiological Mechanisms of Motivation. D W. Pfaff. (ed.) Springer Verlag, New York.
Pickles J O (1988) An Introduction To The Physiology Of Hearing, Academic Press
Phillips K (2003) Wealth and Democracy: A Political History of the American Rich, Broadway
Pillsbury R (1998) No Foreign Food: The American Diet in Time and Place (Geographies of the Imagination), Westview Press

Pine J B 11 & Gilmore J H (1997) The Experience Economy: Work Is Theatre & Every Business A Stage: Goods And Services Are No Longer Enough, Harvard Business School Press

Pink D H (2006) A Whole New Mind: Moving from the Information Age to the Conceptual Age, The Berkley Publishing Group

Pinker S (2002) The Blank Slate: The Modern Denial of Human Nature, Penguin Putnam

Pipher M (2000) Can't Buy My Love: How Advertising Changes the Way We Think and Feel, Free Press

Polanyi K (1985) The Great Transformation, Beacon Press (1944)

Polanyi M (2000) Science faith and Society, University of Chicago Press

Polanyi M (2000) Personal Knowledge: Towards a Post Critical Philosophy, University of Chicago Press

Pollan M (2006) Omnivore's Dilemma, Penguin Press HC

Pollan M (2006) The Botany of Desire: A Plant's-Eye View of the World, Random House Trade Paperbacks

Pollan M (2003) Second Nature: A Gardener's Education, Grove Press

Pollitt J J (1972) Art and Experience in Classical Greece, Cambridge University Press

Architecture and Modernity: A Critique, MIT Press

Pont G (1990) In Search of the Opera Gastronomica, In Food in Festivity: Proceedings of the Fourth Symposium of Australian Gastronomy, eds. Anthony Corones, Graham Pont, and Barbara Santich. Sydney: Symposium of Australian Gastronomy: 115-24

Pooler J 2003, Why We Shop : Emotional Rewards and Retail Strategies, Praeger Publishers

Popcorn F (1992) The Popcorn Report: Faith Popcorn on the Future of Your Company, Your World, Your Life, Collins

Popp E (1978) The Great Cookie Jar: Taking the Mysteries Out of the Money System, Wisconsin Education Fund

Porter A (2001) The Oxford History of the British Empire: Volume 111: The Nineteenth Century, Oxford University Press

Porter M (1980) Competitive Strategy, The Free Press, Macmillan Publishing

Porter R (Editor) (2001) The Cambridge Illustrated History of Medicine, Cambridge University Press; New Ed edition

Porteous J D (1990) Landscapes of the Mind: Worlds of Senses and Metaphor, University of Toronto Press

Postrel V (2004) The Substance of Style: How the Rise of Aesthetic Value Is Remaking Commerce, Culture, and Consciousness, Harper Perennial

Postrel V (1999) The Future and Its Enemies: The Growing Conflict Over Creativity, Enterprise, and Progress, Free Press

Prais, S.J., Houthakker, H.S. (1955), The Analysis of Family Budgets, Cambridge University Press, Cambridge

Pressman S (2001) New Guide to Post-Keynesian Economics, Routledge

Price N (2001) The Archaeology of Shamanism, Routledge

Prince D (2002) Blockhead Behaviourism: B. F. Skinner and the Perversion of a Science

Progressive Grocer (5/1/1996) It's in the bag. (supermarkets; purchasing decisions about food bags)(The Front End), Progressive Grocer

Purdy B (1997) A S Neill: Bringing Happiness to Some Few Children, Educational Heretics Press

Presbrey F (1929) The History and Development of Advertising Garden City, N.Y.: Doubleday

Prusak L (1997) Knowledge In Organizations. Resources For The Knowledge-Based Economy. Butterworth-Heinemann

Pugmire D (1998) Rediscovering Emotion, Edinburgh University Press

Purdy B (1997) A S Neill: Bringing Happiness to Some Few Children, Educational Heretics Press

Pursell C (2005) The Machine in America : A Social History of Technology, The Johns Hopkins University Press

Pye D (1995) The Nature and Art of Workmanship, Cambium Press (1968)

Pye D (1995) The Nature and Aesthetics of Design, Cambium Press, (1964)

Q

Quinn B (2000) How Wal-Mart Is Destroying the World: And What You Can Do About It, Ten Speed Press

R

Rajan T & Wright J M (Eds) (1998) Romanticism, History, and the Possibilities of Genre, Cambridge University Press

Ramaswamy P B (2002) Harvard Business Review On Customer Relationship Management, Harvard Business School Press

Ranson, R. (1998) 'Lineages of the learning society' in S. Ranson (ed.) Inside the Learning Society, London: Cassell

Rappoport L (2003) How We Eat: Appetite, Culture, and the Psychology of Food, Ecw Press

Rarker M (2002) Utopia & Organisation (Sociological Review, Monograph 50) Blackwell

Rathje W (1992) The Archaeology of Garbage, Harper Collins

Ray P H & Anderson S R (2000) The Cultural Creatives: How 50 Million People Are Changing the World, Harmony

Ray P (2000) Discovering the Cultural Creatives, March/April 2000 issue of the Natural Business LOHAS Journal, published by Natural Business Communications

Reber A S (1985) The Penguin Dictionary of Psychology, Penguin Books

Rebora G. & Sonnenfeld A (2001) Culture of the Fork: A Brief History of Everyday Food and Haute Cuisine in Europe (Arts & Traditions of the Table: Perspectives on Culinary History) Columbia University PressReid, T. (1785). Essays on the intellectual powers of man . M.I.T. Press. Cambridge, Mass. (1969).

Reed-Danahay D (1996) Champagne and Chocolate: Taste and Inversion in a French Wedding Ritual', American Anthropologist 98(4):750-761

Reiser+Umemoto (2006) Atlas of Novel Tectonics, Princeton Architectural PressRetail Forward (2006) Natural/Organics Trend Here to Stay, Retail Forward Intelligence System, Report, August 2006)

Rey G (1997) Contemporary Philosophy Of Mind, Oxford University Press

Ricardo D (1996) Principles of Political Economy and Taxation, Prometheus Books (1817)

Rice E F Jr & Grafton A (1994) The Foundations of Early Modern Europe 1460-1559 (The Norton History of Modern Europe), W. W. Norton & Company; 2nd edition

Rich S & Jain S (1968) Social Class and Life Cycle as Predictors of Shopping Behaviour, Journal of Marketing Research, 5: 41-49.

