

**Planting Trees with Digital Media:
Reimagining Ecological Care**

Shruti Desai

Goldsmiths, University of London



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Declaration of Authorship

I hereby declare that this thesis and the work presented in it is entirely my own. Where I have consulted the work of others, this is always clearly stated. I also declare that no portion of this thesis has ever been submitted for assessment elsewhere.

Signed:

Shruti Desai, March 2019

Expressions of Gratitude

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Abstract

In the last decade, planting trees through the internet, social media, and web and mobile applications has become popularised as a means to express care and consideration for the earth and distant others. The advent of digital tree planting coincides with the rise of environmental marketing and agendas for sustainable development that stress the good of trees for addressing environmental change, alongside swelling interest in everyday digital technologies and consumption as mediums for environmental action.

Against this backdrop, the thesis critiques how digital tree planting campaigns are promoting ecological care at a distance. It explores how such campaigns represent trees as valuable and situate them in relations of care for others and the environment. This critical exploration develops through an investigation of how particular uses of digital media technologies are framed as facilitating planting and care. Three empirical cases are chosen, which shed light on the three overarching digital strategies that companies and organisations are employing for this purpose: (i) online shopping; (ii) apps, games, and crowdfunding sites; and (iii) cryptocurrencies, credit cards, e-cards, and e-donations. A set of corresponding campaigns is analysed for each case using multimodal ecocritical discourse analysis, which attends to trees as subjects of environmental discourse and practice.

The resulting case discussions illustrate how the promotion of various kinds of digital consumption affects the kinds of relations with, and regard for, trees that can be imagined. In so doing, it is argued, the campaigns also draw selective lines of ecological connection between contributing individuals and distant others and environments, provoking productive questions about the terms of caring that are being forged.

Intellectually, the critique unfolds through a conversation between ecological ethics and media and cultural studies, and is variously inflected by environmental anthropology, critical studies in marketing and consumption, and geography.

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Preface

A few years now since I embarked upon this research project, I am still moved to astonishment at how it found me. Whereas many doctoral studies unfold through a known interest, however capaciously and hazily delineated at first, this one was kindled by casual and unmotivated curiosity. At the time, I was in my second year of the MPhil/PhD programme, submerged in confusion and angst about the course my research was to take. I had been spending regular time roaming densely peopled areas of inner London, not looking for anything in particular, but all the while, not failing to notice how trees, giants of the city, were left behind by humans zipping past for all manner of reasons I could only speculate. On the trees themselves, I observed a number of other signs of these nonhumans' invisibility, in the form of rubbish comprising various contents, from rusted nails to years' old flyers to half-drunk fizzy energy drinks, broken liquor bottles, discarded crisps and chips, and cigarette butts. Some refuse nestled by tree trunks, while other bits had been pressed into the cracking bark and left to rot; a few discards had been smushed into the soil that was supposed to enrich the tree's root system.

'Do people *care* about trees?' I found myself silently reacting.

From that point, I cannot say how at last I came upon a website advertising tree planting through *Second Life* (<https://secondlife.com>), one of the first and still most popular 3D virtual worlds.



Figure 1 Plant virtual trees in Second Life

Source: Bletaverse Website¹

¹ <https://www.bletaverse.com/features/plant-a-virtual-tree>, last accessed May 2018.

All I recall for certain is that I had been querying the web to find out more about the then Mayor of London Boris Johnson's Street Tree Programme to plant 10,000 trees by 2012. The planting programme was one leg of a series of urban greening schemes that, alongside the pledge to plant two million trees by 2025, were being advocated as partial responses to global warming and attempts to spruce up the appearance of the city's boroughs (Press Association 2008, 2009). I remember being intrigued that the planting of so many trees was being championed when the existing trees seemed to suffer a marked degree of indifference. I wondered what the trees had to gain from these plans. And so, I suppose, I was all the more interested in the prospect of mobilising support to plant even more trees around the world through the internet. In truth, I think it is because this curiosity did not desert me, that I have grown to care about my contribution to research.



As the beginnings of my recollection suggest, my curiosity surfaced as one strictly directed at care about *trees*. Since my initial web search, I have come to appreciate how planting trees online is also about *care*, not only trees. Hence I have grown to understand how care about trees mediates, and is mediated by, other cares. The dawning of this understanding mirrors how the project's focus too has evolved, from how care about trees is promoted by digital tree planting campaigns to how these campaigns value trees for the purpose of caring for the earth and distant others. This shift in critical emphasis has encouraged the thesis to flower in directions that have pried my attention open to the significance of the various digital strategies for mediating ecological care, and how, in particular, they draw lines of ecological relation that weave selective webs of care.

I now recognise the advantages of studying *these* campaigns, for noticing, as I discuss in Chapter 1, how trees shed light on broader attitudes and practices that influence human treatment of the natural world. I invite the reader to journey with me as I share how digital tree planting campaigns offer fresh, at times troubling, but unfailingly thought-compelling, insight into the world of caring at a technologically mediated distance.

Chapter 1

Introduction: extending care to the earth and distant others through digital tree planting

Overview

In this chapter, I highlight the value of studying how digital tree planting campaigns are mainstreaming care and consideration of others and the environment. Popular digital media technologies such as social networking sites, weblogs, and mobile apps have become prime avenues for engrossing the attention of individuals as they go about their everyday life. On this account, they are also serving as the engines for rallying individuals to plant thousands to trillions of trees in order to care for the earth. Paying attention to the promotion of digital planting thus offers insight, and a means of intervening, in how care for the environment is being conceptualised and practised. At a time when many are calling for a thorough reimagining of human relationships with the natural world, the notion of care provides a distinctly enriching orientation for ecological ethics. Ethical care for human relations with tree others demands especially concerted critical attention. Unrivalled in their status as symbols for environmentalism and their material importance to human societies, as well as the spotlight of much contemporary discourse on global warming and environmental change, trees offer a privileged port of entry into learning how ecological care is being championed and how, importantly, it might be more constructively reimagined. I note how the language of care has made its way into the marketing campaigns of companies and environmental organisations as they seek to reach consumers and popularise the idea of caring by planting trees at a digitally mediated distance. I then discuss my guiding research questions as a way of clarifying the scope of the study and previewing the flow of the remainder of the thesis.

A call to reimagine ecological relations with care

Lisa Slater articulates with beautiful precision the shared human and nonhuman condition when she writes, ‘we are enmeshed in the world through modes of care’ (L. Slater 2016, 122). It is no mind-shattering fact that without care, beings on this earth could not subsist, let alone flourish; but, to realise that care is fostered through relations of dependence (Mann 2002, 349) makes a profound claim on the ethical and ecological responsibilities owed to the earth and its human and nonhuman denizens.

As an ethical value, care exacts a ‘non-normative obligation’, for ‘it is concomitant to life – not something forced upon living beings by a moral order; yet it *obliges* in that for life to be liveable it needs being fostered’ (Puig de la Bellacasa 2012, 198, author's emphasis). ‘Speaking of care’ in this way, as a ‘non-moralistic *obligation*’, as María Puig de la Bellacasa discerns, ‘denaturalizes care’ (Puig de la Bellacasa 2017, 70, author's emphasis), making it available for appreciation as an *ethically* significant choice. As Patrick Curry points out, even in the absence of choosing to live by a set of ethical principles, one’s life stands as a demonstration of one’s ethical stances, which inevitably affect others and the environment (Curry 2011, 9–10). Ethics, by this understanding, ‘is not just a theory but a track through the world’ (Rolston III 1988, 349). It involves ‘*reflection* upon our relationships and loyalties’ but is as much a ‘way of *being* in relationships, in the world’ (Peterson 2001, 20, author's emphasis).

In view of how ethics thus ‘builds out of being in the world’, Owain Jones and Paul Cloke suggest that ‘ethical patterns need somehow to trace the relational patterns which perform the world’ (O. Jones and Cloke 2002, 113, 219). Theirs is a view shared by others who urge a revisioning of the ‘ethical imagination’ (O. Jones and Cloke 2002, 106) amidst ‘global warming and the threat of radical climate change’ (Pacini 2016, 174) as the earth stands witness to the ‘sixth extinction’ of terrestrial species (Chaudhuri 2017, 144). As this ‘material’ crisis rages on, antagonising the very conditions that support human survival as well (Chakrabarty 2009, 213), a number of scholars have directed attention to the underpinning ‘ethical crisis’ (Pacini 2016, 193), calling for ‘better ways of imagining nature and humanity’s relation to it’ (Buell 1995, 2). Or, as Jones and Cloke express the point, ‘The material crisis cannot be effectively addressed unless the ethical crisis is also addressed; they are inextricably connected’ (O. Jones and Cloke 2002, 101). That is to say, how ‘the world is imagined’ and particularly, how the place of human beings ‘in nature’ is understood, influences ‘the types of behaviour and obligations’ toward the environment and nonhuman others that ‘people acknowledge and act upon’ (D. Taylor 1997, 263).

Proposals to revise ethical attitudes and practices toward the natural world are commanding increased attention as interest swells around the notion of *the Anthropocene*, a term which has been proposed for marking the onset of a new geo-historical epoch precipitated by the human footprint (Steffen, Crutzen, and McNeill 2007, 615). Scientists in favour of the term point to the immense ecological impact of human industry over the past few centuries, including the profligate use of fossil fuels, wanton deforestation, and

the rise of high-powered technological and consumer-oriented lifestyles, all of which have contributed enormously to the release and accumulation of large amounts of greenhouse gases in the earth's atmosphere (Steffen et al. 2011, 850, 854). While the adoption of the term remains a subject of debate among specialists (Carrington 2016), in the context of rewriting human relationships with nature, the term is perhaps, as Joanna Zylinska suggests, more useful as 'an ethical pointer' than 'a scientific descriptor' (Zylinska 2014, 19). Zylinska argues that even if the current era

is about "the age of man", the ethical thinking it designates is strongly post-anthropocentric, . . . in the sense that it does not consider the human to be the dominant or the most important species, nor does it [sic] see the world as arranged solely for human use and benefit. The term does however entail an appeal to human singularity (not to be confused with human supremacy), coupled with a recognition that we can make a difference to the ongoing dynamic processes taking [place] in the biosphere and the geosphere—of which we are part.

(ibid., 20)

This conceptual framing forces recognition of how humans have situated their lives in relation to nature (Chakrabarty 2009, 216) in ways both ethically and ecologically significant. Conceptions of nature, with their embedded values and assumptions concerning rightful human relations with the natural world, are inextricable from the treatment of nature, as James D. Proctor (1995) argues in unpacking conflicting views on forest protection. The understanding of nature operative in these views, he insists, 'is not just some conception of nature; it is also a conception of the ideal role of humans in nature, which ties directly into ethics' (Proctor 1995, 284).

The contemporary situation of anthropogenic (i.e. human-induced) environmental change reflects the normalisation of patterns of excessive consumption and overproduction with capitalist systems of production and exchange/ These patterns can be said to have profited from an understanding of nature as external Other (J. W. Moore 2014, 4–5), thereby enabling its exploitation through 'extractive and industrial processes' (R. Williams 1980, 80). Along these lines, Serenella Iovino stresses that the ecological crisis brings ethical reflection to bear on 'the tendency, which has progressively grown in industrialized societies, to conceive of nature as an element to be conquered and subjugated, in line with a dualistic hierarchy that opposes nature to a dominating and conquering humankind' (Iovino 2010, 36).

In refusing the instrumentalisation of nonhuman nature as a pool of less-than-human resources (Hall 2008, 177), Val Plumwood underscores the need rethink humans ‘in ecological terms’ and situate ‘non-humans in ethical terms’ (Plumwood 2002b, 8). Further to Plumwood’s proposal, I believe an ecological ethic of care offers a valuable contribution, alongside efforts to catapult human concern for nonhuman nature into an ethical register attuned to ecological inseparability and interdependency (Alaimo 2016, 1). Broadly conceived, ecological ethics attends to the subject of how humans ‘ought to comport themselves in their interaction with all of the extrahuman world’ (Kohák 2000, 2). It extends the sphere of ethical theorising to human relations with nonhuman others and the natural world (Curry 2011, 1, 11), seeing the flourishing of humans as entwined with that of the other-than-human beings ‘with whom we share the Earth’ (Hall 2011; see also Thiele 1999, xxiii, 61). With its emphasis on cultivating a ‘relational sense of self’, characterised by a ‘willingness to empathetically enter into the world of others and care for them’ (Curtin 1991, 66), the ethic of care brings a unique orientation to ecological ethics which departs from the premise of an individualised ethical agent that typifies the stance of conventional western moral philosophy (Plumwood 1991, 9). Various ethical approaches may have a part to play in a given situation (K. Warren 1999, 132), and hence, it is not my wish to situate care ethics oppositionally to any other ethical approach. In order to highlight ‘the ethical significance of care’ (ibid., 138), I would like to briefly review some of the distinguishing ethical inflections of three dominant moral traditions: deontology, consequentialism, and virtue ethics.

Care as a distinct ethical value

To begin with, deontology (e.g. Kantian ethics), anchored by the assumption of universally applicable duties and rights, endeavours to treat moral subjects as ends in themselves (O’Neill, Holland, and Light 2008, 33–34). Paul W. Taylor makes an exemplary argument for extending deontological principles to the entire nonhuman realm (P. W. Taylor 1986, 28–29, 31). From Taylor’s perspective, trees, for example, intrinsically possess a good of their own that can be thwarted or aided, so each tree deserves moral consideration: ‘We can see to it that they get adequate nourishment and moisture by fertilizing and watering the soil around them. Thus we can help or hinder them in the realization of their good’ (P. W. Taylor 1981, 200). Though well-intentioned

and resourceful in a court of law², such reasoning confines morality to a sense of duty, rendering benevolent feeling or kindness irrelevant motivations for moral action (see Singer 1995, 182–83); in doing so, it arguably misses ‘what is fundamental to human interactions with selves and others’ (K. J. Warren 2000, 121) and excludes caring from ethical interactions. As Plumwood notices, Taylor is correct to distinguish between self-indulgent or self-satisfying care and ‘genuine care or respect for the other. But Taylor is doing much more than this—he is treating care, viewed as ‘inclination’ or ‘desire’, as irrelevant to morality’ (Plumwood 1993, 167).

Utilitarianism, or consequentialist ethics, adopts a different tack, defining the greater good in terms of whether the intended ends are accomplished; in this, it applies a unifying denominator of value to inventory and factor in the relative claims of distinct moral subjects (O’Neill, Holland, and Light 2008, 14). A useful example in the current environmental context is furnished by carbon offset forestry, which has, as a chief objective, to value forests as carbon sinks, that is, in terms of the volume of net carbon emissions they subtract from the air (Haug and Gupta 2013, 78). The assumption of exchangeability in this objective reduces the exquisite richness and variability of forest life to bundles of selfsame trees. The universalising tendencies of this approach tend, furthermore, to gloss over the singular qualities of moral subjects (Curry 2011, 44), which may require situated or otherwise distinct ethical attention.

Virtue ethics, in contrast to the previous two approaches, is argued to focus on ‘the actual ethical situations, the challenges and dilemmas that confront us in lived life’ (ibid., 48). A virtue ethic approach encourages the cultivation of character traits (‘virtues’) conducive to achieving ‘the good life’ (O’Neill, Holland, and Light 2008, 41). It has been extended more recently to develop virtues that support the flourishing of the environment (Swanton 2010, 147–48), based on the reasoning that ‘that flourishing, and the meaningful relationships with that those other living things of which this care stands as an expression, is constitutive of our own [human] flourishing’ (O’Neill, Holland, and Light 2008, 120–21; see also Curry 2011, 50–51).

Although I am sympathetic to the possibility of intersecting practices of care with individuals’ ‘lifelong process of learning’ what is good (Curry 2011, 47–48, see 133–34; Halwani 2003, 182–83), an ethic of care is not fundamentally motivated by a sense of

² A famous example is the application of Christopher Stone’s argument that trees have legal standing in response to Walt Disney’s bid to transform Mineral King Valley in the Sierra Nevada Mountains into a ski resort (see Stone 2010, xi–xiv).

what is virtuous or ‘good’. It foregrounds rather the need to cultivate ‘capacities for *care*’, which are essential to life and wellbeing (Mann 2002, 364, my emphasis) and which undergird the conditions for all relationships between self, others, and the earth (Rosie Cox 2010, 127). As I elaborate in the next chapter, caring commits, in its fullest expression, to venture beyond the parameters of individual care to co-articulate with institutional and structural logics and conditions (Wood 1994, 143). Thinking in terms of care brings to the fore how ‘a more than human world’s degree of livability—degree of “as well as possible living”’, is tied to ‘the caring it manages to realize’ (Puig de la Bellacasa 2017, 70). Understood as an ethical response in this respect of taking care of conditions for living well, care is distinct in its attentiveness to relations and *their* flourishing (ibid.).

The research I will be sharing over the next six chapters is oriented, in its most fundamental sense, by a concern for the role of caring dispositions and practices in creating sustainable and flourishing human relations with trees. If care is both ‘to make a claim on life’ (L. Slater 2016, 124) and ‘to create relation’ (Puig de la Bellacasa 2012, 198), then relations of care between humans and trees are vital for burrowing into the possibilities of ecological care. Toward expanding upon this point, I would like first to clarify a few terms I use to discuss care.

Clarification of key terms

In theorising ecological care, I prefer the adjective ‘ecological’ to ‘environmental’ insofar as the former helps emphasise the condition of interrelation. Although I agree that the choice of ‘ecological’ helps in this way to eschew assumptions that are normatively fastened onto ‘environmental’, in particular, that the environment exists for human benefit (Curry 2011, 8), and that thus deny nonhumans their ‘claim to consideration’ (Kohák 2000, 3), this choice involves additional considerations. Perhaps the most directly relevant, ethically speaking, is the fact that in its early instantiations, ecological science germinated in the soil of imperialism, the victims of which were both nonhuman and human (DeLoughrey, Didur, and Carrigan 2015, 15). As an academic field, ecology’s ties to ‘militarism and empire’ have been traced to its institutionalisation ‘through radiation research that arose from US nuclear testing in the Pacific Islands’ (ibid., 16). In the contemporary context, learning from these histories can be used to consciously proceed otherwise, such that to speak of ecological ethics is to admit the relevance of scientific insights to learning how to live well with ecological others (Garrard 2012, 6; Heise 2006,

510), and to commit to ways of living that learn from, in order to diverge from, the egregious ethical policies of the past.

While conceptions of ecological care grow from an understanding of relational matrices, practices of care are undertaken with a specific recipient in mind, such as ‘the environment’, ‘the earth’, or ‘nature’. I am cognisant that in many western cultures, ‘the environment’ has tended, in the absence of qualification or context, to be comprehended ‘in its literal meaning, namely that which surrounds’ (Curry 2011, 8). References in this respect to *the* environment, have tended to imagine a single, pre-existing container of a kind that is also somehow distinct from the human organism and thus intended to refer to all that is not-human (Plumwood 2002a, 13, 17, 21). The human treatment of nature based upon this understanding has begot abominable repercussions in feeding development paved by capitalism and colonialism, as Catriona Mortimer-Sandilands (2009) stresses. As Sandilands notices, the ‘environment’ has frequently been ‘reduced to a place “out there”, the result of a dual move by which nature is simultaneously exploited as resource and mourned as vanishing space’ (Mortimer-Sandilands 2009, 6, paraphrasing Pezzullo 2008, 361). By my use of *environment*, as in ‘care for the environment’, I mean a particular region that exists through its constitutive human and nonhuman membership and the ecological dynamics that inhere between members. In the absence of locational markers, I am referring to the earth environment as a whole, and my concern extends to any environment therein.

Like ‘the environment’, ‘nature’ may also be used to serve an ethical charge to ‘deploy it [the term] otherwise’, particularly to advance non-imperialistic and non-appropriative frameworks for valuing nature (Rigby 2006, n.p.). To this end, when I am making a point about human attitudes and actions as they affect nature, I employ ‘nonhuman’ or ‘more-than-human’, depending on the nuance. When I am referring to ‘nature’ in relation to the human, as in ‘the natural world’, I mean ‘the complex of all nonhuman being and living’ (Kohák 2000, 3). I do not mean ‘a single, essential “nature” that all individuals in all places and ties would recognise as such’ (Peterson 2001, 61), but rather, a natural world that is comprehended and experienced by humans through cultural values and conditioned perceptions (M. Smith 2001, 114). In the sense meant earlier of resituating humans in ecological processes, I mean nature ‘as a larger sphere which takes in but greatly exceeds the human’, and in this sense, is ‘more-than-human’ (Plumwood 2001, 28–29).

Lastly, as much of the current eco-ethical reaction against nature as wholly other to the human is also meant to instigate a critique of anthropocentrism, I would like to clarify my non-anthropocentric position. By this I mean an openness to perceiving the natural world as having value and being worthy of care outside its utility for and appreciation by humans (Diehm 2008, 13) and further, a commitment to ‘rethinking the ontological exceptionality of the human’ (Rose et al. 2012, 2) in order to contest the assumption that humans occupy a superior or central place in the web of life forms. As I indicate later in the chapter and again in the literature review (Chapter 2) when theorising care, I believe that thinking along these lines is served well by mindfulness of inter-human lines of connection as well, which affect and are in turn influenced by human relations with nonhumans. The case of the Green Belt Movement, launched in Kenya by Wangari Maathai, is instructive. To contest the Kenyan militaristic authoritarian regime, which had been arrogating political and economic clout through felling public forest and selling it to commercial development projects, Maathai, together with mostly women from surrounding villages, covertly planted trees in a successful effort to assert the rights of women and the rural poor, reclaiming both civic agency and the means of sustenance and living (Nixon 2011, 128–37). The reclamation of rural livelihoods and human dignity is here inextricable from defying the continued rape of the land abetted by the mass and merciless slaughter of trees.

While my research centres on the promotion of care for tree others, I do not take this orientation as excluding the claims of human others in working toward ecological care, which, after all, is for the sake of nonhuman and human kinds (L. Slater 2016, 125, 127).

Learning to care for human relations with trees

Critical attention to human regard for trees stands to contribute much to the burgeoning conversation about imagining non-anthropocentrically minded care. In manifold respects, trees are ‘bound into the very centre of this recent debate’ (O. Jones and Cloke 2002, 99). For one, the development and flourishing of human civilisations may well be unthinkable without trees, and historians point out that deforestation and reforestation are patterns long predating the present ecological juncture (M. Williams 2003, xxi–xxiii, 495). But ‘[w]hile human societies have been cutting trees and clearing forests for millennia, the rate and scope of deforestation has increased dramatically’ in the last century (Dove 1994, 2), entailing ‘extensive logging and clearing of both original and

regenerated forests' on the six peopled continents (List 2000, 2). In reaction, forests and trees have become major spurs of 'ecological activism around the world' (Harrison 1992, 199), provoking both local and trans-local plantings and protests to protect forests whose trees 'have materially sustained communities over centuries' (Perlman 1994, 208). An early example is the Chipko movement of the 1970s, when Indian peasants defended their claim to the local forests against state appropriation (Guha 2006, 60–62), in part through the courageous actions of women who embraced ('chipko') the trees to situate their physical bodies between the trees and loggers (Shiva 1988, 67–77).

The significance of locally situated tree activism can also be discerned within a more expansive geographical account which places '[f]orest well-being' at the centre of concerns over 'flourishing' and the future of life 'all over the earth' (D. Haraway 2016, 73). Angie Zelter links motivations for direct action protests against tree felling in Britain and logging in Malaysian rain forests to the 'lack of respect for all living beings on our planet' (Zelter 1998, 221). She gives voice to the interlinked chains of local concerns for trees: 'The Newbury Bypass tree-dwellers received support letters from the Ogoni people of Nigeria. The activists campaigning to Save Oxleas Wood received funds from the Brazilian Rubber Tappers, who had raised money to help the Londoners save their trees in the same way as they were attempting to save theirs in the Amazon' (ibid., 230). Trees marshal here as symbols for the many livelihoods that depend on their wellbeing. No longer just 'individual entities', they serve as 'icons' of perceived threats to local as well as 'national and global environments' (O. Jones and Cloke 2002, 37, 38), and symbols for 'the regeneration of life' (Rival 1998, 16). They communicate how the 'global ecological crisis' reflects strained human relations with nature in many different places, as emblematised by humans' treatment of forests and their trees (Perlman 1994, 4).

Historically and in the present situation, the attempt to 'make amends for the damage' doled out 'to the natural world' (Mabey 2015, n.p.) is nowhere more plainly manifest than in the popularity of planting trees, ingrained in the popular 'environmental imagination' through stories such as Dr. Seuss's *The Lorax* (Maniates 2012, 45–49) and slogans such as 'every tree counts' (O. Jones and Cloke 2002, 46). Indeed, it could be argued, following Jones and Cloke (2002, 39), that '[t]he fact that the planting of trees so often constitutes the symbolic as well as the material response to environmental issues' exemplifies the pivotal positioning of trees in discourses of rightful relations between humans and nature. Chronicling recent patterns of this phenomenon, the German historian Joachim Radkau observes,

Beginning in the nineteenth century, reforestation was regarded as a categorical imperative not only by foresters, but also by many other lovers of nature. No matter what the local conditions, the trees that were used, and the cost: reforestation was always good. Today, when a country wants to demonstrate that it is doing something for environmental protection, a public tree-planting action is an especially popular choice, even when these trees have little chance of surviving and flourishing.

(Radkau 2008, 21)

Choices of whether and why to (re)fell or (re)plant forests, to conserve and exploit the homes of trees, furnish windows into the ‘cultural climate’ of how humans choose to regard trees (M. Williams 2003, 498, xxii, 167). Radkau’s comment forces a reflective pause to consider the eco-ethical implications of how trees’ ‘symbolic power casts them as prominent actors on the human stage’ (S. Cohen 2004, 1). While trees unquestionably perform innumerable useful functions for humans, ‘human utilities deriving from tree biologies’, from the ecological to the aesthetic to the economic, exist because they benefit trees first and foremost (Diehm 2008, 11), as Christian Diehm exquisitely reasons:

Living trees fix massive quantities of atmospheric carbon dioxide and release similarly massive amounts of oxygen, thereby playing a key role in regulating the chemical composition of the atmosphere and, in turn, planetary temperatures. Their extensive root systems help to control flooding and reduce soil erosion. Their presence near homes decreases energy bills and increases property values. Their fruits feed both ourselves and the wildlife that draws millions of us outdoors each year, while their spring flowers, fall foliage, and overall aesthetic grandeur lure millions more. Yet it remains that these things are as they are because they are advantageous to trees. The strength-to-weight ratio of wood, for instance, makes it an outstanding building material, but it was engineered by plants that, in competing with others for light, took the evolutionary path of growing upwards, a route which required a material strong enough to support the weight of leaves yet light enough that it would not itself bring a plant crashing to the ground.

(Diehm 2008, 11)

Rationales for, and ways of, valuing trees are even more important to consider today in the midst of a veritable boom in large-scale, worldwide schemes for *reforestation*, planting in areas once forested, and *afforestation*, planting in regions not known to have forest cover. In this context, the symbolism and material importance of trees have become elevated to planetary proportions through the popularisation of tree planting by way of record-setting initiatives like the Billion Tree Campaign (BTC),

launched by the United Nations Environment Programme (UNEP) in November 2006 when the latter announced its intention to plant one billion trees by the end of the following year. Backed by distinguished patrons Wangari Maathai, the late esteemed leader of the Green Belt Movement, and Prince Albert II of the Monaco Foundation, which funds and oversees projects for environmental protection,³ the BTC was received with such approval that one billion pledges to plant were received within five months, with the billionth tree planted not long after, in November 2007. Over the next four years, upwards of 11.5 billion additional trees were planted across 193 countries by more than 1.8 billion participants, including governments, individuals, the private sector, charities, community groups, and UNEP employees (UNEP 2008, 5, 74–75; UN 2014).⁴ In 2011, the BTC was officially handed to one of its partners, Plant-for-the-Planet, a youth-led movement inspired by the Green Belt Movement. Founded with a vision of planting one million trees in every country, the organisation upped its commitment in 2017, declaring a new goal of planting one trillion trees globally ‘to fight the climate crisis’.⁵ Several cities and governments have followed suit, pledging to plant millions more. Examples include Million Trees NYC (<http://www.milliontreesnyc.org>), the Million Tree Challenge in London, Ontario (<http://www.milliontrees.ca>), the Million Tree Project in Shanghai, (<http://srschina.org/en/project/mtp>), Australia’s 20 Million Tree Programme (<http://www.nrm.gov.au/national/20-million-trees>), and the UK’s recently announced plans for a Northern Forest comprising 50 million trees (Harrabin 2018). Not-for-profit and cross-regional campaigns have also emerged. A few of the most ambitious include Trillion Trees Western Australia (<https://trilliontrees.org.au>), the International Tree Foundation’s project to plant 20 million trees in Kenya by 2024 (<http://internationaltreefoundation.org/20milliontrees/>), and the Great Green Wall for the Sahara and Sahel (<http://www.greatgreenwall.org/great-green-wall/#great-green-wall-internal>), an undertaking involving 20 countries, the UN, and multiple tree planting organisations, to afforest a region extending the width of Africa in the mid-north of the continent.⁶

³ <http://www.fpa2.org/home.html>, last accessed May 2018.

⁴ <https://www.plant-for-the-planet.org/en/treecounter/history>, last accessed April 2018.

⁵ <https://www.plant-for-the-planet.org/en/about-us/aims-and-vision>, last accessed April 2018.

⁶ For a map of the original plan of construction, see <http://www.bbc.com/news/10344622>, last accessed April 2018.

The grand push for reforestation and afforestation is indicative of the ‘heightened political and emotional baggage now attached to trees’ (O. Jones and Cloke 2002, 46), which is becoming increasingly conveyed and generated through internet media in particular. Take the case of the Paris Agreement. In December 2015, at the 21st Conference of the Parties to the Treaty of Climate Change (COP21) in Paris, 195 nations committed to reducing greenhouse emissions to keep the global mean temperature from rising 2°C above the pre-industrial average at the end of 2100 (UNFCCC 2015, 3 [Article 2, paragraph 1(a)]). The Agreement identified afforestation and reforestation as prime strategies for carrying this commitment to fruition (UNFCCC 2015, 6 [Article 5, paragraph 2]), reinforcing the new Sustainable Development Goals passed earlier that year in September, in which Goal 15, Target 2 states: ‘By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally’ (SDSN 2012).

In honour of these commitments, Earth Day 2016 was themed ‘Trees for the Earth’, named after the online campaign launched by Earth Day Network in 2016 to plant 7.8 million trees by 2020. A special online initiative was also promoted by the network to celebrate the signing of the Paris Agreement on Earth Day, 22nd April. The initiative called on individuals to show their love for trees by uploading a photo of themselves hugging a tree, a sketch of a tree, or a message to the Earth Day website. Christiana Figueres, Executive Secretary of the United Nations Framework for Convention on Climate Change (UNFCCC)⁷, reportedly ‘launched the campaign by hugging a Poro tree in her native Costa Rica’ (UNFCCC 2016), and was quoted as affirming: ‘Planting, hugging or sketching a tree to mark the signing of the Paris Agreement and to celebrate Earth Day is an expression of solidarity, love and hope’ (Figueres, quoted in *ibid.*). A peer showing was called for in a local celebration of Earth Hour by the Singapore, Malaysia, and Indonesia chapters of the World Wildlife Fund for Nature (WWF), for which RSVPs were collected on Facebook.⁸ The call for participation on WWF-Singapore’s website

⁷ Created in 1992, the UNFCCC was officially instated in 1994 with the aim of preventing ‘dangerous anthropogenic interference with the climate system’ and steering international climate policy toward stabilising ‘greenhouse gas concentrations in the atmosphere’ (UNFCCC 1992, 9 [Article 2, ‘Objective’]). See also <https://unfccc.int/process/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>, last accessed May 2018.

⁸ <https://www.facebook.com/events/487980501404720/>, last accessed May 2018.

appealed: ‘Show the world you care about forests and join us as we form a record breaking mass yoga tree pose at 6pm’.⁹

Such campaigns are energised by the conviction that planting trees can catalyse both an ‘ecological transformation’ and a ‘moral renewal’, echoing Richard Mabey’s (2015, n.p.) synthesis of the aspirational message of Jean Giono’s enchanting fable *The Man Who Planted Trees*, which tells of a lone shepherd who plants forests of oak, beech, birch, and failed maple in southeastern France, turning deserted and desolate landscapes into homes for thousands of villagers, flowing rivers, ‘willows, reeds, meadows, flowers and some reason for living’ (Giono 2015, 4, 19, 20, 30). Similarly, the 82-page leaflet showcasing the success of the BTC opens with the following quote from former US Vice President Al Gore (see Gore 1992, 323): ‘The symbolism – and the substantive significance – of planting a tree has universal power in every culture and every society on Earth, and it is a way for individual men, women and children to participate in creating solutions for the environmental crisis’ (UNEP 2008, 4). Echoing Gore’s pronouncement, the leaflet determines that the BTC’s launch in 2007, ‘a year of “planetary emergency”, when global warming was widely recognized as the defining issue of our era’, was a symbol of ‘the readiness of people everywhere to work to protect our climate and collective home’ (ibid., 5).¹⁰ Remarking upon the show of commitment to tree planting in the wake of the BTC, the UNEP mused, ‘Humans have evolved through the Stone Age, the Bronze Age, and the Iron Age. Perhaps we are now entering the Tree Age!’ (UNEP 2008, 16).

Promoting ecological responsibility and care through digital media

A concerted attempt is being made to raise awareness of the value of trees in addressing anthropogenic environmental change, with the goal of ushering in a new ‘culture of responsibility’ (His Serene Highness Prince Albert II of Monaco, recorded

⁹ <http://earthhour.wwf.sg/en/come-join-us-for-earth-hour-2016/>, last accessed September 2016.

¹⁰ In stressing 2007 as a turning point in climate change awareness, the UNEP is likely referring to the release of the February 2007 report by the Intergovernmental Panel on Climate Change (IPCC), an international panel of scientists who furnish data and analysis to policymakers, including national governments and the UN, to facilitate climate-related decision making. See ‘IPCC Factsheet: What is the IPCC?’, http://www.ipcc.ch/news_and_events/docs/factsheets/FS_what_ipcc.pdf, last accessed April 2018. As a UN news brief summarised, the findings of the report ‘now show unequivocally that the world is warming due to human activities’ (UN 2007).

during the “5th Plenary Meeting” 2007, see 32; see also UNEP 2008, 12–13). In this section, I want to highlight the role of the internet in this process as it intersects with the marketing campaigns of businesses as the latter seek to establish their reputations and offerings as ethical and eco-conscious. Social media and mobile interfaces such as tablets and smartphones have become key access points for companies and organisations to connect with individuals and market their products and services (Meadows-Klue 2008, 248–49) and communicate what they stand for in a world where numerous social and environmental issues call out for attention. To this end, the UNEP emphasised the importance of online outreach to raise the profile of the BTC and generate interest, at a time, moreover, when social media were just bubbling into the mainstream¹¹: ‘Social networking sites recruited thousands of partners and, as a sign of our times, some 4,000 blogs promoted the idea’ (UNEP 2008, 29). Eight years on, Earth Hour 2016 reported more than 2.2 million followers across its social media channels, while 133,000 events were ‘created on digital maps’, with an additional 28,300 individuals promoting the event on their own social media pages.¹²

Today, opportunities to care for the environment through web-enabled devices abound, as a plethora of online campaigns have surfaced in the last several years in this vein ‘to encourage people to become better caretakers of the natural world’ (Büscher and Igoe 2013, 290). These opportunities are commonly marketed through web-based and mobile applications, colloquially known as ‘apps’¹³, e-petitions, social networking sites such as Facebook, digital games, and e-commerce. Some campaigns are multipurpose and

¹¹ The youth of what are now some of the most populated online spaces is startling. Facebook (<https://www.facebook.com>), for example, a social networking site with just under 2 billion active monthly users worldwide as of 2017 (see <https://www.statista.com/topics/751/facebook/>), began for students only in 2003, then opening to the public in 2004. YouTube (<https://www.youtube.com>), a video sharing site with ‘over one billion users’ (see <https://www.youtube.com/intl/en-GB/yt/about/press/>), launched a year later, with the microblog Twitter (<https://twitter.com>), which boasted 330 million active monthly users as of 2018 (<https://blog.hootsuite.com/twitter-statistics/>), following in 2006 (for a timeline of other sites, see Glenn 2012). These media are often descriptively collected under an umbrella term, ‘Web 2.0’, to indicate the paradigm of internet experience that emerged with such platforms in which content can be created, uploaded, edited, and shared by and among multiple users (Meadows-Klue 2008, 247).

¹² WWF, ‘Earth Hour 2016 Report’, <https://www.earthhour.org/sites/default/files/Earth%20Hour%202016%20Report.pdf>, see p.21.

¹³ ‘Apps’ are pared down versions of web environments (e.g. internet browsers) and are more functionally focused and thus limited in their purpose (Morris and Elkins 2015, 77).

broad in their scope, and offer quick, ongoing ways to participate. *Care2.com* and *Care2Click.com* are examples of two websites that are, as their names suggest, dedicated to facilitating care virtually. *Care2.com*, which specialises in online petitions for a range of causes, from women's rights to animal welfare, calls itself 'the world's largest community for good', where 'you'll find over 45 million like-minded people working towards progress, kindness, and lasting impact'.¹⁴

The screenshot shows the Care2.com website interface. At the top left is the 'care2 PETITIONS' logo. To the right, there are navigation links: 'START A PETITION', 'BROWSE', and 'sign in'. A 'Like 1.6M' button is also visible. The main content area features a large image of a koala in a deforested landscape. Below the image is the title 'Save Australia's Trees', the author 'by: Erin M', and the target 'Anyone who wants to support the issue'. A progress bar shows '93 SUPPORTERS' out of a '500 GOAL'. The text below the bar repeats the same information about deforestation and koalas. On the right side, there is a 'SIGN PETITION' form with fields for 'FIRST NAME', 'LAST NAME', 'EMAIL', 'COUNTRY' (set to 'United States'), and 'STREET ADDRESS'. Below the form is a section for 'WHY IS THIS IMPORTANT TO YOU?' with a text area. There are checkboxes for 'Share this petition with friends!' and 'don't display my name'. At the bottom of the form is a large green 'Sign Now' button. A 'privacy policy' link and a disclaimer are also present.

Figure 2 Example of tree protection petition

Source: *Care2.com*¹⁵

Care2Click.com, in contrast, allows individuals to fundraise for causes through clicks and shares on Facebook and Twitter, two of the most used social media sites (see p.27, fn11).

¹⁴ <http://www.care2.com>, last accessed May 2018.

¹⁵ <https://www.thepetitionsite.com/231/629/013/save-australias-trees/>, last accessed May 2018.

The screenshot below shows an example of the page that users might see for a given cause; this one is for rainforest protection.

