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prototyping prototyping

Anthropological Research on the Contemporary
ARC Studio

Season 1, Episode 2
2010

directors: christopher kelty, alberto corsín jiménez, george e. marcus

Contents

5	preface , christopher m. kelty
11	the conference , alberto corsín jiménez and adolfo estatella
15	if I were the ethnographer... marilyn strathern
19	the social prototype , leach/kelty
26	cross cultural partnership template , james leach, wendy seltzer
31	paras-sites: a proto-prototyping culture of method , george e. marcus
37	infra(proto)types in the air , nerea calvillo
43	prototypes in design: materializing futures , alex wilkie
51	the long history of prototypes , michael guggenheim
59	the end of innovation (as we knew it) , lucy suchman
63	of promises and prototypes , lina dib
67	demo for democracy , javier lezaún
73	charismatic prototypes , alain pottage
77	what gets prototyped , alberto corsín jiménez and adolfo estatell
82	participants

preface

This is a conference publication finished before the conference.

Its goal is to be a “prototype” of a conference on prototyping cultures. Participants were invited 2 weeks ahead of time to submit a short piece, and nearly everyone involved did so. I’m tempted to say: prototyping works.

The rub of course, is that this is a group of people who, at best, each have different ideas of what a prototype is or why it might be a salient figure of our contemporary experience. There is a wealth of practical, empirical material to gather and analyze about how prototypes work in different domains (design, architecture, art, metrology, engineering, social science), and also a definite conceptual problematic picked out by the term “prototyping.” It concerns innovation, participation, intellectual property, collaboration, democracy, interdisciplinarity, software, design, ethnography, sociality—just to name a few of the limits and terms proposed herein.

Alberto Corsín Jimenez and Adolfo Estalella, have been either generous or foolhardy to let me

prototype their conference, maybe both. The conference could and would no doubt have generated these thoughts without my help, or presence. But part of the experience of using prototypes is to recognize that sometimes that’s where the *design* work gets done. As Marilyn Strathern puts it in her piece, sometimes the rehearsal is the research. If this is the case, and there is some small success in it, then it changes the stakes for the conference itself. I apologize if necessary. As Lucy Suchman points out here, one of the powerful effects of “prototyping culture” is that it forces people to live in a future not of their own choosing, and some prototypes (e.g. Silicon Valley’s) are more powerful than others.

A different and related reason for this publication is that I want to prove—to myself and others—that it can be done. We have plenty of publications, but few spaces for collaborative experimentation with ongoing research. In some fields “conference proceedings” are *de rigeur*, but in the social sciences we tend to treat them as ephemeral spaces of interaction. *Anthropological Research on the Contemporary (ARC Studio)* is a place

christopher m. kelty

to experiment with preserving the interactions in a collaboration, and a way to valorize the work that goes on—before and during a conference.

The Anthropology of the Contemporary collective has been in existence since roughly 2005, in various forms and with various ongoing projects. A key focus has been “concept work” which generally means a couple of things.¹ First, the development of a serious collaborative enterprise in anthropology—one that makes use of shared concepts, modes of inquiry and norms of judgment with respect to those concepts and inquiries. The need for such a collaborative environment is driven by a historical over-emphasis on the single-authored, monographic project, itself driven by the constraints of a classical model of fieldwork (guy in tent in village). Various critiques of that form have been leveled: e.g. that the guy in the tent was never alone, he had translators or friends or family with him. But the most urgent challenge came as anthropologists increasingly turned to new, complex, reticulate forms in contemporary society:

1 <http://anthropos-lab.net/documents>

development agencies, corporations, stock exchanges and finance, pharmaceutical and biotechnology industries, information technology, the economy, etc. Such objects are far too large and complex for a guy in a tent in a village to inquire into.

The other problem that “concept work” addresses is the need across the disciplines for new tools—new conceptual “equipment” for rerouting entrenched conceptual flows. Here the distinction between first and second order observation (drawn primarily from Luhmann) is frequently invoked. The distinction is dangerous because it can imply that 1st order actors (for example, economists measuring productivity) are completely understood by 2nd order actors (anthropologists measuring economists). While the distancing move is necessary (anthropologists must study someone), the point of the inquiry is different: to make sense of why 1st order systems of knowledge and rationality take the form they do, and to inquire what the political and ethical consequences of this form are.

So to propose a conference on “prototyping”

as Alberto and Adolfo have done, engages in both of these aspects of concept work: on the one hand they start, as anthropologists, from the simple act of studying prototypers (and in this case, the class of people who fit this description is fuzzy, but likely to include: designers, artists, architects, information architects, device makers, engineers, programmers, users, performers, curators, and others) in a specific place (MediaLab Prado and its environs). On the other hand, in proposing prototyping as a “figure” (a field that includes, as the subtitle says: beta knowledge, DIY science, social experimentation), they introduce a distinction between 1st order knowledge of prototypes and second order knowledge of “prototyping culture.”

First order observers of prototyping see a concrete field of experimental relations that is well specified. Georgina Born was on to this long ago in her studies of software prototyping at IRCAM in the 1990s.² Alex Wilkie’s piece nicely captures some of these debates, and extends them. Suchman’s piece

² Born, Georgina, 1996 “(Im)materiality and sociality: the dynamics of intellectual property in a computer software research culture” *Social Anthropology* 4(2)101-116;

points to their use as a key component of future-making, especially in centers of power like Silicon Valley. Indeed, for people who deal daily with prototypes there is nothing particularly new or radical or unusual about them.

Second order observers see something different: prototyping as a *figure*. As Pottage points out in his contribution, “crudely, prototyping is what happens when the distinction between means and ends folds into itself, so that what is means and what is end becomes an effect of interest or strategy. ()” And to ask the question “what comes next?” whether in science or in engineering or in culture, is to see the *figure* of prototyping at work. Prototyping as a figure reveals as set of cultural relationships that are organizing and constraining our relationships with ourselves and others, even if we never touch a real prototype or engage in a specific act of prototyping.

You will see in these contributions, a tension between these first and second order observations of prototypes and prototyping culture. The function of a project like this can only be to work out some

of those tensions, so although this takes the form of an “official” looking publication, and in fact intends to be one, it nonetheless represents a moment in an ongoing exploration.



THE
HISTORY
OF
THE UNITED STATES OF AMERICA



Prototyping cultures

**social experimentation,
do-it-yourself science and beta-knowledge**

A two-day conference organised by the Spanish National Research Council, Madrid. 4-5 November 2010

The Conference

Prototypes have acquired certain prominence and visibility in recent times. Software development is perhaps the case in point, where the release of non-stable versions of programmes has become commonplace, as is famously the case in free and open source software. Developers are here known for releasing beta or work-in-progress versions of their programmes, as an invitation or call for others to contribute their own developments and closures.

Prototyping has also become an important currency of explanation and description in art-technology contexts, where the emphasis is on the productive and processual aspects of experimentation. Medialabs, hacklabs, community and social art collectives or open collaborative websites are further spaces and sites where prototyping and experimentation have taken hold as both modes of knowledge-production and cultural and sociological styles of exchange and interaction. Common to many such endeavours are: user-centred innovation, where users are incorporated into the artefact's industrial design process; ICT mediated forms of collaboration

(email distribution lists, wikispaces, peer-to-peer digital channels), or; decentralised organisational structures. Experimentation has also been at the centre of recent reassessments of the organisation of laboratory, expert and more generally epistemic cultures in the construction of science. An interesting development is the shift in emphasis from the experimental as a knowledge-site to the experimental as a social process. These are only a few examples of what we mean by prototyping cultures. The conference aim to consider different works in light of some of these developments and tensions.

The Schedule

Thursday, 4 November

9:45. *Welcome.* Eduardo Manzano, Director, CCHS (CSIC); Alberto Corsín Jiménez & Adolfo Estalella, conference organizers.

10:00. *Introduction: Prototyping and social experimentation,* Alberto Corsín Jiménez.

Alberto Corsín Jiménez & Adolfo Estalella

10:15. *The end of innovation (as we knew it)*, Lucy Suchman.

10:45. *A Countercultural Prototype for Cold War Social Engineering: Revisiting the Pepsi Pavilion*, Fred Turner.

11:15. Questions and discussion.

11:45. Coffee break.

12:15. *Infra(proto)types*, Nerea Calvillo.

12:45. *Re:farm the city. Connecting food to people*, Hernani Dias.

13:15. Questions and discussion.

13:45 – 15:00. Lunch break

15:00. *Prototyping and the prospects of obesity*, Alex Wilkie.

15:30. *Ethnography of and as prototyping culture*, George Marcus.

16:00. Questions and discussion.

16:30-17:00. Coffee break.

17:00. *Music, art, prototype?* Georgina Born

17:30-17:45. Questions and discussion.

17:45-18:00. Final discussion.

Venue: Centro de Ciencias Humanas y Sociales, Consejo Superior de Investigaciones Científicas, C/ Albasanz 26-28, Madrid 28037. Room: Sala Gómez Moreno, 2C24

Friday, 5 November

10:00. *Prototyping as legal techne. A historical case study*, Alain Pottage

10:30. *Prototypes of engagement: trust, transaction, and digital partnership*, James Leach

11:00-11:30. Questions and discussion.

11:30-12:00. Coffee break.

12:00. *From Prototyping to Allotyping: The Invention of*

Change of Use and the Crisis of Building Types, Michael Guggenheim.

12:30. *Establishing the reality of politics: Revisiting Kurt Lewin's experiments in 'democratic atmospheres'*, Javier Lezaun.

13:00-13.30. Questions and discussion.

13:30 – 15:15. Lunch break.

15:15. *The hospitable prototype: a techno-polis in construction*, Adolfo Estalella & Alberto Corsín Jiménez.

15:45pm. *Prototyping prototyping*, Chris Kelty.

16:15-16.45. Questions and discussion.

16:45. Closing remarks.

Venue: Medialab-Prado, Plaza de las Letras, C/ Alameda 15, 28014 Madrid

Information.

[Program of the conference](#) (PDF).

[Prototyping Conference Abstracts](#) (PDF).

Contact: info@prototyping.es

Attendance to the conference is free. However, we have limited space in both venues, so we are asking people to [register for the conference](#).

Image from the [project interactibus](#). Credits: Medialab-Prado.

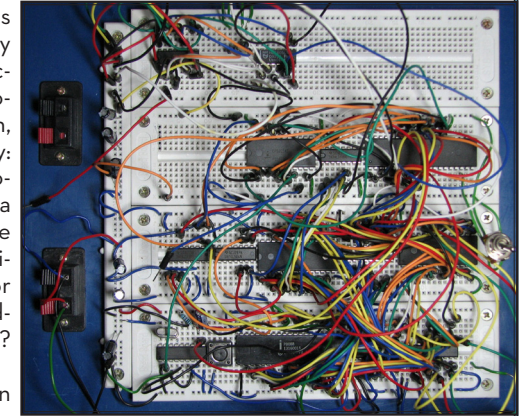
the invitation

12 OCTOBER, 2010

Dear,

Join me in an experiment in prototyping prototyping. Conferences should be spaces of research, not only communication. But conferences, even “workshops” are rarely structured to promote collaborative thought, critical engagement or conceptual work. Let’s prototype this conference.

The conference organizers suggest: “prototypes have acquired certain prominence and visibility in recent times.” Have they? Why? What accounts for the contemporary salience of prototyping, beta knowledge, experimentation, hacking, or DIY this and that? And reflexively: to what extent is the scholarly knowledge produced, consumed, circulated or critiqued at a conference such as this one subject to these same forces? What should be the role of timeliness, rapidity, and flexibility on the one hand, or authoritativeness, permanence, and standardization on the other, especially in our own work?



To explore this I am proposing an experiment in prototyping: to create a conference publication that **precedes** the conference itself; a publication that valorizes the informal work done to organize conferences like this and that facilitates collaboration on concepts and problems. The venue I propose for this is a recently launched experimental online publication, *ANTHROPOLOGICAL RESEARCH ON THE CONTEMPORARY* (ARC). ARC seeks short, incisive pieces by critical scholars on issues of contemporary significance. ARC seeks to provide conceptual and genealogical framings that can inform a critical perspective on current issues and events and to stimulate a new model of intellectual production—one that will not operate according to the lengthy time-span, restrictive organization, or standardized formats of peer-reviewed journals. ARC is arguably ensnared in the forces of prototyping culture itself.

Based on your upcoming contribution to this conference, I’m inviting you to contribute a very short (750 - 1000 word) piece on the contemporary salience of prototyping. Given the goal of timeliness, the deadline is necessarily short: I’d like to receive a first draft before the conference (by Oct 31). In return, the pieces will be edited, formatted and published in time to become part of the conference itself.

I should emphasize that this is something that could be produced fairly quickly: it could be a summary of a piece you’ve already written; a fragment of work that you’re currently writing; a combination of a first-order document with your own commentary; etc. I welcome any images, sound files, or videos that might accompany the piece, as well as links to various kinds of other documents such as works by the author, technical reports, etc.

Please let me know if you have any questions.

Christopher M. Kelty

if I were the ethnographer..

To what might an anthropologist wish to attach the term prototype?

Prompted by Christopher Kelty's reference to a conference publication preceding the conference, I recall a slim volume I brought out before a short seminar series held in 2004.¹

The volume does not really count as a prototype since it was not meant to prefigure the seminars; the programme notes refer to it as 'background'. It simply laid out some of the thoughts that had prompted the series.

The seminar itself was another matter. This consisted of four half-day colloquia (each with two panels of four presenters and discussants) followed by a one-day Interdisciplinary Design Workshop intended to treat each colloquium as raw material for modelling

process and output.² The seminar was deliberately set up as a kind of prototype, although that term was not used: the series (dubbed 'Social property and new social forms') was presented as an 'experiment' in interdisciplinarity, and a paper written just after it got under way³ talked of the anthropologist's 'indirection' and at one point of a 'rehearsal'.

Indirection can be quickly explained. About to make an ethnographic object of an institution promoted as interdisciplinary, the question to myself as anthropologist was how to create a position or context from which to launch the study. The question came from two imperatives: to avoid simply reproducing the institution's own organisation of knowledge; to acquire

² These were led by James Leach and Alan Blackwell, with additional invitees. Acknowledgement should be made to the ESRC-funded project (RES-151-25-0042), 'Interdisciplinarity and society: A crucial comparative study', with Georgina Born and Andrew Barry, and to the Centre for the Study of Invention and Social Processes, Goldsmiths College London, as well as to CRASSH, Cambridge. I record here my profound thanks to all the participants who made the occasions so stimulating in themselves.

³ Strathern, Marilyn, 2004b, "Social property: an interdisciplinary experiment," *PoLAR* vol 27 (1): 23-50, first presented in April 2004.

¹ Strathern, Marilyn, 2004a, *Commons and borderlands: Working papers on interdisciplinarity, accountability and the flow of knowledge*, facilitated by the then new academic publisher, Sean Kingston (Sean Kingston Publishing, Wantage, Oxford), and print-on-demand technology. It was provided at registration for all participants. My comments focus here on the colloquia.

marilyn strathern

some training in interdisciplinary practice. Through a specific social form, the seminar was intended as a prototype of sorts for the ethnographic study. But that phrase needs unpacking. It was prototype neither for the long-suffering participants since they wouldn't be further involved, nor for me a 'pilot study' to anticipate the research approach. Indeed it was in a register somewhat removed from what the ethnographer would subsequently encounter, and doubly removed from me since I could not take on that role myself.⁴ It was, perhaps, an 'imitative' effort on my part in order to think what it would be like to have such encounters, to give me a little experience with which to respond to the ethnographer's findings. In no more than indirect relation with the ethnographic object ahead (though the themes were chosen with it very broadly in mind⁵), this was an exercise in accessing interdisciplinary

4 I had no alternative but to be at arm's length from the study, the recipient of information from the ethnographer [who was to be appointed shortly].