Richardson, V. (1990) 'The evolution of reflective teaching and teacher education' in R. T. Clift, W. R. Houston and M. C. Pugach (eds.) Encouraging Reflective Practice in Education. An analysis of issues and programs, New York: Teachers College Press.

Ridderstrale J & Nordström K (2000) Funky Business: Talent Makes Capital Dance, Pearson Education

Ridderstrale J & Nordström K (2005) Karaoke Capitalism: Daring to Be Different in a Copycat World, Praeger Publishers

Riewoldt O & Hudson J (2000) Retail Design, Neures

Rifkin J (1993) Beyond Beef: The Rise and Fall of the Cattle Culture, Plume; Rep edition

Rindisbacher H J (1992) The Smell of Books: A Cultural-Historical Study of Olfactory Perception in Literature, University of Michigan Press

Ritzer G (2004) Enchanting a Disenchanted World: Revolutionizing the Means of Consumption, Pine Forge Press; 2nd edition

Ritzer G (2003) The Globalization of Nothing, Pine Forge Press

Ritzer G (2002) McDonaldization: The Reader, Thousand Oaks, Pine Forge Press

Ritson C, Gofton L & McKenzie J (Eds.) (1986) The Food Consumer, Wiley

Rivlin R & Gravelle K (1984) Deciphering the Senses: The Expanding World of Human Perception, Simon and Schuster

Roberts J (1994) Art has no History: the making and Unmaking of Modern Art, Verso

Roberts D (Editor) (2002) Signals And Perception; The Fundamentals Of Human Sensation, Open University Press And Palgrave Macmillan

Robinson G & Rundell J (1994) Rethinking Imagination, Culture and Creativity: 156–169;

Patrick Roe J W (2001) English and American Tool Builders, Lindsay Publications Inc

Rosen D (1984) Consumer Perceptions of Quality for Generic Grocery Products: a comparison across product categories. Journal of Retailing. Vol. 60, No 4, Winter: 64 -80.

Roth T P (1989) The Present State of Consumer Theory, Lanham University Press of America

Ronell A (1991) The Telephone Book: Technlogy, Schizophrenia, Electric Speech, The University of Nebraska Press

Roochnik D (2004) Retrieving the Ancients: An Introduction to Greek Philosophy, Blackwell Publishers

Root W & de Rochemeont R (1976) Eating in America: A History, Ecco Press

Rose M B (2000) Firms, Networks and Business Values: The British and American Cotton Industries since 1750, Cambridge University Press

Rose-Ackerman S (1996) Altruism, Nonprofits, and Economic Theory, Journal of Economic Literature 34, (June) pp.701-728

Rosenberg B, Misra, TN & Switzer R (1968) Mechanisms Of Olfactory Transduction. Nature 217, 423-427

Rosennau P (1992) Post-Modernism and the Social Sciences: Insights, Inroads, and Intrusions, Princeton University Press

Rousey S P Morganosky M A (1996) Retail Format Change in US Markets, International Journal of Retail & Distribution Management, Vol. 24 No.3: 8-16

Roxbee J W (1970) Distinguishing the Senses, Mind, 79: 530-346.

Russell B (1971) The Relationship of Sense Data to Physics

Russell B (1972) The History of Western Philosophy, Touchstone

Russell T & Munby H (1991) Reframing: The Role of Experience in Developing Teachers Professional Knowledge' in D. A. Schön (ed.) The Reflective Turn. Case studies in and on educational practice, New York: Teachers Press, Columbia University.
Rust E G (1996) The Music and Dance of the World's Religions: A Comprehensive, Annotated Bibliography of Materials in the English Language, Greenwood Press
Rukeyser M S (1928) Revolution in Retailing, American Review of Reveiws (Nov)
Ryan M-L (2000) Narrative As Virtual Reality. Immersion and Interactivity in Literature and Electronic Media. Baltimore: John Hopkins University Press Rybczynski W (1987) Home: A Short History of an Idea, Penguin
Rubenstein J M (2004) Understanding the Cultural Landscape: An Introduction to Human Geography, Prentice Hall
Ruppel E (2004) Fat Wars: The Inside Story of the Obesity Industry, Shell Atlantic Books

S
Sack R (1992) Place, Modernity and the Consumer's World: A Relational Framework for Geographical Analysis, John Hopkins University Press
Sacks O (1998) The Man Who Mistook His Wife For A Hat: And Other Clinical Tales, Touchstone
Said E (1978) Orientalism. New York: Routledge.
Samara T (2005) Making and Breaking the Grid, Rockport Publishers
Samuel L R (2002) Brought to You By: Post-war Television Advertising and the American Dream, University of Texas Press
Samura T (2005) Making and Breaking the Grid: A Graphic Design Layout Workshop, Rockport Publishers
Sandford M R (Ed.) (1994) Happenings and Other Acts, Routledge.
Sanford D H (1976) The Primary Objects of Perception, Mind, 85: 189-208.
Sargent M (1982) Agricultural Co-operation, Gower
Sarton G (1959): A History of Science,Vol.1: Ancient Science Through the Golden Age of Greece, Cambridge University Press
Sarup M (1993) An Introductory Guide to Post-Structuralism and Postmodernism, University of Georgia Press
Saunders W (2005) Sprawl and Suburbia : A Harvard Design Magazine Reader (Harvard Design Magazine), Univ Of Minnesota Press
Saunders W (2005) Commodification and Spectacle in Architecture : A Harvard Design Magazine Reader (Harvard Design Magazine), Univ Of Minnesota Press
Saussure F de (1916) Course in General Linguistics, Duckworth (1983)
Sapontzis S F (2004) Food for Thought: The Debate over Eating Meat, Prometheus
Scarry E (1985) The Body in Pain: The Making and Unmaking of the World, Oxford University Press.
Schachter H L (1989) Frederick Taylor & the Public Administration Community: A Re-Evaluation, State Univ. of New York Press
Schama S (2002) A History of Britain: The Fate of Empire 1776-2000, Miramax Books
Scharpf F (1991) Crisis and Choice in European Social Democracy. Ithaca, NY: Cornell University Press
Scheper-Hughes N (1995) The Primacy of the Ethical. In Current Anthropology, V 36(3): p.409-420.