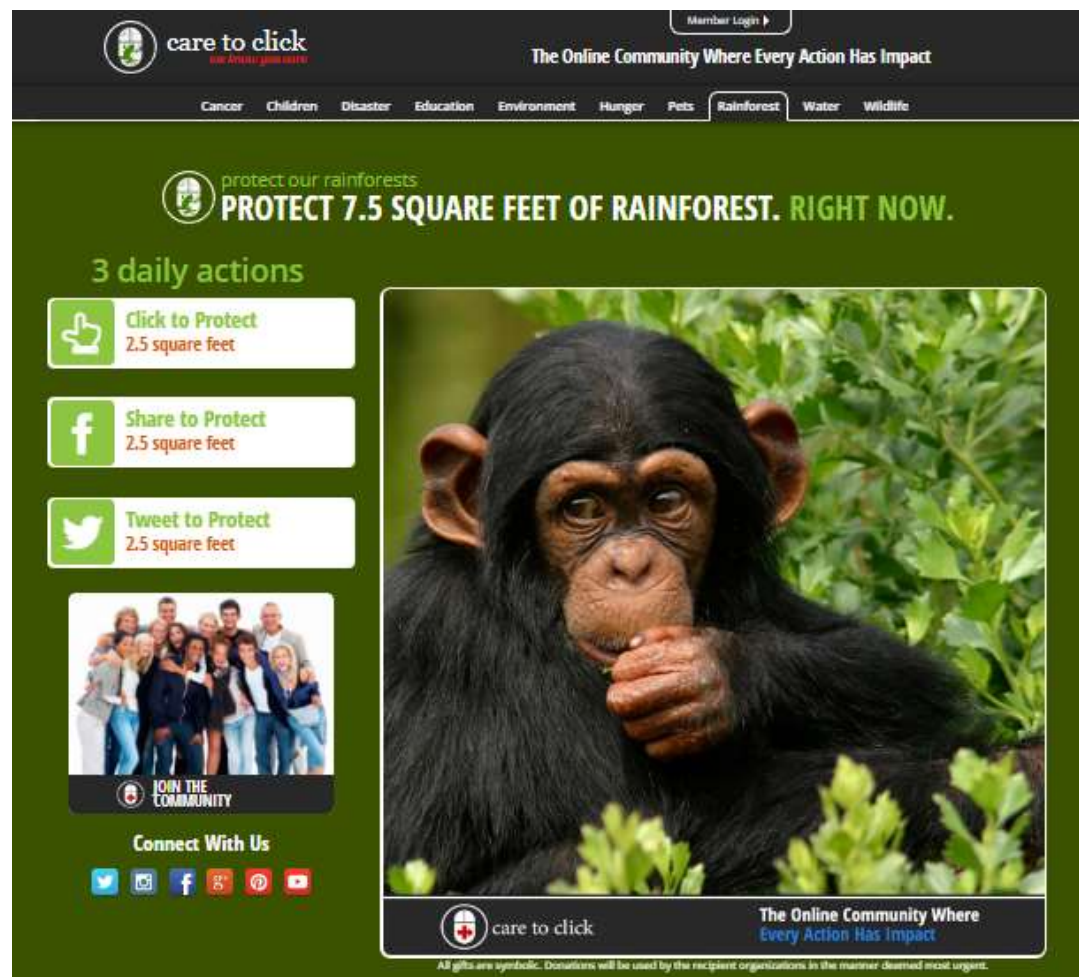


Figure 3 Take action for rainforest protection

Source: Care2Click.com¹⁶

Other types of campaigns are short-term or set to a fixed duration. For instance, to honour Earth Day 2011, a campaign was launched which urged users to text TREE to show their commitment to ‘Regreen the World’. The ‘Green World Campaign’, as the initiative was called, was premised on ‘a simple equation: five dollars = five trees’, with each text message to the advertised phone number going toward improving ‘rural communities in developing countries around the world, “one tree at a time”’ (Igoe 2013, 20).¹⁷ The

¹⁶ <http://caretoclick.com/save-the-rainforests/donate-clicks-likes-and-tweets-to-fight-climate-change-and-deforestation>, last accessed May 2018.

¹⁷ See also the campaign’s website, <http://greenworld.org>, last accessed May 2018.

equation promoted in this example features in digital campaigns as a typical way to highlight the good that results from users' participation. With the emergence of smartphones, it has become more common to link donations to apps that users can download onto their phones. In 2016, for example, the WWF ran a campaign entitled 'Apps for Earth', which generated upwards of 8 million USD from the participation of millions of users across 10 days. The campaign was financed by the software company Apple, which donated 100% of the proceeds from participating apps in the iTunes store.¹⁸

While digital technologies thus provide the architecture for conveying information and mobilising swathes of individuals, partnerships with for-profit companies lend the necessary backing for fundraising (Igoe 2010, 377). This arrangement is perhaps most established in the familiar form of online shopping, which has surfaced as a way to 'make a difference' to help 'save the earth' in the last couple decades (Gardyn 2001) through the promotion of cause-related marketing (CRM). CRM is a strategy that emerged in the 1990s in which companies associate their products and services with 'charity or non-profit organizations, primarily through the sale of commercial products with a percentage of the profits being channelled to the 'good cause' in question' (Littler 2009, 29–30). One of the best known and high profile examples of CRM is the RED campaign, started in 2006 by the singer Bono and Bobby Shriver to boost publicity and fundraising for AIDS programs in Africa (S. E. Anderson and Stage 2010, 154). In addition to attracting several endorsements by various companies, including Google and Facebook, the campaign has received sponsorship from corporate giants, such as Starbucks and Apple, which have agreed to link certain products to the cause.¹⁹

Affiliation with a good cause is one aspect of a broader promotional effort whereby companies now routinely seek to 'portray themselves as nature's caretakers: environmentally friendly, responsible, and caring' (Howlett and Raglon 1992, 55), exemplifying a trend that has been traced back to the 1980s and the emergence of discourses of 'sustainable development' within academic, business, and policy circles that languaged environmental responsibility in terms of caring (Livesey and Kearins 2002, 246, 247). Consider, for instance, the understanding of sustainability advanced by the 1987 Brundtland Report, *Our Common Future*, wherein sustainability is famously defined

¹⁸ <https://www.worldwildlife.org/pages/helping-the-planet-one-app-at-a-time>, last accessed May 2018.

¹⁹ For the lists of partners, see <https://red.org/our-partners/>. The current products on offer can be browsed at: <https://red.org/red-products/>. Both URLs last accessed May 2018.

in terms of development which ‘seeks to meet the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED 1987, Chapter 1, paragraph 49). ‘Sustainable development’, in turn, has been explicated as ‘depend[ing] on caring for the Earth’ (IUCN/UNEP/WWF 1991, 1). One year before the Brundtland Report was published, discussions were already underway for a publication that would be released in 1991, entitled *Caring for the Earth: A Strategy for Sustainable Living*, authored by the World Conservation Union (now known as the International Union for the Conservation of Nature, or IUCN), the UNEP, and the WWF. In the Foreword, the authors summarise the purpose of the report thus:

It is intended to re-state current thinking about conservation and development in a way that will inform and encourage those who believe that people and nature are worth caring about and that their futures are intertwined. It is also intended to persuade people at all levels that they can do something, or help cause something to be done, that will lead to better care for the Earth.

(IUCN/UNEP/WWF 1991, 2)

The popularisation of values of care and sustainability can be witnessed in the rise of ‘green’ and ‘ethical’ marketing, through which companies associate their brand names and offerings with environmentally responsible (Robert Cox 2006, 385) and socially conscious (Neyland and Simakova 2009, 779) practices. From reforming operational processes to renegotiating the choice of suppliers to using recycled packaging, companies vie to ‘show how much they care’ (Puig de la Bellacasa 2012, 197, emphasis removed). As Timothy W. Luke notes, ‘Many major corporations now feel moved to proclaim how much ‘every day is Earth Day’ in their shop, what a meaningful ecological relationship they have with nature, or how their products are manufactured with constant care for the biosphere’ (Luke 1993, 155).

Aims of the thesis and guiding curiosities and considerations

As means of carving out new, commercial niches for advancing and participating in charitable causes, digital media offer advantageous contact points as they are swiftly taken up by populaces for the purpose of daily communication, social interaction, information exchange, and many other ordinary activities such as shopping (Agger 2004, 17–18). This increased embedding in everyday life makes internet, social, and mobile media especially useful for tapping into the societal pulse of how ‘care’ is being conceptualised and popularised as a practice. That is, as avenues to ‘materialize “caring at

a distance”” (Fletcher 2017, 157), digital apps and other virtual activities, along with their promotional campaigns, can be understood as playing a role in negotiating and illuminating ‘the definitional practices’ that shape cultural understandings of care (Wood 1994, 143). I propose that digital tree planting campaigns more specifically can be likewise critically appreciated with respect to their function of mainstreaming and popularising understandings and practices of ecological care. My inquiry travels outward in this regard through the aid of three data-sets, which were prepared in order to plumb the promotion of digital planting and care with respect to the main digital strategies and interfaces being deployed for this purpose: (i) online shopping (Chapter 4), (ii) apps, games, and websites for crowdfunding (Chapter 5), and (iii) digital monetary forms and spending (Chapter 6). Each data-set is based on a corresponding set of campaigns run by companies that employ the respective strategies, and is discussed as a separate case in its own chapter, as parenthetically indicated. In the remainder of this chapter, I summarise the main theoretical and analytical concerns that are explored in relation to the campaigns, by way of outlining the overall aims and questions guiding the thesis.

Discussion of research questions

Considered at its broadest belt of inquiry, the thesis is interested in how companies incorporate tree planting into their digital campaigns and offerings in order to align their promotions with the cause of caring for the environment. Therefore, I launch my inquiry with the following overarching question,

How do digital tree planting campaigns promote care about the environment?

As noted in the previous section, many firms now seek to furnish evidence of, and make claims regarding, their care of the environment and the wider society and thereby promote their products and services as ‘caring’ and conscientious by extension (Livesey and Kearins 2002, 244). My interest rests upon the issue of how companies are making use of digital spaces to showcase this care, namely through associations with tree planting and claims to the value of trees. Hence, the first question I use to orient my broader inquiry is,

How are trees valued?

Trees may be assigned many kinds of values, such as dollar values corresponding to their ecosystem services, ecological values such as the tonnes of carbon dioxide they sequester, or aesthetic values stemming from a recognition of their beauty (Diehm 2008, 10–11, 13–14). In the context of promoting care, I pay attention to how trees are valued in terms of

how they are seen as taking care of human and nonhuman others, as well as social and systemic issues deemed likewise valuable and needing care, such as poverty and desertification. Importantly, the campaigns tend to operate largely, though not exclusively, on the premise of caring at a distance, as can be seen in the choice of companies' tree-planting partners. In my review of digital tree planting campaigns, I found that companies typically partner with well-established organisations with a track record of planting, often in multiple countries. The following four organisations are the most commonly cited partners among the campaigns I examined²⁰: *Trees for the Future*, an American non-profit that has planted over 50 million trees across Cameroon, Kenya, Senegal, Uganda, and Tanzania²¹; *Eden Reforestation Projects*, a California-based non-profit with projects in Ethiopia, Haiti, Madagascar, and Nepal, totalling over 197 million trees planted²²; *WeForest*, a Belgian non-governmental organisation with additional offices in France and the US, that currently plants trees in Brazil, India, Ethiopia, Tanzania, and Zambia, with previous work spanning Burkina Faso, the Philippines, Senegal, Madagascar, and Kenya²³; and *American Forests*, which has planted over 10 million trees across 50 countries and 40 million trees in the US and Canada combined, in addition to conducting community planting projects in urban districts in the US.²⁴ Certain companies may also forge national, regional, or community partnerships. For example, the Canadian apparel company tentree (which I discuss in Chapter 4), which has planted over 20 million trees, works with the City of Sudbury for Canadian planting projects.²⁵

Appreciating this geographical aspect of the research, ties in with how marketing campaigns must now contend with 'a popular sense of local and global crisis' (S. G. Davis 1997, 39), whereby lines of connection are drawn to distant beings and places, which are further situated under a common cause. The interconnection of near and far and local and global, as I discuss in the next chapter, is also a hallmark of the kinds of

²⁰ The planting partner(s) of each campaign examined in the thesis can be found in the Appendix.

²¹ <http://trees.org/wherewework>, last accessed May 2018.

²² <https://edenprojects.org>, last accessed May 2018.

²³ <https://www.weforest.org/page/projects>, last accessed May 2018.

²⁴ <http://www.americanforests.org/discover-american-forests/our-work/american-releaf>, last accessed May 2018.

²⁵ <https://www.tentree.com/pages/projects>, last accessed May 2018.

ethically minded and green digital consumption that the campaigns advertise. The contemporary interest in ‘ethical consumption’ can be characterised as one seeking ‘to embed altruistic, humanitarian, solidaristic and environmental commitments into the rhythms and routines of everyday life from drinking coffee, to buying clothes, to making the kids’ packed lunch’ (Clarke et al. 2007, 233). In one respect, this trend raises concerns about how questions of ecological responsibility should express through individual actions (Maniates 2012, 34, 50). Individual actions such as recycling and shopping are liable to accomplish little in the absence of collective and coordinated action (Cubitt 2017, 7) that takes aim at the institutional and structural frameworks of everyday life (Thiele 1999, 73). At the same time, it is important to acknowledge the fact that ‘it is largely as individuals’ or as groups of individuals ‘that we think and act’ (Attfield 2015, 1, 15).

This issue becomes newly important for critical treatment in light of its interception by the internet and ethical consumption. The way in which the internet allows for the ‘blur[ring] of boundaries between public and private’, thus promising ‘to politicize everyday life in new ways’ (Morrow, Hawkins, and Kern 2015, 527), is inseparable from the corresponding, overt linkages being asserted between the affluent economies of the global north and the poorer economies of the global south under the auspices of promoting environmental and social conscientiousness (Bryant and Goodman 2004, 347). Mehita Iqani provides a useful gloss of the distinction that I take forward to critique the terms of these relations as established by the campaigns:

Global north is a collective term for wealthy societies shaped by advanced industrial and informational capitalism; in contrast, ‘global south’ refers to those societies still classified as developing or underdeveloped. Importantly, this divide between the ‘west and the rest’ is a conceptual classification that does not obey geographical boundaries: pockets of westernized, developed (consumer) lifestyles also exist in almost every underdeveloped or developing country, as do pockets of injustice and material deprivation in every so-called developed nation.

(Iqani 2012, 1–2)

This geographical partitioning raises valuable concerns for exploring ecological care, as the present-day ecological crisis can be argued to be indebted, in no minor measure, to the systemic absence of care for the natural world by ‘the richer and mainly Western nations of the world’ (Chakrabarty 2009, 208). The carelessness that stains this appropriation and pollution of the earth is forcibly conveyed by stories of nonhuman animals—seabirds

whose innards are ravaged by plastic (Wilcox, Van Sebille, and Hardesty 2015, 11901–2)—and plants—coral reefs poisoned by acidification (K. R. N. Anthony 2016, 60–61, 66)—imprisoned in the mentality that the earth exists to secure certain humans’ flourishing. Alongside these stories sit accounts of the grossly uneven distribution of harm to human populations who suffer from this lack of care for the earth, as Richard Maxwell and Toby Miller lay bare in the case of handling electronic waste (e-waste, i.e. discards of electronic devices):

E-waste has historically been produced in the Global North—Australasia, Western Europe, Japan and the U.S.—and dumped in the Global South—Latin America, Eastern Europe, Africa and Asia. It takes the form of a thousand different, often deadly, materials for each computer. Disposal in landfills in the Global North is illegal because of risks to soil, water and workers posed by the dozens of poisonous chemicals and gases in these machines. When the U.S. recycles e-waste domestically, it often does so via its internal slave population, i.e. imprisoned people of colour and the working class.

(Maxwell and Miller 2012b, 180–81, citations omitted)

Ursula K. Heise asserts that a formidable challenge today is ‘to envision how ecologically based advocacy on behalf of the nonhuman world as well as on behalf of greater socioenvironmental justice might be formulated in terms that are premised no longer primarily on ties to local places but on ties to territories and systems that are understood to encompass the planet as a whole’ (Heise 2008, 10). This ‘economic and cultural’ reality has implications for how ecological care is rendered as extending along shared lines of concern (Curtin 2005, x), which upset traditional geographies of ‘care and responsibility’ that take as given the prioritisation of care for those who are ‘nearest’ (Massey 2004, 8–9). I am interested specifically in how these connections are represented with respect to the terms and kinds of caring that the campaigns presuppose and advertise in relation to the good of *trees*.

As such, I seek to understand how the campaigns situate trees in relations of care in order, namely, to construct and validate these relations:

How are trees situated in relations of care?

I see these relations as being forged between digital consumer and tree (e.g. through claims about the role of trees in facilitating sustainable consumption), and through this relation, between digital consumer and distant others (i.e. the target human and nonhuman beneficiaries of the campaigns’ efforts). When possible, I also attend to how these sets of

relations are refracted through the company's online account of its operating practices and principles and how trees are looked after accordingly (e.g. preferring recycled paper, support of sustainable forestry).

In taking trees as the denominator of campaigns' expressions of care, I am not simply lending analytical focus to the research project. I am, more importantly, adopting a theoretical stance regarding the status of trees as subjects of care and communication about the environment. As pathways for environmental communication, digital tree planting campaigns play both 'a constitutive and constructive role' in representing the environment (Cantrill and Oravec 1996, 2). That is, they serve to construct knowledge about the natural world, and as a result, influence attitudes and practices toward and relations with it (Robert Cox 2007, 3, 2006, 19, 22). Given their pervasive presence in western cultures, marketing and media communication about the environment impinge with great insistence on the promotion of understandings about nature (Hansen 2002, 499) and responsibilities to nature (Corbett 2006, 162), and more so as they become increasingly conveyed through 'digital and social media' (Boykoff, McNatt, and Goodman 2015, 226; Moser 2015, 403). These channels of communication therefore furnish critical cultural resources for unpacking eco-ethical stances (Buell, in Arnold et al. 1999, 1091).

In considering trees as subjects of environmental communication, I am drawing attention to how trees are subjectified: the ways they are plunged into visibility as 'the nature we wish (or are told) to protect', as, for example, 'this or that plant' (Woodard 2013, 252). As subjects of the promotion of care, trees are made to mediate relationships between humans and between humans and 'the more-than-human world' (Moser 2015, 403). The manner of this subjectification bears on the eco-ethical claim that trees can make. As Adeline Johns-Putra observes, 'our care response to any nonhuman phenomena runs in tandem with' a 'subjectivating impulse' (Johns-Putra 2013, 130); in other words, the nonhuman is defined as an other who/that is subjectified in order to facilitate human care, and ethical concern more broadly. My analysis of how trees figure as subjects of care within the campaigns, is based on the arguments I set forth in Chapter 2, which affirm the need to 'to re-encounter nature' (Tavares 2015, 52), and by extension, the tree, as an ethical subject, 'a meaningful other in its own terms' (O. Jones and Cloke 2002, 110, emphasis removed). Matthew Hall urges that against the backdrop 'of the human assault on a natural world formed largely of plant life, this ethical revision has an important role to play in stemming the anthropogenic ecological crisis' (Hall 2008, 170).

The specific revision I propose draws from environmental anthropology, plant science, and environmental philosophy to conceive of the tree other as a sentient, communicative, other-than-human being.

In Chapter 3, I develop an approach to reading the campaigns that pairs with this understanding. I work from the assumption that, as has been argued in the case of plants more generally, attuning to trees as ethical subjects ‘requires particular methodological sensitivities to their invisibility’ (Head et al. 2014, 864). I attend to and critique how trees are portrayed in ways that cast them as needing and providing particular kinds of care, based on analysis across a range of representational registers that appreciates the multimodal nature of digital campaigning. I conduct this analysis as a form of, and contribution to, ecocriticism, which is ‘especially attuned to’ the ethical interface between the human and the nonhuman emerging out of cultural formations (Cubitt 2013, 294). In reimagining ecological relations with care, ecocriticism’s analytical sensibilities serve a valuable practical commitment as well, as the point of ecocriticism is to take notice of how human relations with nonhumans and the environment are framed in order to generate ‘better, less anthropocentric metaphors’ for responding thoughtfully ‘to the current environmental crisis’ (Garrard 2012, 205).

The final curiosity I take forth concerns digital media themselves, and specifically, how their role in planting and care is represented or else implied:

How are digital media regarded in terms of planting and taking care?

Critiques of the use of digital media to act at a distance on environmental, social, and political issues often emphasise the instrumental aspect of digital technologies (e.g. Joyce 2010, vii). This tendency is most apparent in the way that digital activism is sometimes referred to condescendingly as a ‘technological form’ of ‘easy-come easy-go politics where you are only ever one click away from a petition (clicktivism)’, and in which individuals are encouraged to ‘shift focus from one issue to another or one website to another with little commitment or even thought (slacktivism)’ (Fenton 2016, 44). The presumption that ‘clicktivist acts’ are ‘fundamentally less important than their more traditional counterparts’ (Halupka 2014, 116) risks decontextualising digitally mediated activism. In some respects, digitally enabled action at a distance is coextensive with older manifestations of activism. Gloria Gómez-Diago underscores how crowdfunding, for instance, is not unique to the digital era, but rather has exploded in its capacity to amass funds and raise awareness as a result of technological media (Gómez-Diago 2016, 52).

Sometimes, the choice of digital technology can offer a campaign certain advantages, such as speed of contact, wider reach, and lower costs (Earl and Kimport 2011, 12, 14, 19). Alex Lockwood describes how the *Save Our Woods* campaign, which successfully blocked the UK government's attempt to sell off public woodlands to private parties, gained its power to mobilise and arouse the citizenry, many of whom were unbeknownst to each other, through Twitter and the circulation of e-petitions through social media (Lockwood 2013, 53–57). Britta Timm Knudsen and Carsten Stage argue, relatedly, that social media circulation 'of installations and sit-ins to defend the ancient forests of the Weld Valley in Tasmania' was essential to attract attention swiftly and 'to lengthen the effect' of the political artistic performances (Knudsen and Stage 2015, 100, 94).

While I am critical of the assumption that the internet is a panacea for societal problems (Morozov 2013, vix–vv, 5–6, 15–16), and equally, that digital technology is 'a magic wand' that can 'solve conservation problems at a stroke' (Arts, van der Wal, and Adams 2015, 669–70), I approach this critique by noticing how digital planting campaigns lend new, altered form to caring practices and considering whether these forms are ones worth working toward. I consider how companies' and organisations' engagement with the potentials of 'web 2.0 and social media spaces' to reimagine and rearticulate human-nature relations (Büscher 2014, 734) applies duly to representations of the environment through these spaces (T. Miller 2016, xiv) as it does to the ecomaterial effects of championing media technologies for these ends (Maxwell and Miller 2008, 331, 334). While focusing on the analysis of campaign representations of digital technologies as means of planting trees and taking care of the environment, I fold in a concern for these material ramifications in exploring the eco-ethical implications of how digitally mediated care is made to appear ecologically efficacious. Mapping the eco-ethical significance of digital 're-imaginings of human-environmental relationships' entails, to this end, pursuing new orientations toward digital media technologies 'such as Twitter, Facebook, and blogs as much as' toward the natural 'environments themselves' that these technologies are designed to act on and mediate relations with (M. K. Goodman et al. 2016, 681). That is, rethinking 'the media in environmental terms' opens into the way that technological 'mediation is an important way we are in the world' (Jørgensen 2014, 110), configuring relational interfaces between humans and the more-than-human world (Zylinska 2014, 72–73).

Toward a constructive critical account of the digital promotion of ecological care

In the next chapter, I expand upon the issues raised in relation to the orienting research questions, to assemble a framework for engaging with intellectual concerns pertaining to my exploration of digital planting campaigns' promotion of ecological care. Chapter 3 follows along the lines sketched above, to formulate a methodological approach to this exploration. In Chapters 4, 5, and 6, I discuss this exploration as it took shape in relation to the three cases indicated above. In each of these three empirical chapters, I expand upon the digital strategies, giving examples, and situate the case discussion within the broader context of the uptake of these strategies for promoting ecological care.

The thesis concludes in Chapter 7 by reflecting on the three cases with an eye toward extending eco-ethical critique of the digitally mediated promotion of care. I furnish suggestions for further developing the present research in directions that take into account some of the limitations of this project while affirming the possibility of rethinking promotional and digital articulations of care in ways that politicise, complexify, and interrogate how care is being promoted thus. In turning to digital tree planting campaigns as a basis for articulating possibilities for imagining caring human-tree relations, I do not wish to uncritically support such attempts to facilitate and popularise care. Rather, I acknowledge that consumption, marketing, and increasingly, digital media, are infrastructuring elements of contemporary life. It is important not to alienate those companies that are thoughtfully seeking to make change (Curry 2011, 235) and that must, in so doing, 'compete against those organizations that have a vested interest in maintaining current levels of environmental exploitation' (Prothero and Fitchett 2000, 51). As I assert in Chapter 3, when clarifying my analytical posture toward digitally mediated consumption and care, I endeavour toward a critical, yet constructive, account of the campaigns based on the view that promotional (Benton Jr. 2015, 238, 244, 255) and cultural (Rust, Monani, and Cubitt 2016, 4) practices and texts can be designed and redeployed toward more eco-ethically desirable outcomes. Digitally mediated care and consumption stand to offer a few strategic, but far from the only, probes into how care for the natural world and earth others is, and might be differently, imagined and practised. In contemporary consumer and technologically driven societies, they offer instrumental and rich starting points for encountering, and learning to attend to, an

incomprehensibly and irreducibly complex architecture of ecological relations knitted together with care.

Chapter 2

Digital mediations of planting and care: a theoretical framework

Outline

This chapter contours the theoretical shape of my exploration of the promotion of ecological care by digital tree planting campaigns. It begins by establishing my understanding of care as an ecological ethic grounded in ecofeminism and further developed through kin insights from plant science and environmental anthropology to appreciate tree others as other-than-human subjects of care. I include here a consideration of how inter-human relations and societal contexts impress upon human-tree relations. I then address issues that bear more specifically on caring for trees and others in digitally mediated environments. I suggest that understanding the various ethical mediations that inflect digital caring, invites a reckoning with how digital technologies are not merely tools for provoking individuals into action and attracting attention to a cause, but also, and vitally, vehicles for inhabiting the world and being in relationship with others. Finally, I consider the eco-ethical ramifications of caring at a distance by means of online consumer activities. Here I engage with literature on ethical consumption and green marketing, focusing on how consumer shopping and spending, virtual representations of others and environments, and promotional and commercial discourses on the value of the natural world, participate in moulding the terms of ecological care.

Care as an ecological ethic

My conceptualisation of care as an ecological ethic can be elucidated by way of critical ecological feminism ('ecofeminism'). Ecofeminism widens the scope of feminist critique—distinguished by a concern with patriarchal legacies of violence against the minds and bodies of women, racial and ethnic minorities, and the poor—to contend with related consequences for the natural world and nonhuman lives (K. J. Warren 1990, 127, 2000, 62–63). It strives to pick apart and intervene in unjust and neglectful relations with the earth and earth others by paying particular attention to how dualisms such as man/woman and human/nature take shape through practice and discourse in a way that legitimates and normalises the domination of those beings deemed inferior or lesser (C. J. Adams and Gruen 2014b, 3, 7; Plumwood 1993, 33, 43, 48–55). In this pursuit, ecofeminism interrogates the sedimentation of humanist and parochial privilege through categories including 'race, class, gender, sexuality, species, age, ability, [and] nation'

(Gaard 2011, 33), thus highlighting ‘intersectional’ linkages in the naturalisation of appropriative attitudes toward, and treatment of, human and nonhuman others. The Green Belt Movement mentioned in Chapter 1 is one such example of an ‘intersectional environmentalism’ (Nixon 2011, 138).

The connections the movement highlights among gender, political and economic dynamics, and environment, exemplify the intertwining of systemic and day-to-day situations of care. The interfacing of individual and societal care practices is a recent development in theorisations of care that have sought to evolve from Carol Gilligan’s formulation of care in the 1970s (Wood 1994, 116).²⁶ Gilligan’s understanding of care was based on interviews she conducted in a US context with women who were considering abortion, undergraduate students who had dropped out of a course on moral and political choice, and individuals aged 6 to 60 years old who were asked to comment on hypothetical moral scenarios (Gilligan and Goldberg 2000, 702). From these interviews, she concluded that women’s approach to moral dilemmas tended to exhibit sensitivity to contextual constraints and the peculiarities of the others involved, whereas men favoured moral responses rooted in universal notions of rights and justice (Gilligan 1993, 19, 146–47). Although Gilligan’s contribution was formative in foregrounding the relational and situational dimensions of ethical decision-making, it left unproblematised the historical and social naturalisation of women as carers (Tronto 1987, 647; Wood 1994, 114).

Subsequent theorisations of care have done more to guard against feminising care (e.g. Cuomo 1998, 198; Merchant 1996, 222), and have widened debate and application beyond women’s issues and situations (MacGregor 2006, 58–65). An important outcome of these theoretical revisions has been the politicisation of personal acts of caring by contending, on the one hand, that ‘[p]ersonal lives are deeply affected by what societies define is of relevance and value’ (L. Slater 2016, 123), and on the other, that mundane contexts of environmental care increasingly command political status, with respect to how, for example, ‘our ordinary actions of energy consumption—(such as the vehicles we

²⁶ This theoretical evolution is instructive in the case of digital tree planting campaigns, which levy expectations upon consumers in the global north to feel and act in solidarity with those human others in poorer countries whose forests are overstretched and compromised for reasons not disconnected from the routine workings of the consumer economy. I return later in the chapter to address this issue in terms of the politics of framing and communicating this ethical obligation to online consumers. Here, I want to explain first how thinking on care has moved in this direction.

drive, how well we insulate our homes) are linked to 'oil drilling politics' and the continued demand for petrochemically derived consumer practices and products (Lawson 2007, 6). Fighting thus for the political representation of issues and subjects in need of care, politicises individual acts for a purpose that should be distinguished from the degeneration of care into self-interest (L. Slater 2016, 123, 127). A widely written about exemplification of the latter kind of caring draws from Michel Foucault's writings on 'care of the self' in which Foucault spoke of an ethic of self-cultivation that manifests as a regimen of refining one's bodily, psychological, and public expressions (Foucault 1986, 3, *The Care of the Self*: 43–45). Whereas Foucault gives an account here of the 'art of existence' in ancient Greece which was designed to support self-flourishing through methodical and thoughtful attention to one's habits of thought and behaviour and choice of activities and associations (Foucault 1986, 3, *The Care of the Self*: 43, 51–53; see also Kavka 2015, 109–10), his writings have influenced debate on how the rise in western societies of neoliberal modes of governance, reproduces the idea of care of the self as an ethical injunction to take responsibility for one's life choices (Allon 2011, 208). Neoliberalism encompasses a set of institutional practices that, among other effects, support the privatisation of state-funded services, turning citizens into consumers, who must then become self-governing subjects charged with caring for themselves by exercising choice within an array of commercial markets (Ouellette and Hay 2008, 472).

An investment in one's personal wellbeing has a foundational place in an ethic of care (Halwani 2003, 183), helping ensure care for others does not turn into a self-effacing endeavour (Whyte and Cuomo 2017, 242). Indeed, the flourishing of the self and the other, and thus care for oneself and the other, are seen in this view as entwined and mutually supportive (Plumwood 1993, 154–55). To the extent that concerns about the wider world and the environment are tied to individual actions and figured in terms of the individual's ethical empowerment or achievement (Potter 2011, 121), or else, are overshadowed by anxieties and decisions over one's *own* life, a neoliberal orientation to ethical accountability as obsessive self-care seriously misconstrues ethical caring for others and the environment. An ethic of care places special emphasis upon the notion of a 'self-in-relation' (Plumwood 1993, 142), where 'the goal of the flourishing of earth others and the earth community' is 'primary' and is pursued by a self who 'respects or cares for those others for their own sake' (*ibid.*, 154–55). In aspiring to reconfigure ecological politics and practices as relational undertakings, an ecological ethic of care takes as its principal motivation, the fostering and stewarding of connections to the earth and earth

others; it is not ‘primarily directed to the ethical edification of human selves’ (Puig de la Bellacasa 2010, 167). In view of this emphasis, politicising the ethic of care stands to considerably enlarge the ambit of human care to attend to social and environmental concerns both local and extra-local in scope (Curtin 1991, 65–68). In their oft-cited seminal conceptualisation of care in this vein, Berenice Fisher and Joan Tronto propose that care be considered ‘*a species activity that includes everything that we do to maintain, continue and repair “our world” so that we can live in it as well as possible. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web*’ (Fisher and Tronto 1990, 40, authors' emphasis).

While this definition does not confine the recipients of care to humans (Rahder 2014, 376), it could be developed further to admit human dependence on nonhumans (e.g. Mann 2002, 358). In this way, too, the human as the locus of caring exchange could be usefully scrutinised (L. Slater 2016, 124), as Puig de la Bellacasa revises, ‘care is everything that *is* done (rather than everything that “we” do)’ (Puig de la Bellacasa 2017, 161, author's emphasis). Analogously to how more recent writings on care venture to defeminise care, a move away from humanist framings of care is needed to comprehend the place of human interests in a *more-than-human* environment (King 1991, 83). Fisher and Tronto’s explication of care as a distinctly human activity concerned with ‘our’ (human) world, environment, bodies, and selves, is reflexively oriented toward human wellbeing as the consummation of a vision of care.

The admission of nonhuman others as ‘member[s] of the moral community’ and a cause for care involves challenging the human as the measuring rod of ‘moral evaluation’ (King 1991, 87, 83), working toward an ethic of care for the environment and other beings ‘that is not ultimately self-referential’, as well as being willing to consider ‘human welfare’ as one good among many (nonhuman) others’ goods (ibid., 83; see also Plumwood 1999b, 72–73). In the next section, I place ecofeminist literature on care in dialogue with scientific research on plants and environmental anthropology to destabilise lines, and the accompanying hierarchical value judgments, that are commonly asserted to distinguish between humans and nonhumans (Philips and Rumens 2016, 2), in this case, between humans and plants and trees. I show how this ethical and epistemological intervention foregrounds the important and challenging work of developing the sense of a ‘self-in-relationship’ (Plumwood 1991, 9) which sees the tree other as part of the broader community of beings engaged in ethical discourse and caring exchange (Plumwood 2002b, 169) wherein the tree is affirmed and appreciated in its otherness and agency.

Trees as other-than-human ethical subjects

Ecofeminist ethics of care hold that approaching nonhumans as ethical subjects involves considering them as others ‘whom one can come to care about and treat respectfully’ as existing in their own right (K. J. Warren 1990, 143). This consideration calls for attuning to ‘a more-than-instrumental basis of concern’ (Plumwood 1999a, 207) for nonhuman nature by developing sensitivity to other as *other*, thus eschewing ‘anthropocentric projections of sameness onto others’ (C. J. Adams and Gruen 2014a, 3). Acknowledging the nonhuman other as, in other words, other-than-human, highlights ‘difference as much as continuity’ in rethinking conceptual divisions between the human and the nonhuman which serve as the basis for ethical concern (King 1991, 79). Positions that claim concern for the nonhuman world, yet grant ethical status to only those beings thought to exhibit features that should elicit human concern, conceive ethics in terms that are prejudiced toward similarity and familiarity. The argument for moral extensionism as laid out by Peter Singer is one, prominent variant of this prejudice. Singer advocates the extension of moral status to certain nonhuman animal others, but not to plants, based upon proof of states of consciousness, such as the experience of enjoyment and pain, in the former but not the latter (Rolston III 1999, 249–50). Singer’s reasoning that trees, for example, are indifferent to death and injury because they lack sentience, or conscious awareness (Singer 1999, 146), is based on a humanist conceptualisation of consciousness that maps awareness of self and environment to specific markers of intelligence, such as reasoning ability, that accord with a “normal” human experience²⁷ of consciousness (for further discussion on this point, see Plumwood 1999a, 199–202). As a result, others are reduced to ethical dispensability. As he writes, ‘non-conscious life’ such as trees, and events such as the wholesale destruction of ‘ancient forest ecosystems’ and the obliteration of ‘an entire species’ of nonhumans, merit ethical attention ‘only in so far as they adversely affect sentient creatures’, which, in his view, are humans and others sufficiently like humans in their experiences of, for instance, suffering (Singer 2011, 93, 247). This line of thought construes ethics as an ultimately human-referencing enterprise: it fails to see nonhuman others, such as trees, and unimaginably complex constellations of

²⁷ Certain humans who exhibit different patterns of neurological development or an inability to acquire the skills of interest would be excluded. The fact that Singer grants this exception (see Singer 1999, 149–50), but withholds the same allowance from the members of the plant world, which he deems similarly deficient in this respect, is logically wanting.

other-than-human life, such as forests, which are full of meaning and good for so many species (Kohn 2013, 72–73; D. Haraway 2016, 73), as having a reason to exist apart from human interests (Diehm 2008, 14–16).

The conferral of moral relevance upon only those processes and behaviours that are thought to be consequential for human and other “sentient” life, employs the human being as the yardstick (Rose 2013, 96), policing a divide between the human and nonhuman that bows down to speciesism, insofar as it denies qualities that are ‘proper-to-the-subject’ in drawing lines of separation between those who/that merit moral concern and others (Marchesini 2016, 220, 221). I place *sentient* in scare quotes because the long-held assumption that the criteria for intelligence and awareness need be passed through an anthropomorphic prism of interpretation, overlooks all those more-than-human capacities of perception and self-recognition that are (dis)missed by zoocentric expectations of conscious awareness and movement.²⁸

Trees, for example, are perfectly equipped to distinguish between self and other, as well as between biological relatives and non-relations. Plants in general have been shown, for example, to grow ‘shorter and fewer roots’ near self roots or grow ‘away from other self roots’, and to allocate greater resources to roots growing near stranger roots (Karban 2015, 76). Discrimination between stranger, kin, and self can also function to benefit different species of trees growing in the same area, as shown in Suzanne Simard’s path-breaking investigations of partnerships between douglas-fir and paper birch trees, and latterly, ponderosa pines and douglas-firs (Frazer 2015, n.p.). The fact, furthermore, that trees’ awareness of and response to both internal events and environmental changes and other, tree and other-than-tree agents is fundamental to their survival, adaptation, and growth, suggests that trees do indeed have a good of their own, and a reason and capability to live beyond human instruction. I expand upon this point next, using examples that convey the importance of a tree’s good for theorising care as a more-than-human dynamic. Human care for trees is an important and essential, but insufficient practice for accomplishing care for the environment, which must also recognise the care performed by trees. In recognising that trees possess agency that is relevant to ecological care, humans can also learn to recognise and work toward better ways of caring for them.

²⁸ As Tristan Moyle puts it, ‘Plants, silent and stationary, fail to grab our attention as do the more visually striking activities of human and nonhuman animals’ (Moyle 2017, 378). Of course, plants only appear unmoving and soundless because human senses have been conditioned to perceive them that way (Collins and Collins 2016, 111, 113).

Accounting for tree agency and flourishing within more-than-human webs of care

In weaving webs of care, the other's difference from the human has necessary ethical relevance, both for countering human exceptionalism (D. J. Haraway 2008, 106) and recognising the active participation of the other in caring (Rahder 2014, 376). In a study exploring the relations of care between villagers, palm plants, and the wider forest landscape of Uaxactún, Guatemala, as mediated by a community NGO, Micha Rahder argues 'that [the plant] *xate*, too, is an active participant in these relations – what it likes and needs, how it grows, when it reproduces' (ibid.). Matthew Hall notes how the Greek botanist Theophrastus, generally astonished by plants' open-ended pattern of growth (Karban 2015, 2), similarly ascribes to trees '*preferences* as to which environments they may grow in' and an '*enjoyment* of thriving in their preferred environment' (Hall 2011, 33, author's emphasis). The language of intentionality used by contemporary botanical sciences to characterise trees, likewise supports a reading of trees as actively seeking what they favour and repelling with comparable readiness and expediency what they do not. A growing body of work in this area reframes such biochemical defences and plant behaviour more generally from being passive reflexes or accidental incidences owing to external, inanimate agents such as the sun's rays or air currents (Gagliano 2013b, 148; Moyle 2017, 381–82), to being illustrative of active, intelligent, learned, and inventive responses to, and monitoring of, the surrounding environment (Hallé 2002, 150, 158–59; Marder 2012, 1366–67).

Conceding that trees have a good of their own, and the means of pursuing that good, suggests that trees possess a self-directedness and purpose for living that is uniquely theirs (Plumwood 1993, 135). Stacy Alaimo argues that '[a]cknowledging the agency of the more-than-human world is crucial for environmental ethics because it challenges the prevalent practice of' reducing the dynamic, lively 'phenomena' of nonhuman nature 'into passive, distinct resources for human use and control' (Alaimo 2008, 249). With respect to digital tree planting campaigns, admitting agency may involve noticing, at a broad level, that whereas 'in the practice of planting trees to prevent desertification, it is 'human' agency' that assigns trees to a particular region and agenda, it is nevertheless the tree that 'bring[s] to the process skills which humans could not otherwise acquire and deploy' (O. Jones and Cloke 2002, 57). To deny this basic evidence of agency is to inadvertently slide into a register of belief that sees human intervention as ecologically indispensable; it is to ignore the more-than-human matrix of agencies that coalesce in the reproduction of tree life and of the conditions that support it.

Nonhuman helpers such as the bees and wind currents aid in seed dispersal, after which ‘it is the plant itself that effects germination through the process of active growth in response to environmental cues’ (Hall 2008, 172). In an ecological context, care is a multispecies achievement.

Hence, where Fisher and Tronto (1990) posit care as a complex of human labours, even as these are directed toward the wider world and earth (see p.43), care is more usefully considered as more-than-human, thereby making room to acknowledge the many ‘*indispensable*’ nonhuman labours involved (Puig de la Bellacasa 2017, 162, author's emphasis). Caring is distributed in ecological contexts, and nonhuman others look after humans often indirectly but extensively (L. Slater 2016, 125–26), by providing the essential resources for living (Curtin 1991, 67–68). As Puig de la Bellacasa notes in the case of soil, humans are cared for by the soil in a manner that could be described in terms of the ‘soil’s capacity to “take care” of a number of processes that are vital’ to existence (Puig de la Bellacasa 2017, 192). Broadening the notion of nonhuman care to encompass the land, Deborah Bird Rose shares from her ethnographic work among some of Australia’s Aboriginal peoples: ‘Victoria River people say that their country gives them body and life; it takes care of them, they say’ (Rose 1999, 178). In these instances, care is ‘collectively shared’ by carers, nonhuman and human, not all of whom directly care for each other, but are nonetheless cared for by others (Puig de la Bellacasa 2017, 192).