5 At my invitation, there was a presence from the institution at the colloquia.

debate. A prototype not of the research process, then, but of what might be encountered in interdisciplinary conversation. It gets close to the condition of the – typically armchair – anthropologist accused of trying to imagine inhabiting the minds of others: the 'if I were a horse' syndrome.⁶ If I were the ethnographer... A question hangs in the air -- how far might such an act of imagination serve as a prototype for engagement?

Rehearsal? At the first colloquium one of the speakers sought me out in advance to discuss his contribution. Our conversation, which he recounted, turned out to be a rehearsal for his paper. One could almost say it was his paper! Leave aside the somewhat artificial circumstances created by my desire to feel what it might be like to be among interdisciplinary conversations, if that conversation qualifies as a prototype then it was created during the course of a very ordinary prelude to presentations. I suggested

6 After E. E. Evans-Pritchard, 1965, *Theories of primitive religion*, Oxford University Press, pp. 24,43.

that this was an example of a phenomenon probably rather common in research communities.

Has this happened to you, I asked when I first gave the paper. You think you are sketching out preliminaries for research, offering material to be addressed as the work proceeds, then suddenly reach a temporal moment when that is in the past, and that was the research. And why? I laid some emphasis on the effect of working in company with others (and my experience of the phenomenon has been in anthropological team work). 'The first attempts at formulating a position in company, where everything seems in the future, a working paper perhaps, suddenly appears to have been a rehearsal for what is to come, suddenly becomes in retrospect *the* output or product. From looking forward one finds one has swivelled round and is looking back' (Strathern 2004b: 41, original emphasis). I wondered if the presence of other people⁷ speeds up the process of objectification.

⁷ 'Otherness' is created afresh at each collaborative encounter self-styled as such.

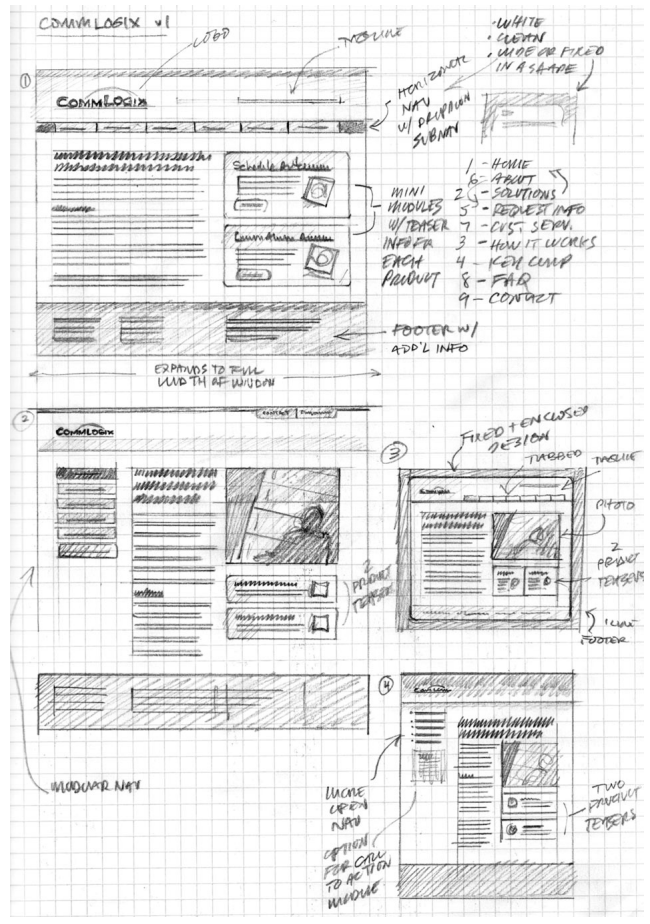
Reflecting now, I wonder further if the provisional nature of the first sketch becomes shifted from the original author onto the uncertain relations among the company present. That becomes the uncertainty to be addressed: what will be the prototype of the joint conversation?

These remarks relate to the experience of anthropologists who are often rather new to collaborative work. If prototypes seem on the increase, I throw into the ring the suggestion that one spotlight is shone where uncertainty is encountered in collaborative relations, and probably between relative strangers. I would include collaborations not just between researchers but between researchers and administrators as knowledge managers (the latter a species certainly on the increase). The speaker I referred to was in his day job a knowledge manager, but on this occasion he was the researcher and I was the manager.

CK: If I were to say that it was exactly what I had in mind, that would no doubt be a lie, and perhaps for exactly the reasons outlined in your piece. Which is to say, reading it has made me realize that one of the reasons I am doing this is provoke exactly the gestalt switch (maybe not the right term) that you point to: the recognition that the rehearsal of the paper sometimes turns out to be the research. A couple of other ongoing conversations (with James Leach and, as ever, with George Marcus) are pointing towards a similar relationship--in which the moment of collaboration is always in the future, until suddenly, it is in the past. In some cases, this is a question of when and how thinking happens with others, but it is also a question of thoughts made real by trying them out on people (the

prototypical moment perhaps).

My anxiety about this is twofold though: first, I don't want to usurp Alberto's project (thought he insists that he is game) by forcing people to think otherwise about this conference than he and Adolfo might want them to. Second because the question of the "interdisciplinary" lingers here still, and I wonder to what extent that term might not be aligned with the that of the "prototype"? As a unwitting creature of interdiscipline, I can see all too clearly how vacuous it can be, and how people like myself are constantly in search of tools and techniques (prototypes) for establishing a ground for thinking (ergo, this publication). So I wonder about the dual salience of prototypes and interdisciplinarity over the last couple of decades...



the social prototype

On Fri, Oct 15, 2010 James Leach wrote:

Hi Chris,

Yes, it will be very good to see you again - I too am looking forward.

Thank you for the invitation. I am intrigued to see what will come of your experiment, and also find it interesting to ponder what might be a suitable contribution. Your invitation is articulate and attractive, but the context into which any participant will be dropping words or images/text is (necessarily) opaque at this point in any conference. Part of the reason to come together is to see what emerges from those moments, what is stimulated by the perceptions (and misperceptions) of others, their positions and arguments, demeanors etc.

On 15 Oct 2010 Christopher M. Kelty wrote:

can I push you further on this? I'm not sure I agree. I don't actually know why people go to conferences anymore. Certainly the big scholarly

society ones are almost totally devoid of anything other than basic communication of what's going on in the field, something that people could surely do more efficiently today (we have the technology!) but have ingrained habits that prevent them from doing. People go to those conferences to network, chat, reconnect, etc. It's entirely a social function at this point. But even the smaller ones, especially in social and cultural sciences, are almost never in my experience about work in progress: we hate presenting ideas that are not already baked. The closest thing to what I'm proposing here is actually the workshop with pre-circulated papers that are discussed at the meeting. That's more often a space of active work. But then all that work disappears from view, and is replaced by an acknowledgement in a paper.

So yes, I hope you are right: people don't know what they are getting into here. It may fail... but that's probably the point. I hope it fails in a way that surprises people.

james leach/christopher kelty

JL: It is the emergence of a context in the interactions that is still valuable, in other words. The 'relief' is to see that emergence, and recognize aspects of it.

On Oct 17, 2010, James Leach wrote:

Yes, I am happy to be pushed.
What was I thinking...(?)

You are right, the really big conferences are almost useless for developing critical work, or as you say, presenting new and unworked-up ideas. If we accept that, I would say 'almost' for two reasons - one is that some people do still take risks, and the pervasive ethos of doing things at the last minute means it is often the case that things *are* half baked (not necessarily good...).

The other is something about what you call social function. I guess I wouldn't want to separate that so clearly from the ideas. Part of the 'social function' is to push people into moments of obligation - having to produce something because of the immediacy of physically presenting, with others who are also making similar efforts - and that in itself is a motivator for thinking and writing. It is still possible to find sessions (or organise them) within such

conferences where people are thinking on their feet as it were. So maybe that was one thing I had in mind.

An extension of, or aspect of this is the frisson of anxiety/anticipation that presenting to a context-not-yet-formed generates. Of course in the massive 'show' conferences, that is unlikely to happen - the context, interactions etc. are already so framed by protocol. This is all (obviously) personal reflection, but I am always relieved when, having buried myself in some ethnography and reading, I produce something vaguely along the lines set out by the organisers, that makes for commonalities and conversations when one arrives. That relief is somehow important. I'm not quite sure what it means, other than that there are conversations and circulations occurring - a confirmation of communication.

I am particularly interested in your point about how the work that goes into the real working session - that of pre-circulated papers and commentaries - disappears after the workshop.

There is a lot in this--something about trust and reciprocity within an academic community that

I'm struggling to articulate here. Each participant is not only their immediate paper - ideas that are stimulated by someone else's work then circulate and appear in ones own. The conversation is not only beneficial to one side, and the development of the context itself, the wider circulation of ideas and approaches amongst all interlocutors is of (potentially) wide and multiple value that all can draw upon in future. So again, the 'social function' is important - not just something as prosaic as networking opportunities - I am grasping for a sentence like 'work and ideas are only nominally attributed to any one author'. Or, that is how it ought to be. But then, of course, that is not true - so I am reaching for something more like, 'even though ideas and their development are attributed to one out of the many people who had a hand in them, the way ideas and conversations work in developing the capacities of the interlocutors, should provide value for all, not just those with headline names.'

Now that might be naive sounding, or at least err on the side of hope. If so, I hope it means I have begun to understand your experiment here - that one

could make visible that process of value creation, and its settlement on certain persons rather than others, as moments in that process. If it is a way to keep the process in view, then it would be a great counter to the continual narrowing of perceptions of value creation, the individuation of academic work, and the demand that all interactions and efforts must produce immediate, tangible and quantifiable outcome.

On Oct. 17, 2010 Christopher M. Kelty wrote:

My general angle on the issue of scholarly communication is to think about how the most well-funded and well-regarded sciences do such things, and then compare it to how anthropologists or historians do it. My frustrations go in both directions: on the one hand, the scientists are much less anxious about ownership of ideas, precisely because the protocols are so much more finely tuned. Collaboration of the sort you imagine and we sometimes experience, is in fact almost totally absent from many of the most competitive fields--it must all be more or less specified

JL: I am glad you picked up on the social as essential to the forming of an idea, and not the way I might have been read, that is, a narrower concern about who gets attribution. Of course the latter is important, but not so much as the recognition of the vitality of wider social processes of exchange, communication, and, to lapse in Melanesian for a moment, reproduction. It is of course contemporary conditions in the academy and its relation to its publics that make that seem so important to me to talk about this now.

in advance, and the rest is simple luck and something like eidetic arbitrage. On the other hand, those fields are light years ahead in a communicative sense: the simple act of keeping track of what they have done, publishing it, making it part of an archive, referring to it, building on it and tearing it apart, and otherwise standardizing their knowledge practices. I often feel that anthropologists and historians, by contrast, are intent on constantly creating that platinum-iridium bar, which weights exactly 1kg, in the hopes that all their colleagues will compare their own platinum-iridium bars to it. This may be an exaggeration, but I doubt it is much of one.

On Oct 18, 2010 James Leach wrote:

Well, for all your talk of possible failure, your experiment is working for me.

Three more things then.

1. Science/attribution and authorship.
2. Record of the gestation, forking and final form for ideas.

3. Prototyping partnership.

Your critique of history and anthropology scholarly presentation is apposite. I have been thinking, for another purpose about why it is anthropologists seem pushed by the genre to single authored texts, particularly for the major (and most respected/rewarded) ethnographic work they produce. The arguments overlap with our discussion, as they draw us away from the narrow focus on attribution and reward, and into forms of knowledge and its circulation, protocols, and how they are built on assumptions that go deeper – in this case about the person and its relation to different kind of ‘external’ subjects of study.

We have come a long way in recent years in acknowledging the core of our knowledge production in social relations to others. But we have yet to exhaust the how the assumptions that lie in western constructions of the person give form to our creation of knowledge as anthropological knowledge. The primary material that anthropologists rely upon is

CK: Similarly, some of my thinking about this has emerged from discussions with people in the Anthropology of the Contemporary. [Collective about how this model of single authorship fails to live up to an ideal of shared conceptual labor on problems too big, complicated or unwieldy for an individual to pretend expertise—but at the same time resisting the full-fledged rush to a model of experimental scientific production that sacrifices the care and skill evidenced in the single-author context. It is a tension that drives much of my thinking these days.]

collected through and in social relations with others. Unlike archaeology, for instance, where there is an acknowledged external referent people can gather around, and contribute partial (expert) knowledge to an understanding of. But in ethnography, the ways in which western notions of the self, its subjectivity, and the responsibility for interpretation is stimulated by the personal nature of the source of understanding – I repeat: one’s social relations with other people – makes for a sense of both responsibility to them, and a sense of ownership in the reporting of ‘facts’ that work against a division of labour in the gathering or presentation of findings.

I’m fascinated by the merographic connections present between the sense of self, the sense of the interpersonal and thus subjective or inter-subjective, and the crafting of descriptions of others’ lives that anthropology instantiates. I have regularly chosen co-authorship because for me the process of coming to understandings with others is more satisfying than the final output of a single authored piece, or because

I think my relations with those others are more important long term.

On the other hand, one might say that satisfaction comes in engaging with others in reading what they have written and published, and the kinds of traces and acknowledgements for other’s work are already there in properly crafted anthropological texts that fully draw in and reference other people’s writing. That single authorship is perfectly OK for that reason. (And I am aware that I have confused two things here – reference to others as textually present, as it were, and reference to others as co-creators of text itself).

The solution, then, to leaving ‘traces’ of others, and others ideas, is already there in anthropology. The constrained form, given shape by the subject and tools of the discipline, is one in which, like scientists’ traces in multiple authorship citations etc., mutual value creation is already acknowledged given the constraints on form that western notions of the person, its relation to external nature, or intersubjective ‘social’ reality etc.

CK: This is clearly true of much in anthropology, and the deeper in the heart of it one is, the more so. And in fact one would want to emphasize this to all those who want to use ethnography as a value-added method for whatever purpose (in business, in design, in art, in science).

JL: yes, there is a different implication when one tries to instrumentalise the approach than with scientific knowledge. There is, again, a lot in this, and a lot of great scholarship to build on in doing so in History of Science etc. It seems to me that the issues turn on whether one is developing capacities in persons – capacities for engagement with others, creating and developing relationships, making links and contextualizing/illuminating/presenting fertile understanding, or one is applying not capacity and expertise, but ‘knowledge’ as an instrument to achieve specific, material, ends. However, this is different

than the production of common thoughts, common objects, common concepts, which is also a problem of property and relationality (and there is no more powerful philosophy for getting at this than the anthropology of Melanesia). What it takes for thought to be formed in social engagement is one thing, but what it takes for that thought to become commonly owned is another thing. And it strikes me that the natural sciences have been pretty good at creating structures for promoting the latter and systematically devaluating the former. It would be great to explore further the contrast between the natural and social sciences (attribution within, protocols for forming and then owning ideas in each) in terms of the above points about subjective/objective subject matter, external referents, instrumentality, capacity etc.