Schien E H (1996) Organisational Culture and Leadership, Jossey Bass
Schimmel P (Ed) (1998) Out of Actions: Between Performance and the Object, 1949-1979, Museum of Contemporary Art and Thames and Hudson
Schiffman, H.R. (1982). Sensation and perception an integrated approach. John Wiley &Sons
Schivelbusch W , Classen C & Zardini M (2006) Senses of the City, Lars Muller
Scholl B (2002) Objects And Attention, MIT Press
Schon D A (1983) The Reflective Practitioner: How Professionals Think in Action, London, Temple Smith
Schrödinger E (1996) Nature and the Greeks' and 'Science and Humanism' (Canto original series), Cambridge University Press, Reprint (1948)
Schön, D. A. (1991) The Reflective Turn: Case Studies In and On Educational Practice, New York: Teachers Press, Columbia University
Schon D A (1973) Beyond the Stable State, Harmondsworth: Penguin
Schön, D. A. (1967) Invention and the evolution of ideas, London: Tavistock (first published in 1963 as Displacement of Concepts)
Schön, D. A. (1985) The design studio: an exploration of its traditions and potentials, London : RIBA Publications for RIBA Building Industry Trust
Schön, D. A. (1967) Technology and change: the new Heraclitus, Oxford: Pergamon
Schlosser E (2001) Fast Food Nation: The Dark Side of the All-American Meal. New York: Houghton Mifflin
Schlosser E (2007) Chew on This: Everything You Don't Want to Know About Fast Food, Houghton Mifflin
Schrage M (1999) Serious Play: How the World's Best Companies Simulate to Innovate, Harvard Business School Press
Schwartz R (1996) A Social History of American Technology, CowanOxford University Press R
Schwartz R (1985) More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave, Basic Books
Scivelbusch W (2006) Sense of the City: An Alternative Approach to Urbanism, Lars Muller
Schmidheiny S (1992) Changing Course: A Global Business Perspective on Development and the Environment. Cambridge: MIT Press
Schneider M A (1993) Culture and Enchantment, Chicago University Press
Scott W D (1912) The Psychology of Advertising, Boston:
Scott R W (2000) Institutions and Organizations, Sage Publications
Scott M W G (1992) Chester I. Barnard and the Guardians of the Managerial State. University of Kansas Press
Schrage M (1999) Serious Play: How the World's Best Companies Simulate to Innovate, Harvard Business School Press
Schumacher E F (1989) Small Is Beautiful: Economics as if People Mattered Harper Perennial
Schumacher E F (1977) A Guide for the Perplexed, Harper & Row
Schumpeter J A (1962) Capitalism, Socialism, and Democracy, Harper Perennial, (1942Sciacca P (2/8/1999) Lifting Efficiency, Supermarket News
Schwitzgebel E & Gordon M S (2000) How Well Do We Know Our Own Conscious Experience? The Case of Human Echolocation, Philosophical Topics, 28: 235-246
Seth A (2001) The Grocers: The Rise and Rise of the Supermarket Chains, Kogan Page

Seymour D & Collett C (1991) Total Quality Management in Higher Education: A Critical Assessment, Methuen

Shields C (2003) Stanford Encyclopedia of Philosophy Supplement to Aristotle's Psychology

Schmitt, B & Simonson A (1997) Marketing Aesthetics: The Strategic Management Of Brands, Identity And Image, Free Press,

Schmitt B, Experiential Marketing, The Free Press 1999

Schmitt B H (2003) Customer Experience Management: A Revolutionary Approach to Connecting with Your Customers, Wiley

Schilthuis W (1994) Biodynamic Agriculture (Rudolf Steiner's Ideas in Practice Series), Steiner Press

Schrage M (1999) Serious Play: How the World's Best Companies Simulate to Innovate, Harvard Business School Press

Schumacher E F (1989) Small Is Beautiful: Economics as if People Mattered Harper Perennial

Scott J R (2005) Obese Patient's Health Care Costs Doubled, The International Journal of Obesity, February 14th

Schwartz R (1997) A Social History of American Technology, Oxford University Press

Schwitzgebel, E. and Gordon, M. S. (2000) - ""How Well Do We Know Our Own Conscious Experience? The Case of Human Echolocation, Philosophical Topics, 28, pp. 235-246.

Scully V (1979) The Earth, the Temple, and the Gods: Greek Sacred Architecture, Yale University Press; Revised edition

Seamon D & Zajonc A (1998) Goethe's Way of Science: A Phenomenology of Nature, State University of New York Press

Segers Y (Ed) (2006) Exploring The Food Chain: Food Production And Food Processing In Western Europe, 1850-1980, Brepols Publishers

Sellerberg A (1991) In food We Trust? Vitally Necessary Confidence: And Unfamiliar Ways of Attaining It, In Furst E, et al, (eds.) Palatable Worlds, Socio-Cultural Food Studies, Solum Forlag

Sen A (1999) Commodities and Capabilities, Oxford University Press, USA

Senauer B (1991) Food Trends and The Changing Consumer, Eagan Press

Senge P (1990) The Fifth Discipline: The Art and Practice of the Learning Organization, Doubleday.

Seremetakis C N (1996) The Senses Still: Perception And Memory As Material Culture In Modernity, University Of Chicago Press

Serres M (1995) The Natural Contract (Studies in Literature and Science), University of Michigan Press

Setha M L (2002) The Anthropology of Space and Place, Blackwell

Seymour, D. (1993). Total Quality Management in higher Education: Clearing the Hurdles. Methuen

Shafritz J M & Steven O J (Eds) (1992) Classics of Organization Theory (3rd ed.), Brooks/Cole Publishing Company: Pacific Grove, CA

Shattuck R (1968) The Banquet Years, Vintage

Shaw C & Ivens J (2002) Building Great Customer Experiences, Palgrave/Macmillan

Shephard S (2001) Pickled, Potted, and Canned: How the Art and Science of Food Preserving Changed the World, Simon & Schuster

Shepherd R (Ed.) (1991) Handbook of the Psychophysiology of Human Eating. Wiley

Shils E (1981) Tradition, Faber and Faber

Snell K D M & Ell P S (2000) Rival Jerusalems: The Geography of Victorian Religion, Cambridge University Press