Trees, to this point, *do* care for humans; this caring might not occur in the directed way that humans may believe *they* care for trees, but as a matter of fact in how trees offer goods enjoyed by humans (Haberman 2013, 185, 189, 192–93). This fact is plainly exposed in the long-standing, deep dependence of human lives on trees, dead and alive, in their countless material (e.g. buildings, furniture, print media), ecological (e.g. habitats and sources of sustenance for nonhumans, cooling, oxygen), and economic (e.g. paper currency, logging and planting industries) uses (Radkau 2012, 14–16, 25–40, 286–93; M. Williams 2003, 79, 91–95, 429–30, 488–501).

Trees as communicative, dialogical partners in care

The recognition of trees’ agency and participation as carers, as opposed to passive, incapable recipients of care, constitutes one piece of the larger task of learning to care about trees as other-than-humans, of acknowledging trees’ needs and likes, growing conditions, and ecological partners—all of which, for the most part, differ remarkably from those of humans. As an earth other, which exceeds human comprehension and exists

for more than human purposes (K. J. Warren 2000, 121), yet can also help shape human worlds, such as through projects for ecological restoration, a tree must be held in regard as a partner in the discourse and practice of care. Plumwood argues that ‘developing an adequate ethical response to the non-human world’ includes searching for ways to communicate and enter into dialogue with the other (Plumwood 2002b, 169). The notion of trees and other vegetal beings as ‘other-than-human persons’ (Hall 2011, 13) stands, in this respect, to ‘open another door to a richer world, and can begin to negotiate life membership in an ecological community of kindred beings’ (Plumwood 2009, 121) where others are intentional, agentic, and communicating subjects. Making a place for trees in ethical discourse and practice means reckoning with them as inherently communicative beings, with a language specific to their kind; as ethical subjects in this respect, they can be appreciated as persons (Hall 2011, 100). Erazim Kohák explains that ethical respect for trees and nonhuman nature more broadly depends on realising that neither is ‘a mute “it” but . . . a fellow being in a community of discourse’ (Kohák 1992, 372). He draws attention to the Czech equivalent of ‘person’, *osoba*, writing that to be recognised as such is to be acknowledged ‘as a being with its own life, its own agenda, its own intrinsic worth and worthy of respect as such’ (ibid., 376). Thus, he emphasises, ‘it is quite appropriate to speak to a tree even though the tree will not respond with words but in the way appropriate to its own kind’ (ibid., 377).

Trees communicate prodigiously, and with a host of nonhuman plant and animal others, not only to enhance their good but also to contribute to the health and integrity of the more-than-tree community of which they are members. Mycorrhizal fungi, which form threadlike webbings across the understories of soil, attach to the insides or outsides of tree roots, affording a vaster and finer uptake of minerals than possible with roots alone (Karban 2015, 133, 134). These same conduits of nutrient uptake can be used by the tree to signal to neighbouring trees attached to the underground network, regarding, for example, nutritional levels and needs and threats from insects and herbivores. In return for information exchange and nutrient absorption, fungi extract a bounty of starches and sugars, and often elements such as carbon and nitrogen (Bonfante and Anca 2009, 366). Symbiotic partnerships between ants and trees are another, well documented example, and feature centrally in many forest habitats (Bronstein 1998, 150–51; D. Haraway 2016, 122–25). Trees attacked by insects release chemical compounds (‘volatiles’) through various ecological media—groundwater, air, fungal networks—to call on certain varieties of nematodes and other carnivorous prey, such as birds, to feast on these arthropods (Amo

et al. 2013, 1348). Plants more generally also modify a host of processes, including growth rates, oxygen uptake, and protein synthesis, according to acoustic frequencies in the environment (Gagliano 2013a, 791–92), and emit their own sonic messages for a variety of reasons that are only beginning to be understood, such as distress signalling (ibid., 790, 792).

Such examples of arboreal communicative pathways and partners suggest that trees are intrinsically dialogical beings. The idea that ‘there is no true ethical relation between humans and plants because the relation is logically one-sided and there is no other consciousness to receive the caring’ (Noddings 1984, 170) misses such ways in which trees do communicate how well they are being cared for and what they would like to support their caring.²⁹

The recognition of trees as communicative, purposeful beings is also a step toward comprehending the multispecies associations that support life (Kohn 2013, 81) and practices of caring exchange. It encourages the appreciation of care as more than a solely *human practice for (needy) others*. The supposition, to this end, that plants are essential to human life, yet incapable of caring for humans (Noddings 1984, 160–61), is rooted in an unnecessarily restrictive understanding of the subject of care as a being that exhibits a capacity for participation in the relationship (of care) that is more characteristic of what is customarily associated in many western cultures with humans and nonhuman animals (see ibid., 156–57). Such assumptions expose their cultural conditioning when examined alongside ontological systems that flourish in some non-western cultures and that, in this way, invite reflection on the possibility that other-than-humans such as trees are ‘selves, that is, beings with a point of view’ (Kohn 2013, 132). Resistance to this suggestion may be, in part, an inheritance of humanism, as Eduardo Viveiros de Castro writes of certain Amazonian cultures that lack this conception, ‘cultivated plants may be conceived as blood relatives of the women who tend them, game animals may be approached by hunters as affines, shamans may relate to animal and plant spirits as associates or enemies’ (Viveiros de Castro 2004, 466). In certain indigenous animisms, which regard other-than-human beings as imbued with conscious existence (Sullivan 2013b, 55), including the capacity for choice and communication (Plumwood 2009, 24; Viveiros de

²⁹ Stone gives a related example in the course of defending legal rights of trees and the natural world, asserting, ‘The lawn tells me that it wants water by a certain dryness of the blades and soil—immediately obvious to the touch—the appearance of bald spots, yellowing, and a lack of springiness after being walked on . . .’ (Stone 2010, 11).

Castro 2004, 467), trees are treated ‘as proper persons’ (Descola 1992, 114). In the Native American cultures of the Pacific Northwest, trees are thought to lead ‘a sentient life’, be ensouled, and feel and think much like humans might (Mauzé 1998, 239).

In citing these examples, my intention is not to venture to assimilate such animist beliefs and practices into a western cultural context of care (Hall 2011, 117), but to see in them an inspiration for animating ecological ethics toward livelier, more enchanted discussion and practice of what human-nonhuman relations could become (Plumwood 2009, 124–25; Rose 2013, 93, 96). An animist conception of ‘sensual and communicative vitality [which] is known and shared by all entities’ makes less possible the violation of relational configurations that support ecological integrity (Sullivan 2013b, 63–64). Understanding nonhuman tree being by these understandings is hence vital for contesting instrumentalist practices that evacuate nonhuman nature of the capacity for meaningful expression (Plumwood 2009, 121). The affirmation of nonhuman nature as articulate (Curry 2008, 59) and duly able to ‘answer back’ intelligibly (Plumwood 1993, 193) is necessary for attuning ethics to more-than-human dialogue and, in this way, fostering the formation of new understandings of caring human-tree relations based upon an expanded view of other-than-humans as agential and expressive. Living is a practice of communication, and it could be said that ‘as other creatures live their lives, so they communicate aspects of themselves’ (Rose 2013, 98), imparting information that can inform human responses to them. Thus, what a conventional expectation of reciprocity in care overlooks is the crucial element of the human being’s dispositional openness to the other-than-human, as well as the need to think in terms beyond human *expectations of* nonhuman nature. Among the Oglala of North America, hierarchical totemic relationships prevail in which humans are demoted to the bottom rung of ecological relations to foreground humans’ reliance on other life forms for subsistence’ (Hall 2011, 110–11). In forest-dwelling communities in Japan, trees are likewise used with care and regarded with gratitude through the human lifestyles and traditions they enable (Knight 1998, 208, 210), rather than presumptuously colonised to energise human ventures (Plumwood 2002a, 9–15).

Dispositional openness to the tree, on the other hand, is necessary to negotiate what is appropriately caring in a given instance. Care is ‘a product of the relationship itself’, not of any inherent or specific qualities of those party to the relationship (King 1991, 84). It is not what the other does, nor their ‘quality or attitude’, that orients ‘ethical practice’, but the quality of attentiveness to the relationship and quality of regard for the

other (Gaard 2016, 281). Respect for trees as ethical subjects means working for and with them, while also attending to specifically human concerns (Merchant 1996, 218); it necessitates, by extension, considering the welfare of plants alongside that of animals. For instance, consuming nonhuman animals may present as an unsavoury ethical choice under conditions of industrial meat production (Gaard 2002, 130, 132) or compromised marine ecosystems; in such cases, the more eco-ethical choice may be to grow and eat plants. But where many voices on animal care ethics have rested the case here, suggesting, commonly, a vegan or vegetarian stance (Curtin 1991, 69–71) that importantly refuses to see animals as faceless ‘meat’ (C. J. Adams 2015, 20–22; in the contemporary context of ethical consumption, see Miele and Evans 2010, 175, 180–83), it is important to consider plant livelihoods and their routine if wanton instrumentalisation as well. The case of plants grown with pesticides and artificial fertilizers, or on monocultural farms, should amount to a comparable ethical claim on dietary choices and the design of agricultural systems. When plants are consumed, in whatever form, be it, for instance, foodstuffs or shelter, their labours and sacrifice, the goods they provide, should be treated ‘with care and respect’ (A. F. Smith 2016, 38).

Although caring, in this sense, involves interactions among ethically equal, but ecologically distinct beings, its ethical vision should not be mistaken as idealised (Puig de la Bellacasa 2012, 197). It is, on the contrary, ‘noninnocent’ (D. Haraway 2016, 71; Puig de la Bellacasa 2017, 164, 204) and accepts death, pain, and uncomfortable decisions as part of the process of learning to live well together (D. Haraway 2016, 2). This acceptance should, however, be accompanied by a thoughtful reflection upon whether plants are killed or maimed ‘where it is not necessary for human survival’ (Hall 2008, 180), such as ‘food overconsumption, the wastage of paper, or the removal (killing) of plants due to human aesthetic taste’ (ibid., 181), particularly if these practices are committed in the absence of any thought to one’s motives and potential alternatives. On a broader scale, one might include as instances of lack of care, ‘[t]he clear felling of tropical forests for corporate profit, the massive conversion of natural habitat into biofuel crops, and the transformation of Amazonia into pastoral grazing land for hamburgers’ (ibid.).

In this section, I laboured to establish the basic epistemological premises and ethical scope of what I consider to be an ecological ethic that strives to foster caring human-tree relations. I now turn to the specific issues of technological mediation and distance that present in relation to calls to care within digital tree planting campaigns.

Digital cultures and the affective and embodied technological mediation of care
Beyond clicktivism: the digital posthuman subject and the interface

As noted in Chapter 1, the use of digital media technologies for activism is typically highlighted in its instrumental dimension, in other words, a way to ‘take action in support of environmental causes by, for instance, generating funding through the use of environmental search engines or spreading awareness by re-posting issues on social media’ (Fletcher 2017, 155). Criticisms which depend on this understanding, notably *clicktivism* and *slacktivism*, shine a spotlight on the perceived inadequacies of these technological media for orchestrating effective environmental and social change (ibid., 154). At the heart of such criticisms is the worry that basic activities such as signing and setting up ‘online petitions’ and circulating content, along with the use of newer, more interactive media, such as games and apps, will predispose individuals toward uncritical, passing, and thoughtless involvement (Halupka 2014, 115–16).

I take seriously the contention ‘that the Internet may in fact diffuse and forestall more progressive action by providing users with the illusion that they are making significant change by simply clicking links and “liking” causes’ (Fletcher 2017, 154). I believe, however, that a more satisfying critical engagement with these sites of ecological action, which bid users to care, would need to demonstrate an awareness of digital media as more than advanced technical gadgets and networks for interhuman communication and coordination. This awareness is necessary to critically appreciate both the distinct contemporary culture of digitality (Gere 2009, 7, 9–10, 13–18) and the affordances of new media technologies for enabling ecological care. In recent decades, there has been a movement toward appreciating what some scholars call ‘the posthuman’ condition that has sped to the fore with the infiltration of electronic and information technologies in ever more niches of everyday life (Hayles 1999, 2). This emergent condition describes how ‘[i]n digital modernity human lives are profoundly shaped and intertwined with smart and intelligent machines’ (Gibson and Carden 2018, 3). The proliferation of ‘[c]omputers, smart phones, Wi-Fi, broadband, fibre optics, apps, and social media, alongside game and virtual worlds’ (ibid.), has created a cultural situation in which humans interact with

others and environments in ways increasingly compelled, ‘moved and touched by’ information ‘expressed through and embodied in digital code’ (Gibson and Carden 2018, 4). As a result, everyday experience in digital cultures registers increasingly through and as the knitting together of digitally represented content, ‘screens, code, and bodies’ (ibid., 37).

On the one hand, the unprecedented enmeshment of computerised information and material forms and bodies throws into question the conceptualisation of the subject or user of technologies as ‘an autonomous self with unambiguous boundaries’ (Hayles 1999, 290). The intralinking of the informatic, or virtual, and the material, or physical, dimensions in digital cultures suggests ‘a coupling’ of human and technological ‘so intense and multifaceted’ (ibid., 14) that a more sophisticated theorisation of (human) user interfacing with technologies is needed than that implied by clicktivism. Powering the latter is a conventional articulation of human-computer relations that tends to presume a neutral interface which serves as an instrument of manipulation and an innocent surface for displaying information (Hookway 2014, 10). This account not only assumes the boundaries between human and machine are ‘given’ and ‘inviolable’ (ibid., 16). In so doing, it also reasserts ‘a division between the solidity of real life on one side and the illusion of virtual reality on the other’ (Hayles 1999, 290), in effect reducing the interface to a bounded entity, and thus shading its multiple effects and operations (Galloway 2012, 30, 33, 121) with respect to agency, the capacity for taking action (Hookway 2014, 5). Taina Bucher explains how, on the one hand, the distinct visibility of user actions made possible by Web 2.0 ‘connects to the notion of empowerment, as it has greatly expanded the social field of becoming recognized as a subject with a voice. On the other hand, ubiquitous computing with increased deployment of surveillance technologies has often been associated with a sense of disempowerment’ (Bucher 2012, 1165).

In my view, thinking ethics and agency in posthuman terms necessitates moving beyond such a bipolar rendition of affordances, which again pits humans against technological protocols. Certainly, it is important to acknowledge not just ‘the various technical means of arranging and organizing attention’ (Bucher 2012, 1166) but also the ways that digital affordances are negotiated by user interactions with and reactions to media and software (Bucher 2017, 40–42; V. Miller 2011, 16). But this co-articulation of technical and human agencies must be engaged with in a way that appreciates the indivisibility of human and technological that underwrites the conditions of digitally mediated experience (Hayles 1999, 282–84).

Thus, on the other hand, the posthuman subject must be recognised as a participant in enacting possibilities for action alongside an understanding of the more-than-instrumental, relational facets of digital interaction. In this sense, it becomes vital to recognise digital media technologies as not simply tools, but more essentially, as fabrics of culture (Lagerkvist 2016, 99, 105). As a cultural form at the forefront of this digital immersion, the screen interface both anchors and mediates the way in which humans encounter and relate with others and other bodies and environments (Gibson and Carden 2018, 3). As Branden Hookway observes, ‘Increasingly the interface constitutes the gateway through which the reservoir of human agency and experience is situated with respect to all that stands outside of it, whether technological, material, social, economic, or political’ (Hookway 2014, 1).

The notion of the posthuman calls for a theorisation of the aesthetics and ethics of digital mediation that refuses to take digital interfaces for granted as purely functional means of publishing and moving information, at the same time as this notion urges retreating from human-centric notions of digital experience and action, and by extension, agency (Hayles 1999, 286–90). In particular, the association of agency with control merits rethinking in this context of dynamic interactions and irreducible couplings between human and technological. Although the interface, for example, functions as a ‘conduit of control’ (Hookway 2014, 11) among other capacities, it is, arguably, more basically a ‘zone of encounter’ that both conditions and is shaped by the entities that are pulled into relation through the interface (*ibid.*, 9, 10, 14). In developing this line of thought, Paul Frosh’s theoretical study of what he terms the ‘moral affordances’ of ‘mainstream, contemporary digital interfaces’ is instructive (Frosh 2018, 354). Frosh argues that digital screens and devices instigate the formation of particular ‘embodied, technically and culturally shaped relations between people and communication technologies’ that infrastructure moral responses to represented content, be this of others or other places (*ibid.*, 354, 355–57). In the hands of this view, the actions of clicking or liking to care, for instance, are brought to bear on the possibilities for ethical relation through prevailing aesthetic frameworks for digital encounters popularised by platforms such as Facebook and Twitter, which are easily dismissed if seen as purely instrumental interfaces.

In the context of digital caring for trees and the environment, it is necessary to flesh out this theorisation in more-than-human terms, acknowledging the fact that digital encounters through interfaces manifest and mediate couplings between not only the

human and digital, but also the human and nonhuman. The next two sections discuss how the issues of affect, time, attention, and materiality are implicated in enacting aesthetic and ethical forms of relation between humans and nonhuman others through digital interfaces. I have chosen to focus on these issues, as they capture the overarching ways in which digital tree planting campaigns place pressure on critical digital perspectives to understand the affordances of digital technologies for mediating ethics and agency in more-than-human terms. Through this focus, I show why it is imperative to extend theorisations of digital media beyond humanistic parameters in order to acknowledge the more-than-human stakes, conditions, and consequences of digital operations.

Affecting involvement in digital activism: paying attention and learning to care

Appreciating caring in the context of contemporary digital cultures means, first of all, noticing how the affordances of digital media are entangled with wider sociocultural formations and tendencies. As Hookway states in the case of digital media interfaces: ‘To use an interface is to participate in culture’, such that ‘the interface describes a cultural moment as much as it does a specific relationship between human user and technological artifact’ (Hookway 2014, 15). Much of the criticism that reads digital action through the lens of slacktivism squeezes out the contextual constraints and cultural conditioning that individuals may experience when participating in ecologically oriented activism, as well as, importantly, the ways in which these constraints might converse with the broader, societal shaping of lifestyles which dampen availability. Fisher and Tronto write that ‘situationally imposed time limits may require us to care about some things more than others’ (Fisher and Tronto 1990, 41). While this statement probably captures many humans’ experience at one time or another, it is distinctly suggestive in the context of digital caring, which enjoys traction through the time pressures and demands upon attention born of the ‘always-on’ condition of technological connectivity increasingly characteristic of life in consumer societies perfused with mobile and internet media (Agger 2004, 5–6, 2011, 123, 126). Some scholars here emphasise how the influx of internet and networked communications technologies into the professional, private, and social realms has enabled new, double-edged opportunities for flexible employment and digital consumption that materialise with the dissolving borders between work and leisure time (Fuchs 2015, 108–9). Moments of availability are rare, sandwiched between to-do’s: everyday life is managed through relentless prioritisation, scheduling, and selective engagement with a cornucopia of potential digital distraction (Agger 2011, 124, 125).

Thus, Jonathan Crary argues, the widespread availability of digital devices and social media has made all moments subject to ‘a relentless incursion’ of digital time (i.e. time spent engrossed in digital content) (Crary 2013, 30). That is to say, although ‘no individual can ever be shopping, gaming, working, blogging, downloading, or texting 24/7’, any moment is potentially one when one can ‘shop, consume, or exploit networked resources’ (ibid.).

The persistent onslaught of information for consumption and response raises interesting questions about the ethical affordances of digital time. Wendy Hui Kyong Chun suggests that social media and mobile media are being leveraged largely as crisis management tools, forming avenues to take charge and get involved with a sense of immediacy not possible with prior modes of technological engagement (Chun 2016, 73–75). While ‘offering users tastes of real-time responsibility’, Chun warns, such crisis-oriented digital activism ‘also threaten[s] to undermine this agency by catching and exhausting users in a neverending series of responses’ (ibid., 17). While I appreciate the ever-present threat of dissolving ethical agency into automated or routinised prompts to care (ibid., 79), I believe that the distinct interactive opportunities for exercising ethical agency that arise with increased digital connectivity call for a more nuanced understanding of digital time and attention. Namely, there is a critical opportunity to see these elements of digital culture as not merely quantities, which can be pressured or added to, but as importantly, experiences that can be qualitatively transformed and acted upon, with important dispositional implications for cultivating an ethic of care.

On the one hand, I grant that the ‘compulsion to connect’, to be online, may afford a type of immersion that diverts attention from the now (ibid., 124), as well as from issues that are not trending on, for instance, Twitter, or otherwise difficult to convey through the fast-moving and ‘eventful’ aesthetic expectations of time-pressed audiences (Nixon 2011, 8), who increasingly lack ‘long blocks of time’ (Crary 2013, 53) to take in and meaningfully digest the implications of the information they consume (Nixon 2011, 275–76). Yet, on the other hand, it must not be overlooked that mobile and social media platforms propose novel possibilities for interacting with information that exploit the unique responsiveness of digital interfaces. Frosh’s theoretical investigation of the digital mediation of the suffering of distant others suggests important aesthetic affordances of digital screen interactions. Frosh argues that in contrast to mass screen media such as ‘cinema or television, the screen of the digital device is not a barrier separating what it depicts nor it is [*sic*] a window on a represented world, but a responsive surface enabling

immediate sensory relations that emerge and shift in a temporal continuum of live interaction' (Frosh 2018, 361). While conceding the partial attentiveness encouraged by immersion in digital media, Frosh's study prods theorisation along the lines of what possibilities for moral action and response are created and affirmed even as sustained focus is at any moment subject to being undermined (ibid., 359-360, 364). The capabilities of digital platforms for producing 'embodied responsiveness' in ethically consequential ways (ibid., 364) require elaboration in terms of how attention to digital content is procured and steered through particular aesthetic logics and affective registers.

Precisely because of the ability of social, internet, and mobile media technologies to command users' attention with evident regularity and force, some researchers suggest considering how these technologies can be strategically harnessed to re-claim digital time for the purpose of orienting user attention toward care about larger environmental, social, and political issues (Fletcher 2017, 157). Bernard Stiegler's work on the structuring of individual and collective attention through technologies (Stiegler 2012a, 106–7, 117–18) lays useful groundwork for interfacing digital modes of attention and caring. Stiegler traces the root of the word *attention* in French and English to the Latin *attendere*, which he translates as 'to shift one's attention to' or 'to take care' (Stiegler 2012b, 1). To attend to, in other words, is reflective of caring, an indication of where one places one's interest and concern (Metzger 2014, 1004). In the current epoch, in which technologies put human attention to work as a matter of course, Stiegler argues, critically reflecting upon what is entailed by *care* involves critiquing modes of paying attention, which are, now, pervasively digital in form (Stiegler 2012b, 1, 8; Crogan 2010, 166). Thus, for him, 'types of attentional forms and knowledges' are at once 'types of concern, systems of care, of techniques for care of the self and of others' (Stiegler 2012b, 3).

In digital contexts of care and consumption, researchers increasingly place importance on how attention is mapped to affective and emotional registers (Garde-Hansen and Gorton 2013, 4; Kuntsman 2012, 2, 3–4, 6), which inform cognitive processing and epistemic capacities for empathy, understanding, and meaning-making (Gibbs 2010, 192–93, 200; Mummery and Rodan 2017, 45–46). Joanne Garde-Hansen and Kristyn Gorton's research is instructive for noticing how, along these lines, individuals' commitment to 'global responsibility and care' for the environment is discursively mediated by the internet (Garde-Hansen and Gorton 2013, 131). Through analyses of how sentiments concerning climate change are visually and verbally expressed, narrativised, and circulated through social and online news media, Garde-

Hansen and Gorton illustrate how ‘bodies, emotions, and technologies’ are interconnected to urge individuals to ‘care’, ‘pay attention’, and ‘watch out for humans and non-humans’ (ibid., 129; see 110–45). These moments of online caring are not individuated in any strict or definitive sense, as the *Save Our Woods* campaign, mentioned in Chapter 1, helps bring to light, showing how online and social media technologies participate in ‘technologically communicating’ care ‘toward the production of a caring community of ordinary people’ (Garde-Hansen and Gorton 2013, 10; see also Mummery and Rodan 2017, 41, 47), independently contributing and often unknown to each other (Gómez-Diago 2016, 61). Lockwood’s analysis of tweets from October 2010 to February 2011 indicates that ‘Twitter was explicitly used to spread positive emotionally-laden protest messages, links to blog posts and pictures’ by UK residents mostly unbeknownst to each other (Lockwood 2013, 56). Independently yet collectively, these residents’ expression of their ‘real and symbolized love of trees’ online became a powerfully affective, and ultimately effective, activist effort (ibid., 52).

The notion of *affect* is helpful for comprehending how online users are both persuaded to care and consequently interlinked as a collective force, however dispersed (ibid., 51–52, 57). Affect may be understood here as, following Teresa Brennan, a ‘vehicle for connecting individuals to one another and the environment’ (Brennan 2004, 19; see Garde-Hansen and Gorton 2013, 129). As Jane Mummery and Debbie Rodan notice through their work on online petitioning for the welfare of farm animals, digitally mediated campaigning works affectively in its capacity to ‘mobilise and encourage individuals into action’ based upon these felt connections (Mummery and Rodan 2017, 43). Although the concept of affect takes on different nuances depending on the intellectual context and object of study (Kuntsman 2012, 4–5), the workings of affect are widely understood to be ‘intricately involved in the human autonomic system and engaging an energetic dimension that impels or inhibits the body’s capacities for action’ (Gibbs 2010, 188). Whereas some researchers have focused more narrowly on the physiological and physical aspects of affect as they register in bodily experience, affect can also be understood in a broader epistemological sense, to help conceptualise how relations between self and other, and between bodies, both human and nonhuman, are forged, sustained, reconfigured, and undone (C. J. Adams and Gruen 2014b, 3). As an indication of subjects’ propensities to be distinctly moved by a ‘prepersonal’ intensity (Shouse 2005, n.p.), in other words, a force not originating within the subject, affect in

this sense foregrounds ‘continuities between things that were once held to be discrete, and discontinuity and difference where once there was sameness’ (Gibbs 2010, 189).

In exploring the promotion of environmental action and responsibility through digital consumption, affect can be further and more specifically theorised with respect to its role in motivating an ethical response of care (e.g. Gibson-Graham 2015, 57, 59). In their reading of the 2007 reality television programme *Carbon Cops*, which follows ‘six Australian households’ as they endeavour ‘to cut their carbon emissions by 50%’, J.K. Gibson-Graham comment on how the members of each household learn to attune to climate change through everyday embodied practices, such as riding a bicycle instead of using an automobile, which work to disrupt their common-sense understandings of being in relationship with the environment and others (ibid., 51, 52–54). Gibson-Graham suggest: ‘Learning to be affected in this way led, at least temporarily, to different, more ecologically responsible ways of living’ (ibid., 60). Being affected into responding with care to ecological issues can be expressed, additionally, if more pithily, by the concept of ‘response-ability’ proposed by Donna Haraway. Eschewing the prescriptive moral undertones fastened onto the idea of responsibility, this concept reframes the latter as the ability to respond through informed affectedness (D. Haraway 2012, 302, 312–13), characterised further by a willingness to learn how to respond otherwise (D. J. Haraway 2008, 71, 336).

An area of digital consumption research for which this concept has proven fruitful, and which, I feel, can be used to extrapolate to other virtual encounters, is games. A number of ecomedia scholars argue for greater critical attention to how ‘games with or without explicit ecological objectives successfully promote environmental consciousness, activism, or lifestyle change’ (A. Y. Chang 2009, 4, see also 2016, 216–17, 226) and influence conceptualisations of ‘right relations’ between human and nonhuman others and the environment (A. Y. Chang 2009, 15), as ‘games compel us to respond’ to environmental issues by learning to be affected by the virtual nonhuman other and issues afflicting the planet (A. Chang and Parham 2017, 8, see also 9–10; Milburn 2014, 212, 2016, 79, 88–89). A main way in which digital interactions generate affective resonances (A. Chang and Parham 2017, 8) is by their distinct capabilities of animated representation and interactive affordances, which some researchers suggest may aid in ‘productively (re)thinking human relations to other species’ (Bianchi 2017, 139; see also Parham 2016, 209). Gaming apps and other interactive virtual platforms such as *Second Life* (Bianchi 2014, 214), may have the potential to intervene in ‘anthroponormative views of species

relations' (Bianchi 2017, 149), by, for instance, limiting player controls (and thus human agency) (A. Chang and Parham 2017, 112) or making players inhabit the imagined virtual body of another species (Bianchi 2017, 142).

Although games may thus contribute to 'constituting or shaping environmental or ecological awareness' (Parham 2016, 205) in desirable ways, they may also harness aesthetic and emotive logics in ways that 'raise concerns that "virtual" interactions with nonhuman nature' may prove 'counterproductive to environmental causes' (Fletcher 2017, 155). Commenting on the visual scenery in *WilderQuest*, an iTunes gaming app, Robert Fletcher suggests that the app's aestheticisation of rain forest habitats and inhabitants, though wildly at odds with the realities of on-the-ground encounters, may nonetheless do more to raise support for 'rainforest conservation' given the engaging animation. He writes that digital games must be recognised as 'possess[ing] potential to generate significant attention to and caring about conservation issues', including the issues of mis-representation that arise and may compete with ways of understanding that prompt care (Fletcher 2017, 159, 160). In the case of encounters with specific nonhuman others, play may equate being responsive *to* with being responsible *for*, emphasising the sense of the other through the lens of possession rather than relation. The use of emotional cues to engage users in 'fun' play takes place on 'discursive terrain' that can be co-opted by commercialised portraits of care and the nonhuman other, as educational and social science researchers Matthew Cole and Kate Stewart make evident in their discursive and textual analysis of the game *Hay Day*, in which players 'are encouraged to make an emotional investment in 'their' animals', which figure as obedient objects of sympathy (Cole and Stewart 2017, 413). The game, Cole and Stewart assert, portrays the confinement of animals on a farm (managed by the player) 'as care rather than captivity' (ibid., 408). Important ethical contradictions ensue in this framing. For instance: 'Hay Day's 'livestock' are incapable of autonomy, such as feeding themselves. Ironically, in the game this is emphasized by anthropomorphic partial subjectivity, such as the capacity to communicate with players using human gestures and facial expressions' (ibid.). Players, for their part, are drawn in to care about these animals as 'cute' human-like others in need of human care, in ways that thus suppress the animals' other-than-humanness. As Cole and Stewart stress, these aesthetics tend to reinforce normative western cultural framings that perpetuate an 'oppressive' affectivity in denying the other their distinct nonhuman needs, appearances, and abilities (ibid., 403, 405, 413).

In the context of digital play, the incorporation of the nonhuman other's subjectivity within 'the category of the 'human'' (Ferreday 2011, 223) brings to the fore the need to pay critical attention to what is *not* cared about well. As I illustrate next, pursuing critique along these lines commits to opening into more-than-human facets of media and time, which have traditionally been treated in much western scholarship as categories applying only to the human. I first establish the issue of time as a more-than-human construct and basis for enacting care. From there, I pursue a more general and grounding consideration of digital media technologies that appreciates them as consequential for ecological care in their extrahuman material dimensions and the relational commitments and practices they imagine and facilitate.

Care time, the nonhuman, and the relational and ecological work of digital media technologies

Digital appeals to care work by bridging the quantitative and qualitative dimensions of time spent online. The effort to generate 'an affective resonance' through digital encounters with ecological issues and subjects emerges through considerations of how long audiences require to be moved to care in the ways hoped for by the sponsoring campaigners (Knudsen and Stage 2015, 94). The quality and efficacy of care is impacted by both the 'emotional, affective dimensions' of the time spent caring (Wajcman 2016, 129, see also 2008, 65) and the kind of care that is possible in *that* time. Reflecting on the 'pace' needed to build 'ecological relations with soils' sufficiently well to participate in looking after the soils, Puig de la Bellacasa writes that 'making time for care time appears as a disruption of anthropocentered temporalities' (Puig de la Bellacasa 2017, 23) that accelerate care to allay anxieties about the future (Puig de la Bellacasa 2014, 699–701), by, for instance, satisfying projected and speculative agricultural demand through 'technically enhanced soil exploitation based on agrochemical inputs and innovative irrigation systems' (ibid., 693–694, 696). Instead of tending to what needs care, such human-oriented timescales of production threaten the conditions necessary for soil renewal (ibid., 699, 702).

Learning to take proper care is a more-than-human undertaking, in that care time unfolds across human and nonhuman registers of time and activity (Rose 2012, 131, 136). It is important to notice here how care exceeds efforts at containment or explication through linear, abstract models of time which are based on human conventions (Bastian 2009, 99, 114, 2012, 25, 27, 45). Michelle Bastian argues that 'a mode of time', such as

clock-time, ‘that does not discriminate between types of moments’, fails to set ‘global warming’ apart as a concern quite other in scale, scope, and seriousness than, say, managing one’s lifestyle and daily schedule (Bastian 2012, 33). In its confinement to a human framework of how time matters, clock-time is unable to mark ecological events and processes according to *their* time of passing. It fails to tell time in a way that captures ‘the urgency and danger’ of phenomena such as the current ‘mass extinction’, ‘dramatic changes in sea levels, before and after climate change’, and the quickening melting of permafrost (ibid., 33, 41). As Bastian argues, the way time is measured and passed at this historical juncture ‘of multiple ecological crises’, merits comprehension as ‘a powerful social tool for producing, managing, and/or undermining various understandings of who or what is in relation with other things or beings’ (ibid., 25).

This proposed way of understanding temporality gives the seemingly simple ‘act of ‘telling the time’’ a newfound political as well as ethical gravitas (ibid.), emphasising in particular the relational and material ecological matrices of time-telling (ibid., 37, 31; see also Peters 2015, 214–20). Telling time with the current system is a choice that privileges ‘time told with ultimate reference to the cesium atom’, whereas solar calendars rely on the sun’s movements and geological scales are closely attentive to changes in rock formation and deposition (Bastian 2012, 33, 31). Care time, in turn, that falls short in its cognisance of the care required by the other-than-human, obstructs the formation of non-anthropocentric relations of care. Puig de la Bellacasa’s work, for example, highlights how the temptation to ‘pace’ soil’s ‘fertility with human demand’ (Puig de la Bellacasa 2014, 691) arises within calculative logics of value. Within the modes of care time these logics give rise to, only those relations with soil and other nonhumans survive that can be managed through human control for ‘the *object* of care’ (Puig de la Bellacasa 2017, 186, author's emphasis). In turn, those practices are privileged, such as soil yield maximisation, whose outputs are measurable through indicators of efficiency, such as speed and return on investment (ibid., 186–87).

In addition to excluding alternative possibilities for care from being conceptualised, as Puig de la Bellacasa’s work shows, reading time as a measure of nonhuman productivity obscures, and greatly downplays, the significant relational element in taking care. This element is crucial for attuning the study and practice of digital care to what counts, to whose lives matter or whose, conversely, are expendable, in facilitating digital activities and digitally mediated lifestyles. Recent media and communications research offers a number of examples of how eco-ethically minded

critiques of mediated representations, discourses, and environmentalism gain distinct eloquence and urgency through acknowledging ‘the environmental destruction and degradation that media forms are themselves imbricated in’ (M. Goodman and Littler 2013, 270), as well as the role of media communications in moulding and altering ecologies and habitats (Taffel 2013, 235–36). Contra the ‘widespread sense that digital media are relatively resource-free technologies’ (Gabrys 2014, 5), occupying an internet presence translates into intensive and relentless labour for the earth’s nonhumans. Companies and organisations which wage digital campaigns broadcast their message and engage users in activities (e.g. tweeting, e-commerce) that ‘require dedicated servers’ simply to remain accessible, while ‘[m]edia-rich cloud services like YouTube, MySpace and Flickr occupy huge quantities of memory’ (Cubitt, Hassan, and Volkmer 2011, 150). Maxwell and Miller write, ‘the environmental costs of production for one e-reader (including raw materials, transport, energy, and disposal) far outweigh those of one book printed on recycled paper’ (Maxwell and Miller 2012a, 63).

These insights belie how ‘green’ and ‘immaterial’ digital technologies are normally represented as being (Walker and Starosielski 2016, 19; Gabrys 2014, 3, 5), as attested by, for instance, the ‘cloud’ imagery and metaphors that circulate in popular news outlets and company advertisements (Carruth 2014, 341–42), which betray the ecological contradiction that is birthed through such discourse. As Miller notes, ‘Seemingly ephemeral and natural—benign necessities of life, clouds rain then go away—nothing could be further from the truth when it comes to the power-famished server farms and data centers’ that are harnessed round-the-clock for cloud computing (T. Miller 2015, 143). Mobile apps, ‘smart’ electronic devices, and most internet and on-demand services including search engines, blogs, and social networking depend on this networked system, which also supplies ‘bulk document storage for industry, financial services, medical records, academia, and government’ (Cubitt 2017, 18).

Insights into media practices’ ecological ramifications make impossible to ignore the fact that in promoting care through the internet and digital devices, ethical and material ecological relations are inevitably created and enforced (Cubitt 2017, 11). As Sy Taffel argues using the example of the mobile phone gaming app *Phone Story*, which alerts users to the ‘detrimental ecological impacts’ of ‘consumptive’ media practices, ‘some of the material consequences of discursive content’ are apparent in how users are steered toward a constructive critique of the problems caused by the very device they are using to play the app, such as forced child labour and ‘toxic e-waste’ (Taffel 2013, 249,

see also 243–44). Media discourses merit mining through a sensibility for how media technologies ‘are more than objects or technological relays among people, places, and things’ (Walker and Starosielski 2016, 14). Technological media invoke and provoke ways of inhabiting the world and relating to one another (ibid., 4–5; Cubitt 2017, 15).

Martin Heidegger writes that technology is ‘no mere means’, but ‘a way of revealing’ human being in the world (Heidegger 1977, 12). Thus, ‘the conception of technology’ as ‘a means and a human activity’, or what he considers to be ‘the instrumental and anthropological definition of technology’ (ibid., 5), falls short in contending with ‘the essence of technology’, which is ‘nothing technological’ (ibid., 4, 20). Just as ‘[t]hat which pervades every tree, as tree, is not itself a tree that can be encountered among all the other trees’, Heidegger argues that technology merits appreciation as more than a tool for facilitating human life: it is not merely another human artefact among others, to be regarded neutrally (ibid., 4–5). Rather it has profound, organisational ramifications in making sensible and intelligible natural and social worlds, enlivening them into relationship with human beings. Heidegger criticises modern technology’s way of revealing as *Gestell*, or ‘enframing’, whereby nature is the supreme pawn of humanity; this regard for nature robs the nonhuman realm of its autonomy, ‘revealing’ it as a mechanism for fulfilling human desires (ibid., 14–18). Media technologies and communication networks, which fall under the regime of ‘challenging’ and ‘ordering’ nature consistent with that which has dominated with ‘modern technology’, thus raise questions about ‘what possible ways of relating to nature are opened and foreclosed’ through the ‘practices of revealing’ these media enable (DeLuca 2005, 79; see also R. Anthony 2012, 139).

In the contemporary technological context, the internet constitutes a most quintessential example of ‘the equipment by which we [humans] exist’ (Peters 2015, 43, 49). Digital information and communications technologies and practices now pervasively ‘infrastructure’ ways of being and living (ibid., 33–38, 104–5, 111–12). In this respect, these media are usefully regarded ‘as part of the habitat’, indeed, essential ‘equipment for living’ (ibid., 4, 5). To this end, they are not simply conduits for communicating among humans or as collections of human messages and meanings (ibid., 4–5, 14). Resonant with Heidegger’s outlook, they warrant appreciation as ‘modes of being’ (ibid., 7, Jørgensen 2014, 110).

Shifting theoretical emphasis from digital media as stable artefacts to digital mediation as shaping conditions for living, brings to the fore how technological media

participate in bringing relations and ethically significant possibilities for co-existence (with nonhuman others) into being (Kember and Zylinska 2012, 16–18, 21–23). This shift invites an understanding of the digital promotion of care through ‘the ‘thick’ lens of relation’, the way in which media representations and discourses not only convey messages, but also, and crucially, articulate relations among humans and nonhumans (Hroch and Stoddart 2015, 298). Technological mediation, a process irreducible to but inclusive of media representations, involves ‘the making of connections’ (Jørgensen 2014, 109).

Comprehending media representations as a mediation of ‘ethical relation’ with trees and nonhuman nature (Alaimo 2016, 77) forces a critique of digital consumption and care to examine choices in how the enabling technologies are used. It brings critique to bear on how humans bring into visibility the ‘nonhuman lives and distant locales’ beyond the screen (ibid., 74), as well as, as a result of human shaping of the world through technologies, the various ways in which the nonhuman other is ‘given over ergonomically to the ends of the human’ (Marchesini 2016, 226). By plumbing media representations and practices through a sensibility for how they configure human-nonhuman relations, the digital promotion of care can come to light as performing relational and ethical work. Ramifying this line of argument, the next section contends with the fact that digital tree planting campaigns appeal to users to care at a distance, that is, by not being at the site of the environment being helped through tree planting. I discuss how care, and the implied ethical and relational connections, might be understood through the lens of distance. I further calibrate this lens to take account of those promotional mediations of distant care that prevail in the campaigns, namely, the marketing and practice of ethical shopping and spending.