CK: Protocols yes, well crafted? I'm not sure I've done that yet and it raises the question of how bespoke those protocols must be.

Part of what is driving this experiment is the simple sense that giving people concrete prompts and short timelines fits in better with the kind of thinking we do these days. I have no idea if that intuition is correct, or if so, if it is frightening or not.☺☺

CK Sounds like a pre-nup! I get the house, you can take the kids.

JL well, you fill in the content depending on your pre-dispositions, hopes and expectations. So maybe there is an overlap. But whereas a pre-nup surely undermines the ideal of evolving partnership in marriage by giving an exit clause when the work becomes too difficult, the template might help define and outline the scope of the relationship itself, and modes of negotiation to keep it working. I don't know – it really is an experiment. But came from quite a few different collaborators calling for a safe space in which people with very different modes of creating and circulating knowledge, could come together productively. In many cases, I'm afraid, that does mean sorting out the status of prior work, the value of each person's input etc.

Your point is about the % well crafted protocols for the recognition of multiple input, and multiple stages, in the construction of scientific knowledge remains of great interest to me. So many ideas get left behind, obviated by the drive or force of having to say one thing, or build a coherent case, that it seems to me to be time we looked, as you are doing, for ways in which those others, and the forks that were not pursued, are made present more clearly. I think you imply that it would also make for more critical (in the positive sense) engagement.

So here is my attempt at a less abstracted or meta commentary. Wendy Seltzer and I, building on work undertaken by a wider group and taking direct inspiration from the 'hack' of IP law that the GPL pioneered, wrote a template and rationale that borrows assumptions in partnership law, but subverts their usual use. Responding to the clear and by now obvious inadequacy of IP law in the face of contemporary creative collaboration, issues of exchange across boundaries and cultures, indigenous knowledge and cultural heritage and its 'protection' etc., we wrote

an open, manipulable document that encourages potential collaborators to think through, and make explicit, their interests, expectations, assumptions and needs prior to engaging in collaboration.

It is a template protocol, where the actual protocol is what emerges from the engagement with others, structured initially around the stimulus of the template.

Now does that amount to a 'prototype'? I really do not know, and am interested to engage with you in this conference to see what fit that term has, and whether or not it has purchase that could be turned to other ends. It is slightly opportunistic I guess – hoping to draw on all your expertise etc. But isn't that a version of what I wrote to you yesterday? That I am happy to have our work turned to the service of the organiser's interest in examining prototypes %– for their own ends, no doubt – in return for the chance to see whether what we have done is part of, usefully contributing to, a contemporary moment.

But my interest was also piqued by the other thing I hope we can manage to expose for examination

CK: This is pretty clearly one troubling aspect of this conference, and of my little experiment as well. I think some participants will be more willing than others to think with prototypes as opposed to about them; which is to say, for a lot of people the prototype is already a problem, it doesn't need to be problematized by people like you and I (the anthropologists for sure, maybe others identities). Certainly the flexibility of this concept varies with one's social location, from most flexible in our domain, to least flexible in places like software engineering or industrial design.

CK: And here perhaps, you do the work of introducing an innovation into the discourse of prototypes, by expanding and reorienting what a prototype can do, at least imaginatively.

in the presentation – ethnographic work I undertook with contemporary choreographers in which they try to make the process and form of contemporary dance available to a wider and more informed audience through digital objects – what we called ‘choreographic objects’. What fascinated me there was the way that these objects were indeed ‘prototypes’, but their creators had not quite realised that they were *prototype exchange objects*, and thus the form they took would determine to a large extent, the form of relations that would arise from their circulation.

The prototyping here was of course about what works technically, how to produce tools for choreographic making, or information about the structure of a dance piece, what bugs and glitches in the systems were and how they could be fixed. At the same time, they were prototypes of new modes in which dance could make relations, circulate and be present in wider social arenas. The work of aesthetic presentation was crucial, unsurprisingly, and that points to the fact that the transactions envisaged had to be true to something about the form and ethos of

the people represented. It went deeper, with issues about revealing process, privacy, the tension between technological forms that do not necessarily generate ongoing relations, the assumed form of dance performance as a kind of packaged commodity etc. and the intention to make new engaged audiences.

These issues draw us back to the concern that Wendy and I had (taken from that wider group) about how and what is exchanged over technologically mediated communication, about how trust and the future shape of relations are to be understood and made present etc. So, (and sorry for such lengthy unravelling of thoughts), prototyping is already helpful in thinking about what these two kinds of objects might be or offer. I am hoping that this will intersect in a conversation with you and others at the conference that generate value for us all.

Well, I have not been critical of the notion of prototyping, but run with what it might do as a frame for other things. It may be that the limits of the usefulness of the term (as I have taken it up) are already apparent – I am using it as a description that reveals something of the tentative and unexpected consequences of object production.

Cross-Cultural Partnership: TEMPLATE

James Leach and Wendy Seltzer

Preamble The cross-cultural partnership template is designed to help potential collaborators to reach understanding and agreement on the terms of their collaboration.

In many contexts people look to the law to establish or enforce a 'safe space' in which collaborative relationships may flourish. Good intention is more fundamental than law or codes of conduct. Nonetheless, legal agreements and faith in the law can facilitate the establishment of relationships where trust is yet to be established.

Here we offer a template which draws upon the law: the result of long-term consideration of issues around collaboration in different situations and arenas. The template draws specifically and intentionally upon understandings abstracted from established social practices and from licenses developed for digital creations.

Copyleft (an example of a license for digital creations) has built its alternative upon the scaffolding of copyright law to achieve goals outside of that law's usual bounds. For the exchange of knowledge and creative partnerships (including between indigenous peoples, corporations and institutions, different disciplinary actors, etc.) we draw upon frameworks from the area of the law pertaining to partnership.

As in business dealings, choosing the partnership form brings with it default terms of fairness between partners: duties of loyalty, of care, of disclosure, of good faith and fair dealing. We seek to import those ethics and their underlying law to relationships broader than business, giving legal force to terms of mutual respect and mutually beneficial interchange.

Although the Gnu GPL and Creative Commons licenses served as models, this template agreement is much more skeletal in form. That is because the core of the partnership relationship is parties jointly articulating their intentions and goals. The process of specifying terms in this agreement can be an important part of building the shared understanding that will assist the relationship to achieve mutually agreeable ends.

It is in this spirit we offer a template for a partnership agreement by which the parties can make explicit to one another their understanding of shared goals, the means to achieve them, and have confidence that in that articulation, they guarantee a level of accountability from their partners. Experience points to the significance of considering and accommodating the expectations, interests, and location of parties to a collaboration as an ongoing aspect of the relationship itself.

See the accompanying How-To document for suggestions on how to use the template that follows:

CROSS-CULTURAL PARTNERSHIP TEMPLATE (draft) 1. Partnership title.

[Insert partnership title]

2. Identification of the partners.

[Insert the names and roles of the parties], ("Partners")

Each partner comes to this agreement with the following authority:

[Insert authority to enter the agreement. Consider all the other people who might be involved. Is their cooperation or consent necessary?]

[Consider at this stage whether and how you may want to add additional partners. For example, if you need special expertise, will you subcontract these tasks or bring in new partners and thereby modify this agreement and the subsequent sections on benefits, future use of material, management?]

3. Common aims.

The Partners agree to the general aim of entering into a mutually respectful and beneficial relationship. The partners also agree to the specific aims of:

[Insert specific aims]

[Specific aims could include:

- * sharing stories or other oral heritage across cultures;
- * creating a documentary film to advocate for an indigenous group;
- * distributing native medicines to a larger public;
- * research creative collaborations in art and technology.]

4. Prior work

We consider that work conducted before entering this Partnership has the following relevance to this agreement and status for each Partner:

[Insert (specific) prior work, relevance, and status (how will the ownership of, or access to that work be modified, if at all, by its inclusion in the work of the partnership).]

5. Specific duties.

The Partnership imposes the following obligations on each partner:

- * [Insert obligations for first Partner.]
- * [Insert obligations for second Partner.]

[Insert specific duties you intend for one or another of the partners to assume, particularly where you expect the partners' contributions to vary because of the different strengths and backgrounds they bring to the partnership. These may or may not extend beyond the term of the partnership.]

In addition, the following obligations shall survive dissolution of the partnership.

- * [Insert obligations for first Partner.]
- * [Insert obligations for second Partner.]

6. Outcomes and benefits.

The Partners agree on the following ways to distribute the results of the Partnership:

- * Forms of outcome to be circulated
- * Fair and correct attribution
- * Ownership and licensing of the products produced in or resulting from the partnership.

[Options might include joint ownership, cross-licensing, or other terms specific to the types of creative outputs (copyright, patent, confidentiality, etc.). Consider how the concrete outputs may be licensed / shared / sold / given away.]

The Partners may draw differential benefits after or as part of the pursuit of their Common Aims.

[Insert differential benefits.]

[Differential benefits might recognize the different strengths and needs of each Partner.

- * A book might draw on Native experience to promote awareness of their cultural distinctiveness while

supplying academic credentials for its author.

* A research project might provide an engineer with a new technical challenge while providing an artist with the tools necessary to create a new form of interactive installation.]

7. Management

The Partners will coordinate their efforts for the Partnership according to the following expectations:

[Insert description of how Partners will manage the project jointly. This might mean that management will be undertaken in accordance with certain principles, and/or under certain authority, which the partners will agree to with full knowledge of the system adopted. See also arbitration, below].

Disclosure

[Management choices might include disclosure of interests relevant to the subject of the Partnership, either:

* via continual or periodic face-to-face contact (as in Native settings);

* via periodic written reports (as in academia or industry).]

Periodic review and amendment

Periodic reviews will occur at the following intervals [Fill in review schedule]. At these times, the parties will disclose their present interests, progress, profits, and unexpected developments pertaining directly to the partnership.

If the [mutual] goals have changed, a renegotiation / amendment will be entered into until all parties are satisfied that the partnership maintains its original equity.

If the parties no longer share mutual goals, parties should seek to wind up the partnership. Proceed to dissolution according to the terms of the latest agreement.

8. Breach

Apart from the standard breaches of fiduciary duty, the following events shall constitute breaches of the Partnership.

[Insert explanation of possible breaches].

9. Remedies

In the event of a breach, the non-breaching Partner(s) shall be entitled to:

[Insert explanation of possible remedies].

10. Choice of law

Partners agree that this partnership will be governed by the law of:

[Insert nation or legal entity]

and disputes will be arbitrated or adjudicated by:

[Insert court or organization.]

[Partners could turn to governmental or nongovernmental organizations to decide conflicts, such as:

* Penobscot Council of Elders

* American Medical Association

* American Arbitration Association

* Village court system]

11. Term and termination

This Partnership shall remain in effect until:

[Insert end condition]

[End conditions could include:

* for a period of time, such as five years;

* until an outcome is accomplished, such as a publication.]

Signatures

All parties have customized each section of this document to meet their common and individual aims.

So Agreed:

[Insert signatures and dates]

Cross-Cultural Partnership: HOW-TO

How to use this template:

The cross-cultural partnership template is designed to help potential collaborators to reach understanding and agreement on the terms of their collaboration.

Partnership, in the sense we mean here, is about the relationship among collaborators. This template and the process of completing it cannot substitute for the relationship. Rather, working through the template may help you to build a productive relationship among partners by articulating your goals and modes of work. Recognizing that partners will not share all goals, the document aims to help partners to negotiate both commonalities and differences.

People might use this document in many ways: as a source of suggestions, as the framework for early conversations, or as the foundation of a partnership. If you want to formalize a partnership, we suggest that you walk through the document section by section, filling out its skeleton. While we believe that the resulting document will be legally binding if the parties wish, our emphasis is on establishing conditions under which such considerations need not arise.

This template is intended to assist in a process of dialog. We do not think the document will work if one person brings it to the others with all the blanks filled in. Real work is required to shape how a relationship is maintained. The difficulty of reaching conclusions is all the more reason to engage in the negotiation process. The process of negotiating this document may include conversations, ceremonies, or other acts entirely outside of the written document, which the writing can complement.

The template is deliberately sparse – each line has been included because it represents a significant element of the cooperative relationship around which negotiation ought to occur. Even if some of these points seem obvious, working through them line by line together and taking time to consider the implications of each section will assist in making explicit the assumptions of each party. Early disclosure and ongoing transparency are key to establishing and maintaining a sustainable relationship, promoting acceptance of difference as well as commonalities. Please don't ignore anything.

Annotations in the document provide suggestions and examples which are by no means comprehensive or exclusive but may assist parties in understanding what may be at stake. [We invite you to share additional suggestions with us.]

The sharing of value created in the course of the partnership should reflect the relative value of the contributions in the course of the partnership. Remember to consider all sources of value and all forms of benefit.

The goal of this document is not to maintain a collaboration when collaboration is no longer mutually beneficial. However, a goal of this document is that dissolution will be equitable. For that reason, you should consider the endpoints of the partnership, the conditions on which the partnership obligations terminate and its products are divided, even as you are embarking. It is our hope that the end of the formal partnership need not be the

end of your productive relationship.

Partnership law, as it exists in [the United States, Canada, and the United Kingdom] enforces background terms of fairness between partners: duties of loyalty, of care, of disclosure, of good faith and fair dealing. We reiterate that we do not see the value of this document in what the law will do for you in the case of disagreement, but in the process by which you negotiate and sustain agreement. Having reiterated this, it is our understanding that by signing this document you will be entering into a partnership, in which the law will imply the fiduciary duties of loyalty, care, disclosure, good faith and fair dealing among the partners.

We envision that for a productive collaboration, the partners should treat one another with respect, disclose their intentions, and act in the best interests of the partnership. U.S. partnership law imposes these duties. If you prefer, you may specify a different source of decision. As described in the template examples, these may include a tribal longhouse council, a village moot in rural New Guinea, [international arbitration provider / world forum of indigenous peoples], American Arbitration Association.

As we understand it, this document is worded such that national jurisdictions would defer and enforce the decisions of such bodies. We suggest that you send copies of this agreement to whatever third party you have chosen to adjudicate it.

Conclusion:

Once you are all happy that the template has assisted you in understanding each others' expectations, restrictions, positions, and interests, and you are happy with the wording of the document itself, we suggest that you print it out and sign it. This will not be the end of the process, by any means. We reiterate that it is the work of achieving an ongoing relationship, not this piece of paper; that is important.

We suggest that you revisit this agreement regularly and allow that developments in the relationship itself are reflected in amendments to the document.

Step-by-Step Guide:

1. Partnership title and

2. Identification of the partners.

Give your partnership a name for reference. Then identify the participants, considering whether you need approval or authorization from people other than the individuals discussing the document, for example a group governing authority, community elders, employer, parent or guardian.

Consider at this stage whether and how you may want to add additional partners. For example, if you need special expertise, will you subcontract these tasks or bring in new partners and thereby modify this agreement and the subsequent sections on benefits, future use of material, management?

Who might use this document? When and where might you consider using this document?