Snow C P (1993) The Two Cultures and the Scientific Revolution, Rede Lecture, Cambridge University Press

Snodgrass M (2004) Encyclopedia of Kitchen History, Routledge

Soderquist D R (2002) Sensory Processes, Sage

Soderquist D (2005) The Wal-Mart Way: The Inside Story of the Success of the World's Largest Company, Nelson Business

Soja E W (1989) Postmodern Geographies: The Reassertion of Space in Critical Social Theory, Verso

Solbrig O T & Solbrig D J (1997) So Shall you Reap: Farming and Crops in Human Affairs, Inland Press

Sokolowski R (2000) Introduction to Phenomenology, Cambridge University Press

Solomon P (1961) Sensory Deprivation: A Symposium Held at Harvard Medical School, Cambridge MA and Oxford: Harvard University Press and Oxford University Press

Solomon R C (2004) Thinking about Feeling: Contemporary Philosophers on Emotions (Series in Affective Science), Oxford University Press

Sorabji R (1971) Aristotle on Demarcating the Five Senses, Philosophical Review, 80: 55-79.

Sparke P (1995) As Long as It's Pink: Sexual Politics of Taste Rivers Oram Press/Pandora List

Sparke P (1986) An Introduction to Design and Culture in the Twentieth Century, Allen and Unwin Sparke P (1991) Design in Context: The History, Application and Development of Design, Bloomsbury

Sparke P (1998) A Century of Design: Design Pioneers of the Twentieth Century, Mitchell Beazley

Sparke P (1994) The Plastics Age: From Bakelite to Beanbags and Beyond, Overlook Hardcover

Speck S (2000) "Met. Office engages in quest for better retail weather", Press Release

Spence K W (1948) "The postulates and methods of behaviorism". Psychological Reviews 55, 67-78.

Spencer C (2003) British Food: An Extraordinary Thousand Years of History (Arts and Traditions of the Table: Perspectives on Culinary History), Columbia University Press

Spehr M, Gisselmann G, Poplawski A, Riffel J A, Wetzel C H, Zimmer R K, & Hatt H "Identifiaction Of A Testicular Odorant Receptor Mediating Human Sperm Chemotaxis". Science 2003 Mar 28; 299 (5615), 2054-8

Spengler O (1996) Decline of the West, Volume One: Form and Actuality, Knopf; 20th edition

Spethmann B (2004) Tipping the Scale, Promo magazine: February 1st

Spiro M E (1992) Cultural Relativism and the Future of Anthropology. In Marcus G.E.(ed) Rereading Cultural Anthropology, Duke University Press

Spiro M E (1996) Postmodernist Anthropology, Subjectivity, and Science. A Modernist Critique. In Comparative Studies in Society and History, V: 759-780

Spitz R (1955) The Primal Cavity: A Contribution to the Genesis of Perception, Psychoanalytic Study of the Child, 10: 215-40.

Stamelman R (2006) Perfume: Joy, Scandal, Sin: A Cultural History of Fragrance from 1750 to the Present, Rizzoli

Stein B E & Meridith M A (2001) The Merging Of The Senses, MIT Press

Steiner, R [1926] The Essentials of Education: Five lectures delivered by R. Steiner during the Educational Conference at the Waldorf School, Stuttgart, April, 1924, Anthroposophical Pub. Co

Steiner R (2004) Agriculture Course: The Birth of the Biodynamic Method, Steiner Press

Steiner R & Querido R M (Translator) (1996) The Spiritual Hierarchies and the Physical World: Reality and Illusion, Steiner Books

Steiner R [1924] 'Spiritual foundations for the renewal of agriculture' [Web Page]. Accessed http://www.angelfire.com/id/biobaby/contentslist.html.

Steiner R (1990) The Riddle of Humanity: The Spiritual Background of Human History, Rudolf Steiner Press (Fifteen Lectures in Dornach in 1916)

Steiner R (2000) Introduction to Goethe's Scientific Writings, Steiner Books

Stern J & M (1992) Roadfood: The All-New, Updated, and Expanded Edition. New York: HarperCollins

Sterne J (2004) The Audible Past: Cultural Origins of Sound Reproduction, Duke University Press

Stevens, S. S. (1975) Psychophysics John Wiley &Sons

Strasser (1989) Satisfaction Guaranteed: The Making of the American Mass Market, New York, Pantheon Smith B D (2006) Guarding the Brand, Economist Intelligence Unit, July

Stern J & M (1992) Roadfood: The All-New, Updated, and Expanded Edition. New York: HarperCollins

Stephenson B (1994). The Music of the Heavens: Kepler's Harmonic Astronomy, Princeton University Press

Sternberg R J (1995) In Search Of The Human Mind, Fort Worth, TX: Harcourt Brace College Publishers

Stich S P (1985) Could Man Be An Irrational Animal? Synthese, 64: 115-135

Stiglitz, Joseph E. 1990. The Economic Role of the State: Efficiency and Effectiveness, In Thomas P. Hardiman and Michael Mulreany, eds., Efficiency and Effectiveness. Dublin: Institute of Public Administration

Stoddart M (1990) The Scented Ape: The Biology and Culture of Human Odour, Cambridge University Press

Stoller P (1997) Sensuous Scholarship (Contemporary Ethnography), University of Pennsylvania Press

Stoller P (1989) The Taste Of Ethnographic Things: The Senses In Antropology, University Of Pennsylvania Press

Storbacka K., Lehtinen-Jarmo R (2001) Customer Relationship Management, Mcgraw-Hill

Strawson P F (1959) Individuals: An Essay in Descriptive Metaphysics, London: Methuen

Striffler S (2005) Chicken: The Dangerous Transformation of America's Favorite Food, Yale University Press

Stull D D (2003) Slaughterhouse Blues: The Meat and Poultry Industry in North America (Case Studies on Contemporary Social Issues), Wadsworth Publishing

Supermarket News (1954) Jan 4th

Sturken M & Cartwright L (2001) Practices of Looking: An Introduction to Visual Culture, Oxford University Press

Sturt G (1923) The Wheelwrights Shop, Cambridge, Cambridge University Press

Sudjic D (2005) The Edifice Complex: How the Rich and Powerful Shape the World, Penguin Press

Suckle A (Editor) (1980) By Their Own Design, New York, Whitney

Sussman A (2006) Just Heat It and Eat It, Collectors Press

Synnott A (1991) Puzzling Over the Senses: From Plato to Marx, In The Varieties of Sensory Experience: a Sourcebook in the Anthropology of the Senses, ed. David Howes. Toronto: University of Toronto Press: 61-76

Symbols And Significance, Journal Of Consumer Research, Vol. 13, 1986, Pps 196-213

T

Talwar J P (2003) Fast Food, Fast Track: Immigrants, Big Business, and the American Dream, Westview Press

Tangermann S (1986) Economic Factors Influencing Food Choice, in Ritson, C. , Gofton, L. and McKenzie J (eds.) The Food Consumer, Wiley: 61-83.