The practice of care at a distance

As a practice, care takes different forms depending on the context and aim of caring (Tronto 1994, 104, 118–19). Conceptual distinctions are commonly made between caring in terms of feeling concern for, as in *care about*, and tending to, as in *care for* (Johns-Putra 2013, 125). Care about expresses as an emotional disposition characterised by ‘sympathy and concern’ (Silk 2004, 231) and an ‘orientation’ toward one’s ‘connection with others’ (Fisher and Tronto 1990, 42), while caring for is displayed in a concrete action motivated by a desire to respond. Some theorists propose further distinctions between care about and care for in these senses to give voice to what they

maintain are differences in the depth and quality of caring that can be exercised at a distance versus in physical proximity (Barnett and Land 2007, 1066). Deane Curtin, for example, reasons:

By reading about the controversy surrounding logging of old-growth forests, one might come to care about them. But caring for is marked by an understanding of and appreciation for a particular context in which one participates. One may, for example, come to understand the issue partly in terms of particular trees one has become accustomed to looking for on a favorite hike, trees that one would miss given changes in logging regulations.

(Curtin 1991, 67)

As Curtin points out, with greater familiarity of a situation, one can significantly deepen one's involvement, as well as, over time, one's understanding of the issues and the various needs of others (Russell and Bell 1996, 175–76). Where Curtin's reasoning could be usefully challenged is its reservation of 'care for' for local situations, as to suggest that physical nearness is necessary to develop a 'genuine' capacity to care (Noddings 1984, 112, 153) or otherwise meaningfully contribute to bettering a situation. My own view in this regard takes into account the increasing and diversifying interconnections among places, near and far, that manifest, for instance, as 'market transactions, supply chains, or displaced pollution effects' (Barnett and Land 2007, 1067). In highlighting how ecological interconnectedness is trans-local or operates at global and regional scales in addition to the local (Heise 2002, 161), I do not wish to deny that these interconnections nonetheless express as distinct localised effects (Massey 2004, 8; Cubitt 2017, 14, 41–54). In fact, I would suggest that this critical stance helps to shine light upon and politicise the intercalation of local and global planes of thinking and practice. Combining discursive analysis of internet conservation campaigns for southern Africa and ethnographic fieldwork at conservation sites, Bram Büscher argues to this end for the need to 'broaden the idea of material outside of physical proximity and include ideas of material in relation to other's [*sic*] physical proximity, as conservation [of] nature through new media in the West can have direct, material consequences for the 'immediate surroundings' of those far away' (Büscher 2014, 740).

An exploration of how the arc of care may extend 'from interpersonal, proximate relations towards those whom one may not personally know' (Raghuram, Madge, and Noxolo 2009, 6) thus stands to draw in consideration of the intermediaries, such as 'mediating practices, relations of professional competency, and various institutional and

material infrastructures', upon which 'caring practice depends' (Barnett and Land 2007, 1069). A useful example is furnished by Clive Barnett et al.'s case study of Traidcraft (<http://www.traidcraft.co.uk>), an 'ethical trading organisation' in the UK that endeavours to assist with addressing issues of world poverty (Barnett et al. 2005a, 28). Barnett et al. employ the phrase 'care-at-a-distance' to capture how 'ethical consumption campaigns' such as Traidcraft's, link individual choice to problems such as environmental sustainability, transnational trade, and labour practices through the help of such mediating practices as marketing, retail, and labelling (e.g. fair trade certification) (Barnett et al. 2011, 11, 16). These practices implicate consumers in 'a widened scope of responsibility towards both human and non-human others' (ibid., 30) that depends on 'care, solidary and collective concern' (Barnett et al. 2005a, 30, 2005b, 45) in ways that break with orthodox 'territorial' thinking, whereby care at a distance has tended to imply a fanning outward from family members to local concerns to progressively grander scales, from the national to the planetary (Massey 2004, 9).

The privileging of ethical relations with those nearest and dearest (D. M. Smith 1998, 16–17, 21–22) discounts the extent to which ordinary practices of care are coextensive with the ordering of institutional and environmental practices (Rosie Cox 2010, 113, 115–16), whose 'marginalization of care is crucial to understand because it bolsters our contemporary world order of privilege, which rests upon (careless) unequal relations across the globe' (Lawson 2007, 5). Glaring contemporary examples of ordinary interconnections include the global capitalist framework of exchange and its commodification and uneven distribution of care labours among migrants, the poor, and women (Isaksen, Devi, and Hochschild 2008, 71–75; Yeates 2004, 373), and the displacement of human underclasses by the international consumer economy, such as the forced relocation of residents of southeast Asia 'into shanties on the ocean fringes by a tourist economy' (Diprose 2011, 64). Honouring the relational social ontology upon which care ethics is staked (Lawson 2007, 3, 4) requires an appreciation of a ground of 'relatedness' that includes yet exceeds the 'realm of face-to-face contact' (Peterson 2001, 137; see also Whyte and Cuomo 2017, 238, 240).

I would point out here that caring for 'concrete' and known others, which some versions of care ethics idealise (e.g. Noddings 1984, 18; Held 2006, 33), is essential for looking after personal relationships (Peterson 2001, 137) and participating in social life. In the case of the natural world, moreover, 'special relationships' formed with 'particular animals, trees, and rivers that are known well' can supply a foundation for both their care

and responsibility and ‘for acquiring a wider, more generalized concern’ for nature (Plumwood 1991, 7). But in searching for ways of ‘grappling with how one’s own bodily existence is ontologically entangled with the well-being of both local and quite distant places, peoples, animals and ecosystems’ (Alaimo 2016, 130), I feel that thinking in terms of the more inclusive demand of ‘ethical proximity’ is instructive, according to which individuals are in ethical relation with not just one other, but with the matrices of relations in which that other is involved (Rose 2008, 166).³⁰ An ‘ethic of proximity’ based in physical nearness ‘relies on the assumption that genuine ethical commitment can only grow out of the lived immediacies of the local’ (Heise 2008, 42). Yet this assumption, as Heise points out, falters in the face of changing modes of inhabiting the world on account of media technologies and the expansion of trade and communications networks beyond culturally, socially, and physically familiar regions such as the neighbourhood community (ibid., 21, 53). In the process, the experience of the local and the near is fundamentally altered. Through the images and narratives conveyed and exchanged through mass and digital media, many western consumers ‘can now compare their own locale with a much greater number of other places they have visited than previous generations’; hence, their ‘perception of the local natural world’ is likely to be ‘inflected by media images of other

³⁰ While my thinking on care at a distance was taking form, I was asked about the influential ethical philosophy of Emmanuel Levinas, for whom ‘the human face’ is ‘the source of ethical demand’ (Zylinska 2014, 94). Though Levinas’s philosophy has been applied to the case of encounters transcending the parameters of physical, face-to-face relations (Silverstone 2003, 475), and more recently, to electronically and digitally mediated encounters with singular human others (e.g. Sandry 2014, 2, 5–6; Silverstone 2003, 481–83), I am troubled by his insistence that ethical responsibility derives only ‘from human others’ (Zylinska 2014, 16). One could argue that Levinas’s philosophical discourses are, at their core, preoccupied with ‘relational and ethical encounters and engagements’ and ‘*could* address ecological issues’ (Rose 2008, 157, 163, author’s emphasis) if interpreted metaphorically (Davy 2007, 40). Following others (Rose 2008, 164, 2012, 134; M. Smith 2011, 60–61), I hesitate to endorse such an interpretation, as Levinas’s thought not only backgrounds nonhuman others, but constructs a metaphysical boundary between humans (who are thought to have language and possess a sense of an other) and nonhumans (who are thought to lack these properties) (Davy 2007, 41, 42–43), thus excluding the latter from ethical consideration. At one point, Levinas claims that the earth is expressly ‘for’ fulfilling human needs and wants (Levinas 1997, 233). In the end, I feel, Levinas’s ‘disinterestedness’ in ‘nonhuman forms of being and becoming’ prevents him from conceptualising human life in more-than-human terms, according to which a human is ‘a sentient being reaching to—and touched by—others in a myriad different ways’ (Zylinska 2014, 94), which must be admitted in order to comprehend the pathways of care whereby human and nonhuman lives coincide.

ecosystems that we [they] may never have seen in person' (ibid., 55, see also Szerszynski 2006, 75).

An attachment to first-hand acquaintance as the precondition for caring practices, downplays the related possibility that care about distant others and issues such 'global climate change and the harm it will bring to future generations' can often spur alterations in behaviour that could be thought of as examples of caring for (Held 2006, 30). The presumption that entities at a distance can be best cared about, that is, simply felt for, rather than cared for, disconnects care from the sense of responsibility which is implied in caring for. Responsibility in this sense does not constitute a normative condition or practice of care (Puig de la Bellacasa 2017, 151–56); it corresponds rather to the experience of responsiveness, aligned with the concept of 'response-ability', introduced earlier (see p.60). This movement toward responding demonstrates caring *for*, in that one goes to the trouble of looking after, thus showing that one *does* care (Johns-Putra 2016, 528). To this point, Daryl Koehn remarks, 'We properly wonder about the genuineness of people's concern if they claim to care for the environment but refuse to recycle their garbage, compost, dispose of hazardous materials properly, or do anything that is currently thought to help protect the environment' (Koehn 1998, 23–24).

Learning to be responsive to events, places, and beings further away, or to specific sites where overarching maxims and forms of care are worked out (Wood 1994, 127), such as economic policy and housing markets (S. J. Smith 2005, 10) and consumer media (Kavka 2016, n.p.), is not to deny that one's caring must be selective in the sense of respecting the limits to one's attentiveness and capabilities. That is to say, 'we often care about more than to which we can respond' (Fisher and Tronto 1990, 42), and, to care well, one may need to prioritise those things or beings that especially elicit one's concern. Yet rather than closing off access to the various pathways of caring for whereby particularised and generalised concerns intersect and act upon each other, it can be useful to think about caring for as the point where, following Mischa Kavka, care as an affective orientation becomes an ethical practice (Kavka 2016, n.p., 2015, 105). In the context of research on digital reality television, Kavka uses the notion of 'mediations' to plumb this interface at which 'caring about' takes on a quality of concern that one feels one must or ought to act on (Kavka 2016, n.p.). In the following sections, I take forward this notion of mediations to discuss distinct ways that this interface presents itself in the context of digital planting, where individuals are appealed to care about and for both issues that manifest nonlocally (e.g. global warming) or have more-than-local effects or origins (e.g.

deforestation) and distant tree and human others. Digital tree planting campaigns rely upon three key, overlapping categories of mediation in this respect to reel individuals in to care: the presentation of individual actions and consumption as acts of environmental responsibility and care, the figuration of internet and new media platforms as means of environmental caretaking, and the promotion of sponsoring companies' and organisations' ethical credentials and environmental aspirations.

The individualisation of environmental responsibility and caring through consumption

The promotion of ethical shopping in western societies has become a prime conduit for mainstreaming care for others and the environment (Littler 2009, 2, 23–24). As one significant result, the role of individuals in enacting change cross-cutting a variety of arenas—social, humanitarian, political, economic, ecological—has gained a prominent place in debate on care at a distance (Clarke et al. 2007, 233). A central issue here concerns the implications for ecological care of the individualisation of ecological responsibility, coupled with its embedding in consumer choice (Fuentes 2015, 202). I take the 'individualization of responsibility' to reflect the understanding of 'environmental degradation as the product of individual shortcomings', which is accordingly 'best countered by action that is staunchly individual and typically consumer based (buy a tree and plant it!)' (Maniates 2012, 45). This response has been criticised by a number of scholars concerned with its impact on formulating appropriate responses to environmental change.

Commenting on the case of digitally mediated actions commonly seen in virtual crowdfunding for conservation, Jim Igoe bemoans that these actions are 'consistently 'individuated'' (Igoe 2013, 25, citation omitted), explaining: 'Opportunities for collective action are limited to pseudo-events, such as texting tree, turning out lights during WWF's Earth Hour, or running in the Nike Human Race. Ultimately, however, the power is always left in the hands of individuals, making choices that will putatively add up to world changing effects' (Igoe 2013, 25). These activities, it is argued, glow with the hope of revolutionary change, but in actuality, circumvent ecological politics (Cubitt 2017, 7), advancing in its stead, isolated efforts that, on the one hand, distract from systemic issues concerning production, based in, for instance, the valorisation of consumption-driven economic growth (Akenji 2014, 15–16; Luke 1993, 166), and on the other, shift responsibility to consumers for problems that are the rightful responsibility of

corporations (e.g. pollution emissions) (Luke 1993, 156) and that should therefore be addressed at the level of institutions and policymaking (Seyfang 2005, 297).

There is, as these critical perspectives intimate, ample reason to feel troubled by the perception of individual responsibility through consumer-friendly lenses, so that, for instance, ‘filling the kettle with just enough water to make tea or buying a slightly less petrol-guzzling make of car are seen as ways of “saving the planet”’ (Zylinska 2014, 27). The attendant discourse of ‘green consumerism’, which proclaims that individuals’ shopping choices ‘can affect the actions of large corporations, such as oil companies, and also can alter our relationships to, and impact on, the environment’ (Robert Cox 2006, 300), is problematic to the extent it bolsters cultural messaging that aligns living the good life with commodity consumption (Japp and Japp 2002, 88, 90–91). As distinctly characteristic of contemporary affluent societies in the global north, ‘consumerism’ refers to the orientation of everyday life *to* pathways of consumption (Iqani 2012, 2). This orientation is set in place ‘both economically, in terms of the operations of the global trade system, and symbolically, in terms of the images and messages that saturate everyday life and culture’ (ibid.). In promoting symbolic alliances with the natural world, such as branding ‘coffee with frog symbols’ to shore up associations with rain forests or selling ‘goods labelled as green or eco’, in the absence of ‘fundamental reflection upon the act of consumption and the ecological repercussions’ (de Burgh-Woodman and King 2013, 162), discourses promising ‘salvation-through-consumption’ (Atkinson 2014, 80) mediate against the prospect of care for the environment by modelling consumption-oriented lifestyles that reinforce the commodification of the natural world for satiating human desires (Corbett 2002, 157).

An important critical task therefore involves subverting the normative framing of ‘the ecological crisis’ as ‘the accumulated impact of consumers’ choices’ (Luke 1993, 159), which dangerously collapses the possibilities for conceptualising and thus tackling ecological issues to ‘piecemeal’ actions oriented by consumerist mentalities (Maniates 2012, 46–47, 52). In some ways, this framing flirts with the construal of ethical consumption as a practice that rehearses a neoliberal discourse which imputes an inordinate amount of responsibility to the individual green consumer (Littler 2009, 95–96). Here, the premises of care are steeped in attention to one’s lifestyle, with view to becoming a model environmental citizen, as Matthew Paterson and Johannes Stripple argue in light of the proliferation of online carbon counters, carbon offsetting online communities and groups, and exhortations popularised by mass-marketed books to go on

a ‘carbon diet’ (Paterson and Stripple 2010, 344–45, 347, 350–54). Such self-conscious ecological attentiveness injects consumption framed as environmentally impactful, with a sense of enablement and dutiful conduct, as Emily Potter argues in her study of the Mount Franklin bottled water campaign sponsored by the Australian company Coca-Cola Amatil, whose ‘Buy me, plant a tree’ campaign was designed to entice consumers to feel as if they did the ‘right’ thing by being indirectly involved in planting a tree (Potter 2011, 121). The kind of ‘care’ that stems from such opportunities to consume for good, exemplifies what Gay Hawkins refers to as ‘categorical moral imperatives’ that routinely surface in campaigns that peg ordinary consumer action to grand stakes, such as ‘global ecological survival’ and ‘care of the planet’ (G. Hawkins 2006, 38). Hawkins argues that whereas such imperatives prescribe ‘a minor change in habits that confers virtue’ on the consumer, they ultimately inhibit the capacity to be meaningfully affected by ecological issues (ibid.). Hawkins’s research focuses on being with consumer waste differently in order to spark more affective and embodied responses to consuming other than those marked by ‘the culture of disposability’ and its ‘careless disregard’ of others involved in consumer exchange (ibid., 32; see 112–15). Her line of reasoning is instructive in offering insight into the ways that consumption is *for* others, in the benevolent sense resonant with an ethic of care, and finds articulation through ‘micropractices’ (ibid., 3–6), everyday actions strategically performed on an individual scale.

In appreciating this twofold suggestion, it is important to recognise, first, that consumption may be a means through which individuals express their disposition to care for others, as amply indicated by Daniel Miller’s interviews with North London households regarding the emotional and practical considerations motivating their shopping practices (D. Miller 1998, see particularly 18, 19, 22, 35). In their research with producers and consumers participating in food schemes, Moya Kneafsey et al. (2008) observed, relatedly, that most consumers displayed ‘a care-oriented sense of self – or disposition – in that they are aware of the needs of others, human and non-human, close and distant’ and are further ‘prepared to act on this awareness’ (Kneafsey et al. 2008, 162, 110). In turn, Kneafsey et al. propose that the motivations underlying ethical consumption in the case of the food scheme can be thought of as comprising ‘interlocking ‘cares’ operating across different scales, from the home through to the local neighbourhood, and the wider community of humankind, and encompassing concerns for people, food, animals, soil, and ecosystems’ (ibid., 162). While an unreflexive subscription to green living is troubling for how it may serve to multiply and valorise consumer choice

(Seyfang 2005, 294), the expansion of ethical markets may yet offer accessible and ongoing sites for collective caring consumption that afford everyday interfaces with environmental and social issues (Micheletti 2003, 2, 9, 12, 29). Such markets may, for some consumers, be the avenues whereby they become aware of these issues in the first place (Seyfang 2005, 298), as could be suggested increasingly in the case of online sites promoting environmental awareness and lifestyle interventions (Haider 2016, 481).

Considering, in this way, ‘the place of minor actions and tactics’, opens a ‘pathway from politics to ethics’ (G. Hawkins 2006, 17), whereby everyday actions can become newly meaningful and intervened in through discursive linkages to broader-scale initiatives and aspirations that are then associated with embodied practices, as suggested by Gibson-Graham in the earlier example of *Carbon Cops* (see p.60). Along these lines, Jimmie M. Killingsworth and Jacqueline S. Palmer offer an intriguing reading of how-to-green consumer books, such as *50 Simple Things You Can Do to Save the Earth* by the Earthworks Group (1989). On the surface, these popular texts certainly appear to advocate superficial actions such as buying eco-detergent (see Luke 1993, 159–62; Maniates 2012, 50). But Killingsworth and Palmer argue that associating everyday behaviours with environmentalism can work to form habits that help bridge knowledge of a seemingly ‘distant phenomenon’, such as ‘the faraway and disappearing rain forests’, with actions that the individual ‘can experience locally and feel with the body’ (Killingsworth and Palmer 1996, 228). The bridge thus forged by ‘green consumerism’ may be instrumental for ‘get[ting] inside the ritual practices of daily secular life and redirect[ing] important symbolic associations’, such that ‘[e]ven a little action’ sounds a reminder of one’s connection with the earth and others (ibid., 231, 232).

Whereas ‘isolated individual efforts’ are improbable catalysts for change without institutional transformation as well (Thiele 1999, 73), individual actions are indispensable to imagining and practising ways to care, if for the plain if sometimes forgotten fact that even problem-solving at the policy level is only as sound as the commitment of individuals to take subsequent actions and enforce policies in their everyday lives (L. F. Miller 2016, 410). Attempts, in turn, to direct individual engagement based on interlinking issues relating to the environment and humanity across a range of scales and regions, must duly appreciate that ‘although advocating personal responsibility is essential, to shrink solutions to the level of the private and the small is evasive’ (Nixon 2011, 39). A fruitful and worthwhile critical opportunity to this end would be to interrogate these attempts for the kinds of connective thinking they afford and the

consequences, specifically, for imagining caring ecological responses. Over the next two sections, I consider key ways in which tissues of interconnection may develop in the context of digital care toward celebrating and idealising particular ways of relating to nonhuman nature and the others whose livelihoods are purportedly facilitated through individual engagement.

The virtual imagination of care about nature and the spectacularisation of nonhuman others

Through crowdfunding platforms and social media, the internet has begun to attract critical interest for its use by both activists and companies working to ‘actively facilitate the reimagining of nature online’ and ‘thus how humans and nature (should) relate’ (Büscher 2014, 728, 735, 736; see also R. Hawkins and Silver 2017, 114–15, 121–23). A critical concern with respect to this technical and discursive mediation of nonhuman nature, what Büscher calls ‘Nature 2.0’ (Büscher 2014, 736), is the way in which acting at a distance and forging ethical relations with ‘offline worlds’ (ibid., 740) and others through these platforms, rests upon partial narratives of ecological realities (Büscher and Igoe 2013, 292).

Igoe stresses the need to be ‘mindful of the ways in which the mediation of relations by images influences and limits people’s conceptions and imaginings of the world’ (Igoe 2010, 389). The 2011 Earth Hour campaign, mentioned in Chapter 1, which called on users to text TREE in order to plant trees, offers a glimpse into the exorbitant ecological investment necessitated by online action that is however eclipsed by campaign representations. Igoe writes that, at the time, a mobile phone used to participate in the campaign may, on average, ‘burn the equivalent of 32 gallons of gasoline and emit 112 kilograms of carbon before being consigned to a landfill, where it will release toxins into the soil’ (Igoe 2013, 21). Such ecological ‘paradoxes’, he stresses in elaborating the consequences of mediating care at a distance, ‘*can be made to appear not to exist*’ (ibid., author’s emphasis). In his view, the images appropriated by conservation campaigns to ‘mediate relationships between Western consumers and people and environments at locations that are distant from them’ suggest that imagined and virtual connections to distant places and peoples promise ‘comforting solutions to terrifying problems and the possibility that such solutions lie, in large part, in the continued consumption of hamburgers, cell phones and online games’ (Igoe 2010, 378, 380). There is thus a need, he concludes, to be attuned to ‘global disconnection’ as well as ‘global connection’ (ibid.,

389). Drawing on Guy Debord's fourth thesis in *The Society of the Spectacle*, which asserts that media images serve to configure relationships between people (see Debord 2002, 7), Igoe extends Debord's focus to highlight how such imagery also imagines humans' relationship to the environment, and to each other via the category of *nature* (Igoe 2010, 376). The spectacularisation of human-environmental relations through media imagery, following Debord, can be seen to work through 'significant concealment of connections and contexts that define those relationships', while the technologically mediated presentation of the mediation may sketch an otherwise compelling portrait of the terms of the relationship and the benefits for the environment and dependent human and nonhuman others (Büscher and Igoe 2013, 290).

Analogously, Büscher critiques an early version of the search engine Ecosia's website (whose campaign I review in Chapter 5), when the search engine was initially partnering with the WWF to reforest Brazil's Atlantic Forest. His critique illustrates kin concerns centred on the website's presentation of an appealing and exotic image of the Amazon, which, as I touch upon in the next section, has long served environmentalism as a symbol of pristine nature under threat. This presentation, he notices, works through editing out the 'lives and stories' of the larger reality, the inclusion of which would indicate that deforestation is rather a more complicated, political and economic issue, irreducible to an issue of replacing trees felled by activities such as illegal logging and 'unsustainable settlements' (Büscher 2014, 731–32). In this case, the merits of rain forest conservation are conveyed to a potential audience of distant, virtual carers through an image of the Amazon forest ecosystem that makes the rain forest stand in for a wider web of ecological relations. Such cases exemplify how, as Michael K. Goodman and Jo Littler have suggested, nonhumans, such as 'polar bears and rivers', are celebrified (or 'celebritised'), with the effect of steering 'environmental and ecological politics' to focus on particular habitats, issues, ecological processes, and species (M. Goodman and Littler 2013, 272). So, for instance, Goodman and Littler argue that '[t]he rainforest (the Amazon in particular) as well as the Arctic, and now the Gulf of Mexico via the BP Deepwater Horizon spill, have taken on special, quasi-celebrity status as places of concern worth 'saving'' (ibid.).

In resonant fashion, one may discern that trees have become likened to ecological saviours in contemporary tree planting discourses, as illustrated by Shaul Cohen's analysis of US campaigns run by timber companies, government agencies, and non-profit organisations and citizen groups (S. Cohen 2004, 2, 15, 1999, 426). In view of the

affective magnetism and symbolic potency of trees, Cohen writes: ‘The very power of trees, our love for them, and their prevalence in our cultural works and iconography make the manipulation of trees and, more important, of the idea of what trees can do, extremely problematic’ (S. Cohen 2004, 2). Troubled, in this respect, by how ‘trees are a common cultural currency throughout the world’ (ibid., 8), Diane Rocheleau and Laurie Ross argue that trees are now ‘major players’ in greening development discourse, which has in turn bore a ‘plethora of forestry and agroforestry initiatives which have been sheltered in the discursive shade of trees as symbols of green goodness’ (Rocheleau and Ross 1995, 408). Summarising the celebrity status of trees, Rocheleau and Ross declare that ‘trees and forests have been turned into metaphors for the green dreams of global environmentalists, the green greed of multinational corporations, and the greening of popular movements’ (ibid.). Set upon this discursive canvas of seduction, which promises a stake in ‘caring for the environment by planting trees’ (S. Cohen 2004, 164), trees are painted in the collective imagination as ‘celebritrees’ (ibid., 165).

These examples of celebrifying the nonhuman and ecological action can be placed under the broader notion of ‘spectacular environmentalisms’, which, ‘in its most overt sense’, is used to refer to ‘forms of mediated, visual media that work across affective registers to frame not just environmental issues but offer up pedagogical narratives about how we should go about caring for more-than-human nature’ (M. K. Goodman et al. 2016, 678, 681). Media events and texts that fall under this category might be ‘Live Earth concerts, *Vanity Fair*’s Green Issues, or celebrity environmental activity’ (ibid., 678). Emphasising the affective component of such mediations of care, M. K. Goodman et al. (2016) elaborate: ‘We see, but most vitally, *feel* the determination of activists sitting in trees, the green celebrity’s anger that rapidly turns to tears as that last tree is cut down to make way for “progress,” the joy and hope in the announcer’s overdubbed voice commentating about a new elephant/tiger/orangutan sanctuary’ (ibid., authors’ emphasis). The ‘celebrity’, whether human or nonhuman, so featured and made to move media audiences, ‘get[s] us to think, care, and do differently in order to ‘save the planet’’ (M. Goodman and Littler 2013, 269). In this way, celebrities take on a rhetorical function comparable to that of corporates, not-for-profits, and NGOs in ‘encourag[ing] us to care’ about human and nonhuman others and distant environments (M. K. Goodman and Barnes 2011, 78–79).

In her study of Sea World’s marketing campaigns, Susan G. Davis (1997) shows how spectacularisations of nonhuman others and environmental issues can work to

normalise certain kinds of human relations with nonhuman nature. She argues that marketing functions in this context to anticipate and interpret patron encounters with sea animals within the theme park as a form of consumerist spectacle. In the familiar tradition nowadays of remaking consumption into environmental action, Sea World popularises a model of consuming ‘animals that until recently have had little cultural visibility to Americans’, and at that, are for most consumers best known through ‘the mass media’ (S. G. Davis 1997, 97). As performers for masses of crowds, these animals, she argues, are used ‘to bring parts of an invisible wild into public view and elevate them to iconic status’ (ibid., 97–98).

Writing of similar ‘marine animal displays and interactive programs [that] draw thousands of spectators and participants worldwide’, Una Chaudhuri points out that ‘they promise a kind of interspecies experience that many people crave, and they afford powerful affective rewards’ (Chaudhuri 2017, 145). Echoing this sentiment, Davis concedes, ‘Sea World expresses, in part, its customers’ desires for nature and their worries about the future’ (S. G. Davis 1997, 39). Although such spectacles may thereby offer a platform to consider afresh issues of human ‘encounter, interaction, and representation’ (Chaudhuri 2017, 145) in the case of nonhumans, and specifically here, animals, they tend to slide into an aesthetic register that plays up the nonhuman as performer rather than kin other, so that what audiences are in essence offered is a spectacle for consumption rather than a moment of relation (Sullivan 2016, 753–54). Audiences are drawn in to care, Davis suggests, through a commercial aesthetic that prioritises the consumer’s agency in caring over the opportunity to become ethically attuned through an encounter:

[T]he job of the theme park is also to transform these longings [showing concern for nature]. Customers want to see the amazing, performing killer whale and the pristine antarctic wilderness, of course, but they also hope to feel agency, that is, that however indirectly, a visit to the theme park is an act of caring. That they can do this is, in part, a result of the fact that in the late twentieth century, American business has worked hard to define consumption as a form of concern, political action, and participation. At Sea World, consumers are explicitly asked to see consumption this way. As one of the killer whale show scripts puts it: “Just by being here, you’re showing that you care!”

(S. G. Davis 1997, 39)³¹

³¹ The popularised moniker of *killer whale* for the orca, the largest species of dolphin, is an unfortunate mistranslation of ‘whale killer’ from the accounts of Spanish whalers (“About Killer Whales/Orcas,” n.d.). Apart from the technical inaccuracy of

The narrative and affective framing of the nonhuman as in need of consumer care reinforces anthropocentric interest in the other as an aesthetic and ethical object of appropriation. Davis's work and related literature on spectacular nature emphasises the inherent ethical problems with the 'disconnective impetus' to care (Sullivan 2016, 750, 752, 755, 758) that is displayed in aggrandisements of the nonhuman's conservational and ecological significance. In the next section, I discuss how the eco-ethical tensions of such imaginings are obscured, and further put in service of, the embedding advertising and commercial discourses that pivot on promises of a just, responsible, and caring ethic of exchange.

The promotion of ecological care and ethical relations through environmental marketing and commercial discourses

A growing body of scholarship on environmental and ethical marketing focuses on the systematic effort being poured into constructing claims about the ethical merits and environmentally progressive attributes of companies and their offerings (Carrier 2010, 678–79). This effort has engendered a situation in which relations of care and responsibility are struck between consumers, companies, and distant others and worlds based on discursively imagining virtuous connections 'with other people around the globe' (Littler 2009, 3) and the benefits that accrue to their environments. Researchers have shown how these relations are forged as 'marketers build ethical worlds into products' through processes of production, retailing, and promotion, as well as through the very standards of certification that denote these processes as ethical (Neyland and Simakova 2009, 781). As Daniel Neyland and Elena Simakova explain using the example of Fair Trade certification and ethical clothing, 'We are not being offered the opportunity to merely purchase a t-shirt, we are being offered the opportunity to produce-consume an ethical world built into the t-shirt' (ibid., 784).

Here, critical studies in marketing and consumption have multiplied around how companies strategically invest in negotiating what is meant by 'ethical' and 'eco-

misclassifying orcas as whales, this translation arguably serves to brand this species as 'killers', lending credence to sensationalised media reporting that orcas are naturally temperamental and thus a danger to their human trainers at entertainment parks. The 2013 documentary film *Blackfish* and David Kirby's book *Death at Sea World* (see Kirby 2012, 178–96) are two texts that attempt to debunk by stressing the crucial factor of captivity in mediating the orcas' behaviours.

conscious', because such qualifiers do not map to precise, agreed-upon definitions, neither in industry nor academic debate (Moor and Littler 2008, 700–701; Banaji and Buckingham 2009, 1199). Rather, they are contextually contingent and multiply determined by what companies choose to disclose and emphasise. Consequently, the depiction of firms' care about 'the natural environment and social well-being' (Livesey and Kearins 2002, 244) brings into play, to differing extents, the public relations management practice known as *greenwashing*, along with the kin practices of *whitewashing*, meaning 'to cover up crimes/scandals', "bluewashing" (human rights, poverty, and labor issues) and "pinkwashing" (LGBT and/or breast cancer research issues)' (E. Jones 2015, 523–24). Greenwashing refers to 'the strategic disclosure of positive sustainability information about a company's performance whilst omitting negative information' (Villarino and Font 2015, 326–27) that may impact public perception of the company's greenness and the ecological merits of its products and services (Robert Cox 2006, 298). In practice, companies manipulate the availability and honesty of information through a variety of discursive techniques, for instance, misleading with words, visuals, or graphics, exhibiting 'vagueness in claims, exaggeration, and avoidance of helpful information' (Dangelico and Vocalelli 2017, 1269). Although greenwashing is thus typically associated with claims about practices and products, it can also, as Littler discerns, be unpacked with respect to a company's choice of *which* products to market. Whether these products uphold 'green' or related eco-conscious standards (e.g. 'organic') is difficult to ascertain insofar as the latter are determined through flexible and relative criteria, which refuse to pin down specific guidelines (Littler 2009, 104–6).

Attention may be deflected from such ambivalences through careful management of values that ethical consumers may be inclined to respond to (Carrier 2010, 686). Values of transparency and care are frequently emphasised to this end, attesting to the core 'set of values and beliefs that guide' companies' business dealings and conventions (Todd 2004, 90, 92) as evidenced, in part, through affiliations with charitable organisations and "a good cause" (Littler 2009, 31–32). Sharon M. Livesey and Kate Kearins offer a rich and detailed example of how 'metaphors of transparency and caring' structure and substantiate the claims of The Body Shop and Royal Dutch/Shell in sustainability reports the companies released in 1998 (Livesey and Kearins 2002, 234), marking 'a new genre of voluntary corporate reporting' that sought to win over consumers by building a trustworthy and environmentally conscious public image (ibid.,

233). The reports feature evidence of visits by ‘outsiders to observe, inspect, or bear witness to a range of corporate activities from industrial production processes to management decision making’; in addition, the companies’ websites highlighted ‘[s]takeholder commentary’, serving ‘as a kind of witnessing to the firms’ emerging practice of sustainable development’ (ibid., 249). Through establishing their commitment to transparency, the companies were able to advance further claims about their humanitarian and environmental conscience. In particular, Livesey and Kearins show, they asserted themselves as ‘companies who “cared”’, through ‘implicit promises’, e.g. ‘that an oil company [Shell] will protect the environment or that a cosmetics company [The Body Shop] will liberate women’ (ibid., 252). These promises, structured by professions of ‘good intentions’, were moreover relayed through ‘a framework of common humanity’, thereby enabling the companies to cast themselves as *human* enterprises, and hence, ‘compelled by values and sentiments’ such as ‘human feeling and trust’ (ibid., 251, 252).

As appeal to ‘concern, care and ethics’ is becoming a norm in positing solidarity with distant others in the realm of ethical trade and consumption (Richey and Ponte 2008, 721), the way these interconnections are imagined is important to unpack toward discerning the terms of caring being forged (U. Narayan 1995, 136). Companies’ trending commitment to greater openness and honesty about their operations, as communicated by, for instance, ‘emphasizing the ‘traceability’ of products’, showcasing working conditions and workers’ experiences, or appealing to ‘notions of ‘provenance’’ (Moor and Littler 2008, 704–5), rests on a bed of strategic disclosures, which are facilitated by portrayals of benevolent ecological and social interventions that, as I show next, are crucially energised by representations of the natural world and its flourishing.

In her analysis of the American Express RED campaign to fight AIDS, Littler unpacks the ‘benevolent dynamic’ through ‘which the Western consumer is being invited to ‘help’ Africa through donations’ (Littler 2009, 28). The ‘affective glow of charitable imperialist endeavour’ rings with the idea, conceived during 19th-century European imperialism, ‘that Africans needed to be helped to pull themselves out of primitive infantilism by the ‘mother countries’’ (ibid.). This idea ‘was used to justify a system which kept the Europeans in power so they could draw on Africa’s natural resources and wealth’ (ibid.). In the contemporary commercial context, it can be argued that the deployment of ‘quasi-imperialist modes of representation, featuring images of happy, smiling ‘natives’ whom Western consumers are invited to patronize and help’ (Moor and

Little 2008, 702), is used to throw into question such suggestions of neocolonialism by constructing the other—in the case of RED, ‘Africans with AIDS’—‘as worthy recipients of profits generated from heroic shopping’ (Richey and Ponte 2008, 713). The presentation of ‘a new modality for resolving’ socioeconomic disparities (ibid., 719) can, nonetheless, play out in campaigns with suspect intimations of socioeconomic parity, as suggested by, for example, ‘the ironies of producer communities gaining access to clean water or basic education while Northern consumers comfortably reflect on their daily coffee purchase’ (M. K. Goodman 2004, 909).

I would argue that these sorts of relations of care gain imaginative purchase in important part through the presentation of winning, idealised images of nature, as research on forest-branded products makes evident. Raymond L. Bryant and Michael K. Goodman note how ethical consumer goods with ties to the Amazon are narrated by ‘invoking’ ideas of ‘‘fecund’ tropical natures and hard-working Southern producers’ (Bryant and Goodman 2004, 348). This narration, they find, employs Edenic mythologies to construe consumption in the global north, through Amazon Flakes dry cereal and ‘Rainforest Sorbet’, as unequivocally taking care of the habitats and peoples of the global south through the depiction of lush vegetation and friendly nonhuman critters (ibid., 351–54). In analogous fashion, Candace Slater scrutinises how ‘rainforest’ branded products, such as fragrances and foods, channel ideas about the Amazonian rain forest (C. Slater 2004, 177), which commands special symbolic and ecological stature in popular environmental consciousness ‘as “the world’s lungs”—and, increasingly, its “toxin-removing kidneys”’ (C. Slater 2002, 8), not to mention a wellspring of resources, featuring herbs, medicines, and commodities of all kinds (ibid., 8, 10, 147–49, 153). Examining the Rainforest Crunch cereal packaging and its cheerful image of environmentally conscientious and charitable consumption framed by a ‘bright assemblage of plants and animals’, Slater observes how the workers ostensibly helped by consumers are shown as indebted to consumers’ cereal appetites (C. Slater 2004, 170). These appetites, in turn, are associated with the vibrancy of the nonhuman centrepiece, which is meant to communicate the natural bounty of the Amazon. Thus, the rain forest is transformed ‘into a site for ‘sustainable development’’, and arguably ‘part of a much larger global project whose success relies above all on First World consumers’ (ibid.).

Based on an analysis of virtual crowdfunding activities promoting conservation, Igoe notes that the connections being drawn between consumer action and environmental change mostly back ‘a system of arrangements and interventions that appear as

unproblematically good' (Igoe 2013, 25). This appearance is crafted through omissions that can complicate the ecological stature of such activities (Wagner 2012, 169–70). As James G. Carrier notes in the case of advertisements for an ethical coffee brand and an ecotourist resort, unaccounted for by claims to the ecological and ethical merits of these initiatives are such impactful factors as 'the flight to the ecotourist destination, the labour used to harvest the coffee and the decisions that lead to the location of the tourist lodge' (Carrier 2010, 686). In the case of rain forest marketing, the reduction of the variety and breadth of distant ecologies and others to impressions distilled through consumable marketing collateral, inevitably glosses over a complicated history of relations among native farmers and forest dwellers, corporates, the consumer industries, and national governments that has contributed to normalising deforestation in such regions (Dove 1994, 3–5). Local communities may not benefit from the improvements in living conditions that are advertised as flowing from 'products containing ingredients from endangered rainforests', for it may be that these communities do not require external payments to guarantee their livelihoods, as much as they do, permission to make use of the forest resources already there (*ibid.*, 2–3).

Working to contextualise the issues and environments that are the subject of promotional discourses can thus assist in noticing how contemporary ethical marketing practices may, unwittingly or inadvertently, serve purposes that are 'antithetical to the promotion of social equity and sustainable ecological practices' (Bryant 2014, 230). Tracing Burmese teak consumption through its precolonial, colonial, and postcolonial passage, Bryant shows how teak consumption has been 'profoundly shaped' by its marketing (Bryant 2014, 226). As a result of manufactured perceptions of teak as signifying loyalty to and love for the British Empire (*ibid.*, 227), commodities, such as home furniture, sang with the promise of enjoying "a little bit of empire", he writes, quoting an advert (*ibid.*, 228, 229). Such marketing discourse, alongside 'consumer affection for the "king of woods"' (*ibid.*, 226), is anchored in a promotional practice whereby 'marketers expunge bad news linked to forest violence, evoke scientific facts about teak's wondrous properties and weave fantasies about stylised living, sometimes spiced with colonial nostalgia' (Bryant 2013, 525). This practice dates back to colonial scientific forestry, which established teak's inimitable commercial usefulness (e.g. durability) among tree species (Bryant 2013, 524, 525, 2009, 9–10), and assisted in the privatisation of much of the Burmese forest lands and surveillance of the local rural poor's highly restrictive access to the forests for sustenance (Bryant 2009, 3, 21–25).