There are many contexts in which we hope this template might be used. Those listed here are exemplary not exhaustive:

Researchers entering into relationships with subjects. The advantages of partnership is that it is not contractual in form and therefore is negotiated and re-negotiated as an aspect of an ongoing relationship. In this sense, this is the opposite of a form contract. It will appeal to ethics committees and institutional review boards as negotiation and transparency are the essence of an ethical relationship.

Other contexts might include collaborations between artists and scientists; among artists from different cultural backgrounds; between digital and non-digital artists.

3. Common aims.

The partners may have both joint and individual goals. Try to discuss those in detail so that no one is surprised later.

4. Prior work.

Annotation: Each of the partners may have previous work that relates to the subject of the partnership agreement. Will this work be included in the terms of the partnership, used somehow in collaborative efforts, kept separate, or a mixture of these? We suggest that if the latter, partners spell out specifically what is included, to avoid future

misunderstanding.

5. Specific duties.

Annotation: All partners will accept the general obligation to work towards the best interests of the partnership. When the different partners bring different skills to the partnership or are expected to fill different roles, you may wish to spell out their differing intended contributions as specific obligations. In addition, you may wish for some obligations to continue ("survive") after the collaborative partnership ends, such as confidentiality, payment of royalties, or attribution.

6. Outcomes and benefits.

How will the partners share the benefits from the partnership? Are different outcomes equally valuable to all partners, or might they mean more to one? How does fair allocation of benefits relate to the partners' anticipated contributions.

Consider how the concrete outputs may be licensed / shared / sold / given away. Options might include joint ownership, cross-licensing, or other terms specific to the types of creative outputs (copyright, patent, confidentiality, etc.). Differential benefits might recognize the different strengths and needs of each Partner.

7. Management.

Annotation: What does the partnership look like on a day-to-day basis? What kind of reporting and disclosures can help partners keep in touch with what the other(s) are doing? Consider how the partners' goals may change over time, and how the partnership should respond to those changes. We recommend periodic reviews of this document to capture changes and help partners to stay on the same page in their understanding of the relationship. Consider also management in terms of who will oversee the agreement, how terms will be enforced, who, and how, will make decisions etc.

8. Breach.

How do you know when the partnership is not working? Standard partnership law includes failures like self-dealing -- when a partner takes for him or herself profit or an opportunity that should go to the partnership -- and lack of due care. Fill in any added specifics in the context of your partnership that would be a breach of partners' duty.

9. Remedies.

The law can't put a broken egg back together; but it can help to make the wronged party whole -- and sometimes being warned of the penalties for breach can help to keep a party from breaching, preserving a valuable relationship from a temporary strain. Specify any particular consequences the partners think should result from breach of the agreement.

10. Choice of law.

If the partners have disagreements, how do you want to resolve them? Here, you can choose both the source of law, such as community norms, ethical codes, or statutes; and the decision maker, such as a longhouse council, arbitration forum, or court.

11. Term and termination.

How long do you intend the partnership to last? Is it for a period of time, until the completion of a specific project, until a particular event, until one of the partners wants to leave, or indefinite?

Consider that some of the obligations, listed above, can survive the termination of the partnership relationship.

12. Signatures.

When you have filled in the template, and agreed on the terms of a mutually beneficial relationship, print and sign the document in multiples so each partner gets one. You may also wish to send a copy to the person or organization that you have designated to resolve disputes.

BETA.

This template is an object around which a kind of partnership is emerging: a partnership with all of you who are helping to develop it. Please report upon your experiences and help us to smooth the path for future partnership by emailing us at partnership (AT) connected-knowledge (DOT) net.

The Para-site in Ethnographic Research Projects

A Project of the Center for Ethnography, University of California, Irvine

While the design and conduct of ethnographic research in anthropology is still largely individualistic, especially in the way that research is presented in the academy, many projects depend on complex relationships of partnership and collaboration, at several sites, and not just those narrowly conceived as fieldwork. The binary here and there-ness of fieldwork is preserved in anthropology departments, despite the reality of fieldwork as movement in complex, unpredictable spatial and temporal frames. This is especially the case where ethnographers work at sites of knowledge production with others, who are patrons, partners, and subjects of research at the same time.

In the absence of formal norms of method covering these de facto and intellectually substantive relations of partnership and collaboration in many contemporary projects of fieldwork, we would like to encourage, where feasible, events in the Center that would blur the boundaries between the field site and the academic conference or seminar room. Might the seminar, conference, or workshop under the auspices of a Center event or program also be an integral, designed part of the fieldwork?--a hybrid between a research report, or reflection on research, and ethnographic research itself, in which events would be attended by a mix of participants from the academic community and from the community or network defined by fieldwork projects. We are terming this overlapping academic/fieldwork space in contemporary ethnographic projects a para-site. It creates the space outside conventional notions of the field in fieldwork to enact and further certain relations of research essential to the intellectual or conceptual work that goes on inside such projects. It might focus on developing those relationships, which in our experience have always informally existed in many fieldwork projects, whereby the ethnographers finds subjects with whom he or she can test and develop ideas (these subjects have not been the classic key informants as such, but the found and often uncredited mentors or muses who correct mistakes, give advice, and pass on interpretations as they emerge).

We invite graduate students engaged with ethnography at UCI and elsewhere to propose projects where the Center event can serve as a para-site within the design of specific research endeavors. This theme signals an experiment with method that is directed to the situation of apprentice ethnographers, and in turn stands for the Center's interest in graduate training and pedagogy as a strategic locus in which the entire research paradigm of ethnography is being reformed.

[Project description
for the Para-site project, UC
Irvine](#)

Para-sites: a proto-prototyping culture of method?

The pedagogy of first fieldwork projects in anthropology

The first para-site event occurred on November 5, 2006. Jesse Cheng, an advanced graduate student, studied a movement among activist lawyers to mitigate the death penalty in capital cases. A practicing lawyer himself, Cheng worked with them and in other directions that their activities suggest to study the operations of the death penalty through the para-ethnographic, descriptive-analytic work that the mitigation lawyers produce in their advocacy. He conducted his own investigation through the forms of their investigation. This is the analogous space of the classic 'native point of view', but without a compass in traditional ethnographic practices to do this kind of research that requires collaborative conceptual work. This work needs a context, a space, a set of expectations and norms, better than the opportunistic conversations that occur in just 'hanging out'. The para-site experiment is intended to be a surrogate for these needs of contemporary research that are certainly anticipated in practice but still without norms and forms of method. It encourages addressing issues

of design before a concept of design has reinvented the expectations of pedagogy in anthropological training. Undoubtedly, the para-site will take different shapes and participations between the field and the conference room in other dissertation projects. But in all cases, it is a response to the imperative to materialize collaborative forms in contemporary ethnographic research.

The following is the reaction I sent to Jesse Cheng after his event. It deals with how a form for epistemic collaboration in contemporary fieldwork might be located and clarified through the holding of a para-site event; and how such a para-site needs a 'third' --a common object or a specific community of reception to address--here high-minded debates about the death penalty--as the basis for the complicit solidarity on which collaboration might be created in contemporary contexts of research, full of causes and activist motivations.

george e. marcus

Jesse,

"That was a great first para-site effort...Just a couple of personal observations:

For me, the key to exploring 'reflexive knowledge' ethnographically among expertises and 'projects' of various sorts in the world, like death penalty mitigation, is to locate/discover where and how it is constituted para-ethnographically, so to speak--to find a 'form' amidst practices of your subjects and counterparts in ethnographic research. In our session, this moment materialized after lunch, when Russ[one of the mitigation experts] revealed in response to my question that all of this elaborate research that such experts do in arguing the penalty phase of cases is built into the advocacy process as a 'front-loaded' phenomenon in a situation of anticipation. And then at the end, Bill [Maurer, anthropologist at UCI attending the event] crucially associated this 'space' of legal research and representation with the formulation of the nature of contemporary ethnography itself as anticipatory. So this is a space of both 'fact-finding' and the imaginary, depending upon the development of reflexive knowledge. The question remains of what the role of the ethnographer/ fieldworker is in this 'found' space of para-ethnography. To describe it?, to analyze it ?, to partner with it? to encourage the development of it? to pass it on, represent it elsewhere by some sort of mediation...?

And this gets to some of the remarks of the final discussion of the event about what the stakes for anthropology are in research like this--for its own disciplinary project--and not part of helping to strategize, where the anthropologist participant might be perceived by the mitigation experts in the role of consultant (this is your 'participant observation' role, your 'blending in' identity in this kind of research). What is in this research for anthropologists themselves when they, in their own disciplinary discussions, have not really created a context to receive it as part of a significant problem that they have defined ? Well, my current solution to this problem of anthropologists themselves

making something of topics that they themselves have not developed is that work in anthropology like yours has to be designed with a 'third' primary area of reception for ethnography in mind-- that is, neither the community of anthropologists who are not prepared to discuss such work deeply, nor the subjects themselves who have their own purposes and interests in developing your work with you. So what is this 'third' arena of reception in which your work should have impact? --that is a key problem and integral responsibility of conducting ethnographic research today. It is as much a problem of ethnographic analysis as describing the work of your subjects--the mitigation lawyers--itself. It could blur into anthropology as activism, but I consider it first and foremost a theoretical and analytic problem of ethnography itself.

Well, in your case, I evoked high-minded, often high literati discourse on capital punishment that usually has no subtle knowledge of ethnographic objects/subjects (with the reflexive knowledge work that goes on in fieldwork), but cumulatively is really important in influencing broad public change in social thought about issues such as capital punishment. I think that if your work is to have effect, it has a real contribution to make at this level of high literati policy debate, and it is an explicit task of design in your project to consider this realm of reception--as itself another, 'third' site for ethnographic understanding.

So ethnography in its production is inherently dialogic where the key partners to dialogue are often not just the 'natives'. This means the very conception and design of projects of ethnographic critique should incorporate a deeply understood (itself ethnographic in nature?) dimension of intended reception outside the scene and interests of fieldwork itself... In this mode, the ethnographer sees the function of his work as mediation in very specific politics or topology of knowledge that incorporates anticipated reception.

George

Classic anthropological ethnography, especially in its development in the apprentice project/dissertation form, was designed to provide answers, or at least data, for questions that anthropology had for it. Nowadays, anthropology itself does not pose these questions. Other domains of discussion and analysis do—some academic or interdisciplinary in the conventional sense; others not—and thus it is a contemporary burden of projects of anthropological research—and especially apprentice ones—to identify these question-asking domains—also, domains of reception for particular projects of research -- as part of learning the techniques of research itself. So, particular policy or development program arenas with many players—NGOs, governments, international organizations, indigenous and social movements — define the terms of anthropological research more powerfully than does any discipline-derived paradigm or center of debate. The very parties who are the primary audiences of such research are also its subjects. Thus ethnography in its most classic inclination to make ‘subjects’ of all of its interlocutors must

develop the methodological practice today of making colleagues, fellow experts, frames of analytic discourse ethnographic subjects themselves in designing the multi-sited terrains of its research projects. Much ethnography shifts today from the study of culture or cultures to the study of knowledge-making processes, broadly conceived and diversely located, and in which its own expertise participates.

In this development, the function of the research project is not simply descriptive-analytic, to provide a contribution to an archive or debate that has been constructed by the discipline—it hasn’t. At best, contemporary anthropology provides a license and an authority to engage, not a reception itself. Ethnographic research out of anthropology thus becomes a mediation in some sense; it takes on agency. It is an experiment and a potential intervention that depends on the response of its subjects for any critical effect it might have. It sutures communities and contexts together in addressing those communities, in presenting its results in constructed contexts of collaboration as a key issue in the increasingly broader

design of research beyond mere fieldwork .

Indeed students are pursuing questions that fieldwork itself in its conventional Malinowskian aesthetics (intensive participant observation in communities of usually subaltern subjects) can't answer. And it is in the process of apprentice research—in dissertation making—that an anthropologist is most subject to these aesthetics and regulative ideals of research practice as they are imposed, not by rules of method, but by the psychodynamics of professional culture. Here the process on its own is not at all stuck, but in transition. What is missing is an articulation of these changes.

At present, as a halfway measure, what prevails is a renewed experimental ethos for the conduct of ethnographic research which makes a virtue of the contingencies deep within its traditional aesthetics, and which works very well for the exceptional talents who enter anthropological careers by embracing this experimental ethos. In producing standard work, however, the experimental ethos serves far less well—it produces more often rhetorically driven

repetitive versions of singular arguments and insights. A fuller account is needed of what kinds of questions contemporary ethnography answers, with and in relation to whom, what results it might be expected to produce on the basis of what data. This is where our discussions of prototyping cultures might help.



PLAZA DE LAS LETRAS

infra(proto)types In The Air

Presentation as a prototype itself: opens questions through the material of *In the Air*, a project which makes visible the components of the air.

A degree of skill and experience is necessary to effectively use prototyping as a design verification tool. (Wikipedia)

Prototypical methodology.

A prototype is generally object oriented, but it can be applied as well to a methodology.

In the Air has been developed mainly through international collaborative workshops, held in Madrid, Budapest and Santiago de Chile. Attended by students and professionals from many different fields, origins and ages, different strategies for production, excitement and participation have been tested.

**What is the level of adaptiveness of a prototype?
Can it be produced by non experts?**

The word derives from the Greek πρωτότυπον (prototypon), "primitive form", neutral of πρωτότυπος (prototypos), "original, primitive", from πρῶτος (protos), "first" and τύπος (typos),

"impression". (Online Etymology Dictionary)
Prototype as a re-presentation.

Visual prototypes are supposed to capture the intended design aesthetic and simulate the appearance, color and surface textures of the intended product, they don't embody the function of the final product. However, do they need to function? Can the representation be the goal in itself? The digital map of *In the Air*:

-it is a step in a collective research on how to describe the air, and it is a machine in permanent change.

-it uses a primitive form (a type?), a topography as a generic experiential codification, to describe it, and has been afterwards borrowed to describe other actions: flowers, water contamination, etc.

-Simulation versus realism.

-There is interaction and feedback from users.

Can a map be a prototype? Can a conglomerate of visualizations be a prototype?

An early model of a product which is tested so that the design can be changed if necessary.



nerea calvillo



(Collins Dictionary)

Prototype as a testing machine.

In order to bring information out of the screen into the physical world, several technological devices have been developed. However, they have not been understood as prototypes for a final product, but as testing machines or thinking devices.

What is the level of “finishness” of a P? How long does it need to last? Does it have to work?

The first example of something, such as a machine or other industrial product, from which all later forms are developed (Cambridge dictionary)

Prototype as a collection, as a process.

P is often referred to as a singular and first item. But as everything comes out of a context and is an interpretation of previous elements, a P could be understood in plural, as a collection of tests, as a research process, and whose goal is not the production of an object but the production of knowledge. An example would be the prototypes of the “Diffused Facade”, a device that, through water vapor, emits and

qualifies the air quality into the public space. What is the prototype? Is it the idea? The drawing? The first model?

How is the P evaluated and in which cultural context? What does success and failure mean?

On the one hand is invention i.e. Ideas, projects, plans, and yet also prototypes and pilot factories: in a word, all that occurs prior to the first uncertain meeting with the user and the judgment which he will pass. (Madeleine Akrich, Michel Callon and Bruno Latour, “The key to success in innovation”)

Prototypes in public.