Tannahil R (1995) Food in History, Three Rivers Press; Revised edition

Tarnas R (2000) The Passion of The Western Mind: Understanding Ideas That Have Shaped Our World View, Pimlico, (1991)

Tatian (1982) Oratio ad Graecos and Fragments, Ed. and trans. Molly Whittaker, Clarendon Press

Taubes G (1997 August) "Beyond The Soapsuds Universe," Discover, 18, 52-59

Taubes G (1993) Bad Science, New York: Random House

Tsai E (1998) Way Stations: Lee Mingwei, May 1-July 19, 1998. New York: Whitney Museum of American Art

Tannahill R (1995) Food in History, Three Rivers Press; Revised edition

Taylor F W (1911) (1998) Principles of scientific Management, Dover Publications

Taylor A J (2001) Food Flavour Technology, Crc Pr I Llc; 1st edition

Taylor L (1994) Visualizing Theory: Selected Essays from Visual Anthropology Review 1990-1994. New York: Routledge

Taylor F W (1988) Principles of scientific Management, Dover Publications (1911)

Taussig M (1993) Mimesis And Alterity: A Particular History Of The Senses, Routledge

Tedlow R (1990) New and Improved: The Story of Mass Marketing in America, New York, Basic Books

Teitelbaum, P. (1964) Appetite. Proceedings of the American Philosophical Society 108, 464-472

Tester K (1993) The Life and Times of Postmodernity, Routledge

Tester K (1994) The Flaneur, Routledge

Thirsk J (1967) Enclosing and Engrossing, In The Agrarian History of England and Wales, Vol. 4, Cambridge University Press

Thackara J (1997) Winners: How Today's Successful Companies Innovate by Design, Gower Press

Thackera J (2005) In the Bubble: Designing in a Complex World, MIT Press

Thomke S H (2003) Experimentation Matters, Unlocking the Potential of New Technologies, Harvard Business School Press

Thompson G B & Thompson F (1996) The Information Revolution and the New Public Management, Journal of Public Administration Research and Theory, vol 6, no 1, pp. 125-144

Thompson E (2004) The Soundscape of Modernity : Architectural Acoustics and the Culture of Listening in America, 1900-1933, MIT Press
Thralls C (1992) Rites and Ceremonials: Corporate Video and the Construction of Social Realities in Modern Organizations, Journal of Business and Technical Communication 6: 381-402
Thrift J & Roberts L (2005) Designer and the Grid, Rotovision
Thrompenaars F (1993) Riding the Waves of Culture, Nicholas Brealey Publishing
Tiger L (1992) The Pursuit of Pleasure, Transaction Publishers, New Edition (2000)
Tiryakian E D (1992) "Dialectics of Modernity: Reenchantment and Dedifferentiation as Counterprocesses," in Hans Haferkamp and Neil J. Smelser, eds., Social Change and Modernity (Berkeley, Calif., 1992)
Titchener, E.B. (1908). Lectures on the elementary psychology of feeling and attention. New York: MacMillan
Titchener, E.B. (1909). Lectures on the experimental psychology of the thought-prices. MacMillan, New York.
Timbrell J (2005) The Poison Paradox: Chemicals As Friends and Foes, Oxford University Press
Tinbergen, N. (1963). On aims and methods in ethology. Zeitschrift fŸr die Tierpsychologie. 20, 4310-433
Toates, F. (1986) Motivational systems. Cambridge University Press
Tolman, E.C. (1918). Nerve process and cognition. Psychological Reviews, 25, 423-442.
Tomlinson A (Ed.) (1990) Consumption, Identity and Style: Marketing, Meanings, and the Packaging of Pleasure, Routledge
Tompkins P & Lawley J (2000) Metaphors in Mind: Transformation through Symbolic Modelling, Developing Company Press
Toussaint-Samat M (1994) History of Food, Blackwell Publishing
Travis D (2000) Emotional Branding: How Successful Brands Gain the Irrational Edge, Prima Tech Trentmann F (2006) The Making of the Consumer: Knowledge, Power And Identity in the Modern World, Berg Publishers
Treays R (1997) Understanding Your Senses, Usborne
Trentmann F (2006) The Making of the Consumer: Knowledge, Power And Identity in the Modern World, Berg Publishers
Trodd C (1994) Culture, Class, City: The National Gallery, London and the Spaces of Education, 1822-57, In Art Apart: Art Institutions and ideology Across England and North America, Marcia Pointon, Ed., Manchester, New York: Manchester University Press, 1994: 42-3
Tuan W-F (2001) Space and Place: The Perspective of Experience, University of Minnesota Press; Reprint edition
Tuan W-F (1990) Topophilia: A Study of Environmental Perceptions, Attitudes, and Values, Columbia University Press; Reprint edition
Tucker J (2005) Retail Desire: Design, Display And Visual Merchandising, Rotovision
Turner V W (1995) The Ritual Process: Structure And Anti-Structure, Aldine De Gruyter
Turener V W (1986) The Anthropology Of Experince, University Of Illinois
Turin, L. (1996) A Spectroscopic Mechanism For Primary Olfactory Reception. Chem. Senses 21, 773-791
Turner B S (1990) Theories of Modernity and Postmodernity. London: SAGE Publications
Turner J (2004) Spice: The History of a Temptation, Knopf

Tweney, R. D., & Chitwood, S. T. (1995). Scientific reasoning. In S. Newstead & J. S. B. T. Evans (Eds.), Perspectives on Thinking and Reasoning, Lawrence Erlbaum Associates

Tweney, R. D. (1994). Towards a cognitive psychology of science. Mexican Journal of Behavioral Analysis, 2o, 35-46