Meanwhile, 'teak's local reputation as "blood" timber' has only recently come to light (Bryant 2014, 226). This nickname refers to the mid-20th century, following Burma's independence, when, in an effort to quash insurgents, the state tamed the forests through merciless logging 'while terrorising' the local insurgent human populations through forced ejection from their homes, imprisonment, and death (Bryant 2013, 525). Far from an issue confined to the colonial period, Bryant emphasises, teak's 'technical and aesthetic merits' continue to mesmerise as 'marketing agents, ship chandlers, and yachting enthusiasts' opt to lower the volume of press that would expose the 'dark side' of the darling that teak has become amongst consumers and merchants (Bryant 2014, 230, see also 2009, 14–16).

In the case of ethically branded opportunities for environmentally themed consumption, the wider context suffers from invisibility and occlusion by subscribing to an image of environmental and social conscience that aligns the consumption of nature with its protection (Bryant and Goodman 2004, 344), as suggested by the Amazon-related marketing examples. Nature in such cases is 'consumed not only in the form of raw materials used to produce goods, but also in less tangible forms as images, experiences, and representations of nature and environmental practices that are used to promote the consumption of products' (Slawter 2008, 216; see also Takach 2013, 214), such as the scenery of coastal waters used to advertise an ecotourist getaway for 'environmentally concerned divers' (Carrier 2010, 675, 678–79). Based on an ethnography of window dressing and other in-store promotional techniques used by the Nordic Nature Shop and a discursive analysis of the company's web and print marketing collateral, Christian Fuentes suggests that a key aspect of the shop's marketing strategy is the promotion of 'outdoor practices, showing consumers that the outdoors can be experienced through various practices' through the use of the Shop's products (Fuentes 2015, 195). For sale, effectively, is not merely the shop's products, but a way of relating to and being with nature through consumption of the products.

In a related vein, Anne Marie Todd's research illustrates how eco-conscious advertisements promise ecological connections by interlinking qualities of nature with those of the human consumer, so that what is good for the earth likewise supports the flourishing of the consumer. Todd describes how Tom's of Maine, The Body Shop, and Burt's Bees affix 'environmental value to personal care' to various degrees through the category of beauty, and associated values of cleanliness, purity, and radiance which indicate robust health. Holistic, natural personal care products are hence thought to

reflect, or be imbued with, the ‘natural’ beauty of the earth and thus enhance the ‘natural’ beauty of the person using the products (Todd 2004, 93–96). Consumers are thus led ‘to feel good about their consumption choices’, which are also advertised to appeal to consumers’ own needs and desires (ibid., 94). Attending to this alliance of care for self and nature highlights how ‘nature’ may be enlisted as ‘a mirror in which to reflect all manner of human desire and calculation’, thus furnishing ‘bountiful opportunities’ for promotion (Bryant 2014, 221) that ‘facilitates certain ways of seeing the environment’ (Bryant 2013, 518) and valuing it (Corbett 2002, 143, 157). Describing *National Geographic*’s ecotourist aesthetic, Todd notes, ‘while tourism is described as a salve for Africa’s problems, it is fundamentally about a quest for retreat. The smattering of green credentials throughout the magazine does not belie the implication that Africa should ultimately be saved to preserve its accessibility to tourists’ (Todd 2010, 220). As a vehicle for articulating eco-ethical practices, nature is yet prohibited from existing beyond the appropriative frame of human tourists’ longings (Corbett 2006, 148, 155).

The eco-ethical contradictions that characterise this alignment of a consumptive mentality with nature protection can be further elaborated with respect to the marketisation of nature more broadly. This frame of analysis introduces critical opportunities to explore the ways in which ‘capital interests’ may yet ‘maintain our fundamental orientation toward nature’ (S. Cohen 2004, 24) as other-than-human natures are converted into ‘monetised and tradable’ forms of value (Sullivan 2013a, 200) to facilitate exchanges ostensibly devised to aid in the natural world’s preservation and flourishing (e.g. one tree planted for each sweater bought, x tonnes of CO₂ offset for each tree planted). To this end, it is useful to acknowledge how nature and trees are incorporated, via market logics, into the representation of caring exchanges.

The examples of ethical consumption and environmental marketing discussed in this section have touched at various points on what is sometimes designated as defetishisation (Carrier 2010, 686), a process of unveiling of ‘the “magic”’ involved in selling a commodity or service (Hepburn 2013, 639, 638–40). Karl Marx’s concept of commodity fetishism, which this perspective draws upon, asserts that when objects become commodities, that is, available for market exchange, their constitutive properties and the labour of making them are mystified (Marx 1887, 1:47). Marketing literature that makes use of this concept emphasises the fact of these obscurations and points out that attempts at making hidden aspects of the production process re-appear, often end up applying new layers of opacity, through symbolisms, selective portrayals, and

certifications, so that it would be more accurate to speak of ‘re-work[ing] the fetish’ (Bryant and Goodman 2004, 359, emphasis removed), in that the natural and ethical attributes of goods and services become commodified and obscure other attributes and facets of production (M. K. Goodman 2004, 902–3). For example, in broadcasting products’ sustainability, ‘transparent information about the processes that lie behind the products is communicated by the label’, e.g. ‘fair trade coffee, Forestry Stewardship Council (FSC) wood products and Rainforest Alliance bananas’ (Richey and Ponte 2008, 723). Arguably, the reliance on the label to communicate sustainability not only blocks from view, or ‘fetishises’, ‘social relations of production’ and qualities of the ethical product that are not signified by this designation (ibid.). It also takes for granted the ways in which nonhuman nature is made to signify through market logics.

The latter point helps problematise how, through ‘the commodity form’, nonhuman nature is rendered ‘productively exchangeable but deadened’ (Sullivan 2013b, 52fn7) or otherwise muted in its ability to be other than for market exchange. This aspect of commodity fetishism is not typically explored within literature on defetishisation, but I feel it brings to light a useful component of Marx’s theorisation. Marx proposes that concealing labour relations and the (living) nonhuman origins of the commodity allows the latter to appear as an autonomous entity ‘endowed with life’, having value in and of itself (Marx 1887, 1:48). This value owes to the projection of human fantasies and desires upon the commodity, which as a result is granted the distinct power of fulfilling them (ibid.). In twinning ethical consumption with tree planting, it is wise to consider how the commodity is invested with agency to enact change in a way that may compete with, or otherwise affect, nature’s expression and ethical value. An interesting consideration here arises from the fact that this concept of commodity fetishism itself works through epistemological valences that empty nonhuman nature of its vitality and sentience, as it ‘is steeped in particular understandings of the “fetish” as a component of “primitive” and animist thought, and is associated with a broader modern dismissal of amodern animist ontologies as ‘savage’ and irrational’ (Sullivan 2013b, 52fn7).

Following Sullivan, I wish to make room for nonhuman beings to make an ethical claim about the consequences of valuing them for the purposes of mediating market exchange (ibid., 52). I endeavour to express how, in the context of marketing representations, they appear available for being in ethical relation with. Sullivan, to this end, questions the compatibility of nature conservation with ‘the lens of capital’ (Sullivan 2017, 72), which forms the basis of opportunities for ethical consumption and green

spending. In translating ‘nature’ as ‘natural capital’ (Sullivan 2017, 71–72), she argues that ‘[c]urrent market logics’ operative in ‘environmental governance for conservation and sustainability tend to disaggregate nonhuman natures into discrete units to which monetary value can attach’ (Sullivan 2013b, 50), effectively ironing the vitality and multiplicity of nonhuman natures into flattened numerical entities which can be priced and traded as ‘[c]arbon credits, environmental options and futures, biodiversity derivatives, mitigation insurance, species credits, [and] biodiversity offsets’ (ibid., 51). These opportunities for market exchange are typically packaged as ways to better ‘account for the costs of environmental degradation’ (ibid.). Yet, they value nature’s existence within a framework of abstraction and commodification that is eerily like that which such valuations are meant to improve upon. Under capitalism, as Marx observed, nature is the ‘material’, the foundational substrate of all economic activity. Nature’s sacrifice in this process goes unacknowledged and unvalued as it is thanklessly appropriated to fashion ‘useful’ goods that then fetch a price (i.e. exchange value) on the market (Marx 1887, 1:31, 39, 52). Rather than valuing nature indirectly thus, as the value which facilitates market exchange, schemes such as Payments for Ecosystem Services (PES), which assigns monetary values to nonhuman labours (e.g. carbon sequestration) that contribute to ecological care through the unifying language of ‘services’ (Sullivan 2009, 19, 23), propose a corrective which acknowledges nature as the basis of the human economy (Redford and Adams 2009, 787).

Sullivan worries that the imagination of possible kinds of human-nonhuman relations and ways of being in the world is being dangerously simplified and standardised to appease an equivalence mentality (Sullivan 2009, 25–26, 2013a, 200, 210). For lost upon such accounting systems are ‘the forms of value, appreciation, understanding, and experience of non-human worlds [which] simply are incommensurable with economic pricing mechanisms’ (Sullivan 2009, 24). Schemes such as PES may be said to ‘reinforce somewhat Hegelian master-servant relationships between human and non-human realms’ (ibid., 23, Jackson and Palmer 2014, 136), chiming with a colonialist mentality that seeks to possess nature and exhaust its productivity for a variety of human ends (W. M. Adams 2003, 43). To this end, Kent H. Redford and Williams M. Adams point out that from the mid-17th to mid-19th centuries, ‘ecosystem services were seen as vital for maintaining the economic output of the [European] colonies. Today they are judged important as a way of framing conservation imperatives to convince humans of the value of the natural world’ (Redford and Adams 2009, 785).

Complicating this issue is the way in which care itself is accounted for. In traditional capitalist accounting, the work of care performed by mainly women in the domestic sphere was written out of valuation (Mellor 2006, 141, 144–45). In response, Mary Raddon argues that addressing the ‘split’ of ‘caring and money’ requires embedding ‘money in a broader set of values, which are the same values that motivate and guide caring work’, these being, ‘at minimum, the values of human relatedness and interdependence’ (Raddon 2002, 26). In the ecological context, these values must be expanded to embrace a more-than-human world. To this end, Puig de la Bellacasa suggests, following Sue Jackson and Lisa R. Palmer, that reconceptualising mechanisms such as ecosystem services around an ethic of care could contest the divisive and supremacist articulation of human-nonhuman relations implicit in the present construal of ‘nature as provider/producer and human as consumer’ by making relational more-than-human configurations, as opposed to ecological entities, the locus of value (Jackson and Palmer 2014, 136; see Puig de la Bellacasa 2017, 187–88).

This rethinking offers a thoughtful possibility for revaluing nonhumans’ agencies and capacities, and re-embedding human livelihoods in more-than-human webs of relation. Given, however, that the articulation of monetary values revolves around human interests, as demonstrated in the case of PES, which would, as it now stands, only preserve those aspects of nature deemed beneficial to humans (Redford and Adams 2009, 786), it would be necessary to consider how this shift in thinking would benefit nonhumans. Which is to ask, how would valuing webs of more-than-human relationship with care, assist in nonhumans’ flourishing and behave the lines of relation that connect them to humans in myriad ways?



In this chapter, I have mapped out key theoretical debates that orient my analysis of digital campaigns for tree planting and care in Chapters 4, 5, and 6. Through this analysis, I build upon and attempt to cast fresh light upon these debates. In the next chapter, I outline the methods I use to approach the empirical work.

Chapter 3

Attending to the promotion of care by digital tree planting campaigns

Outline

In this chapter, I outline an ecocritically oriented multimodal discourse analytical approach to study the promotion of care by digital tree planting campaigns. In developing this approach, I pull methodological insights from the fields of media and communications, marketing and public relations, and the environmental humanities. I begin with an overview of ecocriticism, highlighting its aims and critical sensibilities. I then introduce the data-sets which I subject to ecocritical study, including the criteria I used to select them and my method for discovering them online. Next, I describe the discursive analytical approach I use to examine the data-sets. I explain how I study the campaigns as ecocritical texts with respect to their unique textual features. Then I share my methods of data collection and process of synthesis and writing up. The chapter concludes with a discussion of how care is woven into my research approach through my overall analytical disposition toward the empirical materials and ethical considerations in appropriating and citing online data.

Ecocriticism: aims and sensibilities

Ecologically oriented criticism, or ‘ecocriticism’, is distinguished by its close reading of cultural texts with an aim to unpack and constructively critique discourses of human-nonhuman relations. Conventionally comprehended, ecocriticism focuses upon literary and non-fiction genres of nature writing (Buell 2005, 5–6). In its most basic sense, however, ecocriticism is concerned with any cultural product or phenomenon that, whether intentionally or inadvertently, ‘contains an ethical characterization’ of human ‘interrelatedness with the non-human world’ (Iovino 2010, 44). Increasingly, a ‘more general cultural ecocriticism’ is being embraced, resulting in ‘studies of popular scientific writings, film, TV, art, architecture and other cultural artefacts such as theme parks, zoos, and shopping malls’ (Garrard 2012, 5), as well as ‘software, advertising, activist manifestos, and global legal instruments’ (Ahuja 2010, 119).

This diversification of the cultural objects of study enables ecocriticism to take place and flourish as a thoroughly interdisciplinary practice (ibid.; Carruth 2016, 365; Heise, in Arnold et al. 1999, 1097), directing attention to the immense breadth ‘of cultural

processes and products’ whereby ‘the relationship of the human and the non-human’ is negotiated and play out (Garrard 2012, 5), and to the various intellectual bearings that can be used to intervene in this articulation of relational dispositions (Rust, Monani, and Cubitt 2016, 4). As Serenella Iovino affirms, in an important respect, ‘outstripping the borders’ of traditional ‘ecocritical studies’ brings to the fore and reasserts the foundational premise of ecocriticism as ‘both an interpretive methodology and a form of social pedagogy’ (Iovino 2010, 9, 40), which is to say, ecocritical investigation is based on ‘the idea of an ecology of culture’, which ‘sees the possibility of building a circuit of positive interaction between the life of nature and the products of culture’ (ibid., 40, 39). In other words, interrogation of cultural texts and practices is a means of tuning into ‘the changing moods and tendencies in cultural perceptions of environmental relationships and concerns’ (Rust, Monani, and Cubitt 2016, 4), so as to positively influence how nature is treated and nonhuman others are taken account of and responded to (Iovino 2010, 42).

In its foundational concern with ‘representations of ideas about nature and possible and proper human-environmental interactions’, ecocriticism is a sister field to ecological ethics, which ‘develops and clarifies a theoretical discourse’ around these ideas, and the underpinning values which guide them (Iovino 2010, 40). Ecocriticism’s defining preoccupation with imagining more ethical interactions with, and attitudes toward, nonhuman others and the natural world with respect to cultural systems of thought and practice (Iovino 2010, 43–44; Rust, Monani, and Cubitt 2016, 3–4), makes it exceptionally suited to engage with the possibility of conceiving care as an ecological ethic in relation to new, digital forms of cultural representation and engagement. To facilitate understanding of how I approach the campaigns as objects of ecocritical interest, I first share the campaigns I used to form the data-sets and then outline my approach to analysing the campaigns. Thereafter I share how I conduct this analysis with view to the campaigns’ multimodal and distinct textual characteristics.

Campaign selection and discovery

To explore the promotion of ecological care by digital tree planting campaigns, I select three cases corresponding to the chief ways that companies are making use of digital media in this way. These cases are based on samples of campaigns that meet certain basic criteria for inclusion. In general, I am interested in campaigns that had emerged in the latter 2000s, in the wake of the UNEP’s Billion Tree Campaign. In the first place, I wished to select campaigns that targeted individuals in order to focus the

analysis in a way that matched my concern with how individuals were being reached in their everyday lives as digital consumers. Thus, I include only campaigns in which individuals constitute the key demographic, hence eliminating services or goods exclusively or mainly for businesses or other institutions. Some campaigns, I found, reached out to private individuals alongside institutions, such as schools, or even other companies, as part of a multi-pronged effort to disseminate their message and fundraise (e.g. ForestNation, <https://forestnation.com>). In these campaigns, however, the emphasis of marketing rests on planting by individuals, as indicated by the orientation of social media content, company websites, and the organisation's overarching mission, for instance, citizen crowdfunding (e.g. Tree-Nation, <https://info.tree-nation.com>). Second, I considered only companies whose primary market was online so that I could offer an accurate picture of how digital strategies in particular are being used to plant trees and attract users. Third, I focused on companies which donated automatically as a result of individual actions. In other words, I ensured that a company's promise to plant trees was not an optional add-on, as in contrast with, for instance, Dell's Plant a Tree Program³², where consumers must decide whether they want to pay extra for offsetting their purchase.³³ In all cases, I consulted more campaigns than I eventually used as the basis for analysis. Doing so enabled me to gain a sense of the types and range of digital strategies to facilitate segmenting the campaigns for analysis, including which campaigns could be considered instructive for focusing analysis. I now describe how I searched for the campaigns, followed by the three cases I decided upon, and finally, additional case-specific inclusion criteria which I progressively refined through both searches and comparative examination of campaigns.

As I shared in the Preface, I learned of digital tree planting campaigns quite by chance. I traced the first few campaigns back to their tree-planting partners. Browsing the companies that these partners worked with, gave me ideas about what kinds of digital strategies that companies in general might be employing. I used these ideas to help create initial search terms which I then plugged into Google and Bing. These search engines

³² <http://www.dell.com/learn/us/en/uscorp1/corp-comm/plantatreeforme>, last accessed June 2018.

³³ As I note in Chapter 5, though, using the example of the search engine Ecosia, this criterion does not mean that companies cannot mislead about how individual participation leads to planting a tree. This observation, as I elaborate there, offers insight into the way that digital participation is promoted in ways that may compete with caring.

employ different search algorithms and are the two most popular search engines worldwide, based on market share,³⁴ so I conjectured that companies who wanted to be found online by the greatest number of users would make their campaigns discoverable through at least one of them.

I conducted searches with the following two groups of keywords:

A: *tree planting, plant tree(s), forest, tree, conservation, reforest(ation), afforest(ation)*

B: *digital, internet, online, virtual, mobile device, (smart)phone, iPad, iPhone, tablet, game, app, search engine, shopping, crowdfund(ing), citizen, social network, Facebook, Second Life*

I began by searching with one term from A and B, for example, *digital tree planting*, after which I combined multiple words from a single group, such as *digital virtual tree planting*. For terms that include parentheses, I tried the full and truncated strings separately, e.g. *reforest* and *reforestation*. For terms consisting of two words, I searched the term in quotes and with the Boolean operator AND: e.g. “*mobile device*” and *mobile AND device*. After obtaining an initial list of campaigns, I searched using the name of the sponsoring company or, in the case of web-based applications, the name of the app (e.g. *Tree Story Game*), and a keyword from group A. I also visited the partnering tree planting organisation’s website to learn of other companies that I may have missed in my internet search. Finally, I tried searching Facebook, Google Play, and iTunes for a keyword from group A, in case certain initiatives did not feature a standalone website or had not garnered web publicity outside these media.

From this search, I decided upon the following three sets of campaigns:

Case 1: Online shopping for consumer goods (Chapter 4)

Online shopping, or e-commerce, is by far the most frequently leveraged strategy, whereby companies agree to plant a set number of trees per customer order or item purchased. The greatest challenge in this case was downsizing the selection pool to a manageable number. I decided to focus on companies which tied their missions centrally

³⁴ According to Statista, a statistical database used by industry professionals and academics worldwide, this dominance in market share, especially by Google, has remained consistent over the last eight years: <http://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines>, last accessed June 2018.

to doing good for the environment and planting trees. I also worked to ensure the final set of nineteen campaigns included both a variety of commodities indicative of the types of goods on offer in the wider pool of shop-to-plant initiatives and companies partnering with different planting organisations. Finally, I narrowed the selection pool by selecting companies that showed their success in planting several thousands of trees and had been in business for a few years.

Case 2: Apps, games, and websites for crowdfunding (Chapter 5)

In contrast to campaigns for online shopping, campaigns for apps, games, and platforms dedicated to crowdfunding for forest conservation could not necessarily be chosen on the basis of whether they endured. Because of lack of financing or struggles with generating sufficient advertising revenue to support the campaigns, some companies floundered after an initial run, spanning a few months to a few years. However, whereas the campaigns included in the first case all employ an identical strategy for fundraising, i.e. a number of trees in exchange for an online purchase, what I found insightful in this case was the variety of activities that were being tried. These activities, in my view, impart insight into the imagination about what activities are being promoted as ‘caring’ and thought to be attractive to users. Thus, for this case, I prioritised access to a campaign over the length of time the campaign had been active, for I noticed that even a brief period of digital campaigning could lead to many trees planted. I examine a selection of sixteen campaigns in detail, and gesture, in my write-up, to aspects of other campaigns that shed light on shared tendencies or fundamental assumptions (e.g. techno-fix thinking) in employing virtual activities to engage users in caring.

Case 3: Monetary forms and spending (Chapter 6)

A third set of campaigns was distinguishable by the fact that their pitches for participation centred upon money, as opposed to online purchases for specific goods or partaking in other virtual activities. The form of participation required here revolves around the use of credit cards; digital currencies, which are internet-based monies that are variants of Bitcoin (<https://bitcoin.org/en/>); e-cards and e-certificates, which can be dedicated to a particular person and bought for a special occasion; and gifting donations to a cause through websites. Like the second case, I did not find myself overwhelmed by the number of suitable candidates for analysis, and ended up considering a total of twelve campaigns spread across these types of monetary-based participation.

Citing data from the campaigns: The names and URLs of the campaigns I analysed are available in the Appendix, sorted alphabetically by case. For ease of reading, whenever I refer to data from the campaigns, I use only the company name, followed by either ‘Website’ and if applicable, the specific section, or the name of the social media or online site (e.g. ‘Facebook’, ‘Indiegogo’). If known, I include the date of the posted content, except if this information is already indicated in the cited information, as is often the case with social media screenshots. In the respective empirical chapters, I use footnotes to point readers to the web location of information drawn from other campaigns or related initiatives that is used to support the case discussions.

Exploring the digital promotion of ecological care through ecocritical discourse analysis

As objects of ecocritical study, the three sets of digital tree planting campaigns can be understood as cultural and promotional texts having eco-ethical inflections and functions. Within qualitative analysis, texts are understood to take a variety of formats, from print literature to movies and ‘websites, games, television programs, radio broadcasts, advertisements, fashions and popular music’ (Brennen 2013, 193). In treating the campaigns thus, I study them as part of an ecocritical discourse analysis. As an approach to unpacking texts, discourse analysis emphasises the persuasive dimension of texts (R. Gill 2000, 176), as characterises, for example, ‘advertising and public relations’ (Brennen 2013, 205) and communication to motivate eco-activism (Weeks 1999, 20). It offers a way of interrogating how texts are used to lend credibility to a given explanation of a reality, an issue, or an event (R. Gill 2000, 175, 178). In studies of environmental communication, discourses signify ‘the broader ideas communicated by a text’ (Hansen and Machin 2013b, 117, 159) by means of ‘coherent stories or accounts’ (Dryzek 1997, 9–10, 17) that are understood to be in the service of ‘construct[ing] an invested, partial and always subjective understanding of the environment’ (Peeples 2015, 40). An ecologically oriented discourse analysis is attentive, on the one hand, to the rhetorical strategies that are used to sway readers toward particular ecological attitudes and actions (Schlechtweg 1996, 52), such as the use of ‘metaphors of care and transparency’ in vouching for ‘companies’ ethic of corporate social responsibility’ (Livesey and Kearins 2002, 234, 246), and on the other hand, to the narratives that these strategies tell about the subject matter of the text (Fill and Mühlhäusler 2001, 7), such as deforestation and global

warming, as well as any involved parties, for instance, ‘responsible and caring companies’ (Livesey and Kearins 2002, 236), consumers, distant others, and trees.

In applying discursive analytical techniques through an ecocritical lens, the rhetorical functions and aspects of the text which are consequential for generating discourses ‘about the relationship between humans and the natural environment’ are accorded prime attention (Mühlhäusler and Peace 2006, 458, 469). In this way, the task of ecocritical discourse analysis is to mobilise a ‘critical, rhetorical perspective’ that investigates a discourse ‘for implicit equations and connections that define the relationship between human and nature, for the assumptions and values it supports’ and the ‘acceptable’ courses of action it foregrounds (Meister and Japp 2002, 6). My ecocritical discursive analysis of the campaigns is centred on how planting trees is promoted through digital media, focusing on how this promotion orients human relations with, and regard for, trees, based on premises of care for others and the environment. I structure this analysis around three interrelated discursive concerns anchored by the research questions I specified in Chapter 1 (pp.32–38): the discursive constitution of trees as valuable and subjects of care; the embrace of particular digital strategies as vehicles of planting and care; and the mediation of ecological connections at a distance. These concerns interdependently articulate in the analysis, and my aim here is to indicate the distinct orientations with which they equip the analysis.

In pursuing my overarching inquiry into the promotion of care by the campaigns, I explore, in broad terms, how caring is packaged, or ‘framed’, in terms of certain courses of action and ways of understanding the need for tree planting. Niranjala Weerakkody asserts, ‘Framing is the basis of advertising, marketing, political and public relations messages and campaigns’ (Weerakkody 2009, 271). As rhetorical devices activated by words or phrases, frames ‘tell us what to think about and how to think about’ and issue’ (ibid.). As such, frames function as filtering mechanisms which admit certain ways of viewing an issue (ibid., 272; Schlechtweg 1996, 257, 258), as Harold P. Schlechtweg illustrates in his analysis of the TV programme “Focus:Logjam”, a one-hour ‘news feature’ centred on the environmental activist group EarthFirst! and the 1990 protests against logging old-growth redwood forest in northern California (Schlechtweg 1996, 258). Schlechtweg notes, in particular, how the programme footage defined the group metonymically in terms of its ‘tree spiking’ practices, thereby reducing it to one aspect of its action, as moreover ‘symbolized by the newscast’ (ibid., 266).

Similarly to how a partial portrayal of an activist group can come, through strategic narration, to stand for the entire ideological agenda of the group, I am attentive to how certain abilities or features of trees may stand in for the tree as if to suggest they constitute a self-sufficient basis for valuing trees. In attending to the construal of trees in this way, I adopt an approach to reading the campaigns that highlights how trees may be framed in ways that make them readily appreciated in particular ways and conversely, ‘more difficult to take into account’ (Bastian et al. 2016, 2) beyond these framings. I examine how trees are represented as meaningful for motivating planting—how they, in other words, are taken notice of through campaign discourses. George Myerson and Yvonne Rydin write that ‘rhetoric’ means ‘noticing’: taking notice of ‘the words and the worlds inherent in them’ (Myerson and Rydin 1996, 14–15). Alternatively put, ‘It is not possible to *think* about *that* for which there is no word, and it is in that sense that words create worlds’ (Tsouvalis-Gerber 1998, 224, author’s emphasis). Rhetoric activates, by means of metaphorical description, ‘ways of thinking’ that make particular ways of imagining how to inhabit a world and relate to fellow inhabitants, significant (Myerson and Rydin 1996, 25–26).

These ways of thinking are tied to ‘manners of speaking’, ways of regarding the tree as the subject of environmental discourse and imbuing the tree with value that instructs action (Kohák 1992, 385). These manners are non-innocent; they ask others to take notice of the tree as important in some way and not another. Kohák writes: ‘The world and our place therein are not meaningful – *or* “meaningless” – before we opt for a manner of speaking. They become so in the prism of metaphors, or manners of speaking, which then determine what will appear to us as natural and reasonable ways of acting’ (ibid., 383, author’s emphasis). As Sandilands analogously stresses, ‘all environmental discourse contains a moment of filtration, some point where nature is made knowable and meaningful; these discourses are not merely convenient descriptive fictions, but carry important implications for the prescribed relations between human and nonhuman nature’ (Sandilands 1999, 77–78).

Manners of speaking bring subjects of environmental discourse to individuals’ attention as subjects to be understood as consequential, worth noticing and caring about. In acknowledging trees as subjects of environmental discourse, an ethic of care stands tasked with ‘educating the moral imagination’ to perceive trees ‘consciously as a presence’ (King 1991, 86) in the environment. To this end, I consider how trees become (in)visible through particular discursive categories and operations, in ways that have

material ecological ramifications (i.e. resulting in reforestation, afforestation, or deforestation) (P. Robbins 1998, 72, 73–74, 83). In this respect, becoming aware of trees is facilitated in part through the categorical descriptions and classifications applied to trees (Tsouvalis-Gerber 1998, 225, 227), which signify something about how trees are thought to represent value for the presenting context and issue. For instance, naming trees' ecosystem services is a way of showing concern for one aspect of trees' life while leaving out many others, some of which may otherwise be especially qualified for sensitising humans to qualities of trees that provoke human care and ethical consideration (Diehm 2008, 11, 14–16).

In addition to noticing how trees are explicitly characterised, which helps highlight how they are made to appear perceptible and salient under particular guises, I endeavour to become aware of how trees show up in the campaigns in ways that are also not immediately apparent through outright naming. I notice, for instance, how trees may figure as inputs in the manufacturing of consumer goods, or serve as the backdrop to an outdoor adventure that one can accomplish through purchasing a company's tree-planting product. I am inspired here by the ethnobotanically minded geographical work of Jennifer Atchison and Lesley Head, as they sought to 'attune' to the 'industrial transformation' of wheat into products on supermarket shelves in order to introduce new ways of understanding humans' relationships with wheat (Atchison and Head 2016, 184–85). This methodological attunement thus strove to make wheat visible in, for instance, 'the shampoo and fabric conditioner' and the familiar 'breakfast cereal box' (ibid., 184). I adapt Atchison and Head's inquiry to trace how different ways of being in mediated relation with trees, whether through a pair of wooden glasses or a digital currency, are charged with messages about why to value and care about trees. In 'attuning' to how trees take form, I see how they become more or less invisible, and therefore variously conditioned as valuable, through the rhetorical functions they are tasked with performing within the campaigns. I cultivate dispositional attention to the tree based upon its expressive capacities and agential qualities (Bastian et al. 2016, 3; Atchison and Head 2016, 181–82), as I consider how these could inflect ways of reading how trees are valued by the campaigns. In committing to this task, I realise that I myself am subjectifying the tree in situating it within environmental discourse (Sandilands 1999, 79–80), and cannot speak about trees in any unmediated or pure sense (ibid., 180). The best I can do is commit to acknowledging and gesturing to the limits of representing trees (Alaimo 2016,

76–77), not only in the case of the campaigns but as importantly, in my written account of them.

In noticing how trees are used in turn to buttress claims to care for others and the environment, I take forth the suggestion that what is insightful often emerges by what is unacknowledged ‘in the ongoing streams of words and images’, in other words, ‘the stories *not* told, the images *not* displayed’ (Meister and Japp 2002, 7, authors' emphasis). I recognise that people can hardly learn ‘to consider and care about things that are systematically erased from the texts that they deal with in their everyday life’ (Stibbe 2015, 149). Cuing into these absences opens up alternative ways of accounting for the issue at hand (e.g. felling trees), and thus for establishing how certain ideological commitments, such as market-oriented framings of care based in green growth, discursively override other sensibilities (Stibbe 2015, 36–39). Particularly in considering how digital consumption, as a reflexive indication of a lifestyle norm, is promoted as a medium for care, I home in on ‘patterns of erasure’ and selective description (Stibbe 2015, 146–47) that would result in a favourable portrayal of digital shopping, work, entertainment, and spending as preferred or at minimum, appropriate, ways of resolving the ecological problems posed in the campaigns, such as climate change, poverty, and desertification. Relatedly, as these strategies are only as credible as the organisations and people promoting them, I pay attention to how companies establish their operational practices as ‘caring’ and responsive to environmental and social concerns, for instance, by citing evidence of their ‘charitable contributions to local communities’ (Livesey and Kearins 2002, 245). To imbue these claims, and the promotion of care more generally, with contextual information, I work to cast them in systemic and ecological relief. I consider how ecological scientific data figure into mediating the good of a tree planting scheme. Following Heise, I read the campaigns with respect to how ecological ‘science can help determine what kinds of human interventions into the natural world are acceptable’ and thus, what cultural practices are situationally better or worse, thereby assisting the ecocritical evaluation of texts (Heise 2006, 510). More specifically, I aim to contextualise discourses which make reference to specific tree kinds (e.g. cork trees, Chapter 4) and/or forest ecosystems (e.g. Madagascar rain forests, Chapter 5) that then supply a core element in shaping how companies talk about their planting arrangements as exemplifying caring intentions and outcomes. At times, my effort to ecologically contextualise, intercepts broader concerns and ideas about how the supporting strategies, for example, shopping, are involved in wider systems of production and societal

dispositions (e.g. recycling, waste) that lend a culturally conditioned and naturalised backdrop against which digital campaigns can suggest they are facilitating care.

Provoking this wider view into discursive visibility responds to the fact that discourses may have the effect of ‘concealing responsibilities’ by blanking out ‘specific details’ or alternate viewpoints (Hansen and Machin 2013b, 194). Noticing how the campaigns tell stories about how and why to care involves, also, illuminating how the agency to care is conferred upon individuals (Hansen and Machin 2013b, 195) through their involvement in the campaigns. For each set of campaigns, I discern how digital technology and the corresponding strategy (e-commerce, virtual crowdfunding, and digital monetary transactions) are crafted as agents which help accomplish caring, and with what consequences for instructing individuals in what caring means. In turn, I scrutinise logics of representation and discourse that portray the participating individuals as necessary caretakers, for instance, by boxing out background processes, such as the ecological expenses of running apps and games to plant trees.

Given the distinct geo-cultural linkages between the global north and the global south that contribute to the goals and rationales of the planting campaigns as mentioned in Chapter 1, at certain points I extend the analysis of how trees are constituted as particular subjects of care, and how digital strategies are enlisted in caring, to comment on the framing of ethical dispositions toward other human beings in other societies. I restrict my comments to instances in which this framing sheds unique light on ethical orientations toward trees, such as the promotion of consumer leisure (Jack 2015, 373) to sell the good of planting, or where campaigns underscore this element of human connection in motivating individual involvement. Consonant with my theorisation, in Chapter 2, of digital media as relational, material, and ecological, I undertake digital ecocriticism by considering how digital engagement is more constructively thought of in terms other than those of ‘escaping from the world’, as Adena Rivera-Dundas (2017, 134) similarly advocates in the case of digital game ecocriticism in particular. I read digital engagement as a situation of ‘entering into yet another web of connections’ (ibid.). Reading virtual activities thus ‘opens up new ways of seeing our contemporary, Internet-infused world as one that exists beyond a “real world”/screen dichotomy’ (ibid., 133). This viewpoint helps acknowledge the discursive and material connections that the campaign texts forge with distant and offline environments and how, importantly, these connections are made proximate through the screen.

I was able to hone this approach to the analysis of virtual connections while collaborating on an essay with a Goldsmiths colleague, at the time also a PhD student. We suggest there, in relation to one of the tree planting games that I discuss in Chapter 5, that ‘a sense of proximity may be developed, which we could think of as an ‘embodied hereeness’ that is also attuned to an elsewhere’ (Desai and Smith 2018, 56, citing Alaimo, 2016, 74), in line with the conceptualisation of ethical proximity I set forth in Chapter 2. This notion of mediated proximity helps to analyse digital interaction as, following Alaimo, a dialogical ethical and ‘social space in which a virtual intercorporeality may emerge’ (Alaimo 2016, 74), whereby individuals are imaginatively and affectively drawn in to care. A consideration of this virtually achieved proximity helps weave in a critique of some of the ramifying assumptions of global care and responsibility that were touched upon in the previous chapter, in terms, namely, of how these assumptions draw lines of emotional and actionable connection between the participating individuals and distant human others and environments. I am attentive to how certain groups of human society are portrayed as speaking for a much larger slice of humanity (Hansen and Machin 2013b, 157), and seek to be sensitive to superficial claims, e.g. ‘every tree constitutes a significant contribution’ to sustainability (S. Cohen 1999, 426) with regard to how these may be given conflicting expression through evidential markers of ‘the common good’ (Huggan and Tiffin 2010, 45). I attend to how certain classes of humans are placed in particular positions of caring, in ways that raise notable questions concerning, for instance, how distinctions such as ethnicity, race, and socioeconomic standing mediate the distribution and imagination of ecological care through the value placed upon trees in their various forms.

In the next section, I share how I analysed the campaign texts in terms of their distinct expressive modalities.

Studying digital tree planting campaigns as multimodal ecocritical texts

In treating the campaigns as ecocritical texts, I include a wide variety of content. Because I wish to consider the various digital avenues involved in promoting care, I examine not only companies’ websites but also their other, key surfaces of interaction and information dissemination: online press coverage (often, links to publicity could be found on a company’s website); social media interfaces, particularly Facebook, Instagram, Twitter, YouTube, Vimeo, and blogs; and in the case of online and mobile apps (e.g.

search engines, games), the app interfaces and the app's corresponding pages on Google Play (<https://play.google.com/store/>) and iTunes (<https://www.apple.com/itunes/>).

In the case of social media, I analyse posts on the particular sites I name because they are designed, and often used, to communicate different types of information, and in different ways. For instance, I noticed that the campaigns employ Facebook to post images, promote products and services, and engage users in contests and questions. Instagram (<https://www.instagram.com>), with its photo sharing focus, performed an extensional function to Facebook in advertising products and a company's association with nature in particular. The microblog (i.e. short form) Twitter, with its 140-character constraint, encourages brevity of content, which lends itself to communicating updates, posting links, and ongoing conversations through the use of hashtags (#). Other forms of weblogs which are frequently hosted on companies' websites provide more room to narrate a story or assert a viewpoint about, for instance, the merits of recycling or ecotourism. Video sharing sites like YouTube (<https://www.youtube.com>) and Vimeo (<https://vimeo.com>) allow organisations to exploit audiovisual capabilities to give the feel of watching a story unfold, and can convey information in more aesthetically compact and rich ways.

Not all companies use all the social media platforms I named, and some companies use additional ones, most often, Google+ (<https://plus.google.com/discover>) and Pinterest (<https://www.pinterest.com>). I found these sites unhelpful for examining how companies promoted care about trees and the environment. Google+ was seldom used, and typically duplicated content from Twitter and Facebook. Pinterest was used by certain consumer goods companies, and seemed to be focused on promoting a community of interests around particular hobbies and lifestyle interests. I could not readily make sense of the 'boards' where information was 'pinned', without additional insight into the company founders and employees and their motivations for posting and their personal interests. Such insight could be helpful for extending the study in future work, by boring into employees' and companies' perspectives on their chosen business strategies to plant trees. For the present study, I elected to exclude these sites from analysis in order to provide a close reading of the main social media sites used consistently across campaigns to communicate directly with users.

The distinct facilities for engagement that social media offer, which weighed into my choice of which sites to analyse, reflect the multimodal nature of the campaigns. That is, the campaigns' avenues of representational expression exemplify various means of

mobilising rhetoric, corresponding to multiple expressive forms, including images, text, video, and audio. The campaigns, like many digital media, are multimodal: they communicate through a variety of representational modes (Daymon and Holloway 2011, 277), often in tandem (Murphy 2009, 51–52), such as the pairing of ‘catchy slogans’ with particular ‘colors, typefaces and other typographical elements’ and/or with ‘melodies and jingles that can get caught in our heads’ (Brennen 2013, 205, 206).

For content hosted on companies’ websites, press coverage, and social media pages, I examined, firstly, how verbal and visual imagery refer to each other as a means to persuade individuals of their statements and claims (Hansen and Machin 2013b, 158–59). At times, one or other of these aesthetic elements may be foregrounded and thus invite special attention. For example, analyses of media representations show how visual symbolism in particular is often deployed to render ‘the abstract science of climate change . . . culturally meaningful and environmentally consequential’, such as the use of a ‘smoking stump’ to epitomise ‘destroyed forests’ (Lester and Cottle 2009, 921). It is also common to see human subjects featured in images, or videos, as a way of forging relation with the target audience to act for a good cause. I considered how characteristics such as their ‘age, gender, ethnicity, physical characteristics and expressions’ meaningfully communicate (Brennen 2013, 206). Other kinds of signifying features, as ascertained by choices regarding angle of viewing the subject and proximity to the subject (Hansen and Machin 2013a, 190–92), whether human or nonhuman, are similarly noteworthy in how they frame the situation as one in which the individual can relate or be drawn to understand (Hansen and Machin 2013b, 159–60). For instance, a bird’s-eye view may ‘[inspire] a sense of command’ or mastery of an ecological situation (Houser 2017, 362, 363), while the choice of lighting may imbue a prospective action or outcome with goodwill or trustworthiness (Hansen and Machin 2013a, 200–201) or a general feeling tone of positivity (Hansen and Machin 2008, 785). In the case of multimedia digital content, I analysed the videographic and navigational aspects as well. I noted how ways of proceeding through a game or website, foreground certain options and position them in particular ways in relation to each other to evoke a response (Murphy 2009, 49, 52).