A new question arises with another visualization system, the application for an urban screen. After several tests the project is adapted to the communicative and interactive aspects of the new media, although it would need more development. But then:

Can a prototype be shown in the public space?

Can tests be done in the public space?

Can something public be a prototype? What is the image of a prototype? What is the image





of the finished? What is the aesthetics of the prototype?

A person or a thing that serves as an example of a type. (Collins dictionary)

Collective prototypes.

A line of research in progress is the design of a kit of domestic sensors that citizens could ensemble at home to produce independent data. It becomes necessary to recognize the new type of data that they will produce, and to question its level of credibility.

Would the system become a large scale collective prototype? Can it be emergent and self organized?

A prototype is an original type, form, or instance of something serving as a typical example, basis, or standard for other things of the same category. (Wikipedia).

Infra(proto)types.

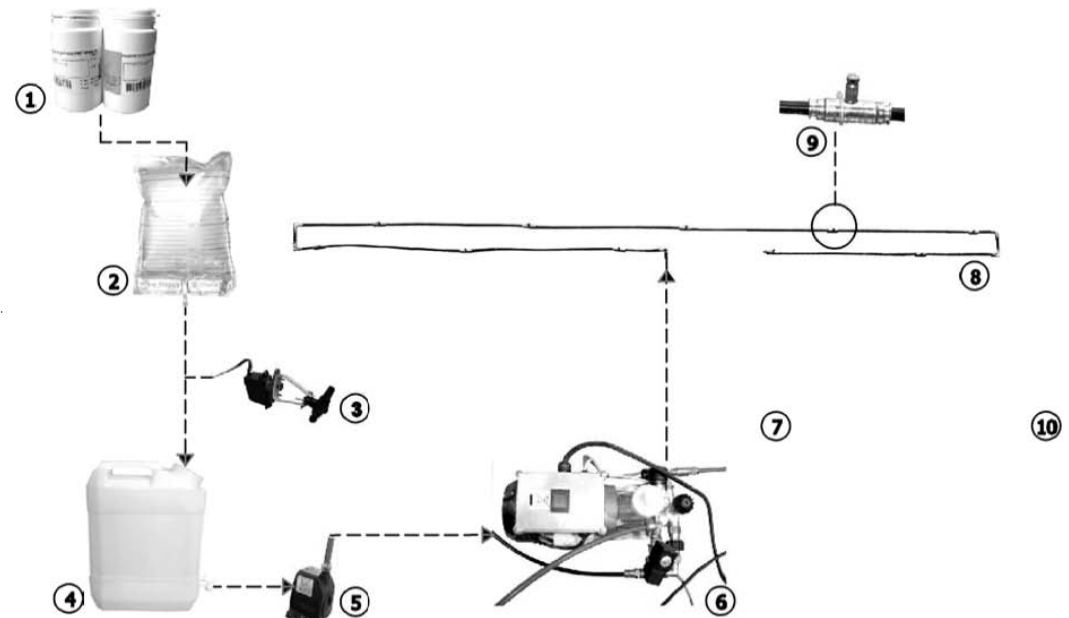
The prototypes developed in *In the Air* could be developed further, but they also have been the door of new paths of research, and the platform or instrument for other analysis:

-production of urbanistic maps.
-identification of new narratives of the functioning of the city.

-emergence of political implications of the publication of data, position of stations, etc.

If an infrastructure could be described as a system that makes possible or facilitates other things to happen, one could say that these prototypes have an infrastructural side, questioning aspects of durability, efficiency, use, accessibility, etc.

Can prototypes be infrastructures? Can Infrastructures be prototypes?





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Prototypes in Design: Materializing Futures

The two excerpts that follow are drawn from my Ph.D. research *User Assemblages in Design: An Ethnographic Study*. The thesis is an examination of the role of multiple users in user-centered design (UCD) processes and is based on a six-month ethnographic field study of designers employed to apply the principles and practices of UCD as part of the research and development efforts of a multinational microprocessor manufacturer. It is written from the perspective of science and technology studies, in particular developments in actor-network theory, and draws on the notion of the assemblage from the work of Deleuze and Guattari. The central argument of this thesis is that *multiple* users are assembled along with the new technologies whose design they resource, as well as with new configurations of socio-cultural life that they bring into view. 'Excerpt One' forms part of an introduction into an empirical study of a health and fitness prototype being designed to address the increasing prevalence of obesity in North American and Western Europe. Excerpt two is drawn from the conclusion of my thesis and points to how

prototyping, within user-centered and participatory design practices, can be understood as a material and formal method for managing the future.

Excerpt One

Before tackling the case in hand, I first want to sketch out the role of prototypes as socio-material devices for ordering the future in the present. There are many approaches to prototyping in design. Bødker and Grønbaek (1991: 198) provide a useful and critical summary of four applications of prototyping in design practice, including system requirements evaluation, complete system specification, exploratory artefacts and 'cooperative prototypes'. In brief, prototypes used in system evaluation allow for adjustments to be made to system specifications. Prototypes as complete system specification provide a full and formal description of what a future system will do. Exploratory prototypes are rapidly made and disposable mock-ups that aid the clarification of system requirements. Lastly, cooperative prototypes mediate the capacity

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of both users and designers to formulate system requirements. This approach, closely associated with the role of prototypes in PD (e.g. Ehn, 1988; Ehn & Kyng, 1991) and CSCW (e.g. Bødker & Grønbaek, 1989), challenges the conventional view that systems should be designed by expert designers. Instead, cooperative prototyping incorporates the knowledge of end-users in the design of technological systems, such as trade-union members, as discussed in chapter two. As such, prototypes act as both literary devices, where system specifications are abstractly inscribed, and as socio-material configurations that embody practices in durable artefacts (Suchman et al., 2002: 166).

Now, one particularly salient aspect of prototypes is their capacity to reify the future in the present – not least in the coding of future practices. As socio-material artefacts that are indexical to designer-user interactions, prototypes operate to durably align various interests (Suchman et al., 2002: 168). As such, prototyping can be viewed as the local and material enactment of a future system design in the present, wherein users are mobilized in the design

process as either active and ‘creative’ actors or passive instruments for system evaluation (Grønbaek, 1990: 8). Accordingly, prototypes function as performative artefacts (Danholt, 2005: 1) with which designers materially envision and construct the future in the present, which in turn works to bring about a future. That is to say, prototypes entail the management of substantive representations of the future in the present (cf. Michael, 2000: 22), where visions of the future determine the present and where the future is determined *in the present*.

According to Ehn (1988, pp. 128-129) and Mogensen (1992: 1), the central dilemma of prototyping concerns the choice between two alternative prospects: to support existing practices or to bring into being entirely new practices. Ehn characterises this as the dialectical opposition between tradition and transcendence. As a future-making practice, viewed alongside other methods of managing and coordinating uncertainty such as Foresight, risk analysis and DELPHI (De Laat, 2000), prototyping can be understood to provide its own methodological

vectors into the future. On this score, Floyd et al. (1984) describe the practice of prototyping as a 'learning vehicle' in which the specifications of a future system are determined in the present through progressive steps extrapolating the present into the future. Thus prototypes operate as heuristic artefacts that allow designers to explore socio-material alignments between future users and technology ('paths'). Bødker (1998: 112), drawing on Norman's (1991) application of the notion of *affordance* in design, argues that prototypes delineate development along a single temporal path whilst resisting others. In other words, prototypes afford particular temporal directions; however, 'breakdowns' brought about by alternative prototypes and representations of a system can force a change in direction. Danholt (2005) elaborates on these interpretations of the prototype – as heuristic, path determining and progressive – by describing how users and technology are co-constituted during the prototyping of a 'diet diary'. Here, novel diabetic subjectivities, bodies and healthcare technologies are performed through what Danholt (2005: 6), drawing

on Stengers' (2000: 148) view of scientific knowledge, refers to as 'vectors of becoming'.

To my mind, the notion of vector provides a useful way to understand the temporalities of prototypes and the patternings of technological change, especially in relation to the concept of the assemblage. A common metaphor to describe the temporality of technical objects in STS is the notion of technological trajectory. As Mackenzie points out, the notion of technological trajectory makes it possible to extrapolate growth and development into the future. Although the notion of trajectory does have appropriate connotations, for example the 'social' patterning of technological change through which a technology is constructed, such as the pre-programmed accuracy of a ballistic missile (MacKenzie, 1990: 168), like Mackenzie, however, I also find the notion of technological trajectory misleading. It suggests a mechanical understanding of technological change: one that evokes Newtonian physics and laws of motion. It also suggests, as Mackenzie points out, that change is 'natural' and self-sustaining. In short, it

provides an explanation of change that is determined by either natural laws or social conditions. Rather than letting these associations interfere with my analysis, I use a different word that doesn't carry the baggage of a natural or social trajectory. The term *vector* is useful here, and it is possible to say that in design practice, efforts and resources coalesce around a vector occasioning a patterning of technological changes, which in turn contribute to the vector or necessitate a change in direction. Moreover, vector also suggests dynamic multiplicity and directionality without reduction to a single spatio-temporal logic. For the case in hand, this is important as it allows me to speak about the manifold interests and directions that a prototype can resource, not just efforts to address the increasing prevalence of obesity in global populations. Whereas trajectory speaks of a singular development and change, vectors speak about multilinear ensembles that can follow different directions that can be broken,

subject to change and drift.¹ Lastly, mathematics speaks of *vector-objects*, which points to objects that are in continual processes of becoming that cannot be abstracted from their spatio-temporal circumstances.

Against this reading of prototyping as a socio-material technique for performing the future in the present, I examine the local enactment of the DEP as the making of multiple futures. In what follows, I examine the diversity of technologies, users and practices through which a prototype is occasioned. Invoking Ong and Collier (2005: 12), I present the case in hand as 'the product of multiple determinations that are not reducible to one single logic'. This includes the emergent temporalities of the prototype and prompts me to consider the different sociotechnical arrangements formatted in and by the prototype.

1 I am paraphrasing Deleuze's (1992: 159) description of Foucault's notion of a *dispositif*. Deleuze (ibid.: 162) argues that *dispositifs* "are composed of the following elements: lines of visibility and enunciation, lines of force, lines of subjectification, lines of splitting, breakage, fracture, all of which criss-cross and mingle together, some lines reproducing or giving rise to others, by means of variations or even changes to the way they are grouped." Thus, the notion of lines, or vectors, can incorporate various logics, movements and interactions, which might include trajectories for that matter.

That is to say, how the prototype engenders much more than a single vector into the future. My analysis therefore attends to the multiplicity of the prototype mediated by putative users, anticipated contexts of use, the prospective provision of healthcare, and research agendas in HCI, particularly ubicomp; as well as individual career paths. Finally, my attention to the DEP as a distributed and somewhat loose configuration of users, technology and discourse that is locally enacted does not rely on the explanatory power of cohesion, consistency and order. In what follows, I demonstrate how the DEP accommodates interpretation as both an artefact patterning multiple interests, resources and future visions, as well as a material-semiotic entanglement that works by virtue of being provisional, flexible and open to change.

Excerpt Two

Frequently allied to the enactment of users in the design process is the practice of prototyping and vice versa. Accordingly, this thesis is littered with

accounts of actual technologies in the making, where I have argued that prototyping is a material and semiotic form of experimentation, and where competencies and expectations are assembled in the present. To my mind this evokes Garfinkel's (1967: 57) breaching experiments in which the background assumptions of people engaged in everyday situations, especially in relation to conversational processes, were subject to breakdown and disturbance. For Garfinkel, breaching was a means to explore the fragility and maintenance of situated social order by bringing about disorder through 'deliberately modifying scenic events' (ibid.). Though, on occasion, prototypes also purposely breach situated social order, they act in a very different manner, not least through intervention in material, as well as semiotic in-situ processes. For Garfinkel, breaching acted to break down social order and disappoint people's normative expectations, which inevitably required some form of repair. Prototypes, on the other hand act to reconfigure social order in a constructive manner. They break open, rather than break down. They enthuse rather than disappoint. They

enrol, mobilize and conscript heterogeneous allies as a means to strengthen the expectations they embody, and support the competencies they promote, rather than antagonize their users. Prototypes thus redefine expectations with concrete prospects of future relations in the present that require construction, not re-construction to pre-existing norms or relations.² In this way, user assemblages, entangled with prototypes, act as socio-material scripts for the future (cf. De Laet, 2000) – artefacts which in practice embody explicit technological promises and future trajectories. However, contrary to de Laet's assertion (ibid.: 200) that futurology is concerned with 'macro-evolutions', my study of UCD (viewed as a set of techniques for managing the future) demonstrates how users traverse macro and micro scales – across populations' and individuals' situated practices, for example. In the following section, I will expand on how users criss-cross and blur these conventional sociological registers.

² See (Mann et al, 2003; Crabtree, 2004) for alternative accounts, also drawing on ethnomethodology, of prototype technologies as experimental breaching devices.

References

- Asaro, P. M. (1999). Transforming Society by Transforming Technology: The Science and Politics of Participatory Design, Critical Management Studies Conference. Manchester School of Management.
- Bødker, S. (1998). 'Understanding Representation in Design', Human-Computer Interaction.
- Bødker, S., & Grønbaek, K. (1989). Cooperative Prototyping Experiments – Users and Designers Envision a Dentist Case Record System. In J. Bowers & S. Benford (Eds.), First European Conference on Computer-Supported Cooperative Work, EC-CSCW (pp. 343-357). London.
- Bødker, S., & Grønbaek, K. (1991). 'Design in Action: From Prototyping by Demonstration to Cooperative Prototyping' in J. M. Greenbaum & M. Kyng (eds), Design at Work : Cooperative Design of Computer Systems. Hillsdale, N.J.: L. Erlbaum Associates.
- Danholt, P. (2005). Prototypes as Performative. Aarhus, Denmark: ACM Press.
- De Laet, B. (2000). 'Scripts for the Future: Using Innovation Studies to Design Foresight Tools', pp. 175-208 in N. Brown, B. Rappert & A. Webster (eds), Contested

- Futures: A Sociology of Prospective Techno-Science. Aldershot: Ashgate.
- Deleuze, G. (1992). 'What Is a Dispositif?', pp. 159-168 in T. J. Armstrong (ed), Michel Foucault: Philosopher: Essays Translated from the French and German. New York: London: Harvester Wheatsheaf.
- Ehn, P. (1988). Work-Oriented Design of Computer Artifacts. Stockholm: Arbetslivscentrum.
- Ehn, P., & Kyng, M. (1991). 'Cardboard Computers: Mocking It up or Hands on the Future' in J. M. Greenbaum & M. Kyng (eds), Design at Work: Cooperative Design of Computer Systems. Hillsdale, N.J.: L. Erlbaum Associates.
- Floyd, C. (1984). 'A Systematic View of Prototyping', pp. xi, 458 p. in R. Budde, K. Kuhlenkamp & L. Mathiassen (eds), Approaches to Prototyping. Berlin ; New York: Springer Verlag.
- Grønbaek, K. (1990). 'Supporting Active User Involvement in Prototyping', Scandinavian Journal of Information Systems, 2, 3-24.
- MacKenzie, D. A. (1990). Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance. Cambridge, Mass. ; London: MIT Press.
- Michael, M. (2000). 'Futures of the Present: From Performativity to Prehension', pp. 21-39 in N. Brown, B. Rappert & A. Webster (eds), Contested Futures: A Sociology of Prospective Techno-Science. Aldershot: Ashgate.
- Mogensen, P. (1992). 'Towards a Prototyping Approach in Systems Development', Scandinavian Journal of Information Systems, 4, 31-53.
- Norman, D. (1991). 'Cognitive Artifacts', pp. 17-38 in J. M. Carroll (ed), Designing Interaction: Psychology as the Human-Computer Interface. New York: Cambridge University Press.
- Ong, A., & Collier, S. J. (2005). Global Assemblages : Technology, Politics, and Ethics as Anthropological Problems. Malden, MA ; Oxford: Blackwell Publishing.
- Spinuzzi, C. (2002). A Scandinavian Challenge, a Us Response: Methodological Assumptions in Scandinavian and Us Prototyping Approaches, 20th annual international conference on Computer documentation. Toronto, Ontario, Canada: ACM Press.
- Stengers, I. (2000). The Invention of Modern Science. Minneapolis ; London: University of Minnesota Press.