Tylor E B (1871) Primitive Culture, Peter Smith Publisher (1986)

Tweney, R. D., Doherty, M. E., & Mynatt, C. R. (Ed.). (1981). On Scientific Thinking. New York: Columbia University Press

Tyman M (1970) Lithography, Oxford University Press

Twitchell J (2001) Twenty Ads That Shook the World : The Century's Most Groundbreaking Advertising and How It Changed Us All, Three Rivers Press

Twitchell J B (2003) Living It Up: America's Love Affair with Luxury, Simon & Schuster; Reprint edition

Twivy P (2000) Passionate Brands Will Win the Race, Haymarket publications

Tyler S.A., (1986). Postmodern Ethnography in Clifford, J. and Marcus, G.E. (Eds.) Writing Culture: The Poetics and Politics of Ethnography. Berkeley: University of California Press

U

Underhill P (1999) Why We Buy: The Science Of Shopping, Orion Business

Underhill P, 2004, The Call of the Mall, Simon & Schuster

Ulrich, W. (1994). Can We Secure Future-Responsive Management Through Systems Thinking And Design? Interfaces, 24(4), 26-37

Upton R (2005) Altruistic Economics: A Relationship – Based Trading Model, www altruists.org

Urmson J O (1968) The Objects of the Five Senses, Proceedings of the British Academy, 54: 117-131

Urry, J. (1990), The Tourist Gaze, Sage, London

Usher R (1997) Adult Education and the Postmodern Challenge, London: Routledge.

V

Vaggi G & Groenewegen P (2003) A Concise History of Economic Thought: From Mercantilism to Monetarism, Palgrave Macmillan

Van Campen C (1997) "Synesthesia and Artistic Experimentation," Psyche, Volume 3, Number 6. Online at http://psyche.cs.monash.edu.au/v3/psyche-3-06-vancampen.html

Van Toller S (1988) Perfumery: The Psychology and Biology of Fragrance, Chapman Hall

Varela F J (1992) The Embodied Mind: Cognitive Science and Human Experience, MIT Press

Vattimo G (1992) The Transparent Society, The John Hopkins University

Vattimo G (1988) The End of Modernity, The John Hopkins University Press

Venturi R (1996) Iconography and Electronics Upon a Generic Architecture: A View from the Drafting Room, The MIT Press

Verbeke W Farris P & Thurik R (1997) "Consumer Response to the Preferred Brand Out-of-Stock Situation," European Journal of Marketing, Vol. 32 No.11/12, pp.1008-28

Vergo P (1989) The New Museology, Reaktion Books

Vidler A (1994) The Architectural Uncanny: Essays in the Modern Unhomely, The MIT Press; Reissue edition

Vidler A (2002) Warped Space: Art, Architecture, and Anxiety in Modern Culture, MIT Press

Virilio P (2005) Negative Horizon: An Essay In Dromoscopy, Continuum International Publishing Group

Virilio P (1994) The Vision Machine, The Indiana University Press

Visser M (1999) Much Depends on Dinner: The Extraordinary History and Mythology, Allure and Obsessions, Perils and Taboos, of an Ordinary Meal, Grove Press

Visser M (1991) The Rituals of Dinner: The Origins, Evolution, Eccentricities, and the Meaning of Table Manners, New York, Harper Collins

Von Helmoltz H L F (1866) Physiological Optics 3 ed. Engl transl. ed.by J. P. C. Southall, NY: Dover (1962)

Von Senden M (1960) Space and Sight: The Perception of Space and Shape in the Congenitally Blind before and After Operstion, trans. P. Heath, Methuen

W

Wagner A (1999) The Extra Qualia Problem: Synaesthesia and Representationism, Philosophical Psychology, Volume 12, No. 3: 265-283.

Wagner A (2001) Synaesthesia Misrepresented (Response to Gray), Philosophical Psychology, Volume 14, No. 3: 347 - 351.

Walker S (1999) The manifestation of Meaning: A discussion of the Environmental, Social and Spiritual Aspects of Product Design, The Design Journal, Vol 2, Issue 2

Walker S (2000) How the Other Half Lives: Product Design Sustainability and the Human Spirit, Design Issues, Spring 2000, Vol 16, Number 1

Walker S (2001) Beyond Aesthetics, Identity, Religion, and Design, Design Journal, Vol 4, Issue 2

Walker S (2003) Visual Myths: Creating Intuitive Impressions of Design Sources and Meanings. The Design Journal, Vol 6, Issue 3

Wallach B (2005) Understanding the Cultural Landscape: An Introduction to Human Geography, The Guilford Press

Waltz D L (1988). Artificial intelligence. Daedlaus, 117, 191-212

Warde A (1999) Convenience Food: Space and Timing, British Food Journal, Vol. 101 No.7

Warde A (1997) Consumption, Food and Taste, Sage

Wason, P. C. (1983). Realism And Rationality In The Selection Task. In J. S. B. T. Evans (Ed.), Thinking and Reasoning: Psychological Approaches . London: Routledge & Kegan Paul

Waring S P (1994) Taylorism Transformed, University Of North Carolina Press

Watson L (1992) The Nature Of Things: The Secret Life Of Inaminate Objects, Destiny Books

Watson J L & Caldwell M (2005) The Cultural Politics of Food and Eating, Blackwell Publishing

Waldo D (March 1952) p81-103 Development of a Theory of Democratic Administration."" American Political Science Review 46,

Walters K & Portmesi L (1999) Ethical Vegetarianism: From Pythagoras to Peter Singer, State University of New York Press

Waring S P (1994) Scientific Management/'Management Theory: Taylorism Transformed, University Of North Carolina Press

Ward, T. B., Finke, R. A., & Smith, S. M. (1995). Creativity and the Mind., Plenum Press

Wason P C & Green D W (1984) Reasoning and Mental Representation, Quarterly Journal of Experimental Pyschology, 36A: 597-610.