These various aesthetic components of a text ‘are made meaningful by their relationships to each other’ and should thus be understood as collaborating to produce rhetorics (Scott 1990, 228, 229–30). For instance, in analysing games and apps, I was attentive to the way that the visual appearance of an on-screen character or scene, any background music, written information, and the flow of movement through the game all

worked together to affect user experience and narrate eco-ethically significant messages (A. Y. Chang 2011, 78; Rivera-Dundas 2017, 122–23), such as how, as I discuss in the case of *Tree Story Game* in Chapter 5, human players are steered toward caring about an animated pet tree as the object of their affection. In the context of games, these analytical considerations map to concerns about the rhetorical communication of the game aesthetics on the one hand, and on the other, the ‘procedural rhetoric’, or how movement through the game is steered (Bianchi 2014, 210) toward achieving a particular environmental resolution or affirming a particular relationship between humans and the natural world (A. Y. Chang 2011, 73, 80).

In addition to their multimodal expressivity, digital media texts are able to move users into caring through introducing new pathways for persuasion and narration. These pathways introduce new textual elements into analysis. For instance, ‘emoticons and emojis’, which ‘are expressive pictures’ such as smiley faces and flowers, occur at times in companies’ social media expressions in the course of text-based linguistic expression; these can be analysed as ‘the digital version of body language, tone, and facial expression’ (Byrne 2017, 806). Hashtags, another type of social media communication, are typically used to thematise messages. They may function rhetorically to draw out what is especially worth taking away from messages (Yang 2016, 15) and, further, ‘to publicize or connect’ specific ideas to a broader cause or conversation (R. Hawkins and Silver 2017, 114, 120, 122). A *retweet* on Twitter, whose analogue is a *share* on Facebook and other social media sites (Ananda, Lamberti, and Hernández-García 2015, 12; Hays, Page, and Buhalis 2013, 217, 225), is used to re-post messages. These operations not only ‘broadcast information’ (Metatexas et al. 2015, 658) but also endorse and recommend, as is suggested by the role of retweeting in facilitating electronic word-of-mouth marketing, or eWOM (Kwon and Sung 2011, 5, 9; Soboleva et al. 2017, 1123). For instance, I noticed that digital planting campaigns exhibited a ‘call to action’ (Soboleva et al. 2017, 1127) by asking users to retweet content or share one of the company’s posts on Facebook, with the promise that the company would plant a tree in exchange. Re-circulating posted content in this way also works at times as a sign of approval, performing a signifying function analogous to ‘likes’ of content on Facebook and Instagram (Hays, Page, and Buhalis 2013, 217) or ‘faving’ a tweet (i.e. using the heart symbol at the bottom of a tweet). Another notable social media interface quirk concerns *@mentions* on Twitter (and the analogous hyperlinking of a user on Facebook), which are used to call out to another user, thus establishing a direct affiliation with the

posted content. I treat these instances as ways to sign to this connection and ‘capture the attention’ of others (i.e. fans and followers) who may be interested in this link, as when, for instance, an organisation mentions a celebrity (Kwon and Sung 2011, 1126).

An appreciation for such distinct aesthetic and variously interactive features of digital interfaces helps sensitise analysis to the way that online spaces can serve to emotionally and affectively predispose audiences toward particular understandings of an issue (Kuntsman 2012, 6). Heather Houser notes in the case of internet visualisations of climate change data, such as digital infographics, ‘The viewer is not just a vessel into which information is poured; rather, features like multimodality make data experiential’ (Houser 2017, 362), introducing multiple and new passageways for orienting and activating individuals’ care. Houser argues that ‘data visualizations that register that data are rhetorical objects couched in meaning-laden imagery and language’ (ibid., 359). As such persuasive agents, they ‘propose relations’ between information and actions, prompting understandings of issues that affectively speak to viewers (ibid., 359, 360). Digital data visualisations of the kind to which Houser is referring, which are compressed representations of complex issues that can ‘supplement news stories, promote corporate or nonprofit campaigns’ and otherwise circulate on the internet (Houser 2014, 319), are common in digital planting campaigns. As saturated with such ‘digestible’ bits of ecological representation that exemplify ‘a connect-the-dots aesthetic’ (ibid., 328, 321), planting campaigns function analogously as rhetorical intermediaries, which are designed to appear as transparent as possible in their conveyance of ‘data’ through a prism of evidenced representation (ibid., 329, 335).

In coming to terms with these manifold expressive and persuasive features of the campaign texts, I adopt a recursive and exploratory approach that I describe in the next section, where I explain how I captured and subsequently combed through data from the campaigns.

Data collection and method of synthesis

Timeframe

I began the study in Fall 2015, collecting data through the end of 2016. However, I include data from the years before the start of my study, as the campaigns I analyse began in the 2000s, mostly after 2010. I did not restrict the data analysis to particular years, as companies were founded at different times, and some dissolved during or prior to the end of the study. I have noticed that, when collecting social media data about a

particular environmental issue, researchers have either relied on clear external markers to temporally bound the study, such as Alexandra Segerberg and W. Lance Bennett's study of social media discourse about climate change protest events prior to and during the COP15 conference in Copenhagen (Segerberg and Bennett 2011, 198, 202–3), or else have collected data for at least several months (e.g. Chou et al. 2011; R. Hawkins and Silver 2017, 117). Because companies varied in how often and how much content they posted on their social media pages, I could not predict beforehand how much data a given slice of time would yield. I wanted to examine enough of the campaigns to obtain a firm sense of the kinds of messaging being circulated in relation to caring about the environment and the benefits of planting trees. I also wished to leave sufficient time for synthesising the different data sets and avoiding overwhelm in terms of the mass of information I was attempting to make useful sense of.

I decided to begin with one-year snapshots of campaigns, working outward as needed until the point of data saturation had been achieved, that is, when the corpus of collected campaign coverage ceased to reveal insight (Lindlof and Taylor 2011, 256). Qualitative data analysis, involving the synthesis of discourses and close textual analysis that I was undertaking, can accommodate smaller samples, which 'are valuable for the deep, rich data they provide', as long as the samples are adequately voluminous to achieve saturation of information that is relevant and 'important for the agenda of the study' (Daymon and Holloway 2011, 217). I assessed, in particular, whether the campaigns were framing trees, care, or the environment in a new light, or whether they were promoting engagement with their products and services (including digital media more generally) for the purpose of caring, in a fresh way.

For most campaigns, I ended up with one year to three years of data, with select information from additional years. I sought the latter information when trying to unpick a particular issue; in these cases, I extended the timeframe of analysis further back in time prior to the point of saturation. When I was looking for distinct visual or video information, I scrolled back through a social media feed manually. In other cases, I performed targeted online searching of companies' Facebook and Twitter feeds to efficiently locate information when I was interested in the possibility of unpacking a promotional theme from additional angles that I may not have considered. I also did so when I had particular queries of the material after forming initial impressions or wanted to verify that I had not missed enlightening connections in the datasets. I used the following terms to search across years: *carbon*, *care*, *caring*, *cares*, *digital*, *earth*, *eco*,

ecosystem, environment, grove, green, plant, planting, planted, planet, social, species, tree(s), and forest(s). I also used the name of the tree planting partner and any countries that the company named on its website, publicity, or social media.

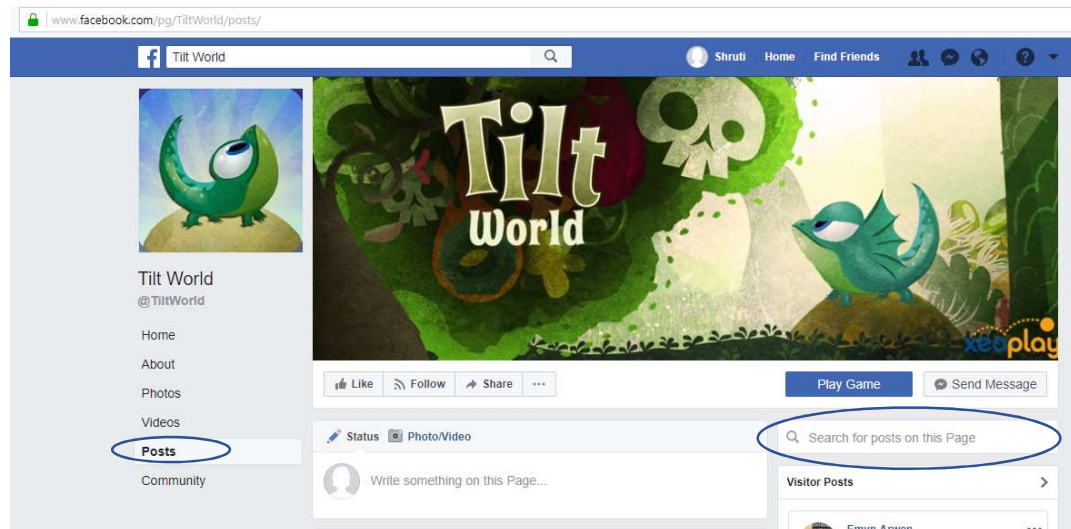


Figure 4 Search posts function, Facebook

Source: Tilt World, Facebook

While Facebook is readily searchable by navigating to the ‘posts’ section of a company’s page (Figure 4), the search function works slightly differently on Twitter. While an in-text search can be conducted once all a user’s tweets are manually loaded by going to the end of the page of displayed tweets, Twitter does not necessarily show all tweets. In the search box at the upper right hand of the Twitter homepage, I entered an organisation’s handle (e.g. ‘hemphelps’), followed by one of the keywords noted above.



Figure 5 Search box, Twitter

Source: Twitter Website

Data capture

I created local files on my personal computer of key data sources: these included Facebook and Twitter, websites, and when available, press releases, to assist in marking up the data for analysis and to facilitate easy reference during write-up. In the case of Instagram, YouTube, and Vimeo, I had to work from the online sites, so I captured

screenshots and took notes as I watched or browsed the feeds. Facebook and Twitter are set up so that a certain amount of the most recent content is first loaded when users navigate to the page. Users must continue scrolling to the end of the page to cue the site to load additional content from further back in time. After prompting the site to load enough data based on my needs, I printed the social media feed to pdf, in this way saving the feed as a digital file I could refer to at my leisure without an internet connection. Saving the files as pdfs also facilitated searching for text with the ‘find’ function in Adobe Acrobat Reader (Simonetto 2016, 102).

For websites, I saved pages as .html files when possible. For content that could not be captured in this way, such as dynamic infographics or drop-down features, I found it useful to capture certain pages as screenshots, using the ‘Print Screen’ function and Microsoft Windows’s snapshot tool, and collect them in a Word document, a method that has been suggested by other internet researchers (e.g. Brügger 2011, 27–28; Büscher 2017, 164; Lomborg 2014, 83, 84–86).

For apps, as well as games that required a smartphone to access, I captured screenshots with my personal phone’s screen capture function (on my Motorola G phone, this entailed pressing the volume reduction (-) and power buttons simultaneously), saved them as .jpeg files, and uploaded them to my computer. The choice of screenshots proved useful for documenting the process of play (Cole and Stewart 2017, 414) and the flow of events in apps more generally, alongside which I noted my impressions of other aspects such as background music and character movements or animation on-screen.

Writing up and/alongside data synthesis

I began making sense of the data I collected by taking time to appreciably acquaint myself with the campaign content (Daymon and Holloway 2011, 135, 306–7). Doing so allowed me to form an overall impression of what the campaigns ‘sought to convey’ (R. Hawkins and Silver 2017, 118). After this stage, I used broad functional categories to help organise information (R. Gill 2000, 179), noting mentions or instances of the natural world, trees, or planting projects, and correspondingly, mentions of digital technology, activities, products, or other outreach that brought these topics into play. I copied and pasted information corresponding to these broad groupings into a document, then began to draw reasoned lines of connection between the various contents. I did so by experimenting with turning these groupings into narrative accounts. In this way, writing was a formative and crucial aspect of the analytic process. Rather than occurring apart

from or after analysis, ‘writing up’ was essential to discerning and ‘shaping the ‘story’ that the research tells’ (Daymon and Holloway 2011, 135).

Writing made the inquiry into care dialogical and personal to me as a researcher (Laurel Richardson, in Richardson and St. Pierre 2013, 472, 481): it invited me to be with the campaigns as a curious, suggestive, ongoing encounter (ibid., 482), transforming the synthesis of themes into a subtler and iterative process of thematic discovery. Analysing through writing also made it easier for me to incorporate input from theoretical literature (Daymon and Holloway 2011, 303, 317), as I came to be in conversation with academic texts rather than seeing them as self-evident theses. Through writing and revisiting the data, I passed through several stages of noting themes that stood out, then realising new ways of expressing these themes and finding mirroring linkages between the data. I shifted between modes of looking for insights and allowing myself to be surprised by them, manoeuvring, in other words, between applying ‘predetermined categories of analysis’, based initially upon theoretical readings and my research questions (Daymon and Holloway 2011, 313; R. Gill 2000, 179) and latterly by earlier versions of thematic groupings, and permitting ‘categories to emerge’ (Brennen 2013, 206). Hence, I held categories in thought loosely, more as an indication of what the material could say rather than what it means to say. Doing so enabled me to re-encounter the material and thematic groupings as a process of showing attention, rather than nailing down interpretations and closing off the possibility to be nudged toward alternative and more nuanced narrations of care.

I must admit that this process of synthesis is one I eventually came to inhabit; it was not in place from the start. Not until I could abandon expectations of formulating a ‘comprehensive account’ (Daymon and Holloway 2011, 93), which were rooted in pressures I felt to speak authoritatively about my work (Mauthner and Doucet 2003, 423), could I engage with the material meaningfully. Prior to this, I had found myself preparing mechanically composed accounts of the material from which I felt disconnected, and I felt, as importantly, that I was skidding along the surface of the campaigns. It was through disappointment with these accounts that I learned to care about the work in a new way. I grew to appreciate ways of speaking about care *through* the data, regarding the data with a respect I had not shown them in my zeal to do something with them. I learned, in turn, that in studying the digital promotion of care, I, too, as the researcher, am ‘affectively implicated’ in the work by how I ‘pay attention (watch out for and to care about)’ to technologically mediated discourses (Garde-Hansen and Gorton 2013, 3, emphasis

removed). By noticing how I am affected, I attempt to reflect upon how these discourses call on audiences to analogously pay attention. I came to take residence in the writing process as a mode of responding, however partially, to the eco-ethical subjects that ground my research, a call, of a kind, to turn toward the trees and others I was professing to write about and present as key ecocritical concerns (Rigby 2006, 2006).

In the chapter discussions, I have worked to honour this imperfect and evolving process of learning to write with care for these others. In this respect, my written presentation diverges in style from many examples of discourse analyses of nature advertising and environmental marketing that I found were composed in the manner of point-by-point presentations of interpretive themes, illustrated by a set of examples (e.g. Dobscha and Ozanne 2001, 279–91). For me, the campaigns' discursive themes are entwined and refer to each other in ways that are confused by an attempt to model this style of thematic synthesis. I do make use of the 'exemplar' approach employed by a number of discourse analytical studies, which selectively use examples from the data that help express a given theme (S. Taylor 2001, 42; e.g. Atkinson 2014, 562). However, I choose examples which prompt the formation of connective tissues of discussion, bridging between promotional themes and pathways of inquiry into care. In addition to better indicating the many issues that intersect in promoting care, this approach, I hope, has served to offer a more dialogical and interested account of the campaigns that helps impart the care I have taken to cultivate my dispositional posture toward the research, which I clarify next.

Valuing care as a researcher: dispositional and ethical considerations

To this research undertaking, which feels inspired to work toward more caring human-tree relations, an ethic of care offers not simply a theoretical orientation; it enlivens a methodological sensibility. A care ethics approach to research takes to heart 'the ways in which our work is "*for others*"', and in this way, exemplifies values of response-ability and connection (Lawson 2007, 5, author's emphasis). Dispositionally, approaching the analysis of the campaigns with care concerns the quality of attention showed to others, particularly trees, as the subjects of environmental discourse. 'Attention' to the other is a cornerstone disposition in care ethics (Gruen 2015, 35). Taking ecological care seriously in terms of the theoretical orientation outlined in the previous chapter, aims not simply for 'the inclusion of others' but concerns itself with the

‘quality of attention’ brought ‘to regard the other’ (Gaard 2016, 281, 282).³⁵ I pay attention to how the human individual is being asked to enter into discursive and ethical relations with trees, and through trees, with the earth and distant others. In so doing, I strive to inhabit a posture of attentiveness, which ‘acknowledge[s] the narrative voice’ of the nonhuman (tree), thus posing a challenge to human exceptionalism (Opperman 2013, 78; see also Plumwood 2009, 125–27). Rather than assuming that planting is for humans, I orient the research investigation to the question of how the tree ‘benefits from human care’ (King 1991, 85), and by extension, the practical implications for those others cared for by this care. As stated earlier (p.97), I do not attempt to speak as a tree, or for the tree. Rather, I am concerned with how the human vantage point offers ‘an opening’ for involvement in more-than-human worlds (A. Tsing 2013, 30, 34), in a way that is oriented by caring for trees.

Taking care in the research process also extends to the handling and representation of others’ online data. All the content I cite from weblogs and social networking sites is publicly and freely available online, except a few cases in which a page has been taken down. The social media sites I reproduce content from do not require site registration to view, though an account is required to interact with the site beyond reading. Although nearly all the social media content I cite is drawn from companies’ social media pages, in some instances, I reached out to companies via Facebook and Twitter to ask questions about their offerings or details about their planting partnerships. I created a profile on those sites that clearly states my position as a PhD student and my research interest. When I failed to receive a reply, I elaborated on my intentions and reasons for reaching out. I also introduced myself this way in the few times I used email to contact a company representative. At these times, I used my Goldsmiths email address to verify my identity and position at the college, and requested permission to cite the email exchanges in an academic setting.

In a few cases, I cite information by other online users pertinent to the digital campaigns I am reviewing, for instance, a blog post about an app, or a quote by the app developer in a news report. In including online information from social media and news sites, I considered two guidelines, namely, the accessibility of the information outside my presentation of it here, and ‘perceived privacy’ (Byrne 2017, 803, 804), or ‘how public

³⁵ I am extremely grateful to Harriet Smith for discussion on these points, which we also applied to our collaborative work (see Desai and Smith 2018, 47).

and private' the 'users *understand* their contribution to be' (Sveningsson Elm 2009, 77–78, author's emphasis). I assumed that, when users make comments on a company's social media feeds, users are aware that their comments are being posted to a public forum, whose data may be used by third parties for commercial or other purposes, and that, when companies maintain a presence on social media, they are most likely wanting their content to be seen and circulated as widely as possible. Still, I realise that sometimes, people may not be conscious of these facts at the time of posting. Some researchers have deemed it permissible to include identifying information such as Twitter handles (e.g. R. Hawkins and Silver 2017, 120), whereas others express reservations about including these details even while considering sites such as YouTube a forum of 'public discourse' (Roberta Hawkins, in Morrow, Hawkins, and Kern 2015, 536). I do not feel that sharing users' digital aliases informs the analysis I conduct, and so, except in the case of blog posts, which I treat as parenthetical citations identical to other references, I blot out the username. I am mindful that even in doing so, an internet search can trace back to the content (Lomborg and Bechmann 2014, 263), though I have found it can be more, sometimes exceedingly, difficult to locate information this way. I take care in which information I cite (e.g. comments posted on Facebook) and how I cite it. Especially in the case of blogs and news reports, which others could readily locate, I consider whether the information contributes a substantial enough point to be re-presented in my thesis (A. Markham and Buchanan 2012, 8–9), taking to heart that these users are not strings of text; they are fellow human beings. In discussing their comments, I try not to displace the context of their postings (Morrow, Hawkins, and Kern 2015, 539).

Finally, I work to extend care to the analysis and its written formulation. Consonant with ecocriticism's constructive aspiration (Garrard 2012, 205), I seek to provide an affirmative reading of the campaigns, whereby alternative ways of narrating care for the environment and others can be productively imagined. In so doing, I am alert to the ways in which promotional discourses express certain assumptions about the goals of marketing as a practice (Tadajewski and Brownlie 2015, 2). I believe that thoughtful critiques of marketing may offer avenues to promote expressions of care and orientations toward 'life choices', such as consumption, that are more apt to support an 'ethos' of flourishing (ibid., 18). Hence, when I make critical remarks, such as how the presentation of issues may misguide online users or misdirect caring responses, I do not do so to single out a particular campaign for its failings or to censure a particular representational practice. I do so, rather, in the trust that critical commentary may encourage online

communication to be fostered as a practice that takes care in divining its expressions and in advocating digital consumption for the purpose of orienting ethical regard for trees and the earth.

Chapter 4

Planting and care through online shopping

Introduction

In the hands of care

The digital photograph *Utility Pole* (2014) by Susana Reisman shows a utility pole standing amidst birch trees and companion shrubs, which seem both unfazed by its presence and alienated by its stiff stature and distinctive appearance.³⁶ As the accompanying catalogue essay observes of the scene's conspicuous combination of resemblance and dissimilarity, 'a wooden telephone pole stands with, and yet in contrast to, a scrubby glade. Not hewn from these trees and no longer a tree, it is still strangely kin' (Cheetham 2014). The 'utility' of the pole seems here to be, as the essay notes, 'to remind us of wood and trees when we see lumber'.

The change from tree to pole, from nonhuman life to 'mere' communications utility, marks a transition that is easy to take for granted because it occurs with such regularity in the processes of industrial production and commodity consumption that everyday life has come to rely on. Reisman's photograph calls attention to this oversight, imploring viewers to notice the naturalised relationship of trees to their industrial counterparts. Lumber, an input in the manufacturing of numerous consumer wares, from furniture to fashion accessories, is prepared to conventions that strip trees of many imperfections and distinctions, as the artist critiques in pieces such as *1 x 6 x 3 Rough-cut Slab*³⁷, which 'singles out just one potentially useful board within the larger piece of raw wood' (Cheetham 2014). The title of the piece is a nod to the customary designation used by builders to specify the dimensions, grades, and intended use of cut wood. While the clean borders of the smaller piece reflect practised vetting—an eye honed to inspect for qualifying characteristics, the shot also makes plainly visible the waste that accompanies these practices of standardisation (Brower 2015, 57).

³⁶ <https://www.artsy.net/artwork/susana-reisman-utility-pole>. This work forms part of Reisman's exhibition *Standardizing Nature: Trees, Wood, Lumber*. See: www.susanareisman.com/standardizing-nature-trees-wood-lumber.html. Both URLs were last accessed January 2018.

³⁷ http://www.susanareisman.com/uploads/4/9/0/3/4903082/401943_orig.jpg, last accessed January 2018.

In gesturing to the enforced waste and standardised selection involved in commercial applications, one effect of Reisman's photographs is to imply that commercially processed wood rehearses an attitude toward trees that is founded upon exacting indifference. Seeing the trees within the lumber would require an entirely other regard for trees.

With his sculpture *The Hidden Life Within* (2012), Italian artist Giuseppe Penone indulges this suggestion. Penone chisels the sculpture from a wooden plank that he salvaged from a logging operation. Clearing away a portion of the plank's interior, he carves the likeness of a tree into its centre.³⁸ By this act, Penone reclaims the tree, which might have ended up as a floorboard, perhaps, or a telephone pole. Yet Penone's labour does more than rescue the tree from a destiny of mere utility. It restores a meaningfulness to the tree denied by its status as logging by-product, industrial fodder awaiting further, machinic instruction on how to become useful. The tree's situation as industrial beam could be described as one of 'standing-reserve' (Heidegger 1977, 17), the term reserved by Heidegger to refer to the reduction of objects, whether human-made or of the earth, to things whose 'only important quality has become their readiness for use' (Lovitt 1977, xxix). Against this consignment to undifferentiated anonymity, Penone's craftsmanship returns to sight, a sense of the individual tree that bore the wood for the beam, and that exceeds the tree's resourcefulness for industrial machines.

Penone saves the tree not simply from an eventual use, then, but from indifference, from a fate of being 'on call', 'stockpiled' for future conversion into consumable product (Heidegger 1977, 15). His handiwork transforms the shaven and cut log into ethical subject, by making it the preoccupation of his attention and care. In this process, Penone does not 'impos[e] a form', but rather, 'draws out an existing form', as one gallery describes his approach to the piece.³⁹ Though, in a sense, *using* the tree, in order to fulfil the artist's vision, the sculpture enables the tree to exist as other than an industrial fabrication. Whereas the latter's gaze dines upon the tree with the aim of forcing it into something other than itself, a good fetch on the market, the work of Penone, as indeed of Reisman, provokes curiosity in the tree beyond its value-added conversion.

³⁸ For images of the process and the finished artwork, see Yoo (2012).

³⁹ <http://www.ago.net/giuseppe-penone-the-hidden-life-within>, last accessed January 2018.

At the behest of consumption

Both artists offer constructive forays into thinking about how to mediate human consumption of trees with care. Though trees constitute possibly the earliest basis of human trade,⁴⁰ the regard they garner in contexts of consumption is temperamental. Consider the example of the tanoak tree, a variety of hardwood indigenous to the western American coast. Frederica Bowcutt's history of the tree recounts the turn of luck suffered by this species as its care became subject to a radically altered sensibility captained by mass production and commercial profit. The tree transitioned from 'a crucial resource for Native Americans', to 'a useful one for nineteenth-century industries', to finally, 'an expendable one for twentieth-century lumber companies' (Bowcutt 2015, 3–4). Although valuable for a variety of consumer ends, such as planks for flooring and tannins for tanning leather, medicinal purposes (e.g. a cough remedy), as well as food, providing acorns for livestock that also contain nutritious fatty acids for humans, the tanoak is, alas, less commercially lucrative 'to harvest than conifers' such as douglas-fir, and cannot be grown at as accelerated a rate, nor processed as easily, as can other softwoods such as acacia and eucalyptus (Bowcutt 2015, 4; see also 22-25, 37-40, 91-92).

How dissimilar a sentiment industrial ends impart to the tanoak, compared with its prized status early on among North American Indian tribes as a staple 'food plant'. These tribes' memories recall how 'the naked tanoak trunks left to rot' by large-scale felling in the early twentieth century, exasperated even 'the Creator', who, according to one Sinkyone tribesman, grieved, "It looks just like my people lying around . . . with all their skin cut off" (Bowcutt 2015, 3). Even before industrial interests emerged, Bowcutt contends, the European botanical names assigned to the tree 'marked the beginnings of new kinds of relationships between people and tanoaks', whereby the tree's amenability to human control became accepted as its most impressive attribute (Bowcutt 2015, 79).

Anna Tsing (2015) elucidates how the plantation model of farming later supplied the template for factories, motoring the Industrial Revolution. Originally devised for

⁴⁰ Dove observes, 'most of human history, in most parts of the world, has involved an intimate relationship with trees. The antiquity and ubiquity of this relationship is reflected in the fact that the oldest trade good in the world may well be tree sap. Camphor (*Dryobalanops aromatic* Gaetn F.), dammar (gum from a variety of dipterocarps, especially of the genus *Shorea*), "dragon's blood" (*Daemonorhops* Blume, spp.), gum benjamin (*Styrax* spp.), and various pine resins (especially from *Pinus merkusii*) are the oldest trade products of Southeast Asia; and they fit into a trade niche that was originally created for the even more ancient traffic in the tree saps of the Middle East, the fabled frankincense (*Boswellia* spp.) and myrrh (*Commiphora* spp.)' (Dove 2011, 109).

sugarcane in the sixteenth and seventeenth centuries, quite by accident by Portuguese planters in Brazil under Euro-colonial rule, this scalable methodology for growth became the blueprint for single-species timber plantations bred for uniform output (A. L. Tsing 2015, 39–41). The conceptual vision of scalable plantations persisted well into the mid-twentieth century, just as the botanical identity the tanoak gained in the eighteenth century as a specimen to be controlled, has overseen its cultivation into the present, guiding its passage from hand to hand of human industry.

Priming trees as cause for caring consumption

In the last couple decades, a less ruthless conception of how trees fit into patterns of consumption has begun to creep into the priorities of economic production. In this new phase of consumption, what could be called ‘caring consumption’ (Littler 2009, 3), trees are being groomed to imbue commodity consumption with the promise of caring for the earth and its inhabitants, as companies foreground the good of trees for both people and the planet, promising, on the one hand, to appropriate trees and tree substitutes responsibly in the making of consumer goods, and on the other hand, to demonstrate their commitment to the environment through planting trees. By way of introduction, consider how the famed coastal redwoods are being retooled for consumption.

A few years ago, the California-based eyewear company Woodzee reached out to its fans on Facebook, asking them to consider the redwoods as a candidate for developing a new line of fashion sunglasses.

 **Woodzee**
November 13, 2012 · 🌐

Who would like to see Redwood frames?
Any other types of wood you would like to see in a frame from Woodzee?
Let us know!



👍 Like 💬 Comment ➦ Share

👤 5

 Zebrawood, rosewood, purple heart, Birdseye maple
5y · Like 👤 1

 To me there is nothing like redwood. Grew up surrounded by them in nor cal my whole life. The most beautiful, respectfully 😊
4y · Like

Figure 6 Call for wood requests for new frame ideas

Source: Woodzee, Facebook

Woodzee sells wooden and bamboo sunglasses online and plants a tree for each pair of glasses sold (Facebook, 28/Aug/2011). A co-founder explains the company's mission thus: 'We can make money. But at the same time we can do good things and help others, and make sure our planet is around for a long time to come' (Luke Winter, quoted in Badore 2015). While this statement would seem to cast the company's appropriation of wood in an utterly well-meant light, its readiness to prospect the redwoods is noticeably amnesic. During their tenure in public consciousness, the Pacific coast redwoods have occupied conflicting ground in the American environmental imagination. Their bulging into familiarity in the early to mid-nineteenth century coincided with the rise of Transcendentalism in New England, as Ralph Waldo Emerson and his contemporaries advanced upon the idea of nature as permeated with divine perfection.⁴¹ Visitors from the eastern states ferried forth these sentiments in their veneration of sequoia groves as sacred gifts to the nation (Schama 1995, 189). Stereographers fed on a smitten public at a time of festering discord among states. One famous print from 1861 shows a three-hundred-year-old christened 'Grizzly Giant' weathered by the centuries, with characteristically impressive girth. The image could be seen as casting the tree's enduring stand in the vein of resilience, thereby, Simon Schama argues, capturing the allegorical appeal of the redwoods for the young democracy at that time: 'storm-racked but defiant and enduring', the tree was the 'perfect emblem for the American Republic on the brink of the Civil War: a botanical Fort Sumter',⁴² impacted but not toppled by conflict (Schama 1995, 190–91).⁴³

These sky-high pillars of breath abating awe, the fascination of an incredulous nineteenth-century public, would in the twentieth century begin toppling from these heights of fancy, as scores of their bodies came to lay pathetically on the ground as provisions for logging industries. A century after the Civil War, the redwoods would stand embroiled in a highly publicised legal dispute between Walt Disney and the Sierra

⁴¹ Emerson's first published essay on the subject, "Nature" (1836), propounds that 'spirit, that is, the Supreme Being', is responsible for creating nature, such 'that behind nature, throughout nature, spirit is present' (Emerson 2009, 27).

⁴² Shots fired at Fort Sumter marked the beginning of the war in April: <https://www.civilwar.org/learn/civil-war/battles/fort-sumter>, last accessed January 2018.

⁴³ A photo of the full print can be viewed at: <https://www.moma.org/collection/works/45474>, while the base is magnified in another shot: <https://metmuseum.org/art/collection/search/259683>, last accessed January 2018.

Club over the former's proposed transformation of Mineral King Valley, a remote stretch of the Sierra Nevada, into a ski resort (Stone 2010, xiii).

Though Disney eventually withdrew its bid, and the Valley was added to Sequoia National Park,⁴⁴ the case presaged the continuing tug of war between visions of development and preservation—in other forms, with other parties. These competing visions can be detected in subsequent contestations over clear-cutting versus protecting extensive swathes of west coast forest, much of which encompassed ancient and old growth redwood territory. Contained within these struggles were differences of opinion between groups with allied interests, such as the Save the Redwoods League and the Sierra Club. Such arguments played out, for instance, in debates over the area and virgin composition of forest preserves and the willingness to engage in negotiations with government and private industry to apportion land for timber growth (Schrepfer 1983, 232–38).

Some thirty years later, it would seem the contentious mood of this history has lifted in favour of the agreeable prospect of milling the woods for an eco-conscious genre of consumption. The Facebook post in Figure 6 tempts consumers with the thought of owning this immense legacy of nature: the arresting majesty of the redwoods, now potentially a disposable accessory resting coolly upon the bridge of one's nose, gracing one's view of the world. All that is, or at least very recently was, controversial about extracting timber from this area can be forgotten as wearers of the accessory become party to a certified breed of 'conscious consumerism' (Woodzee Website, *Recycle Program*). As Woodzee tweets to prospective shoppers: 'The world is yours to explore . . . pick up a pair of FSC [Forest Stewardship Council] certified wooden sunglasses' (21/Nov/2015).

Forest certification is but one means that companies employ to trumpet the eco-ethical credentials of their ventures. The FSC logo communicates to consumers that products are made with 'certified sustainably grown' materials (Henne 2015, 2), either wood or bamboo. Adam Henne explains that forest certification schemes such as FSC emerged in the aftermath of campaigns by environmental NGOs in the 1980s to protect tropical timber from destructive corporate practices that had proceeded apace without a care for sustainable forest management (Henne 2015, 3). A spur of forest certification was therefore a demand for adherence to certain agreed upon ethics in growing and

⁴⁴ See <http://vault.sierraclub.org/history/timeline.aspx>, last accessed January 2018.

harvesting timber, and latterly, bamboo, that instead of overshadowing, would support, forest protection and the needs of local communities. By affixing the FSC designation to their marketing collateral and products, companies are distinguishing themselves as committed to just and sustainable resource management, extraction, and use. Theirs are products, in other words, that consumers can ‘feel good about buying’ (Henne 2015, 3).

This chapter ventures to unravel and reflect on the regard for trees that is stitched into such claims, which are designed to market shopping to plant trees as a vehicle for caring. In the next section, I outline the mechanics of how these companies are set up to allow for caring through shopping online and interacting on social media. Then, I outline and discuss the major discourses that circulate in their campaigns to encourage shopping to plant trees. The chapter concludes with a brief reflection on the practice of promoting caring consumption, including possibilities of using online media to widen the pathways of engagement with online consumers toward learning to care for trees.

Shopping to plant trees: an overview

The discussion in this chapter is based on a close reading of nineteen companies’ digital campaigns marketing a variety of commodities, from fashion accessories (e.g. watches) to specialty goods (e.g. greeting cards) and everyday household items (e.g. disposable paper products). These campaigns can be located as part of a broader turn toward e-commerce for folding environmental action into online purchases. A 2001 article in *Advertising Age* captures the crux of this strategy, stressing its ease and convenience for shoppers as it matter-of-factly informs readers, ‘Thanks to the Internet, even fair-weather friends of the environment can make a difference. Today, helping to save the planet may be as easy as buying a sweater at J. Crew or a Madonna CD from Amazon.com’ (Gardyn 2001).

Known as ‘Buy 1, Give 1’ (BIG1), this model of ‘purchase-triggered donation’ (Littler 2009, 27) is a form of Internet-powered shopper activism that operates through a ‘buy and give’ mechanism, diverting a portion of sales from online purchases to social and environmental causes. In practice, the one-for-one trade is more flexible and variable. In the case of tree planting, companies can choose to donate more than one tree, and they may set donations to occur for each customer order or each item purchased. For instance, LUMBR, a wooden sunglasses manufacturer based in Ottawa, Canada (LUMBR, Instagram profile), donates 20 trees per order, while Love Heals, an artisan jewellery shop based in Ojai, California, donates 10 trees per design sold (Love Heals Website, *Our*

Mission). Several other online actions apart from shopping can also generate donations, as the Australian company GOBE, which sells memory cards and lenses for photographic cameras, showcases on its website:

Let's go planting

Every time you interact with Gobe you'll be planting a tree in a country devastated by deforestation. Every tree counts, join the movement and helps us save this beautiful planet we call home.







	<p>Make a purchase</p> <p>For every Gobe product you purchase we plant trees.</p>	+5 ▲
	<p>Connect with Facebook</p> <p>Create a Gobe account via your Facebook.</p>	+2 ▲
	<p>Share your thoughts</p> <p>If you made a purchase, write a product review and tell the world what you think about Gobe products.</p>	+5 ▲
	<p>Recommend Gobe to your friends</p> <p>Every time you help us spread the love we will be planting a tree.</p>	+1 ▲
	<p>Follow us on Instagram</p> <p>To get inspired and up to date!</p>	+2 ▲
	<p>Join our Newsletter</p> <p>Awesome content for any wild photographer. We don't spam.</p> <div style="margin-top: 10px;"> <input style="width: 150px; border: 1px solid #ccc; padding: 5px;" type="text" value="Enter your email address"/> <input style="background-color: #444; color: white; padding: 5px 15px; margin-left: 10px;" type="button" value="Subscribe"/> </div>	+1 ▲

Figure 7 Plant trees through online actions

Source: GOBE Website, *Reforestation*

As this graphic indicates, companies may affix the promise of planting trees to opportunities to take part in occasional social media activities and contests that serve simultaneously to stimulate interest in companies' products and brand. A common strategy is to promise to plant a number of trees for each new 'like' a company's Facebook page receives, or, similarly, for each new Twitter follower. Companies may schedule these promotions leading up to or immediately following their launch, though I found that more often, they overlapped with an earth-associated event, especially Earth Day (e.g. '4 Earth Day, we'll plant 2 trees for every new like today (up to 50,000)', Jade Yoga, Twitter, 22/Apr/2013). Sharing a company's post on Facebook, Twitter ('retweeting'), and Instagram ('regraming'), all work in analogous fashion, i.e. resulting in a tree planted.

The promotional woodwork of caring consumption

Schama writes about 'the *xylothèque*', or 'wooden library', and the 'dazzling statement' it made 'about the necessary union of culture and nature' (Schama 1995, 19). The wooden books he is referring to were made in eighteenth-century Germany out of the materials corresponding to the books' subject matter. Thus, 'the volume on *Fagus*, for example, the common European beech, would be bound in the bark of that tree. Its interior would contain samples of beech nuts and seeds; and its pages would literally be its leaves' (ibid.). The aspect that makes these books special, in Schama's engrossed eyes, is that they honour 'the vegetable matter from which it, and all literature, was constituted' (ibid.). In what follows, I seek to shed light on what can be considered the promotional woodwork of caring consumption, as I critique how consumer goods, analogously to these 'wood-books', are being promoted as a means of 'paying homage' to trees (ibid.). This woodwork can be distilled into three interrelated volumes that together impart how trees and their nonhuman plant brethren, along with individual consumers and human planters, are being discursively worked upon, moulded into usefulness, and branded with the intentions of caring.

The first theme, *Care for self, others, and the environment*, centres on how online shopping is made out to be akin to the figurative soil from which all good things—via trees—come to lay down roots in people's lives and the environment. The second theme, *Design for the earth*, highlights how companies foreground the sustainable and ethical virtues of their raw materials and approach to manufacturing to exhibit their commitment

to the wellbeing of trees and the earth. The third theme, *Consumption that makes a world of difference*, discusses companies' depiction of commodities, and consumer living more generally, as bearing a world-changing impact.

Care for self, others, and the environment

In a section of their website titled 'How it all started', the founders of LUMBR share:

It started with a love of the outdoors, sunglasses, and a growing concern for the condition of the world we live and breathe in. We wanted to create something that had a minimal impact on the environment, but something that also gave back in a meaningful way - in a way that can actually make an impact in communities that truly need it. We combined our passions to produce sustainable wood frames and plant 20 trees for every purchase with our partner Eden Reforestation Projects. Eden plants trees in communities struggling with extreme poverty and minimal forestation. Eden keeps the power and pride in the hands of the locals by employing them to plant trees in their village.

(LUMBR Website, *Our Story*)

Stories like LUMBR's are typical in that they link buying something one wants for oneself while helping those less fortunate and bettering the environment. In my reading of the campaigns, this three-way linkage makes for awkward, and skewed, alliances that favour the interests of consumers. In this section, I discuss the claims of caring about one's interests in relation to those of others and the environment, drawing attention to how the claims betray a selective, and at times baffling, sense of care for the circumstances of human and tree others.

Clean and green giving

Shopping is marketed as a gesture of clean, hassle-free giving, which comes bearing deals for both consumer and the environment. The purity of this form of giving is illustrated well by a Facebook post by BLINQ, a retailer that sells 'returned and overstock products' at reduced prices (BLINQ Website, *Who We Are*).