Suchman, L, Trigg, R, & Blomberg, J. (2002). 'Working Artefacts: Ethnomethods of the Prototype', *British Journal of Sociology*, 53(2), 163-179.

the long history of prototypes

The conference organisers Alberto Corsín Jiménez and Adolfo Estalella state at the beginning of their invitation: “prototypes have acquired certain prominence and visibility in recent times”.

What I want to focus on is what the words “visibility” and “recent times” may mean in the above sentence. The problem here is that the conference description can be read to imply that the practices of prototypes and prototyping have become more prominent, widespread, and important “in recent times”. Alternatively, it can also be read to imply that prototypes have always been important, but that they merely became more visible at some (recent) point in time. If the former is true, we need a history of prototyping and to ask: why and when the increase and qualitative switch of prototyping took place? If the latter is true, it amounts to asking: why do we suddenly recognize the importance of prototyping? Obviously, a mixture or a connection between these two interpretations is possible. However, I want to propose, that it is predominantly the second, discursive interpretation that I think we can observe now. We are

not witnessing the recent invention of prototyping, but the invention of prototyping as a positive, celebratory discourse.

In a nutshell, my answer is: “prototyping” has always existed and probably, for most of human history, has been more important than its opposite, orderly science and planning. But the differentiation of the functional system of science and art and the strong differentiation between experts and lay people in high modernity has obscured existing forms of prototyping. Only since the late 1960ies, as part of the “revolt of the audience” as Jürgen Gerhards has called it (Gerhards 2001), has it become possible to acknowledge prototyping as part of western society.

Such a claim rests on a notion of prototyping as laid out in the description of the conference: prototyping is not simply understood as the development of “first forms” or “first strikes” as beta-versions of products as in industrial design, but as a more general mode of doing culture: a mode that is tentative, based on bricolage, user involvement and ongoing change and improvements of products and

michael guggenheim

practices, as “open innovation”, rather than on an expert in a closed lab who turns out a finished product to be used by a unknowing user.

The thesis, that proto-typing in this sense has always existed but was not recognized until some point around 1970, relies on a discourse that came with the establishment of modern science. It aligned on one side, in the west, with science, experts and scientific methodologies that produce working results and on the other side, with lay people, un-methodological working and bricolage. For Lévi Strauss, who introduced the term “bricolage” the social sciences, the bricoleur was still the “savage mind”, the mind of the primitive in a closed world as opposed to the openness of the “engineer” with his scientific mind (Lévi-Strauss 1962:19 ff.). But with the changes of the 1970s, these assumptions were thoroughly reversed, and the notion of prototyping as used in this conference testifies to this reversal: Now bricolage is identified with the supposed openness of lay participation, and product development in labs is imagined to be a sign of closure and narrow-mindedness. A well-known version of this

thesis is Bruno Latour’s book “We Have Never Been Modern” (Latour 1993). He argues that the modern differentiation between science and the rest of society rests on an unwarranted but constitutive assumption that science produces objective truths while other forms of knowledge do not. Latour’s focus is on the side of the experts and science: he wants to prove that they are indeed messy bricoleurs as well.

But I focus here on the crisis of *differentiation* between experts and lay people. I would suggest that the discourse on the prominence of proto-typing according to the definition given above is a direct result of the crisis of differentiation of experts and lay people and the related assumption of rational planning versus untidy bricolage.

As I will show in the case of architecture, the modern *discourse* of producing things claimed that experts—scientists, artists, urban planners, architects or bureaucrats--would arrive at the best available solution to a given problem. The role of lay people would be to adopt, adhere to and cherish these solutions. Artists would produce great artworks that define our times.

Scientists would come up with truths about the world, that bureaucrats and engineers would translate into procedures for managing organisations or states or making use of nature. Architects and urban planners would design buildings and cities that would deliver the best solutions to scarce housing and give city dwellers beautiful flats. This asymmetry between experts and lay people first needed to be established in a long process of differentiation.

But the establishment of these differentiations did not mean that there were no lay people who made drawings at home that they or their relatives liked – or often didn't. Neither did it imply that there were not a lot of people, who built or adapted their own houses according to their own tastes. Many people could invent products at home, or produce ad-hoc solutions to practical problems they encountered with a piece of wood and some nails (Arkhipov 2006).

In modernity all these processes of bricolage, home-tinkering and strange projects were largely written out of history, in favour of the great achievements of science, art, planning and organization,

in the same way as the history of technology did not want to see the continuing importance of low tech in high modernity (Edgerton 2006).

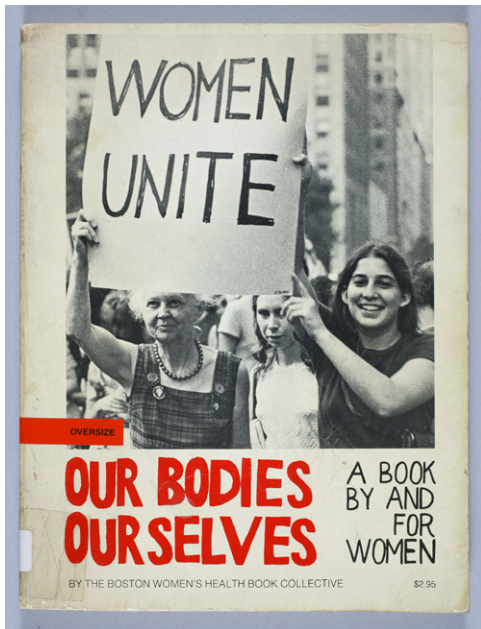
High modernity could ignore home tinkering, because the differentiation of society allowed experts to ignore and downplay lay people and tinkering. Science and the arts could still be run by elites with elitist values and a disgust of anything lay-based or popular. But the massive expansion and increased access to higher education made it ever more difficult to run societies based on experts and their pre-elaborated plans only to be inserted into the world. Prototyping is then also an expression of the "professionalizing of everyone" (Wilensky 1964). Furthermore, strong and simple asymmetries between experts and lay people make sense, as long as the knowledge and practices of the experts are manageable and easy to control. However, if they accumulate in such complexity that it becomes difficult to claim to be knowledgeable in more but one highly specialized field and at the same time, if more and more people have access to the foundations and the basics of specialist knowledge,

these simple asymmetries break down. In the late 1960s these neat separations came into crisis and the previously negative sides of the distinctions expert/lay person and planning/bricolage suddenly gained a positive value. This includes largely three processes:

First, groups of lay people asked for recognition of their achievements and in a long process western states came to embrace these achievements. For example in medicine, women discovered their bodies and contested medical knowledge (Boston Women's Health Course Collective. 1971). In architecture users revolted against the tyranny of architects and city planners (Jacobs 1962). Science shops opened to facilitate between scientists and non-scientists and criticised existing knowledge (Leydesdorff and Van den Besselaar 1987). In religion, people left the existing churches and their priests and looked for other forms of spirituality, without priests.

Initially people who were close to the experts often led these movements, but increasingly their practices were disseminated in written form to wider audiences. Buried lay knowledge based on messy

practices transformed into a kind of written and authoritative discourse. A central resource for the dissemination of such non-expert knowledge was a sprawling genre of self-help books epitomized by the "Whole Earth Catalog" edited by Stewart Brand (Turner 2006; 1968; Kirk 2007). The Whole Earth Catalog was a massive resource book that brought "access to tools" as its subtitle said, including books, that enabled non-experts to become fluent in topics such as "earth imaging", "cybernetics", "permaculture", "log houses", "metal working", "psychological self-care" and "factions" and "tactics" to name but a few. Many of these knowledges and practices were not new discoveries and did not have their origins in (elite) universities (a central exception being cybernetics and computers), but rather old. They were re-discovered and in many ways "re-imported": either traditional practices that came from the far-east or native people of the west (such as various alternative medicines and mind and body techniques) or re-imported from the rural areas of the world both north and south (as many buildings practices, such as building with stone, wood

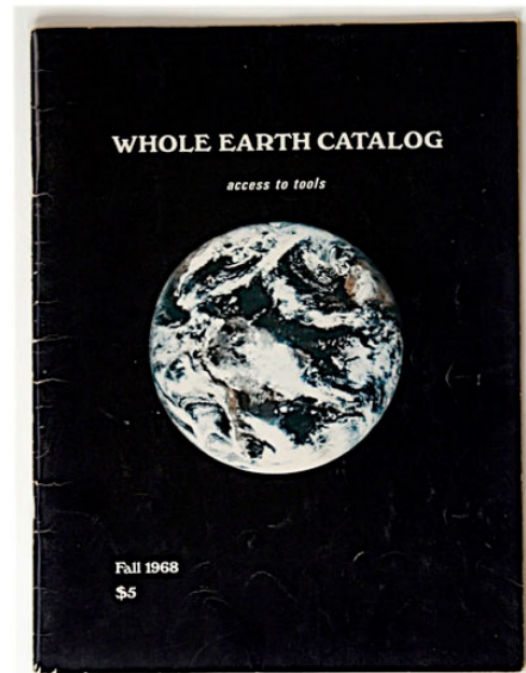


or mud). These included not only science, technology, medicine and building, but also music and art: the whole earth catalogue includes descriptions of what was then called “world music” and guides how to build various musical instruments, both traditional and modern.

Second, a lot of these practices and knowledges were, at least from the viewpoint of experts and science, messy. They include the collaboration of non-experts, outdated technologies, seemingly non-rational forms of knowledge and knowledge generation. These forms often deliberately tore down the division between experts and audience, and they even tore down the difference between performers and bystanders. For an extreme case, consider something like the actor’s lab: a group of people met with no piece to play and no instruction whatsoever. It was unclear who was a performer and what the performance consisted of and whether what was happening was a form of theatre or a religious ceremony (Grimes 1978). The actor’s lab not only undermined any idea of acting as an expert practice but of theatre as a performance

that would differentiate actors from an audience. Similarly, medical self-help books such as “Our Bodies Our Selves” erased the difference between doctor and patient by encouraging women to self-diagnosis and self-treatment.

Third, along with these processes, the experts themselves came to embrace the values of lay people. For example, architects discovered the “user” and “participative” architecture. They also discovered the fact that buildings are malleable and can be changed and defined by users. Architects and urban planners themselves sought to include users into their own concepts and procedures, thereby reclaiming power by distributing it. In art, it became fashionable to recognize that “everybody is an artist”. Arts councils started to distribute money not only for professional art, but for community oriented arts practices. The emergence of pop music, and its commercialization in that sense can be seen as a long process of establishing collaborative forms of music and the lay musician as an acceptable form of musician. In medicine, the patient became a subject that had to be heard, and whose



condition had to be discovered in a collaborative practice, rather than a body that is simply diagnosed (Armstrong 1984).

All these trends together do not result in an invention of prototyping, but in the invention of prototyping as a positive, celebratory discourse. From the 1970s onwards, it became impossible to denounce collaborative, non-hierarchic practices, lay people's knowledge in the name of rational expert based planning. Rather, even the most hard-nosed expert had to account the positive value of collaboration and multiplicities of viewpoints. The invention of "change of use of buildings" is part and parcel of this larger process and since it directly depends on the notion of building *types*, it helps to elaborate why we speak of *proto-typing*.

Literature

1968. The Whole Earth Catalog. Menlo Park: The Portola Institute.
- Arkipov, Vladimir. 2006. Home-Made: Contemporary Russian Folk Artifacts. London: Fuel.
- Armstrong, David. 1984. "The Patient's View." *Social Science and Medicine* 18:737-744.
- Boston Women's Health Course Collective. 1971. *Our Bodies Our Selves: A Course by and for Women*. Boston: New England Free Press.
- Edgerton, David. 2006. *The Shock of the Old. Technology and Global History Since 1900*. London: Profile.
- Gerhards, Jürgen. 2001. "Der Aufstand des Publikums. Eine systemtheoretische Interpretation des Kulturwandels in Deutschland zwischen 1960 und 1989." *Zeitschrift für Soziologie* 30:163-184.
- Grimes, Ron. 1978. "The Rituals of Walking and Flying: Public Participatory Events at Actor's Lab." *The Drama Review: TDR* 22:77-82.
- Jacobs, Jane. 1962. *The Death and Life of Great American Cities*. London: Cape.
- Kirk, Andrew. 2007. *Counterculture Green: The Whole Earth Catalog and American Environmentalism*. Lawrence: University Press of Kansas.
- Latour, Bruno. 1993. *We Have Never Been Modern*. Cambridge: Harvard University Press.

Lévi-Strauss, Claude. 1962. *The Savage Mind* (La pensée sauvage.). [S.l.]: Weidenfeld & Nicolson.

Leydesdorff, Loet, and (with Peter Van den Besselaar. 1987. "What We Have Learned from the Amsterdam Science Shop." Pp. 135-160 in *The Social Direction of the Public Sciences: Causes and Consequences of Co-Operation Between Scientists and Non-Scientific Groups*, vol. 11, *Sociology of the Sciences Yearbook*, edited by Stuart Blume, Loet Leydesdorff, and Richard Whitley. Dordrecht: Reidel.

Stanitzek, Georg. 1987. "Der Projektmacher. Projektionen auf eine 'unmögliche' moderne Kategorie." *Ästhetik und Kommunikation* 17:135-146.

Turner, Fred. 2006. *From Counterculture to Cyberculture*. University of Chicago Press.

Wilensky, Harold L. 1964. "The Professionalization of Everyone?." *American Journal of Sociology* 70:137-158.

the end of innovation (as we knew it)

'The future arrives sooner here.' I'm driving my car down Hillview Avenue in Palo Alto, California one evening around 1995 and I hear this assertion on U.S. National Public Radio, spoken by a Silicon Valley technologist who's being interviewed. It elicits a familiar response – a certain tightening in my stomach, a bodily resistance to being hailed into this presumption of avant-gardism, with its attendant mandate to enact the future that others will subsequently live.

These words reiterate a past, in the form of a diffusionist model of change that works, in turn, to reproduce the neocolonial geographies of center and periphery that (in the mid 1990s at least) underwrote the Silicon Valley's figuration as central to the future of everywhere. But we know now that centers and margins are multiple and relative, and futures can only be enacted in what Anna Tsing names "the sticky materiality of practical encounters – the makeshift links across distance and difference that shape global futures – and ensure their uncertain status" (2005: 1-2). These encounters and links happen within circulatory systems characterized by specific moments of

boundary-making and transversal movement, events that we are just beginning to articulate in ways other than through the simple tropes of local knowledge or global flows. Moreover, as Tsing also observes, those who claim to be in touch with the universal are notoriously bad at seeing the limits and exclusions of their own knowledge practices (ibid: 8).