Waters D (2003) Logistics: An Introduction To Supply Chain Management, Palpgrave Macmillan
Watson J L & Caldwell M (2005) The Cultural Politics of Food and Eating, Blackwell Publishing
Weaver C M (2003) The Food Chemistry Laboratory: A Manual for Experimental Foods, Dietetics, and Food Scientists, C R C
Webber M (2001) The Protestant Ethic & The Spirit of Capitalism, Routledge
Webber M (2002) The Protestant Ethic and the Spirit of Capitalism: and Other Writings (Penguin Twentieth-Century Classics), Penguin Classics (1905)
Webber M (2003) The Protestant Ethic and the Spirit of Capitalism, Dover Publications
Weber R J & Dixon S (1989) "Invention and Gain Analysis," Cognitive Psychology, 21, 1-21
Weber R J & Perkins D N (1989) "How to Invent Artifacts and Ideas," New Ideas in Psychology, 7: 49-72.
Weber R J (1992) Forks, Phonographs, and Hot Air Balloons: A Field Guide to Inventive Thinking, Oxford University Press.
Weber R J & Perkins D N (Eds.) (1992) Inventive Minds. New York: Oxford University Press.
Wedekind C & Furi S (1997) Body Odour Preferences In Men And Women: Do They Aim For Specific Mhc Combinations Or Simply Heterozygosity? Proc. Roy. Soc. Lond. B 264, 1471-9.
Weintraub E R (2002) How Economics Became an Mathematical Science, Duke University Press
Weisberg R W (1995). Case Studies of Creative Thinking: Reproduction Versus Restructuring in the Real World, In S M Smith, T B Ward & R A Finke (Eds.), The Creative Cognition Approach . Cambridge, MA: MIT Press
Weisbord M R (1987) Productive workplaces: Organizing and Managing for Dignity, Meaning, and Community, Jossey-Bass
Weiskrantz L (1986) Blindsight: A Case Study and Implications, Clarendon Press.
Weiskrantz L (1997) Consciousness Lost and Found, Oxford University Press
Welsh J P (1993) Supermarkets Transformed: Understanding Organizational and technological Innovations, ASA Rose Monograph Series: Rutgers University Press
Werner J V (2004) American Flaneur: The Cosmic Physiognomy of Edgar Allen Poe (Studies in Major Literary authors, 33), Routledge
Westra L & Werhane P H (Eds.). (1998). The Business of Consumption: Environmental Ethics and the Global Economy. Lanham M D
Rowman & Littlefield Wiener N (1993) Invention: The Care and Feeding of Ideas, MIT Press
Welsh J P (1993) Supermarkets Transformed: Understanding Organizational and technological Innovations, ASA Rose Monograph Series: Rutgers University Press
Werner J V (2004) American Flaneur: The Cosmic Physiognomy of Edgar Allen Poe (Studies in Major Literary authors, 33), Routledge
Wheatley H (1997) Agriculture, Resource Exploitation, and Environmental Change, Ashgate
Wheatley, M. (1992). Leadership and the New Science. Learning about Organization from an Orderly Universe, Berrett-Koehler
Wheatley M & Kellner-Rogers M (1996) A Simpler Way, Berrett-Koehler
Wheaton B (1983) Savouring the Past: the French Kitchen and Table From 1300-1789, University of Pennsylvania Press
Wheeler A (2003) Designing Brand Identity: A Complete Guide to Creating, Building, and Maintaining Strong Brands, Wiley
Whipp R (2002) Making Time: Time And Management In Modern Organisations, Oxford University Press

White, N.M. (1989). Reward or reinforcement: what's the difference? Neuroscience and Biobehavioral Reiews, 13, 181-186
White M (1999) Isaac Newton: The Last Sorcerer, Perseus Books Group
White K & Macierowski E M (Translators)(2005) Commentaries On Aristotle's On Sense And What Is Sensed And On Memory And Recollection (Thomas Aquinas in Translation), Catholic University of America Press
White J (1987) The Birth and Rebirth of Pictorial Space, Routledge
White E (2001) The Flaneur (Writer and the City), Bloomsbury
White R (2003) Prehistoric Art: The Symbolic Journey of Human Kind, Harry N. Abrams
Whiting J (2005) James Watt & The Steam Engine, Mitchell Lane Publishers
Whybrow P C (2005) American Mania: When More is Not Enough, W W Norton & Co
Wigley M. (1993) The Architecture of Deconstruction: Derrida's Haunt, The MIT Press
Wigley M (1995) White Walls, Designer Dresses: The Fashioning of modern Architecture, The MIT Press
Williams R (1973) The Country and the City, Chatto and Windus
Wilson T M (2005) Drinking Cultures: Alcohol and Identity, Berg Publishers
Wilson E G (2003) The Spiritual History of Ice: Romanticism, Science, and the Imagination, Palgrave Macmillan
Wilson R A (Editor) & F C Keil (Editor) (2001) The MIT Encyclopaedia of the Cognitive Sciences (MITECS), The MIT Press
Williams R (1975) The Country and the City, Oxford University Press
Williamson J (1978) Decoding Advertisements, Marion Boyars
Williamson O E (1993) The Nature of the Firm: Origins, Evolution, and Development, Oxford University Press
Williamson O E (1999) The Mechanisms of Governance, Oxford University Press
Williamson O E (1998) The Economic Institutions of Capitalism, Free Press
Wilk C (2006) Modernism 1914-1939: Designing a New World, V&A Publications
Wilkie W (1986) Consumer Behaviour, John Wiley & Sons, Inc.
Wilson W (June 1887) The Study of Administration. Political Science Quarterly, p 197-222
Winnet R & Thomas J U. (20-02-2005) 'Store face fines in toxic food scandal', Sunday Times, 20-02-2005) (p15)
Winthrop R H (1991) Dictionary of Concepts in Cultural Anthropology. New York: Greenwood Press
Wiser M & Carey S (1983) When Heat and Temperature Were One: In Gentner D & Stevens A L (Ed.), Mental Models (pp. 267-297). Hillsdale, NJ: Lawrence Erlbaum Associates.
Wittgenstein L (1997) Philosophical Investigations Oxford University Press
Wolfe T (1999) From Bauhaus to Our House, Bantam
Wolfe J.M (1988). Introduction, in: Readings from the Encyclopedia of Neurosciences. Sensory systems II. Birkhayser, Boston, pp.XI-XIV.
Woloch I (1982) Eighteenth Century Europe: Tradition and Progress, 1715-1789 (Norton History of Modern Europe), W. W. Norton & Company
Wood E M (2002) The Origin of Capitalism: A Longer View, Verso
Wood J (2005) Is Kevin Warick a Dandy: Observation, Self-Control and the Evolution Of Perception-Steering Mechanisms, Kybernetes
Wood J (1998) The Virtual Embodied. Presence | Practice | Technology, Routledge