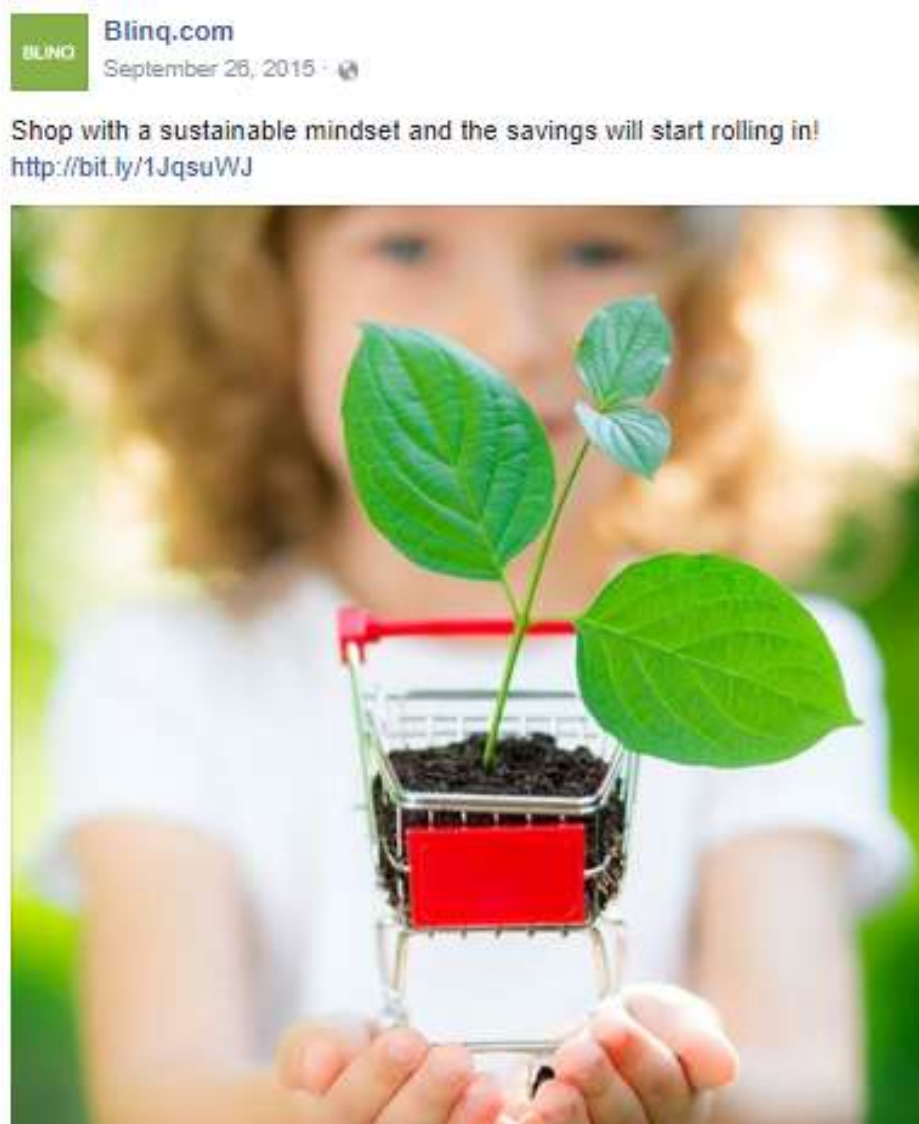


Figure 8 Sprouting saplings in the figurative soil of online purchases

Source: BLINQ, Facebook

Notice the choice of a child model to hold the cart, the smiling innocence of youth and the white tee attesting to the purity of the venture. The child's gesture of holding out the shopping cart, delicately balanced between her slightly cupped palms, accentuates the suggestion that the company's claim is a gesture of clean giving. Gentle sunlight and green hues illuminate the backdrop, brightening and warming the complexion of the scene as if vouching for the plain goodness of the offer. The placement of the sapling, used 'to connote the fragility of the environment', in the girl's hands, 'symbolizes the environment in the hands of humanity' (Hansen and Machin 2008, 784). The written text

works to push the additional implication that by putting environmental considerations first ('Shop with a sustainable mindset'), BLINQ customers are rewarded in desirable measure: in the form of not only the purchased item (which is implied), but more specifically here, the price markdown passed along to the customer. Given the visual, the 'savings' that roll in could be read here in the literal sense that the company might well mean it—as financial savings. Considering the orientation of shopping by a 'sustainable mindset', it could also be taken to mean 'saving' the environment by growing a tree.

Look, feel, and do good

The counterpart to easy, clean shopping is shopping in style, so much so that I would suggest that style constitutes the principal channel for showing one's commitment to the cause. Note how the following tweet languages virtue as a savvy shopping experience:



Figure 9 Look, do, and feel good with hemp tees

Source: hemp helps, Twitter

The women are ostensibly smiling because they have snagged an environmental as well as an aesthetic bargain. This interpretation is supported by the hashtags that serve to classify the written text, associating this unusually great ‘deal’ (so great, that the orange and blue emoji mouths a gesture of disbelief) with looking and feeling good, as well as planting trees. Merely by being fashionable, the tees accomplish a trifecta of good: ‘Our #hemp shirts help you look, feel and do good’ (Twitter, 11/Aug/2015). Shoppers are prompted to think, therefore, that ‘just by looking stylish’, they can help ‘restore what has been lost’ (WeWOOD, Facebook, 29/Sep/2010), and thus have due reason to ‘feel good’, knowing ‘the positive impact on the earth and people’ they have made (Tinlid Hat Company Website, *Our Goal*).

‘From Seed to Woodzee’⁴⁵: a stylish circle of life

One could be forgiven for believing, as a consequence, that it is fashion that oils the means of life, as dryly suggested by an online review commenting on the sustainability of WeWOOD’s wristwatches: ‘It is a fashionable circle of life’ (Molzilla 2011). Though not so bluntly stated in other campaigns, this assertion is very nearly what is suggested. Consider an end-of-year promotional video by Woodzee, to which the company published a link on Facebook, commenting, ‘This video is our New Year’s resolution, to grow locally but think globally. Hope you’ll join us!’ (Facebook, 18/Dec/2013). Most of the 3 ½-minute video films a group of three to five individuals cruising in style in their surroundings: walking with a swagger down a neighbourhood street, skateboarding in a skate park, bicycling through unpopulated dirt roads and paved streets, lying in a hammock, riding motorbikes, hiking trails, climbing trees. The resolution is screened for all of two to three seconds, as so:

⁴⁵ This was a name of a page on Woodzee’s website at the time of data collection.



Figure 10 Woodzee’s New Year’s resolution

Source: Woodzee, Vimeo, ‘Woodzee Sunglasses 2014 Lookbook Video’

It is as though, walking casually, the sun at their backs, enjoying each other’s company, individuals can grow locally and act globally by strutting their Woodzee shades during outdoor adventures. This suggestion is certainly communicated in the way the camera immediately switches from the scene pictured above to profile the face of a girl wearing Woodzees. Later, these friends are joined by a few others, who are shown casually planting a tree in perfectly pressed and unsoiled tops and bottoms. Their manner of planting rings with an offhand sense of care. The friends laugh and smile while flicking Woodzee packaging into a patch of ground flanked by tall, healthy trees, which an accelerated simulation shows the planted packaging will grow into.⁴⁶ Shovelling is similarly painless, as the soil, by the looks of it, is already moist and well nourished. Woodzee’s customer-planters have made a global difference—or at least, in Africa, the centrepiece of the gridded globe.

Proud of their work, the friends stand side-by-side, looking suave and confident in their wooden sunglasses. They smile out at the setting sun over the horizon, the end of the day signifying the conclusion of the journey from purchase to reforestation. The video ends with the appeal: ‘Please join us in fostering a more sustainable relationship between

⁴⁶ Two months before this video was released, Woodzee indicated it had changed its packaging materials so that they could be planted in ‘well drained soil’ to ‘grow wild flowers’ (Facebook, 14/Oct/2013).

Style & Nature', pressed onto the crowns of trees, which make up the forest 'grown' by the young adults in the video. This wooded vista kisses a clear, calm, light blue sky, signalling that all is well.

This representation of consuming to care effectively offsets an outdoors lifestyle, carefree and removed from the practicalities of living, with the laborious work of planting. One must wonder what kind of 'sustainable' circle of life is imagined where nature as leisure is proudly funded by nature as source of life. The terms of this trade, which sound from this view objectionable, are however represented as the key to unlocking positive change. As I show next, in showing how others are helped, the campaigns magnify the good of shopping by focusing on dramatic changes in the life situations of poor families.

Change and save lives

Shoppers are told that their purchases register as an array of essential resources and services that trees provide, in effect changing and saving lives, as conveyed in the following excerpts from two companies' rationalisation of the good of planting:

At tentree, we're focused on more than just planting trees. We want to help change lives. Not only does reforestation revitalize dry arid soil and provide a substantial oxygen supply, but it directly benefits locals living in the area by providing wood for fuel, food, and fodder in livestock, as well as permanent and seasonal employment.

(tentree Website, *tree planting*)

The trees we plant together transform lives, providing food, fuel, livestock feed, and a source of employment. The trees we plant together help bring about a future of clean air, fresh water, and fertile soil.

(Paper Culture Website, *Trees Save Lives*)

The claim is not just that trees can so hugely affect the lives of those directly dependent on the land. It is that this magnitude of effect is possible only because shoppers and planters reside in a common environment. Consider how tentree, a Canadian apparel company, answers the 'frequently asked question', 'Why should I care about planting trees?': 'You should plant trees because you care about both people and the environment, and because our program brings more benefits to the people of these threatened lands-and to the environment we share with them-than any other program out there' (tentree

Website, *FAQs*). tentree's response makes a point to sign to the notion of an environment held in common. By making purchases to plant trees, shoppers can shower this environment, and the human lives imperilled by damage to it, with unparalleled benefits. This claim to a common habitat becomes the basis for asserting shoppers' ability to affect the livelihoods of these human others ('the people of these threatened lands').

The claim of good done for these others is often backed with short stories on company websites or social media updates featuring snapshots of the villagers empowered through tree planting projects. The photos and facts are supplied by the planting partner, and companies contextualise the information within their missions. The manner in which this claim is thus put to rhetorical illustration is telling of how asymmetries between shoppers and planters, consumers and labourers, are passed off as acceptable, even desirable. Consider the case of 'Malik', one of the villagers whose lives have been changed and saved through a partnership with Trees for the Future (TFF).

Malik: a life changed and saved

'Malik Ndao' is the portrait of tree-planting success. He features in a portion of Paper Culture's website dedicated to showcasing how 'Trees save lives' (Paper Culture Website, *Our Mission*) as well as on Love Heals's Facebook Wall (Figure 11).

Paper Culture's account of how 'trees provide prosperity' paints a picture of the hardships endured by Malik and his family (Paper Culture Website, *Our Mission*, 'Trees Save Lives'). It tells of Malik's 'backbreaking efforts to work the thin dry soil', the torment of being separated from his family for 'months at a time to work in markets across Senegal, earning tips by pushing wheelbarrows and carrying heavy boxes', and foraging that provided 'barely . . . enough to survive'. When Malik became part of the BIG1 arrangement, his family's fortune reversed: 'Thanks to Paper Culture's customers and Trees for the Future, the better life Malik dreamed of, living self-sustainably on land he can depend on to feed and support his family, became a reality'.⁴⁷

Love Heals's Facebook feature on Malik also speaks of the turnaround and newfound self-sufficiency that arose through funds (customer sales) and instructions (from TFF) to cultivate sustainable tree gardens. The post attests to the extraordinary impact of purchasing the company's handcrafted jewellery on Malik's life circumstances.

⁴⁷ The quotations in this paragraph are drawn from Malik's story: <https://www.paperculture.com/trees-make-dreams-come-true>, last accessed July 2018.

Somewhat curiously, the company chooses to relay this impact visually with a photo of Malik wolfing down a banana.

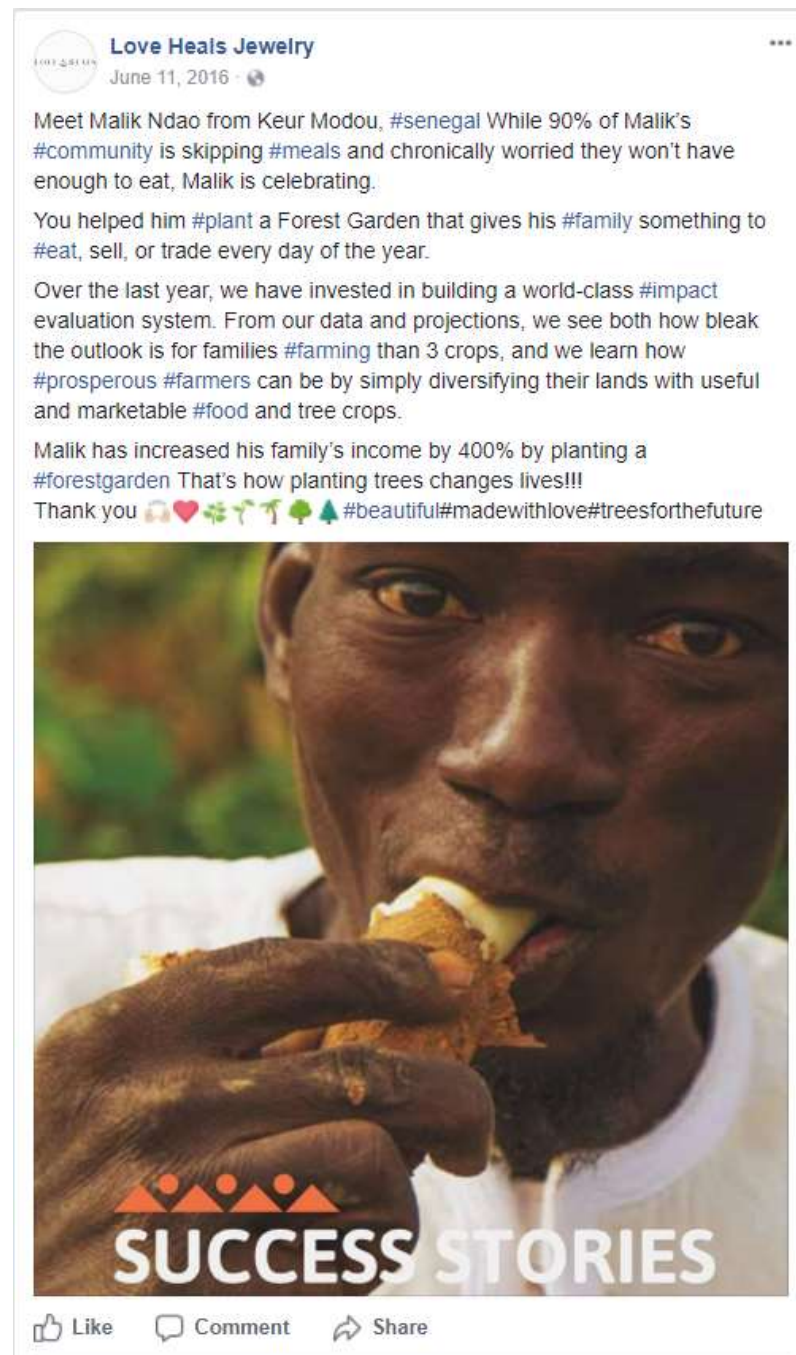


Figure 11 A typical success story⁴⁸

Source: Love Heals, Facebook

⁴⁸ The third paragraph was probably furnished by TFF, as Love Heals oversees neither planting operations nor evaluation systems. Hence, the use of 'we' likely refers to TFF.

The price of Love Heals's jewellery ranges from 49 to 459 USD (Love Heals Website, *Jewelry*). That the company would select to crystallise the life-changing impact of purchasing its pieces with an agricultural crop that costs mere cents and pence for the same consumers, is perplexing. For households saddled with economic adversity, bananas easily assume the status of critical foods, eaten to stave off hunger (see e.g. Fata 2017; D. Narayan 2000, 32, 184). They are not the inexpensive conveniences that they have come to be taken for granted as in western consumer economies. For some who are especially clawing for a living, even bananas are too costly to consume more than occasionally (*The Economist* 2016; Scawen 2014). Malik, it follows, may have increased his income by '400%' (Figure 11, above), earning 'over \$1,250 a year - five times what Senegalese maize and peanut farmers typically earn cultivating the same amount of land!', as Paper Culture's version of the story celebrates. It seems, nevertheless, somehow overstating the facts to exclaim that immense good has been accomplished because Malik, and those others he may represent,⁴⁹ get to eat a banana thanks to shoppers' readiness to adorn their flesh with pricey stones and crystals that could be traded to buy hundreds and thousands of bananas.

This rendition of doing good suggests, further, that a certain incongruence in what different parties come away with is to be readily accepted, even celebrated. Consider what this message of affluence-bred prosperity brings about and implies. Two vastly dissimilar experiences of 'prosperity' are thought reconcilable as a show of care: that of the elite consumer, who in purchasing three of the most expensive Love Heals pieces, would top Malik's salary, and that of the Senegalese farmer, who can only now afford goods to 'eat, sell, or trade' daily (Figure 11, above). Divergent in every way, these realities are not fated to intersect. They proceed, rather, in parallel, and one wonders if the distance might not in fact increase as a matter of course, given the terms of their selective engagement through BIG1.

On the one hand, such success stories lend concrete reality to the advertised impact. On the other hand, they expose thorny conversions between shopping, tree planting, and prosperity: conversions which happily parade in the guise of caring simultaneously about one's personal interests and those of others, as in the invitation

⁴⁹ Critiquing the story of a woman named 'Narmaben' on the UK charity Traidcraft's website, Neyland and Simakova note how this woman, similarly to what I suggest about Malik, 'stands in for the aggregate category of poor people whom might benefit from our purchase' (Neyland and Simakova 2009, 784).

‘Connect to both your #music and a cause you care about with the Reveal #Headphones (Reveal, Twitter, 17/Dec/2014). The conversion in this case takes place between a lifestyle amenity and a biological need: ‘You get a new pair of earbuds, a family gets two weeks of water’ (Reveal, Twitter, 27/Jan/2015). Notice how this statement masks differences in the standard of living intimated in what each party receives by mentioning them in one breath as if all that is at stake is an exchange of resources, earbuds and water. As resources, the two items are indistinguishable, mere utilities for trade on the market. As indicators of standard of living, they serve rather more as windows into the disparate life circumstances of the two beneficiaries: an individual who, in the context of their life, may feel as if they need an entertainment accessory, compared with a group of individuals whose need for water is common to all humans, irrespective of socioeconomic bracket.

E.N. Anderson writes: ‘We are constantly reinterpreting . . . perceptions in terms of our wants and needs—not only needs for things like food and shelter, but also needs to see the world as hopefully as possible, to see it as simple and comprehensible, to see it as ultimately manageable’ (E. N. Anderson 1996, 3). The charitable draw of BIG1 springs from the perception of the world it sells: a world made plain and simple in the image of those tastes and priorities that are seen as ‘our wants and needs’, a world that kindles hope through retail circuits of exchange, as sounded by the tagline of the ethical clothing company Raintees, ‘Growing Hope™ where it’s needed most one Raintee at a time’ (Raintees Website, *About Us*).

Undoubtedly, the portrayed life of Malik and his family has changed, and by the measure of the narrated extent of their previous adversity, probably even been saved. Still, the means of transformation and rescue—namely, constructing a bridge between accessorising and survival—backpacks on the troubling bet that shopping for specialty goods can rescue the poor from the brink of ruin. Many campaigns in one way or another gamble on this chance, as if it were assured because planting trees is thought to make for a healthier environment. As Little Sapling Toys, a Utah-based maker of children’s toys, concludes, its commitment ‘to innovative toys and healthy earth’, makes ‘planting a tree for every toy that we sold . . . the perfect solution, a gift to our wonderful customers and beautiful planet’ (Facebook, 22/Apr/2016).

This statement reveals something important about the campaigns’ figuration of how trees are good for everyone because the environment improves. It simply clips non-shopping human beneficiaries from consideration. Using the example of one campaign’s

Earth Day promotion, I want to expand upon this observation to show how it can illuminate the problematic bargain of interdependence into which BIG1 draws shoppers and planters, even as it may change and save lives through transforming material circumstances. I would like to show, in particular, that the latter achievement sits shrouded in the presumption of a shared environment that is depicted to belong only to well-to-do shoppers.

The environment held in common

Reveal makes plant-based accessories for mobile devices, such as smartphone cases and earbuds. It invites online shoppers: ‘Join our growing community of people who share common values of caring for the environment, a passion for nature and exploration, and a desire to stay connected and stylish while on the move’ (Reveal Website, *About Reveal*). Its social media feeds gush over all manner of outdoor escapes, for example: ‘What could be better than a nice holiday enjoying the refreshing greens of Scotland’ (Facebook, 20/Jun/2012); ‘New Zealand is an idyllic destination for nature and adventure’ (Facebook, 20/May/2014); and ‘Enjoy the serenity of white beaches and blue lagoons of Australia’ (Twitter, 8/Oct/2012). Throughout its campaign, Reveal foregrounds the environment that shoppers will take pleasure in. As a case in point, the following Facebook post makes the idea of planting trees to improve environmental health enticing by picturing that environment as a picture-perfect getaway.



Reveal

April 18, 2016 · 🌐



We love Honduras for their beaches & their forests! Unfortunately many of the rural communities in Honduras have experienced severe deforestation. Every time a tree is planted, our environment improves. That's why we are so happy to report that we have planted 4,500 trees with American Forests in Honduras.

#RevealNature #RevealEarthday



Figure 12 Improving Honduras's environment through tree planting

Source: Reveal, Facebook

With the first sentence, the company exclaims its 'love' for two of Honduras's prime habitats, 'beaches' and 'forests'. The company then proceeds to note the 'unfortunate' reality of deforestation that has affected the country's rural residents. This sequencing strings together the integrity of Honduras's habitats with the threat posed by 'severe deforestation' to the country's forest-dependent human livelihoods. Sympathy that may arise from the suggestion of suffering experienced by the latter because of the whittling away of forests, is extended to a concern for the welfare of the country's beach and forest environments.

Concern for forests follows logically from the claim of deforestation. But how deforestation relates to the condition of beaches is not clear. I would argue that this linkage confuses the primary subject of the text, the environment being reforested in Honduras, with the visual featured, the environment being 'revealed' as a sunny day at

the beach in—one might reasonably guess—Honduras through the purchase of Reveal’s products. The photograph and the hashtags combine with the text to curate a ‘Honduras’ that tempts shoppers as a fabulous tropical paradise they may very well be keen to visit, as well as a place that is flourishing because of the trees planted. Typical of paradisaical discourses (Costa 1998, 325, 328), the photo abstains from providing any hint of the country’s eight million plus human inhabitants.⁵⁰ Instead, consumers can fantasise about ‘revealing’ Earth Day by relaxing into their mobile lifestyles with Reveal accessories.

The environment supposedly shared between Honduran rural residents and Reveal shoppers, plays to the urges of an escapist fantasy that blooms into view as a result of planting trees. This fantasy, along with the good feeling that shoppers may enjoy from assurances of the impact of their purchases, escapes more than just everyday life. In the wider context of the campaigns’ calls to shop to care, it ducks consideration of the flawed vision of environmental solidarity built upon the link between first world prosperity and third world desperation. Recall hemp helps’s advertisement of its tee shirt sale featuring three smiling women (Figure 9, p.125). In an earlier version of the plug, the company tweeted a photo provided by TFF of the workers who plant the trees funded by customer sales:

⁵⁰ <https://www.statista.com/statistics/509990/total-population-of-honduras/>, last accessed January 2018.



Figure 13 T-shirt promotion with workers

Source: hemp helps, Twitter (11/Aug/2015)

The visual and text of the tweet, read together, communicate that consuming further commodities is a way to keep the labourers in their fields. This balance, this putative parity, is maintained so long as land, trees, and the toil of planters are indentured to the fashionable appetites of privileged consumers.

The giving tree

The logic of doing human others a favour, while luxuriating in the fruits of their labours, resembles the treatment of trees, the principal nonhuman beneficiary named in claims to give back to the environment. An example that helps encounter this quality of regard for trees is offered by the Paper Culture campaign. Paper Culture is a stationery company based in southern California. It plants a tree for each customer order, and names Shel Silverstein's 1964 illustrated children's book *The Giving Tree* as a distinct inspiration for its business operations and planting programme:

We are so inspired by the story “The Giving Tree”. It reminds us of how the trees provide so much to us... from shelter, to joy, to sights of beauty, but the trees can never ask for anything back.

If all we do is take and take, then at some point, nothing will be left to be taken. That’s why we pledged to give back 1,000,000 trees back [*sic*] to the planet, to help restore forests in devastated areas.

(Paper Culture, Facebook, 29/Nov/2016)

In my view, the moral of *The Giving Tree* is somewhat oddly heeded in this expression of gratitude for all that trees ‘provide’ for ‘us’ (humans) that is then used to justify the company’s planting goal. In the story, a female tree provides shade, apples, and companionship to ‘a little boy’, who ‘loved the tree . . . very much’, and ‘the tree’ too ‘was happy’. Over the years, the boy grows bored of the tree and as he grows older, wants to make money and build a home for his wife and children. The tree offers her apples and branches and is characterised as ‘happy’ throughout this time, while the grown man is depicted as only coming to ask the tree for things. Toward the end of the story, the now old man wants to sail away, and while the tree is ‘so happy’ to see him that she can ‘hardly speak’, she offers her trunk for a boat so that he can ‘be happy’. At that point, the tree is ‘happy . . . but not really’. Only when the old man returns and uses the remaining stump as ‘a quiet place to sit and rest’, is the tree is ‘happy’ once again (Silverstein 1992).

The book characterises the tree as happy to give, and especially happy to share human company. While the boy’s show of gratitude is ever-lacking, it is noteworthy that not once does he ask the tree for things; the tree offers herself and her fruits at noticing the boy’s and later, man’s disgruntlement. It is as if the tree is born to give, and is pleased by how its gifts make the human happy. Read alongside Paper Culture’s pledge to plant one million trees, this character portrait condones the consumption of trees. The statement that trees ‘provide so much’ yet ‘can never ask for anything back’ might lead one to infer that the company means to give back to trees somehow. And yet, the idea seems to be one of ensuring something is ‘left to be taken’.

One could also read in this tale the gendered trope of man taking from a feminine nature (Merchant 1996, 77, 84). The appalling conclusion I am led to draw based upon the tree’s apparent wanting to satisfy the boy, is that nature (represented by the female tree) is made to provide for all of humanity’s (read: men’s) needs. Planting trees would then be tantamount to taking care of the woman (in the context of the Facebook post, she

would be ‘the planet’) in order to ensure her continued ability to provide. The personification of the tree as a servile woman keen to anticipate the man’s needs, and thrilled to satisfy him, suggests an exploitative relationship of caretaking, in which the tree receives nothing in return except a promise to be used. In these terms, the proposal of giving back sounds more self-serving than caring. While I do not wish to write off the company’s efforts to popularise its planting efforts as derogatory or ill-intended, I would point out that the trees that give seem to be receiving little of anything. Thankfulness for the trees’ gifts manifests not in the form of sparing, or nurturing, these trees, but replacing them with new trees, which can continue to provide. This expression of appreciation indicates not concern for the tree, but care about having enough trees.

The quality of care shown to trees is threaded into several aspects of companies’ missions apart from tree planting. In the next section, I engage with this issue by fanning out into a discussion of dominant attitudes toward other plants and the earth in general, as companies work to demonstrate their commitment to taking care in the selection and processing of raw materials.

Design for the earth

The set of themes that I am grouping under the heading ‘Design for the earth’ highlight orientations toward trees, plants, and the earth that dominate in companies’ attempts to construct an image of themselves as committed to environmentally responsible manufacturing. I named this heading to give voice to the contrasting orientations to design processes that show themselves in the way that trees specifically and nature generally are imagined as being cared about and looked after by these processes. The meaning of the preposition *for* is decisive here: it may qualify the companies’ design processes as being either for the sake of the earth or conversely, fit for it. Whereas the former meaning favours a notion of design that is meant to benefit the earth, with the aims of design resting squarely on the earth’s needs, the latter meaning casts the earth as constraint, whose requirements for functioning are taken stock of, but as a means to another end, such as the fulfilment of consumer wants and business objectives.

These perspectives show up and mingle in discourses dealing with issues of care in terms of materials selection and processing for design, waste, resource productivity, and sustainable sourcing. As I will show, these discourses resolve the worth of plants and the earth into the fact of their being, to varying degrees, nurtured by, as well as intended for, the production of consumer goods. In this resolution, the earth can be said to be

‘challenged upon’ by ‘human willing’ through its reduction to a store of natural resources (Heidegger 1977, 14–16),⁵¹ offering potentially inexhaustible energies that can be harnessed to satiate consumer appetites.

Taking care with design

Many companies stress the care invested into making their consumer products, as evidenced by the choice and handling of materials. For example, from tentree’s website, shoppers learn: ‘We have worked to ensure that our environmental footprint is minimized throughout the supply chain by only working with factories that can source product from the local region’ (tentree Website, *company*). tentree’s apparel is then described as imprinted with this ethic of sustainable production:

. . . [O]ur commitment to sustainably [*sic*] extends beyond planting trees. In fact, it is woven (pun intended) into everything we do. Every tentree item is made using a blend of sustainable fabrics. Here [on its website], you will find a few examples of some of the environmentally progressive fabrics we use in our products. Whether it is organic cotton, recycled polyester, cork, or coconut; you can feel good about how your product is made, and what it is made with!

(tentree Website, *company*)

The claim, in short, is that tentree’s clothing materialises care: the care observed in the choice of material composition (‘what it is made with’); in sourcing these materials (‘by only working with factories that can source . . . from the local region’); and in weaving the materials into ‘sustainable fabrics’ (‘how your product is made’).

This care results in products of ‘premium quality’ (LUMBR Website), which, especially apparent in the case of accessories, exemplifies something of the knowledge and expertise that inform the application of manufacturing methods. Love Heals, for instance, boasts that its jewellery is ‘handcrafted with the highest quality- lending an old-worth aesthetic and craftsmanship you can feel’ (Love Heals, Facebook, *About*). The resulting product is marketed as a one of a kind find, based on both the materials used and the techniques applied. Original Grain, an Oregon-based manufacturer of men’s stainless steel and wooden watches, suggests that the distinctive allure of its watches can be credited to the company’s passion for woodworking: ‘When we started this company, it wasn’t to make wood watches, It was to perfect a craft’ (Facebook, 14/Mar/2016), and to

⁵¹ In the referring passage, Heidegger uses the example of coal consumption to illustrate this point.

its selection of wood, which the company adds, ‘can date back hundreds of years, meaning you have a bit of history in every watch; something that is truly original’ (Original Grain Website, *About Us*).

The emphasis on attentiveness and artistry in crafting consumer goods is redolent of David Orr’s recollections of a beloved wooden letter opener given to him by a friend. Handmade from rosewood, the gift reveals to Orr not only his friend’s skill and passion as a ‘woodworker’ whose small family business exhibited a tradition of ‘craft[ing] tables and cabinetwork with exquisite inlaid patterns using an assortment of woods from forests all over the world’ (Orr 2002, 172). The letter opener is also ‘a lesson in giving and appropriate materialism’: it is ‘useful’, ‘beautiful’, and ‘made with great skill and design intelligence’, with wood sourced ‘from forests managed for long-term ecological health’ (ibid., 172, 173).

Companies give the impression that their products are made in much the same vein, with, for instance, WeWOOD professing, ‘craftsmen are able to create works of art from re-purposed woods, saving precious resources and helping to keep our planet green’ (WeWOOD Blog-US, 11/Apr/n.y.). In my view, however, the ‘green’ qualifications of product design processes overshadow the commitment to care in design. In particular, whereas companies amply advertise how attentiveness and concern are present in the handling and selection of raw materials, this kind of regard is absent in the case of the plants and trees that constitute the inputs in this work. Heidegger writes that in ancient Greek, ‘*techne* means neither art nor handicraft but rather: to make something appear, within what is present, as this or that, in this way or that way’ (Heidegger 1971, 157, author's emphasis). The campaigns, I argue, evoke the presence of trees and other plants within commodities in terms predominantly of their natural and renewable credentials and ecological performance. Companies take care with the design of their production processes to the extent that these vegetal species meet such criteria. The remaining sections progressively unpack this typesetting of care into various eco-friendly attributes, putting on display how design is carefully ‘woven’ in eco-commendable terms by asserting a kinship with nature or allying with the interests of nature.

Reducing ecological impact

Waste reduction

A central way that companies interpret ecological design is through the notion of ecological impact. Quite often, this aim is pursued by attempting to control the generation

of waste, such as through the selection of non-virgin woods as production inputs, the assumption being that living trees need no longer be valued as a resource base. This assumption, furthermore, is presented in a way which permits companies to accentuate their commitment to sourcing salvaged or recycled materials to a degree that the consumptive aspect of these processes is either muted or else rendered insignificant by comparison with the alternative.

Consider the following statement by the Director of UK Operations for WeWOOD, an Italian designer of luxury wooden watches with a multinational presence.

We believe it is important to use sustainable materials in fashion We only use wood that would otherwise be thrown away, creating something functional and stylish that is designed to be worn, used and enjoyed rather than wasted. Our high-tech Miyota [*sic*] movement timepieces are made from natural wood and as well as using materials destined for the scrap heap, our designs actually help to replenish forests and woods around the world with a new tree being planted for every watch sold.

(WeWOOD Blog-UK, 13/Sep/2013)

This statement sets WeWOOD apart in the fashion industry based on its practice of redirecting wood scraps to useful ends, then punctuates the repeated reference to this distinction with the promise of restoration. Although brief, the statement mentions the prevention of waste thrice, in terms, namely, of rescuing unwanted wood to fuel the company's operations ('i.e. wood that would otherwise be thrown away', 'rather than wasted', and 'using materials destined for the scrap heap'). This testament of the company's eco-conscious initiative is then quickly followed with a suggestion of the unexpected ('actually help') restorative effects ('replenish forests and woods') of the company's operations. No pause save for a comma is permitted, suggesting a tight sequence from reusing woods to planting new ones.

Greenwashing impact through omissions

Here, resource and energy requirements of the production process itself are screened from sight by the apparently more impressive initiative to innovate production through reuse and resource conservation. Reserving select fractions of the production process for public visibility works to overstate the eco-ethical benefits of reuse in this context. Consider the case of TreeRing, which markets an eco-friendly version of yearbooks that are made with recycled paper and tailored to each student's and school's requests. Testifying to the 'environmentally friendly' design of its operations, the

company assures schools and parents, ‘we print on recycled paper and only produce the exact number of books parents buy, eliminating unnecessary waste and resources’ (TreeRing Website, *Environmentally Friendly*), thereby ‘prevent[ing] the wasted paper, ink, and space of leftover books’ (Press Release, 5/Aug/2010).

True, the company is ‘eliminating’ the need for additional raw materials required for printing on virgin paper. By printing only pages that students want to see, and ordering only as many yearbooks as requested, TreeRing is also preventing the usual heaps of unread and undesired yearbooks and yearbook pages. For all this relative benefit, though, ‘unnecessary’ remains a subjective appraisal of the amount of waste generated in this situation. In fact, considering that yearbooks are arguably non-essential, this adjective strikes me as missing its mark within the broader agenda of environmental betterment, as the designation of its business as inaugurating ‘A Sustainable Yearbook Tradition’ (TreeRing Website), functions as more an advertising gloss of its environmental impact, exemplifying a variant of greenwashing, than an admission of its actual environmental effects. TreeRing distinguishes its yearbooks in terms of the undesirable environmental elements it subtracts from yearbook production, thus stressing the positives with cheerful declarations such as ‘environmentally friendly’. By construing its comparatively reduced resource consumption (compared with traditional yearbooks) as being ‘an investment in the future of our planet’ (TreeRing Website, Video: ‘See What Makes TreeRing Different’), the company muddies the fact that its yearbook production is in truth less environmentally destructive.

High performance plants

The discourse of waste reduction suggests, among other benefits, the good of swapping virgin inputs for second-hand counterparts. In this respect, this discourse is complemented by the promotion of ‘wood alternatives’ (Paper Culture, *Our Vision*), such as hemp and bamboo. Interestingly, whereas the ecological merit of non-virgin woods is boiled down to their prevention of ‘unnecessary waste’, fresh cuts of other plants are heavily promoted in terms of their potential to boost ecological performance and resource availability.

Bamboo, for example, garners recognition as ‘one of the fastest growing renewable resources’ (Paper Culture Blog, 22/Apr/2015), which ‘absorbs 30% more carbon dioxide per hectare than equivalent tree’ (Reveal Website, *Eco Materials*). Hemp is showered with praise for its speedy ability to mature and its greater output of consumer

product per acre compared with trees. The following tweet takes this praise to its logical end in the context of the campaigns, unveiling hemp as, namely, both inexhaustible supplier for consumer production and crucial ingredient in the brew to preserve forests.



Figure 14 Hemp as godsend for consumption and forest preservation

Source: hemp helps, Twitter

In this tweet, hemp’s productivity for producing paper constitutes its ecological attractiveness: it can at once ‘save our world!’ and forgo the logging of trees and forests. The plant’s propensity for rapid growth in turn determines the kind of world in need of saving. This ability is suggestive, in particular, of a world chopped into units of productivity (for producing consumer goods, as suggested by the reference to paper).

Thus, one may surmise, the world in terms of its productivity is the world which requires rescue.

The source of the statistic, as the photo indicates, is a US Department of Agriculture document, which was published during World War I. The report predicts an auspicious future for hemp given the increasing rate of wood consumption for paper production (Dewey and Merrill 1916, 7).⁵² This information lends the promotional cover for *The Gospel of Hemp: How Hemp Can Save the World*, a free e-book, the link to which is stamped on the photo in Figure 14. The 50-page e-book incites citizens to push for the legalisation of hemp for the sake of the planet. In a sentence, ‘hemp can save our world’, ‘the Earth and civilization’ because it ‘can produce oil, fuel, building materials, clothing, food, acid-free paper, textiles, clean energy, cars, biodegradable plastics, and over 25,000 different products ranging from dynamite to cellophane’ (Archuleta 2012, 6). As in the tweet, hemp passes as a resource in this text, which affirms this plant kind as a means to save ‘the Earth’ by way of powering the consumer industries that support (human) ‘civilization’.

Made to be consumed

In applying an ethic of substitution to the selection of materials, whether by opting for recycled materials or other, cultivated plant varieties, the companies normalise the status of plants as inputs in consumer production. It could even be said that *this* feature, i.e. plants’ suitability for consumption, more than their ecological function, comes to the fore in appeals to their sustainability. Consider how maple wood is advertised.

Sustainability piloted by consumption: the case of maple

Original Grain emphasises the stories ‘that can be told about the materials used’, pressing upon visitors to its website the following message:

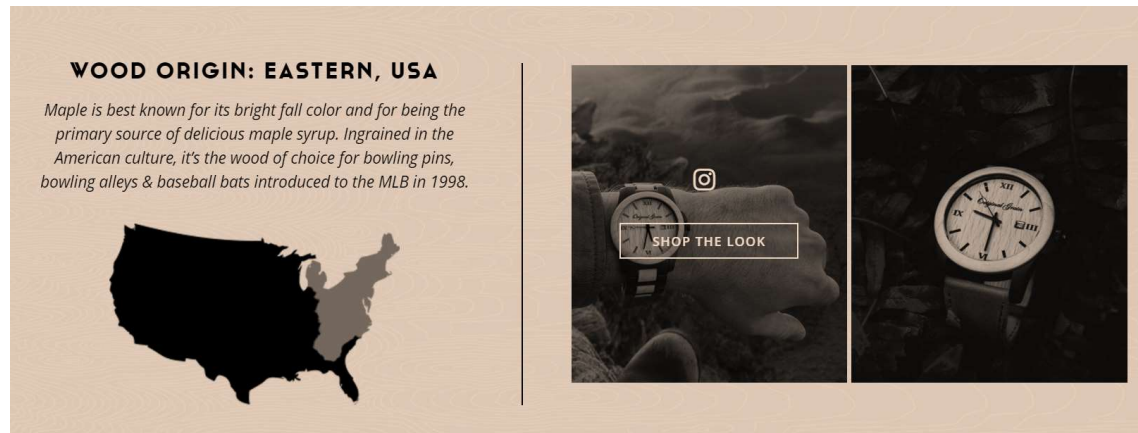
"MORE THAN JUST A WATCH"
IT'S TIME TO TELL A STORY

Figure 15 Narrating the story of wood watches

Source: Original Grain Website, *About OG*

⁵² The statistic appears on p.24 of the text.

The company narrates the story of the five hardwoods that compose its watches through a link to learn about its ‘SUSTAINABLY SOURCED MATERIALS’. The referring page features a section on maple wood.



The text reads:

Maple is best known for its bright fall color and for being the primary source of delicious maple syrup. Ingrained in the American culture, it's the wood of choice for bowling pins, bowling alleys & baseball bats introduced to the MLB in 1998.