In *The End of Capitalism as we Knew It* (1996), feminist economists Katherine Gibson and Julie Graham remind us of the performative effects of discourses of political economy, and the attendant dangers of a singularized 'Capitalism' as the figure for all forms of contemporary exchange. They question why it is that some terms are seen as what Judith Butler characterizes as 'regulatory fictions' (for example, the fiction of binary gender and its regulatory function in support of compulsory heterosexuality), while 'Capitalism' retains its status as structurally real (ibid: 2). It is precisely in the disjuncture between the singularity of figures and their enacted multiplicities, they suggest, that the most generative forms of interference occur. They insist that in minimizing the significance of, for

lucy suchman

example, small spaces of noncapitalist economic practices within corporations, or the multiplicity of market forms outside of them, we are in danger of retrenching the figure of hegemonic Capitalism rather than loosening its grip. 'Capitalist hegemony', Gibson and Graham propose, is at once constitutive of the anticapitalist imaginary, and a brake on its development.

So how might we apply this analysis to the figure of Innovation and associated practices? My own engagement in that project takes us back to the Silicon Valley, and more specifically the place that I'll call here, following Susan Newman's felicitous pseudonym, Acme Blackbox Research Center (ABRC), a highly celebrated site of research and development in computing.¹ My investigation begins with the question: What could it mean to take ABRC as a particular place, without presupposing it as a unique or exceptional one? What if, rather than taking such a site as central, we treat it instead as one site among others? And even in itself not as one but as many? A key move

1 See Newman 1998.

is to shift from a view of the research center as the *origin* of change, to an understanding of the center as involved in the *circulation* of technological imaginaries, artifacts and regimes of value (Appadurai 1986). Combined with an appreciation for the ways in which circulating objects are refracted in distinctive – even unique – ways through particular places, persons, and things, this shift provides the basis for a decentering of innovation. At the same time, I attend to the effects of organization members' own preoccupations with the status of ABRC as central; a status seen variously as a history, and as a tenuous present and future.

How to think about futures and future making differently is the question that motivated a broader, collaborative project titled 'Relocating Innovation: places and material practices of future making.'² The project worked through comparative analysis of three differently located sites of social, technological and political future making: an internationally recognized 'center' of technology research and development

2 This project was funded by The Leverhulme Trust, and ran from January 2007 through September 2010. See <http://www.sand14.com/relocatinginnovation/>

in Silicon Valley, California (my own study); small scale marine renewable energy enterprises on the 'remote' archipelago of Orkney, Scotland, best known as a World Heritage site for remains of Neolithic settlement (the work of my colleague Laura Watts); and the Hungarian Parliament, considered multiply as monument, administrative machine, and theatre of political representation (research conducted by Endre Dányi as part of his doctoral thesis at Lancaster University). We approach all three sites as places of future making; that is, of material practices oriented to imagining, and enacting, various modes of social reproduction and transformation. Our aim is that these cases should work as critical inquiries that can help to unseat the dominant discourse of innovation as a universal, and largely unquestioned, figure of social change. This involves, among other things, shifting questions of innovation, creativity and the new from their status as unexamined 'goods', to constitutive moments of affiliation and action within particular imaginaries of possibility and desirability. In developing our analyses, we mobilize recent refigurations of the

future not as a temporal period existing somewhere beyond the present, but as an effect of discursive and material practices enacted always in the present moment, however much those practices may be haunted by memory or animated by imaginings of things to come.³ We mean 'relocating' in the double sense, of putting future making in its place, and in that way making evident the multiplicity of places in which different, but also potentially related, future making activities occur. Through this strategy we hope to help loosen the grip of unquestioned assumptions regarding what innovation is and where and how it happens, to make room for more generative and sustainable forms of future making.

References

- Appadurai, Arjun (1997) *Modernity at large: cultural dimensions of globalization*. Minneapolis, Minn.: University of Minnesota Press.
- Gibson-Graham, J.K. (1996) *The End of Capitalism (as we knew it)*. Cambridge, MA: Blackwell.

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2005.

See for example the essays collected in Rosenberg and Harding

Newman, Susan (1998) Here, There, and Nowhere at All: Distribution, negotiation, and virtuality in postmodern ethnography and engineering. *Knowledge and Society* 11: 235-267.

Rosenberg, Daniel and Harding, Susan (2005) *Histories of the Future*. Durham and London: Duke.

Tsing, Anna (2005) *Friction: An ethnography of global connection*. Princeton: Princeton University Press.

of promises and prototypes: the archaeology of the future

"It's just we wanted, we needed something for the deployment which would kind of work in a general way. [...] So there were problems with it, it's not a kind of definitive answer, but it certainly found its uses."

Drawing on the analogy of a box filled with mementos, stored under the bed, or in the attic, in 2008 Microsoft Research developed and tested a prototype they termed the *Family Archive*. The archive as a unit looked like a small wooden desk and consisted of an interactive touch interface, which was part screen, part scanner, and part digital storage for the scanned images. Using the family archive, test users could upload pictures and scan images of objects around their home for later retrieval.

The system was intended to act as a practical tool to organize and archive family memories in a digital age. However, test users did not use the archive for organizing their photos into neat little digital boxes. They found the modes of ordering that the device offered were messy and hard to work with. But "systems work because they do not work. Nonfunctioning

remains essential for functioning."¹ We will return to this apparent design failure in a moment.

Another Microsoft Research prototype, the *SenseCam*, is a wearable badge-sized camera equipped with light, temperature, and position sensors. Based on the sensors, it determines when to take a picture and record information. The *SenseCam* was initially designed in 2004 to help people with memory loss such as Alzheimer's or amnesia. As the story goes, one morning its inventor misplaced her keys and decided to design something that would remind her of where she had left them. This prototype has generated a tremendous buzz; capturing the public's imagination as the penultimate tool to seamlessly and ubiquitously (one doesn't even have to push a button to take a picture) upgrade our often dubious memories. *Never forget a place or face again!*

*When your wetware wears out,
or you're Oliver Sacks'd in an accident,
it won't be the end of the game.*

You'll reload this blackboxed prosthetic memory,

¹ Michel Serres, *The Parasite*, trans. Lawrence R. Schehr, Minnesota, University of Minnesota Press, 2007, 79.



lina dib



Images taken by Lina Dib using Microsoft's *SenseCam*.



*restore everything as far as your last saved brain.*²

Of interest however, is not the promise of perfect memory, but the way prototypes embody ideas and hopes; and are created to debunk, complicate or reinforce those very ideas. In doing so, they often act as catalysts for fresh ones. Prototypes are tools to think with. They are particular and telling objects in that they represent at once the idealization of what is to be built as well as the rudimentary, necessarily incomplete experimental processes in which such building occurs. There is an iterative quality to the prototype that implies intrinsic plasticity and rapid exchange between the world of concepts and the world of things, a rhythmic and temporal flux that separates it from mass-produced artifacts.

Back to apparent failures: in several studies, Microsoft has shown that reviewing *SenseCam* pictures does help support patients with memory loss.³ Yet,

² AF Harold, BBC4, Oct 04, 2007.

³ Hodges, Steve, et al, "SenseCam: A Retrospective Memory Aid," presented at the 8th International Conference on Ubicomp, Orange County, California, September 16–19, 2006.

these memory-producing prototypes display certain conceptual contradictions. Firstly, the term prototype connotes speculation and the future. Yet these up-and-coming objects specialize in generating a retrievable past. They are in a sense constructing the archeology of the future. The irony however comes with the problem of organizing and contextualizing the innumerable images captured by the device. Faced with so much information, one wonders whether it would be less tedious to simply forget.

Since my participation in test uses of the *SenseCam*, I have never looked at my pictures in order to remember something I did or ate in the past (note: I'm not clinically amnesiac). However, I have enjoyed the aesthetic serial qualities of sequencing the images, and have occasionally indulged in revisiting random days from my past. The astounding volume of photographs makes it virtually impossible to predict which historical moment I will stumble upon. It feels like a little surprise every time I click on a file. When Microsoft tested the *SenseCam* with users who did not suffer memory loss, they discovered that people liked how the fish-eye lens

made the ordinary look extraordinary. Moreover, by tying the unit to a dog, they discovered the possibilities of seeing the world in new ways.

As for the *Family Archive*, users didn't use the device as storage. Instead they played with it as an interactive tabletop for scrapbooking and storytelling, cutting, pasting and compositing images. A function of these prototypes is to allow a kind of derive (drifting) as encouraged by the Situationists. In the mid twentieth century, the *Situationists International*, an influential group of artists, thinkers and activists, promoted the deliberate construction of what they called a moment of life in which one might allow oneself to go off track, to "[...] drop their usual motives for movement and action, their relations, their work and leisure activities, and let themselves be drawn by the attractions of the terrain and the encounters they find there."⁴

What the makers of both the *Family Archive* and the *SenseCam* discovered through test uses was that they were supporting more than mere collection and

recollection. Their detailed field studies revealed that they had created instruments that touched on the generational obligations of organizing the past, the desire to store things out of sight, the possibilities for making art, for telling stories, and for surprising oneself and others. Although built with a specific purpose in mind – supporting memory and providing a solution to the problem of forgetting – these prototypes' were nonetheless imbued with possibilities. Untethered from their original function, prototypes are more like receptacles for potentialities than resolute objects in the world. When treated as receptacles, they foster innovation, imagination and creativity. "Inventive thinking is unstable, it is undetermined, it is undifferentiated, it is as little singular in its function as is our hand."⁵ Like Serres' hand, prototypes have the opportunity to become what they grasp. Thus the promise of the prototype is not so much that it does what it was built to do, but rather that it breaks free of its intended function while fostering a conjectural quality and embracing multiple futures.

4 Guy Debord, "Theory of the Derive," In *Theory of the Derive and other situationist writings on the city*, Museu d'Art Contemporani de Barcelona, ACTAR Barcelona, 1996 [1956], 22.

5 Michel Serres, *Genesis*, Ann Arbor, University of Michigan Press, 1995, 34.





This year the *SenseCam* can be said to have gone from prototype to product. Production rights have been purchased by Vicon, a company specializing in motion capture.⁶ At 500£ each, they cater to academic and research markets. Vicon and Microsoft now host an annual *SenseCam* conference that brings together research on its applications. In doing so, they might be embracing what this conference refers to as a *prototype culture*, or a more 'seamful' and democratic approach to their designs,⁷ encouraging others to engage the device, propose modifications, and proactively spur on its evolution. As Guggenheim puts it, prototypes are becoming *allotypes*; or to adopt Serres' term "quasi-objects." With *SenseCams* being continually appropriated for reasons ranging from the construction of reliable, viewable histories for amnesiacs, to the creation of poetic visual narratives, the users take a leading role in elaborating their eventual incarnations.

⁶ <https://www.viconrevue.com/home.html>

⁷ Matthew Chalmers and Ian MacColl, "Seamful and Seamless Design in Ubiquitous Computing," In Proceedings of Workshop At the Crossroads: The Interaction of HCI and Systems Issues in UbiComp, 2003.



Demo for Democracy

Suppose you wanted to test the reality of democracy. Tired of claims and counter-claims, of endless debates about ideals and aspirations, and deeply unconvinced by the arguments of political philosophers, you would like to produce some real, hard facts; to verify, once and for all, that democracy really exists – that it can be successfully built and made to work.

Would it be possible, perhaps, to build a democratic prototype? A device that would demonstrate, beyond reasonable doubt or ideological skepticism, that that most fragile of political forms can truly survive in this world? Could we fabricate a *demo* to make visible, tangible and testable the viability and inner workings of democracy?

The psychologist Kurt Lewin is famous for having produced such a demo. After a prolific career at the Psychology Institute in Berlin, he fled Germany in 1933 and, towards the end of the decade, settled in Iowa. There, at the Child Welfare Research Extension, he undertook a series of experiments that culminated in the first successful fabrication of a laboratory

democracy – or, to use Lewin’s own phrase, of a “democratic atmosphere.”

Lewin’s endeavors had a clear pedagogical motivation. “If Science,” he wrote, “is going to help to establish the reality of democracy for the young American it cannot be a science dealing with words. It will have to be a science dealing with facts; with facts of a very tangible nature; with facts close to the everyday of the individual person; with facts that matter.”¹

The experimental odds for producing such material facts were, however, inauspicious. No similar experiment had ever been tried before. It was dubious that democracy could be successfully transposed into a laboratory context – it was indeed far from evident that the very enterprise made any sense at all. Transforming basic categories of psychological description – “will,” “personality,” “emotion” – into observable experimental entities had been hard enough; trying to convert a political form into an object of laboratory observation seemed brazenly naive.

¹ Quoted in R. K. White and R. Lippitt, *Autocracy and Democracy* (New York: Harper and Row Brothers, 1960): ix.

javier lezaún

“Is democracy not much too large a subject for an experimental approach?” Lewin asked himself. “Would such an experiment not presuppose having the control of a full country with cities, streets, and factories, and a hundred years to learn the outcomes of the experiment?”²

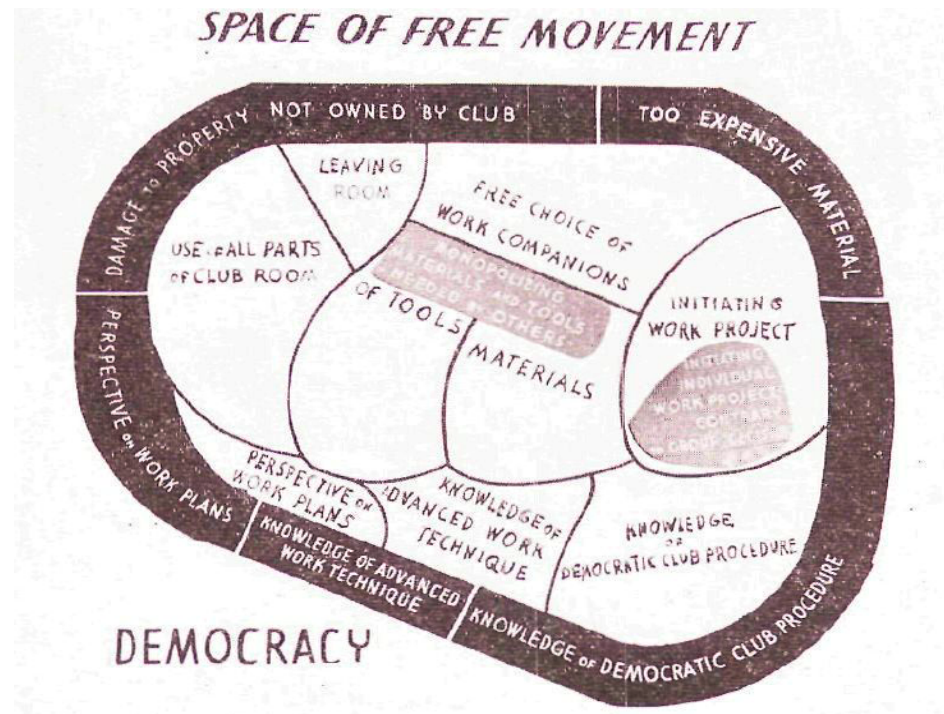
Lewin did not have control of a full country. What he did have was an unusual knack for bringing into the laboratory phenomena of ambiguous ontological status – and in the process making those phenomena tangible and visible to others.