Woodham J M (1997) Twentieth Century Design, Oxford University Press
Woods M & Woods M B (2000) Ancient Agriculture: From Foraging to Farming (Ancient Technology)
Woolgar S (1987) Reconstructing man and machine: A note on sociological critiques of cognitivism: In W E Bjiker, Hughes T, & Pinch T (Ed.), The Social Construction of Technological Systems. Cambridge: MIT Press
Womack J P, Jones D T, & Roos D (1990) The Machine that Changed the World, New York: Rawson Associates
Wrege C & Greenwood R (1991) The Father of Scientific Management - Myth and Reality, Irwin Professional Pub
Wrigley N (1998) PPG6 and the contemporary food store dynamic, British Food Journal, Vol. 100 No.3, pp.154-161
Wu D (2005) Romanticism: An Anthology, Blackwell (1995)
Wunthrow R (2003) Creative Spirituality: The way of the Artist, University of California Press

X

Y
Yancey P (1997) What Is so Amazing About Grace? Grand Rapids, MI: Zondervan Publishing House
Yamaguchi S (1987) Fundamental properties of umamai in human taste sensation: In: Umami: a basic taste. Y Kawamura & M. R. Kare eds. Marcel Dekker
Yergin D (1991) The prize: The epic quest for oil, money and power. New York: Simon & Schuster
Yezzi R (2001) From the Preface of Foucault's The Order of Things: An Archeology of the Human Sciences, Philosophy Department, Minnesota State University, Manko
Yiannis L T (1995) The Unmanagable Consumer: Contemporary Consumption And Its Fragmentations, Sage Publications
Yokoyama, M (1921) "The nature of the affective judgement in the method of paired comparison," American Journal of Psychology 32, 357-369.
Young P T (1959) The role of affective processes in learning and motivation. Psychological Reviews 66, 104-123
Young W (2004) Sold Out!: The True Cost of Supermarket Shopping, Fusion Press
Young R & Loasby B (1976) Choice, Complexity, and Ignorance, Cambridge University Press
Yudkin J & McKenzie J (Eds.) (1964) Changing Food Habits. London
Yudkin J (1978) Diet of Man: Need and Wants, Applied Science Publishers Ltd.

Z
Zaichkowsky J L (1986) The Emotional Aspect of Product Involvement, Advances in Consumer Research, 14: 32 -35.
Zaleznik A (1990) The Managerial Mystique: Restoring Leadership in Business. Harper and Row: New York
Zhao H, Ivic L, Otaki J M, Hashimoto M, Mikoshiba K & Firestein S (1998) Functional Expression Of A Mammalian Odorant Receptor, Science 279: 237-241

Zajonc A (1995) Catching the Light: The Entwined History of Light and Mind, Oxford University Press

Zaltman G (2001) The Soul Of The New Consumer: Authenticity-What We Buy And Why In The New Economy

Zaltman G (2003) How Customers Think: Essential Insights Into The Mind Of The Market, Harvard Bus School Press

Zell M (2004) Industry in the Countryside: Wealden Society in the Sixteenth Century (Cambridge Studies in Population, Economy and Society in Past Time), Cambridge University Press; New Ed edition

Zubek J P (Ed) (1969) Sensory Deprivation: Fifteen Years of Research, Appleton-Century-Crofts

Zukin S (2005) Point of Purchase, Routledge

Zucker L G (1977) "The Role of Institutionalization in Cultural Persistence," American Sociological Review, 42, 726-743

Zumthor P (2006) Atmospheres, Princeton Architectural Press

Methodology

Arndt J (1986) "Paradigms in Consumer Research: A Review of Perspectives and Approaches," European Journal of Marketing 20 (8): 23 - 40.

Bearden W O, Netemeyer R G & Mobley M E (1993) Handbook of Marketing Scales, California: Sage Publications

Chambers E IV (2006) Sensory and Consumer Research in Food product Design and Development, Blackwell

Clemson L B (1998) An Approach for Applying Cultural Study Theory to Technical Writing Research, Technical Communication Quarterly 53, Winter 1998, Vol. 7, No. 1., pp's 53-73, Clemson University

Corbin J M & Strauss (1998) The Basics Of Qualitative Research; Techniques And Procedures For Developing Grounded Theory, Sage Pub

Creswell J W (1997) Qualitative Inquiry and Research Design: Choosing among Five Traditions, Sage

Creswell J W (2002) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, Sage

Denzin N & Lincoln Y (Eds.) (1994) Handbook of Qualitative Research, Sage

Dillon W & Goldstein M (1984) Multivariate Analysis: methods and applications, Wiley Series in Probability and Mathematical Statistics, John Wiley & Sons

Don W & Hocking J E (1992) Essentials of Communication Research, Harper Collins

Feagin, J., Orum, A., & Sjoberg, G. (Eds.). (1991) *A Case for Case Study*, Chapel Hill, NC: University of North Carolina Press.

Heymann H & Lawless H T (1999) Sensory Evaluation of Food: Principles and Practices, Springer

Jones, Steve (1999) Doing Internet Research. Critical Issues and Methods for Examining the Net. London: Sage Publications.

Guba E & Lincoln Y (1994) Competing Paradigms in Qualitative Research, In N. Denzin & Kunz G (2002) The Elements of Taste, Imported Little Brown

Lewin K (1951) Field theory in social science. New York: HarperCollins Lincoln, (Eds), Handbook of Qualitative Research, Sage Publications

McQuarrie E F (2005) The Market Research Toolbox : A Concise Guide for Beginners, Sage 2nd. Edition

Miles M B (1994) Qualitative Data Analysis: An Expanded Sourcebook, Sage

Meilgaard M, Civille G V & Carr B T (1999) The Farther Reaches Of Human Nature,

Patton M Q (2001) Qualitative Research & Evaluation Methods, Sage

Meilgaard M C (2006) Sensory Evaluation Techniques (3rd Edit) CRC Press

Munoz A M & Civille G M (1992) Sensory Evaluation In Quality Control, Academic Publications

Nunnally J C (1967) Psychometric Theory, McGraw-Hill

Zeisel J (1984) Inquiry by Design, Cambridge, Cambridge University Press

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