His approach to the laboratorization of democracy followed in the lineage of the work that he and his Gestalt colleagues had conducted on apes and humans. He recruited groups of schoolchildren (age 10 to 11), gathered them in an experimental space (a makeshift laboratory created by hanging burlap curtains around a small work area), and gave them an identical task (the fabrication of theatrical masks). The children (grouped in separate ‘clubs’) were then subjected to strikingly different styles of “leadership”

² Kurt Lewin, “Experiments on Autocratic and Democratic Atmospheres,” *The Social Frontier*, Vol. IV, July 1938: 316.

(“leadership” being another of Lewin’s successful fabrications). Under an “authoritarian atmosphere”, the leader (an adult member of Lewin’s team) would dictate to the children the steps to be undertaken (one at a time, so that the overall structure of the task would remain uncertain to the participants), assign individuals to particular activities, be “personal” in his criticism or praise of the participants, etc. Under the alternative mode, what he would later describe as the “democratic atmosphere” or “democratic social climate,” decisions about the nature and trajectory of the task were made by the group, children were free to associate themselves with whomever they wanted in pursuit of their practical goals, while the leader was “objective” or “fact-minded” in his comments about the performance of the group.

Over several weeks, groups would transition back and forth from one mode of authority to another, while every aspect of the children’s behavior was scrupulously recorded by a team of psychologists “grouped behind a low burlap wall in a darkly shaded



“Space of free movement in the democratic group.” In Lewin, Lippitt, and White, “Patterns of Aggressive Behavior in Experimentally Created “Social Climates”, 1939



The group and its leader (sitting), in the democratic atmosphere. From the film "Experimental Studies in the Social Climates of Groups," Prelinger Archives.



Group working under authoritarian leadership. *Ibid.*

area.”³ The experimental protocols required an extreme intensity of observation: the children’s movements and actions were recorded at 1-minute intervals, while Lewin, hiding behind the blankets that demarcated the laboratory space, filmed the proceedings.

The results were striking. The amount of interpersonal hostility and aggression was markedly greater in the authoritarian “social climate”, as was the volume of “tension” (yet another Lewinian construct that would enjoy a long and successful career in twentieth-century psychology) and the tendency towards “scapegoating”. The changes in the groups as they moved back and forth between democratic and authoritarian atmospheres (as the experiment progressed, Lewin introduced a third political ambience: “laissez-faire”) were sudden and dramatic: “There have been few experiences for me as impressive,” Lewin wrote, “as seeing the expression in children’s faces change during the first day of

3 Kurt Lewin, Ronald Lippitt, and Ralph K. White, “Patterns of Aggressive Behavior in Experimentally Created “Social Climates,”” *The Journal of Social Psychology* 1939 (10): 276.

autocracy.”⁴

In what sense, though, were all these phenomena “visible”? For one, Lewin produced a silent film that, despite (or because of) its combination of raw footage, crude cutting, and authoritarian titling, convinced many of its viewers that the “atmospheres” were perceptible and manifestly distinct. (One sees in Lewin’s cinematography the influence of an old acquaintance of his, the Soviet film director Sergei Eisenstein). In the images of children unknowingly passing through democracy and autocracy, displaying always the “spontaneous poses” associated with different political climates, one observes the origins of a powerful genre: the candid camera trick as a way of enacting a reality far more objective than anything achievable through mere “representation”.⁵

We should thus resist the temptation to focus on the flaws and limitations of Lewin’s research (the slapdash ~~setting, the crude~~ deceptions, the schoolchildren tasked

4 Kurt Lewin, “Experiments in Social Space,” *Harvard Educational Review* 1939 4: 21-32.

5 J. Izquierdo Antonio, *Las Meninas en el objetivo: Artes escénicas y vida ordinaria en La Obra de Velázquez* (Madrid: Lengua de Trapo, 2006)

with expressing ideal-typical political categories), and see instead the incredible productivity of his approach. This potential had less to do with the fabrication of a finished version of democracy in action – the conventional notion of prototyping – than with demonstrating the fantastic notion that “pure” political forms could emerge under conditions of experimental artificiality. Lewin saw experimentation as “the deliberate creation of pure cases,” and his Iowa studies represented the application of this vision to the creation of political facts.

By demonstrating that human democratic behavior can be successfully reproduced in experimental captivity – by showing, in fact, that it can be best reproduced in experimental captivity – Lewin ushered in the era of miniature democracies. We are by now accustomed to the once bizarre notion that democracy can happen – and in fact happens more readily – in reduced spaces: in the “white rooms” of focus groups, deliberative experiments, and group-therapeutic settings. Today democracy survives in greenhouses – in artificial and experimental spaces where “climates” and “atmospheres” can be carefully manipulated. At a time when uncontained mass political participation was coming to a tragic end,

Lewin invented a format that allowed the capture and observation of pure, fleeting moments of democratic life.

charismatic prototypes

Prototyping is a charismatic figure: no sooner does one have it in mind than one begins to see it at work everywhere. This is testimony to the astuteness of the organizers' vision, and the reflexive twist of Chris's call to prototype 'prototyping' invites us to explore the 'prototyping moment' that is seized in their vision. I start from a specific theory of prototyping; namely, the classical patent law doctrine of 'reduction to practice'. Legal doctrine offers a somewhat dusty, parochial, and involuted take on prototyping, but it nonetheless develops the rare thing that is a sustained and evolved discourse on prototyping. Doctrine is not 'theory' in the sense that critical scholars might understand it, but that fact is itself salient to any reflection on our 'prototyping moment'. As I observe in my paper, the nineteenth-century theory of reduction to practice focused on the agency of the things or media to which it ascribed a prototyping function: ideas as they were held in the head, sketches, drawings and blueprints, scale models, and experimental manufactures. The

basic question in the cases was whether an inventor had used one of these material prototypes as a means of perfecting an inventive idea or, alternatively, as a means of materializing that idea as an effective instrumentality. In other words, was prototyping the final phase of experimentation with an 'idea', or as the beginning of the process of preparing a finished idea for manufacture? Depending on the answer to that question, the invention would be deemed to have been either complete or still in process. As I suggest in my paper, the legal topos of 'prototyping' negotiated the equivocations between tangibility and intangibility, between recollection and anticipation (prototypes were material anticipations of the future, material forms that recursively folded a recollection (design) into a future manufacture), and between legal schematizations and the reality that they schematized. So, what does this have to do with our 'prototyping moment'?

Abstracting from the specifics of 19th-century doctrinal theory, the interesting thing about law's

alain pottage

prototyping of prototypes is that it turned a noun into a verb, dissolved materiality into sociality, and, crucially, reconstituted material instruments as means of 'de-instrumentalizing' the social process of bringing machines into being. In the scene of a legal dispute, the form of the prototype was rematerialized as a non-instrumental translator or agencement, or as an unmotivated operator that could be used strategically, to reorganize or reinvent linearity, materiality, and collectivity. In a crude sense, this mode of agencement is still in play in contemporary (theoretical) debates about prototyping in complex (informatic) settings: crudely, prototyping is what happens when the distinction between means and ends folds into itself, so that what is means and what is end becomes an effect of interest or strategy. This gets us to the connection between an antique legal doctrine and the charismatic effect of 'prototyping'. I have heard people – as it happens, anthropologists – ask the question 'what comes next [in the theoretical life of the discipline]?' This kind of question performs, or symptomatizes, our prototyping moment. 'Prototyping' is an instance

of what has already 'come next'; it is an example of a figure that recollects theoretical operators or motifs, that abstracts them from the motivational impulse of any particular patron (proper noun or architectonic schema) and turns them into a mode of theorization which presuppose that what remains of (now old) theoretical architectures is a repertoire of operators with(in) which one is always beginning again (prototyping). The challenge is to iterate theoretical operators anew, to reinvent them as means of reinventing the worlds that scholarship conjures into being. Figures such as 'prototyping', 'ontology/ies', or 'public(s)' are charismatic because they have something like the function that patent law ascribed to its material prototypes. They selectively recollect a theoretical tradition and (recursively) fold it into a project of conceptual renewal. The point is to absorb theoretical resources that we are supposed to know already into a device that recombines those resources in the same moment as it brings them to bear on the world that is renewed through their agency.



In a sense, what comes next is what we have always done. Reflexivity is ingrained as the most basic disposition of the contemporary social scientist: scholarship is almost necessarily a mode of what cyberneticians call 'second-order observation'; of oneself, or, more usually, another. The point of scholarship is to know, if not better, then otherwise – to reframe, reanimate, enrich, recombine. The recursive form of the call to 'prototype' prototyping operationalizes this disposition – so too does my response – and in so doing makes explicit the kind of recollection that is already immanent in 'prototyping'. The attempt to turn reflexivity into recursivity, to effect what cyberneticians call the 're-entry' of one form into another, or to (re)incorporate ends in means, very nicely frames 'prototyping' as a device whose sense and effect are themselves effects of reinvention. And, by doing to prototyping what prototyping does with the worlds it elicits, it reproduces the logic of our prototyping moment. All of this may or may not help us in seizing the prototyping moment, but I, for one, propose to go on being inspired by 'prototyping' in the

sense that is advanced by the organizers.

what gets prototyped?

Dear all,

We would like to invite you to an experiment in 'prototyping' the Prototyping conference.

This experiment is part of a larger proposal by Chris Kelty. Kelty has invited all conference speakers to 'prototype' their own papers. He wants to interrogate what the 'prototyping of a conference' might look like. We are all used to conferences where people give talks, present posters, or show power point presentations. But what if we were to challenge our standard model of conferencing by making it undergo a 'prototyping' experience – what would the result look like?

Kelty's idea draws on a larger collaborative project he is part of at the Anthropological Research on the Contemporary Collaboratory (<http://anthropos-lab.net/>). As he put it to the conference speakers, "the proposal is something that the ARC group has recently been working on: the ARC Studio. It is an online publication devoted to experimenting with rapid prototyping of scholarly knowledge and

the valorization of the kind of conceptual labor that happens preliminary to conventional publications and is often eliminated from them. In its process, it aims for short timelines (1 month), short contributions (750-1000 words), found objects, collaborative editing, multimedia presentation, but with permanent archiving and formal recognition in the world of scholarly communication". In this light, he invited speakers to take part in the prototyping of the conference.

We were surprised by Chris's provocation. We thought a bit about how to proceed and have finally decided on the following. Our paper, called The Hospitable Prototype, talks about the culture of prototyping at Medialab-Prado (MLP) in Madrid. It occurred to us that an interesting approach to prototyping our own paper would be to open up an avenue for exploring and informing its own 'hospitality'.

The idea is the following:

We have published a copy of our talk in

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Medialab-Prado's wiki (http://wiki.medialab-prado.es/index.php/The_Hospitable_Prototype). It is freely accessible for all to read and comment. By inviting you all to read and interpellate our paper we hope to prompt discussion and reflection on (at least) the following two issues:

1. How does a paper 'prototype' new forms of relations between its hosts/writers and its guests/readers?

In response to this question we would like to welcome in particular comments and reactions by Medialab-Prado's own staff. MLP was host to our own ethnography, and in reciprocating the hospitality here we want to interrogate how the experience of 'prototyping' (our paper) may be co-generative of different modalities and layers of hospitality.

But the invitation is not circumscribed to MLP, however. Reading and engaging with a paper may itself be regarded as a technique of hospitality: the reader is

turned guest of one's paper; or on the contrary, she becomes one's intellectual enemy .

2. What gets prototyped in a conference's paper?

Like all forms of communication, a conference's paper says many things, but it also keeps many other things hidden. Ours is no different. The paper we have posted in the wiki is one of multiple versions. There are bits and pieces that have not made it to the final version; portions that were written over again and again; or sentences that got deleted, for stylistic reasons but also, on second thoughts, as an expression of self-censorship.

A hospitable prototype, like the one's we have encountered in MLP, should perhaps expose and problematize this economy of the academic occult. What does it do to the experience of 'prototyping' one's paper if its entrails are subjected to exposure – how much sneaking into one's secrets – how much

hospitality – can a prototype tolerate?

In what follows, then, we have selected a number of passages which were edited during writing. We want to make explicit part of what we have left aside during our writing process, presenting you with a few rough drafts of things that have been carefully reworked, things that have been cut out or routes that have been left aside. Perhaps you have something to say, an example to show, similar experiences on the difficulties of cutting things out.

Example 1: Taking care of things

Sometimes it is difficult to make attributions, to take care of the subtle nuances in writing. Below are two different openings for our paper. By exposing them we want to expose different interpretations of some facts that are difficult to conciliate.

Final version

Sometime in the spring of 2009 Medialab-Prado,

a critical art and technology centre part of the City Council's Area of Culture, was designated curator of a giant screen (140 sq. m.)

Previous version

Sometime in the spring of 2009 Madrid's City Council came up with an idea for networking and digitalizing the city's public landscape.

Example 2: Cutting out the historical context

There are always things that are relevant but there is not place for them, you have to cut them out. However, you always face the risk of leaving aside what could be relevant. This is an example of something that we preserve for a longer version of the paper but we decided not to include in the presentation.

Interactivos?

A little history is in place to help contextualise

the coming-into-being of MLP. Back in the year 2000, two local artists decided to put together a platform for the promotion of emerging digital cultures in Madrid. The initiative was picked up by the Madrid City Council which for a number of years took the programme under its wings. In the year 2006, however, a decision was taken to dismantle the programme and incorporate it into the larger institutional framework of a new City Council project.

Somewhat unexpectedly, however, the decision was reverted in 2007. The forthcoming renovation of a historic sawmill in the city's downtown is seen as an opportunity to relocate, revamp and re-launch the ML programme. The programme now flashes a new brand and a new name, MLP, which points to its location in the golden mile of Madrid's cultural quarters. The once emerging digital culture now vies for recognition next to the Prado and Reina Sofia's museums.

Internally, the decision to keep the MLP alive is seen as a decision to support a new curatorial project:

a move away from exhibition-based artistic practices to the promotion of process-oriented productions.

Example 3: Routes left aside

A trial, at the beginning of writing; you never know where it will take you; some thing that you have read and you want to make a link between your empirical data and this idea; sometimes it works, sometimes doesn't. In this case it didn't work. Here is a rough example of a route just outlined and left aside.

Enacting the city (in prototypes)

Workshops and projects have the city as their background in which experiment takes place.

In the process of prototyping, projects enact particular versions of the city and so do problematize political dimensions of it: they question environmental politics, recycling practices, consuming practices, food production and consumption

[...]

Conclusions

If hospitality is an space for ontological encounter then it is a political locus in which different versions of reality are negotiated... very often, it is the city what is at stake in Medialab prototypes.

It is therefore by being hospitable to strangers that Medialab-Prado is capable of foregrounding practices aiming at making the city a more hospitable place.

Making the city a more hospitable place is a political practice. Hospitality is based on the distinction between host and guest, between home and X. But making the city a more hospitable place means enacting oneself as part of the city, it is getting involve in the city as a home for oneself, making of the issues of the city the worries of oneself.

[...]

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