Figure 16 Description of maple wood

Source: Original Grain Website, *SHOP BY WOOD*

Excepting a single visual attribute, maple is familiarised through its place in ‘American culture’. Maple wood takes on meaning more specifically through its commodity form, as it becomes recognisable matter through its association with consumer pleasures, including maple syrup, bowling, baseball, and, now, Original Grain watches. Noticeably, no mention is made of the sustainability of the wood as an input in production, despite indications given by the title of the forwarding link.⁵³ One might deduce that maple’s versatility for consumption makes the wood a sustainable choice, as the tree’s timber and non-timber products are framed as if enabling a tradition of consumer culture, making their most obvious feature their historic availability for consumption.

WeWOOD actually specifies this attribute as being precisely what makes trees sustainable resources. The company utilises a beige variety of maple wood to manufacture its Kardo watch (see Figure 17, p.148). The product description informs

⁵³ The sections on the other four hardwoods likewise lack any reference to sustainability.

browsing shoppers, ‘Maple’s light golden hue and workability make it a popular choice among woodworkers, and its availability makes it a sustainable choice for watchmaking’ (WeWOOD Website, *Watches*, ‘Kardo’). This statement defends the felling of maple for watchmaking by resolving the sustainability of production into a determination of resource availability, echoing the discourse of high ecological performance illustrated with the example of hemp. This resolution is strengthened through an emphasis, likewise, on the renewability of tree species, as I explore shortly. Both facets, availability and renewability, are discursively anchored by an emphasis on the naturalness of resources. In the next section, I explain how attention to natural qualities muddies the borders between raw material and manufactured commodity, suggesting that trees are as good as ready for consumption, without the need for further transformation to make them market-ready.

Direct from nature

Products are often described to suggest they are sourced directly from nature, as in the expression that a wooden watch ‘is as natural as your wrist’ (Molzilla 2011). At times, the natural character of the materials is accentuated as to imply the products are untouched by artifice. Little Sapling Toys writes that its toys are made from woods ‘with no paint or dye’ and that it ‘achieve[s] different colors using different woods: Maple (light wood), Cherry (red-tones), and Walnut (dark)’ (Little Sapling Toys Website, *Our Design*).

Other times, the innateness of a material’s qualities is foregrounded, suggesting the materials are wholly natural. This marketing strategy can be demonstrated by looking at the promotion of cellulose acetates, a standard ingredient in many eyeglass frames.

As good as natural: cellulose acetates

LUMBR contends that it ‘contributes to preserving the earth with sustainably sourced materials’, including ‘plant-based acetates’ (LUMBR Website). Acetates form the outermost lining of eyewear. Until recently, they were composed of plastic derived from petroleum sources, which were considered more readily obtainable and amenable to processing (Hon 1997, 331). With predictions of ‘peak oil looming’, and concerns over environmental pollution coming to the fore, the cellulose of plant fibres is now being looked upon as a viable ‘base for a new generation of “green” plastics’ (Freinkel 2011, 14; see Hillmyer 2017, 868), namely, cellulose acetates.

In this wider context of multi-industry benefit, cellulose acetate promises an alternative to oil dependency, a presumed selling point for eco-conscious shoppers. To be

sure, one of the first retailers whose website I came across in a casual search of the marketed differences between types of acetates, beamed that ‘non-petroleum based plastic frames are made from all renewable resources including natural cotton and wood fibers. So next time you don your lovely lenses, pat yourself on the back for taking care of the planet at the same time’.⁵⁴

The overemphasis on the natural origin of cellulose acetates covers over the fact that they are ‘semisynthetic’ (Freinkel 2011, 23). Cellulose acetate is a laboratory experiment: it arises from the reaction of cellulose with acetic anhydride in a solution of acetic and sulfuric acids (Hon 1997, 341). Cellulose itself takes work to procure. Mechanical and chemical processes are pressed into delicate service to sever polymer chains from the structural matrices which constitute varieties of plants known in material engineering contexts as ‘lignocellulosic materials’, a few of which are flax, bamboo, cotton, wood, hemp, and jute (Mohanty, Misra, and Hinrichsen 2000, 3). Traditionally, moreover, the labour needed to gather, extract, inspect, and prepare cellulose acetates for industry applications has meant that cotton and wood have been the donors of choice (Hon 1997, 332–33). Thus, while cotton and wood are ‘renewable’ in that they can be regrown and ‘sustainable’ in that they do not foul ecosystems as a matter of course, they have also proven most compliant with requirements for mass production. ‘Cellulose acetates’ might well be ‘biodegradable’, as another eyewear company further touts (Woodzee Website, *Products*), but their insertion in the manufacturing process is a function that the marketing of eyewear makes out to gratify firstly commercial, and secondly ecological, cares.

Nature born, nature made

In part, the effort entailed in turning natural substances into ‘natural’ products is subdued through the habit of staging products in outdoor scenes. Products are displayed as though resident in the outdoors environment much like their comprising raw materials once were.

⁵⁴ <http://www.artwearglasses.com/115/benefits-of-reading-glasses-with-cellulose-acetate-frames.htm>, last accessed January 2018.



Figure 17 Watches resident in the outdoors

Source: WeWOOD, Facebook

This Facebook post suggests that any distinction between the naturalness of the watch and the naturalness of its surroundings is negligible or altogether absent. The suggestion of kinship is amplified in the description, which claims the watch still carries the fragrance of its outdoors nest, ‘smell[ing] of the organic wood it was carved from’ (Facebook, 20/Aug/2010). It is further substantiated by the dramatisation of the watch’s effects on the wearer. A *Parade* magazine feature on Father’s Day gifts promises: ‘Wearing this superlight watch made of scrap lumber, he’ll [dad] feel like he’s one with nature’ (*Parade* 2014).

This similitude between commodity and nature, in this case, watch and wood, becomes additionally possible because the process of manufacture is made out to be either minimal or in keeping with nature’s own preferences. WeWOOD watches, shoppers are informed, are ‘either finely machined, or created by hand to offer a rare glimpse into the unique elements inherent in the wood’ (WeWOOD Blog-US, 11/Apr/n.y.). In this way, companies liken their techniques to methods that one might

imagine are employed in small-scale or non-industrial living. For instance, Jade Yoga describes its method for making yoga mats with reference to a simple motion of one's hand: 'Natural rubber is tapped, like maple syrup, from a rubber tree, a sustainable, renewable resource' (Jade Yoga Website, *FAQ*). This statement likens the extraction of rubber to make yoga mats to the process of obtaining maple syrup from a tree. Tellingly, neither the milky liquid ("rubber", i.e. latex) extracted from rubber trees⁵⁵ nor the sap drained from maple trees⁵⁶ is yet in a form recognisable in the desired final product. Lacking the detail of further processing, the statement suggests the yoga mat, like maple syrup, comes readymade, requiring no intermediary process or packaging. The yoga mat would seem as good 'a sustainable, renewable resource' as the rubber tree itself.

The purported kinship between the yoga mat and the rubber tree disguises the status of the rubber tree as resource. In this disguise, the very fact that the rubber tree had to be *designated* a resource is lost from view. All but evident, too, is the fact that its sustainable and renewable attributes are also conferred on it, not natural by-products of the fact that it grows of its own accord rather than being the handiwork of human artifice. This strategic camouflage, as I argue next, has repercussions for how the welfare of trees is likely to be taken into account.

Regenerative by nature

The cork oak tree is singled out by multiple campaigns that extol its sustainable and renewable advantages as a raw material. It is named in tentree's 'effort to create an even more environmentally progressive product' (tentree Website, *company*), while Reveal anoints cork 'the new leather' in promoting a line of cellular phone cases that exemplify the company's principles of 'sustainable design'.

⁵⁵ See <http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:349913-1>, last accessed January 2018.

⁵⁶ As detailed on the maple sugaring hobbyist's website *Tap My Trees*, <http://tapmytrees.com/collect-sap-make-syrup>, last accessed January 2018.



Figure 18 Promotion of cork mobile phone cases

Source: Reveal, Facebook

The use of the tree not only makes a ‘100% cruelty free product’ practicable and ‘stylish’ (Figure 18); the tree is made the better for it, as tentree apprises shoppers: ‘By stripping the bark from sustainably grown cork trees, it promotes growth and increases the lifespan of the tree’ (tentree Website, *company*). Reveal elaborates on how the process of harvesting ushers forth benefits for consumers and the environment alike:

At the age of twenty five the tree’s bark can be harvested every nine years, for a period of over 200 years. While the cork tree is developing, it is capturing carbon dioxide from the atmosphere. Each time the cork wood is harvested, the tree absorbs more CO₂ to aid in the bark regeneration. Thus, regularly harvested cork trees store three to five times more CO₂ than those left unharvested.

(Reveal Website, *Shop*)

Evidently, cork makes an impression upon these companies as superior to more traditional materials, such as animal skin (for leather), owing to the bark's aesthetic qualities ('soft and supple like leather'), its swift regrowth, and its insurance of 'a low carbon footprint' for centuries to come, with the ability to cash in for more every decade ('absorbs more CO₂ to aid in the bark regeneration', see block quote above, p.150), all 'without damage to the plant' (Reveal, Facebook, 10/Aug/2014).

In the fashion industry, products frequently receive a 'cruelty free' pass if their production has not involved animal testing, while some companies set out to do one better, promoting vegetarian and vegan products (Beard 2008, 459). By these criteria, the use of cork bark, rather than, for instance, cowhide, to produce mobile phone cases, sounds '100% cruelty free' indeed.

It interests me that protecting an animal from being skinned or sheared would be presumed as more ethical than subjecting a tree to the equivalent. As is true of human skin, and animal fur, hair, and pelt, bark is a protective sheath. Stripping the bark, like skinning a human, leaves the organism vulnerable to disease. In cork's case, bark also performs irreplaceable, vital functions, such as 'the transportation of nutrients from leaves to roots through the phloem tissues' (Catry et al. 2012, 1). Certainly, like the wool of sheep in fine health, the bark of healthy cork trees regrows in time. But it does so at risk to itself, which, in recent years, has been documented as a critical factor in deciding which corks live, and which die. A study conducted in Portugal found that following fires, younger trees with thicker bark were most likely to survive, whereas older trees that had been exploited for cork production, and which had thinner bark as a result, were at greatest risk for dying (Moreira et al. 2009, 77, 78, 82–83).

Managing the image of cork bark in terms of its regenerative potential eclipses contextual factors, whose effects may even undermine this attribute. Jade Yoga describes its cork block as 'made with sustainably harvested cork in Portugal from the native cork trees- a rapidly renewable resource' (Jade Yoga Website, *Jade Cork Block*). A cursory read would suggest this statement ticks the boxes of care in sourcing: the species is neither exotic, requiring none of the introduction that might compromise the integrity of the embedding ecosystem, nor apparently in danger of becoming scarce, what with its speedy recovery. But Jade Yoga is far from the only company intent on appropriating cork for its consumer wares. Cork oak is reportedly 'the second most important marketable non-timber forest product in the western Mediterranean', while annual exports from this region total approximately two billion USD (Catry et al. 2012, 1). The tree is

considered an endangered species in western Europe, and in Portugal, which is estimated to house one-third of the world's cork oak population, wildfires are deemed 'one of the major causes of cork oak decline' (Catry et al. 2009, 231). Debarking has been shown to exacerbate the risk of fire. An analysis of 22 wildfires which occurred in Portugal, Spain, and France from 1994 to 2006, affecting 4,585 cork oaks, concluded that harvesting the bark compromises the health of the trees and interferes with the recovery of forest and woodland ecosystems post-fire (Catry et al. 2012, 7).

Whatever the merits of cork as a "sustainable" and "renewable" resource, its continued survival is under pressure because of climatological factors put into play by the demands of human industry. Companies are quick to claim that their operations lessen harm to the environment precisely because of their choice of raw materials. This claim, though, like the claim to reduce ecological impact, suffers from a narrow-framed view that sees in plants, the prospect of renewable consumption. In the final section, I argue that this view is limited in part because it does not duly consider the reasons for consumption, and how they may impact upon the ability to care for plant others.

Lessening harm

Paper Culture abides by a strict policy of using only 100% post-consumer recycled paper, bamboo, and '100% recycled fabric' in its products (Paper Culture Website, *Eco Mission*). In so doing, it strives to ensure that 'no trees are harmed' (Paper Culture Blog, 22/Apr/2015) and that there is 'no net harm' to the environment (Paper Culture Website, *Wedding Invitations*). Harm is an insightful category for thinking about care in this context. It suggests concern for the tree's welfare, as well as its fate. The reasons that campaigns give for this concern are enlightening; they suggest that harm may have little to do with the tree per se, as in the reference to trees' utility for human culture. To this end, a few of the reasons the boy from Silverstein's book enjoys the tree, such as climbing its branches and taking shelter (p.137), are echoed in Paper Culture's sentimental appeal to how trees support human lives:

The tree we save
and the tree we plant may be
the tree we climbed in our youth,
the tree we sit underneath on
our first date,
the tree that helps build our house,
the tree that cools our earth,
or the tree that provides the air
we breathe.

Figure 19 Excerpt of tree poem

Source: Paper Culture Website, Our Vision

Notice how the cultural experiences facilitated by trees begin the stanza's ode to trees, which then segues to the ecological benefits. It is as if the reader is being led to care about trees because they sustain the very ecology that enables human culture, and in this case, more specifically, American culture, to survive.

A similar suggestion resounds in the Nimbus Eco campaign, which advocates the use of 'tree-free' paper products that substitute bamboo for trees.⁵⁷ On the one hand, Nimbus Eco blogs that 'traditional toilet tissue alone causes 27,000 trees to be flushed down the toilet every day or 10 million trees per year' (Nimbus Eco Blog, 3/Apr/2014). Given the company's marketing of non-tree based products, the purpose of this statistic would seem to be to stir concern for the sheer volume of trees put to poor use in this way. This concern does not seem to be for trees as such, though, as the company seems to care less for the fact that trees are wasted, than for establishing the superiority of its products for doing whatever trees are ordinarily used to do. For, on the other hand, the company tweets a photo of a tree whose branches are robed with toilet paper, even recommending its toilet paper for the job:

⁵⁷ The company formerly relied on a blend of sugarcane and bamboo. As of September 2016, the company was testing hemp in combination with bamboo (Nimbus Eco Blog, 23/Sep/2016).



Figure 20 ‘Tree-free’ toilet papering promotion

Source: Nimbus Eco, Twitter

A traditional prank played by American youth, toilet papering amounts to an undoubtedly more intensive consumption of trees than for customary sanitary use in commodes. Nonetheless, by choosing Nimbus Eco’s toilet paper, customers can rest assured that they are not harming any trees (*#notreeswereharmed*).

Harm, it turns out, has to do with whether trees are felled when other choices are available. Yet saving trees, while laying waste to other plants and one’s surroundings, is scarcely proof of a caring attitude toward the environment. Sparing trees from the blade might seem more caring than the alternative. But in the case of tree substitutes, the life of another plant is being sacrificed. Justifying the ending of one plant life for another, only to carry on with the production of consumer goods while granting scant care to their prudent use, implies that the lives of human consumers matter more than those of plants.

In the final set of themes, I look at discourses of consumption-based caring, and the way they may shelter such attitudes by focusing on the environmental good that commodity consumption can accomplish. I show that the claimed difference that

consumption can make, caters, on the whole, to the mindset that caring can slot easily into living the first world life as usual.

Consumption that makes a world of difference

Companies' efforts to draw individuals into their orbit of caring consumption are coloured by attempts to narrate the world as a place in need of shoppers' care. These attempts highlight the minor opportunities that individuals have as consumers to make a nonetheless sizeable ecological splash, the necessity of commodities in seizing these opportunities, and the tensions between caring as consumers and consuming with an environmental conscience.

The world in need of shoppers' care

Raintees sells tees and tanks for youth and adults. It is reputed to have begun following founder Beth Doane's horrified realisation of the fashion industry's unethical labour practices and wasteful environmental practices (Raintees Website, *Corporate Responsibility*). This realisation prompted Doane to search for a way 'that fashion could be made ethically while making a difference' (Raintees Website, *About Us*). Hence, so the story unfolds, Raintees was founded on the grounds that 'every Raintee' would 'give back' (Website, *About Us*).

Each RainTee design is based on artwork by children that Doane has visited near critically endangered rain forests in Central and South America, some of which also fills Doane's short book *From the Jungle* (Doane 2010), which stitches together the children's accounts of their experiences of deforestation expressed as drawings and words (Raintees Website, *Shop the Book!*). Doane's particular concern for rain forests appears to have been prompted by an event that occurred when she was eight years old, when she rallied her 'classmates to donate their lunch money to save the trees' after hearing 'that our rainforests were being cut down' (Doane 2010, "From the Author"). Sales of the company's merchandise go towards planting a tree in endangered rain forests and donating school supplies to children in those areas.

Doane's back story treks along narrative tracks similar to those Potter identifies in the case of 'not-for-profit ethical water brands', wherein founders 'commonly draw attention to the very personal ways in which their products came to be, thus emphasizing the individualized ethical awakening embodied' in the products (Potter 2011, 121). What I think is useful to notice is that despite what may have been a significant experience for Doane to gain insight into the practices of the fashion industry, rain forest reforestation

seems nonetheless to have nothing to do with the power of her ‘ethical awakening’. As far as her story lets on, when she heard of the disappearance of rain forests, she had neither seen them nor been moved to act because of a feeling that she, or how she lives, had any role to play in bringing about this situation. Yet, now, in the context of e-commerce, she asserts a claim to responsibility, referring to these places as ‘our rainforests’. The result is a fabricated charitable link between first world consumption and third world environmental destruction that permeates discourses about a world that needs shoppers’ care.

To help make the point, I would like to share my impressions of my first visit to the official B1G1 website, where I decided to learn ‘how it works’, as one of the menu choices seemed ready to disclose. My eyes were caught by an interactive example window, a few consecutive moments of which I captured as screenshots (Figure 21). In the window, a cursor types, and types over, suggestions for different charitable causes for various company accomplishments:

B1G1 BUSINESS FOR GOOD

LOG IN CONTACT EVENTS HELP CENTRE B1G1 STORE 0 ITEMS

HOW IT WORKS BENEFITS TESTIMONIALS OUR STORY BLOG **JOIN US**

STEP 3

DECIDE HOW YOUR COMPANY WILL GIVE.

Choose the ways to give that fit in best with your way of doing business. Because your membership fee directly funds B1G1's developments, innovations, and operations, 100% of your giving goes directly to the projects you choose.

[SEE HOW MEMBERS ARE GIVING >](#)

FOR EXAMPLE:

When you make a sale, |
an orphaned/at-risk child is given a meal |

FOR EXAMPLE:

When you sign a new client, |
a tree is planted to save an orangutan |

FOR EXAMPLE:

When you complete a project, |
a tree is planted to save an orangutan |

Figure 21 B1G1 process

*Source: B1G1 Website, How it works*⁵⁸

As the cursor quickly substitutes one line of text for another, its clinical movement makes distinct company actions and ideas for giving as good as interchangeable, and the link between giving and business, arbitrary. The proposal of planting trees for orangutans reminded me of a related announcement in one of the campaigns.

⁵⁸ <https://www.b1g1.com/businessforgood/how-it-works/>, last accessed January 2018.



Figure 22 Planting to restore orangutan habitats in Sumatra

Source: Reveal, Facebook

The skyward gaze, so common an angle employed in the campaigns, gives the impression of possibility, one made possible through the growth of trees. While the trees being planted by this company may very well help restore orangutan habitats, the promise of restoration through shopping does not admit the hand that precisely well-intentioned consumer choice may have in instigating and perpetuating destructive land use practices. For instance, palm oil operations in Indonesia have been criticised for their application of industrial models of harvesting and farming (Glastra et al. 2002, 18–20). The ensuing

spread of oil palm plantations, critics contend, is crowding out rain forest, exacerbating the threatened status of orangutans (Campbell-Smith et al. 2011, 6–8) and imperilling other nonhumans endemic to the region (Glastra et al. 2002, 13–14).⁵⁹

An ingredient in many ‘first-world’ vegan cosmetic and food products (Gaard 2011, 276), palm oil offers a relevant example of how demand for consumer products can compete with, rather than further, conservation and aspirations to consume and live ethically (Gruen and Jones 2015, 157–58). With efforts to cater to the appetites of affluent consumers mired in industrial systems of production, animal harm and clear-felling are standard by-products. Short of an awareness of such intersectional linkages that may bear on commodity consumption and tree planting, it becomes easy to proclaim, as Doane is credited with doing: ‘We can solve our world’s greatest humanitarian and environmental problems by giving every time we buy’ (Raintees Website, *Our Founder*). Identifying such problems as the ‘astounding’ rate of forest disappearance, Raintees states that these problems ‘often seem complex’, but ‘we believe that the solution can be simple’ (Raintees Website, *Why We Plant*).

The spirit and logic of these assertions are carried forth throughout the campaigns, which both keep the ‘solution’ within the casing of consumption and propound that small actions spur great change. For example, hemp helps hopes the effect of its campaign will be to encourage shoppers ‘to replace many . . . everyday products’ with hemp-based alternatives (hemp helps Website, *Become a Hemp Helper!*), and highlights this replacement as ‘the best way to become part of the Hemp movement’ (Facebook, 13/Mar/2015). Consumers are supplied tips on how to green their living through, for example, recycling and saving energy (BLINQ Blog, n.d.),⁶⁰ and planning holidays that require less long-distance travel (Raintees Blog, 30/Sep/2015). Unsurprisingly, though, the greatest potential for consumer-driven change is recognised in the form of supporting environmentally friendly businesses.

Commodities with world-changing impact

In a YouTube video promoting its toilet paper, Nimbus Eco shows a car moving along a road bordered by hills of trees, while the voiceover pronounces: ‘What was once

⁵⁹ See also <https://www.theorangutanproject.org/about-orangutans/palm-oil/>, accessed January 2018.

⁶⁰ See, for example: <https://blog.blinq.com/live-green/improve-eco-friendliness-green-tips/>, last accessed July 2018.

an abundance of resources as far as could be imagined, is now a place where ecosystems are in dire need of saving' (YouTube, 'Nimbus Eco', 20/Mar/2014). Declaring that 'our collective impact is not only staggering, but visible in all corners of our planet', the video lays the ground for later introducing viewers to an individual action (buying toilet paper) that can, similarly, add up to a 'staggering', albeit this time, positive, 'collective impact'. Thus, purchasing the right commodities can make a 'world' of difference, as implied by the company's Facebook cover photo, which reads 'change your toilet paper, change the world' (Nimbus Eco, 16/Jun/2016).

Indeed, shoppers are told, what they purchase can make a substantial and tangible impact that extends far and wide. tentree writes that it 'allows consumers to have a direct impact on the environment and communities worldwide' (tentree Website, *story*). The implication here is that there is a single environment ('the environment'), and that the breadth of the impact ('worldwide') stretches smoothly across distances and locales ('direct impact'). The company's map of impact echoes these inferences as it dynamically changes to connect shopper purchases with the effects of the trees consequently planted.



Figure 23 The worldwide impact of consumer apparel

Source: tentree Website, *treemap* (Dec/2015)

The image of one world is architected through a resourcist conception of the environment, which thus becomes intelligible as that which provides for. The map is populated with indicators of the significance of trees as resources based on the amenities they provide to

villagers, while consumers enjoy the earth's resources in another form supplied by their tree-planting purchases. This framework of 'direct' exchange—clothing for trees—facilitates scaling up to 'worldwide' impact through the translation of the environment as a resource provider. The world can be changed, in other words, because the environment *qua* resource functions as a common denominator of exchange.

A good example of how this translation is operative in scaling up impact is the rhetoric used by Tiny Footprint Coffee, a Minnesota-based artisan coffee company that plants trees in Ecuadorian rain forest (Tiny Footprint Coffee Website, *Story*). The company offers what it calls a 'carbon negative, earth positive' version of coffee, which, in eco-ethical terms, means: 'Well it takes us 4 lbs. of carbon to make a pound of our coffee. So we plant 54 lbs. worth of carbon sucking #trees. Which means there's 50 lbs of good karma in every pound' (Facebook, 20/May/2015). Coffee consumption becomes here an act of reaping the CO₂-reducing benefits of sowing the good ('karmic') deed of tree planting. Hence, coffee drinkers can feel they deserve to consume coffee.

I am reminded here of Littler's (2009) analysis of an image in Oxfam's 'Make Trade Fair' campaign, which distinguishes fair trade coffee produced by farmers as the conscientious alternative to coffee grown from the deep pockets of profit-hungry coffee companies. The image features a blonde woman holding a cup of coffee clearly made by these companies, as her face expresses evident displeasure. Littler explains that the advertisement 'render[s] the exploitation of the means of production metaphorically palpable in the product itself', as 'the 'bitterness' of the coffee emerges by tasting the exploitation, in which the meaning of 'bitterness' shifts from sensory perception of taste to a conceptual category of disgust' (Littler 2009, 42). Tiny Footprint Coffee's rhetoric of good/bad karma applies an analogous strategy, branding its version of coffee consumption as tantamount to taking the moral high ground. In doing so, the business also relays the message that in living one's life, one can still look out for the wellbeing of others and the environment. As it asserts, 'people can make a difference [*sic*] the world by enjoying the things they already love to do' (Facebook, 18/May/2015; Tiny Footprint Coffee Website, *Story*).

The convenience of caring through consumption is a theme that shows up in a particularly pronounced way in relation to suggestions of consumers and products basking in outdoors living. Using a pair of scenarios, I want to draw attention to the way that 'the outdoors' functions as a stimulus to care within the parameters of one's accustomed way of life. I have chosen these examples because they demonstrate how

commodities are used to slide promotional attention between care and consumption, emphasising one or the other in a way that has implications for how commodities might be more or less instructive for facilitating care in everyday consumption.

Portals to adventure and exploration in the outdoors

For many, the inspiration for their business model surges up through an appreciation for the awe and wonder experienced in the outdoors. In this section, I want to signpost to two main variations of how this inspiration informs the marketing of commodities in terms of their role in furthering environmental care.

Inspired to care

On GOBE's website, the company's founders briefly recount their two-year trip across Latin America after 'quitting their jobs', which propelled them on an unexpected 'journey of self-discovery and environmental awareness' (GOBE, Facebook, *About*) that left them moved 'by both the beauty and devastation of what they saw' (GOBE Website, *Our Story*). The company maintains a blog dedicated to scenic photography. Showcasing the 'splendour of nature' serves both to promote their products and motivate eco-activism (GOBE Website, *Our Story*). As the brief bio of Christopher Gooley, one of the co-founders, echoes, 'Chris believes that inspirational images from the natural world will help grow a heightened appreciation of nature, hopefully sparking desire for conservation' (GOBE Blog).

More recently, the founders have become engaged in producing a film, *Pacifico*, which they started in late 2016. Every copy of the film sold plants 10 trees. The Kickstarter campaign and trailer suggest the film will piece together the pair's experiences backpacking, venturing along the Latin American coast, to inspire viewers to help protect nature by helping GOBE plant 100,000 trees through the company's partnership with Eden Reforestation Projects (YouTube, 'Pacifico Kickstarter trailer', 21/Nov/2016). In particular, the film will relay 'how slowing down and observing the world mindfully can aid in gaining perspective and help form an understanding of the things that are important in life' (GOBE, Kickstarter campaign).

Photography here is the spur and access road to learning to care for what one takes in through sight. This framing of GOBE products as having a distinct eco-activist purpose prioritises care over consumption; in this respect, it differs from the related idea that commodities are meant to facilitate nature experiences, which reverses the priorities. Consider, for instance, the statement: 'Founders Mark Samuels and Josh Ashkin,

longtime friends raised in Southern California's beaches and mountains, saw how climate change was not only effecting [*sic*] their favorite hobbies like snowboarding, but the planet as a whole' (Nimbus Eco Website, *About Us*). The phrasing of this statement makes it sound as if two individuals' leisure pursuits are as important as planetary care, and further, that actually, the possible disruption of consuming nature for leisure and sport, prompted these individuals' concern.

Consuming nature

In such cases, the weight of marketing shifts, I would argue, from care for the environment to consuming nature. For instance, tentree began when two friends wished to preserve the outdoors that they 'just fell in love with', where they enjoyed hikes, water activities, and loafing on the beach (tentree, YouTube, 'the tentree story', 30/Aug/2012). Thus, the business aspires to 'protect the world we play in' (tentree Website, *company*). Tinlid Hat Company echoes this sentiment, writing of its envisioned business trajectory, 'we want to continue to preserve and protect the places that we consider our playground' (Tinlid Hat Company Website, *About*). In keeping with such aims, companies' products feature as prime portals to navigating the outdoors, as, for example, in the invitation 'Explore in style with the Traveler cap' (Tinlid Hat Company, Facebook, 14/Aug/2015), and similarly in the prompt 'Adventure starts here. Where will LUMBR take you?' (LUMBR, Facebook, 16/Dec/2016).

Roaming the outdoors in style is brought into alignment with performing good deeds through the subtext of style as virtuous. As LUMBR tweets, 'Style shouldn't just look good, it should do good' (Twitter, 13/Oct/2015). The magnitude of the impact of exploring the outdoors in LUMBR style is conveyed by an image published leading up to the company's official launch (Figure 24). One's line of sight is drawn to the ascending cliff, which travels left to right as if implying forward movement. The rugged, uneven ascent is angled to coincide with the bird's line of flight. Style promises to scale the cliff of environmental responsibility, making a mighty difference as suggested by the rigour of undertaking such a climb. The 'M' in the name of the brand, drawn to resemble a pair of peaks, reinforces the impression that the branded eyewear makes a mountain of an impact.



Figure 24 Preparation for the launch of the LUMBR brand

Source: LUMBR Facebook (11/Jun/2015)

In support of this impression, the company name evokes ‘lumber’ as both noun and verb, both of whose associations with the timber industry are weakened in the context of the LUMBR campaign. For lumber becomes part of the company’s objective of making ‘renewable’ products that give back ‘in a meaningful way’ (LUMBR Website, *Info*). To lumber, which may normally mean working hard or felling trees, becomes here a way of describing the hard work that shoppers are performing by purchasing these trees.

To an extent, the focus on the prospect of ‘overcoming the difficulties associated with these [kinds of outdoor] challenges’ (Fuentes 2015, 198), as Fuentes finds in the narratives used by the Nordic Nature Shop to sell its goods, substitutes the issue of whether consumption is compatible with nature preservation, with the prospect of becoming capable to be in nature (as a consumer) in fresh, exciting ways (ibid., 197). Fuentes suggests: ‘What the Nordic Nature Shop demonstrates to consumers is that with the right products, there is no reason why one cannot consume the outdoors and outdoor products and still be environmentally conscientious’, and moreover, ‘that by purchasing and using environmentally friendly products, one can help preserve nature’ (ibid., 201). Although consumers may thus feel the company’s products are more relevant to them (ibid., 197), preservation with an eye to consumer appeal depends, in part, on an ‘extractive gaze’ in the sense of extracting from nature what serves human ‘opportunity,

freedom and personal achievement’ (Takach 2013, 225). Caring through consumption here depends on ‘a disconnection from nature’ (Corbett 2006, 163), the construction of an ‘anthropocentric distance’ from the natural world in order to better consume it (Todd 2010, 208–10).

Charged with care

The foregoing pair of scenarios differentially place weight upon care and consumption in shopping for and using commodities. The companies suggest that commodities can offer consumers a way to access nature, the nature, that is, they are buying the commodity to protect. One could say that commodities are charged with care: charged in the sense of both being powered by, as in charging electronics, and being tasked with, as in being charged with responsibility. Notice how Love Heals brands its designs as ‘JEWELRY WITH A CONSCIENCE’, affirming, ‘our jewelry embodies our commitment to nature, spirit, and service. With the purchase of each piece of jewelry, we lovingly plant 10 fruit-bearing trees To date, over 1 MILLION trees have been planted. . . . LOVE DOES HEAL!’ (Love Heals, Facebook, *Company Overview*). By purchasing the jewellery, the customer participates in the ‘healing’ process. It seems, though, that the jewellery is the more powerful agent of care. It emblematises the intention to care, and through the allure it holds for customers, whether by its beauty or infusion of ‘nature, spirit, and service’, it draws them to purchase it, thereby ensuring that trees are planted and that Love Heals consummates its mission.

Animated with care thus, the commodity easily bears the seal of impact. But giving care over to the commodity in this way, suggests sacrificing the consumer’s ethical agency. Care in consumption depends on consumers’ discernment. Widening the aperture of focus beyond the utility of commodities for caring, the final example suggests that care is a ‘qualified’ attribute of the commodity (Potter 2011, 119), which falls short of signalling the accomplishment of care.

Reclaiming teak for care

WeWOOD describes the reclaimed teak wood from Indonesia that it uses for some of its watches as well known ‘for its capacity to withstand strong winds and resilience in strong weather, its resin contains oil that makes the wood highly water resistant’.⁶¹ The description continues, concluding: ‘Reclaimed teak makes for hardy

⁶¹ See <https://www.we-wood.com/phoenixchrono>, last accessed January 2018.

watches, perfect for adventurers.’ What is more, the description wants prospective buyers to know: ‘Not a single tree is cut down in the process of crafting these watches’. Thus, not only can the consumer channel the watch’s properties, they can feel they have made a clean purchase involving no tree deaths. As one product review remarked, ‘now your wristpiece can tell others how much you care about the environment’ (Meyers 2011).

Noting the popularity of this wood for consumer products, Bryant observes of teak’s marketing that ‘thoughts about the dark side of teak are banished in a modern romanticized narrative designed purely to enhance the consumption experience’ (Bryant 2014, 230). This shadow history, discussed in Chapter 2 (see Bryant 2014, 224–26), was, Bryant argues, ‘until very recently’ concealed by ‘artful marketing’ and consumer penchant for the tree species, based upon characteristics such as ‘quality and durability’ (Bryant 2013, 526) and ‘a sense of adventure and the exotic’ (Bryant 2014, 227, 226). In the 1920s, some marketers ‘promoted teak garden furniture – noting that it was sometimes recycled from old British warships’, under the auspices that ‘love of teak was linked to love of empire’ (Bryant 2013, 526, 2014, 227). Today, nearly a century later, in spite of the ‘growing activist-sponsored anti-branding’, ‘tourists’ are yet ‘enjoined to experience ‘halcyon days’ on a 1920s Burma teak yacht (www.halcyonyachcharter.com), collectors are encouraged to buy Burmese campaign furniture (www.clippertrading.com), while new furniture is made from reclaimed colonial teak (www.paulsantiques.com)’ (Bryant 2013, 526).

Bryant’s account is thought-provoking in relation to WeWOOD’s advertising of Indonesian teak, which, like its Burmese cousin, suffered a long history of colonial appetites. Over three centuries’ Dutch rule in Indonesia from the early 1600s to the mid-1900s was fed by teak extraction. Until 1849, the pattern of extraction went the way of forest ‘decimation’ in Java (Tucker 2000, 365). This ruthless depletion of the forest was succeeded by a more sophisticated system of German-advised scientific forestry, whereby, Ramachandra Guha explains, ‘a stream of German experts arrived to help the Dutch colonies institute a forest regime, based on strict state control. The foresters’ brief was to harvest teak for the construction of roads, railways, and for the growing export trade—teak being a high-quality wood plundered for making furniture to adorn European drawing rooms’ (Guha 2000, 34). The assisted scientific recolonisation of teak forests for luxury consumption would continue until the early twentieth century.

Today, WeWOOD pinpoints Indonesia as the source of its reclaimed teak wood, though does not specify from which products the teak originates. Teak is located on a

map with the other woods that WeWOOD uses in its watches (WeWOOD Website, *A Tree Story*). On another map, the company marks the location of its planting projects, headlined by an invitation to ‘Explore how WeWOOD is creating change all around the globe’ (WeWOOD Website, *Reforestation Projects*). These maps reclaim the status of the woods, rebranding them with the capacity to care by seeing in them a medium to facilitate ‘caring for the environment’ and ‘other people’ (WeWOOD Blog-US, 26/Jan/n.y.). Without additional details about the sources and processes of procurement, it is difficult to feel encouraged by this reclamation.

Conclusion: creating opportunities to care through online shopping

Igoe writes that what are becoming popular ‘kinds of spectacular arrangements’ to change the world, such as consuming at a distance, ‘(sometimes actively) discourage consumers from examining the ways in which their lives are implicated in the environmental problems with which they are concerned’ (Igoe 2013, 25). By, furthermore, ‘focusing on individual consumption, they [these arrangements] downplay the profound environmental effects of structural arrangements over which consumers as consumers have practically no control’ (ibid., citation omitted). The discussion in this chapter highlights a clear need for greater reflexivity concerning the role of a predominantly ‘fossil-fuel dependent consumer culture in the Global North’ in precipitating ‘tropical deforestation’ (ibid., 21) in some of the very places that the campaigns claim they are vying to nurse back to health. The discussion showed, moreover, that claims that ‘vouch for’ the ‘efficacy’ of green consumption ‘to repair the world’ and resolve the attendant injustices (ibid.) stand on tenuous footing. The notion of consumers as inhabiting ‘a more or less shared spatial and temporal context with those helped by shopping’ (Littler 2009, 42) is portrayed as ethical by presenting the arrangements as ‘unmitigated successes’ (Igoe 2013, 24), while subduing tensions in how the terms of the caring exchange are articulated. The foregrounding of pleasure and leisure in establishing the links that bind online shoppers, via trees, to economically disadvantaged others, suggests an ‘escape from a world plagued by deforestation, pollution and climate change’ (C. Slater 2004, 170), not a response. As the promised return on ethical investment, loafing in the outdoors or vacationing in a tropical paradise, ‘accessible and available as a reward to affluent consumers’ (Hope 2002, 172), plays more to consumer desires than to the wellbeing of ‘the world at large’ (Igoe 2013, 23). As I suggested in the case of ‘Malik’, one might well wonder how much others and

environments can be helped by consumers' goodwill without a concurrent commitment to rethink the framework of exchange structuring the arrangements of care on offer through e-commerce.

In the Indonesian case, Dove recounts the historical pattern of sustainable smallholder and small-scale development of rattan, gold, and rubber which, upon proving successful and marketable, become seized by 'central economic and political interests', which proceed through 'self-interest disguised as the common good' (Dove 1994, 4–5). Reflecting on the most recent iteration of this pattern, expressing as the commercialisation of rain forest-affiliated products such as Rainforest Crunch cereal, Dove writes that shoppers 'in the more-developed world, whose purchases make them a knowing or unknowing part of inequitable economic systems, have a responsibility to make sure that the message on the back of the cereal box is the full story' (ibid., 7). Addressing the inequities that allow these systems to prosper 'would do more to save the tropical forests and peoples than filling shopping baskets with "Rainforest Crunch"' (ibid.).

Although this chapter demonstrated that digital tree planting campaigns exhibit a clear drive toward more ethical and sustainable consumer lifestyles, what is missing is a commitment to greater awareness of the trade-offs and selective agendas that enable caring consumption. Disturbing the commodified orientation toward nature that prevails in consumer marketing depends on a way to be more responsive to the conditions that call for care. Responsiveness here must entail more than the automated response built into the shop-to-plant mechanism, in which consumers may be responding to information presented on the screen, but through options that are limited to either making an online purchase or doing nothing. The capacity for users to care is arguably undermined by this limited range of motion (Chun 2016, 79), if only because digital interfaces are taken for granted as neutral surfaces for information display and manipulation. The presumption of the interface as a unit controlled, if momentarily, by the human user, envelops the online consumer in a comforting but artificial reality in which their body and actions are disentangled from the unfathomable media infrastructure that supports e-commerce and consumer production, the uneasy complexities of rendering one ecological and social reality exchangeable for another, wildly different one, and the tight-knit interdependence of poverty and flourishing that is integrated into the promotion of schemes for shopping to planting trees.

Digital media are interactive media: the promise they hold for making consumers privy to more of, in Dove's words, 'the full story' (Dove 1994, 7), is considerably underexploited in the campaigns I reviewed. Failing to take advantage of the affordances of digital media compromises the ethical possibilities of caring at a distance: responsible engagement here demands, I believe, a kind of defetishisation appropriate to the digital, to combat the distinct ways in which digital media introduce opportunities for obscuration into commodity production and consumption. In translating across various social and ecological contexts, digital interfaces of consumer shopping seem to make the distance between these realities evaporate through an encounter with Facebook images of others such as 'Malik' and other places such as Honduras; at the same time, the seeming proximity afforded by the immediacy of the digital images denies the fact that these interfaces work to lend representational form to what consumers cannot possibly know otherwise. Data, in this case, about the ways in which online shopping cares for economically disadvantaged and ecologically compromised societies, are rendered into form (Galloway 2012, 81–82). For digital consumption to become more caring, it needs to be able to air its noninnocence: the fact of its devised accomplishment. Further to this suggestion, I would like to highlight a couple, seemingly minor, but ethically productive shifts in orientation toward digital consumer media that could be put into practice in the current context.

As a response to Dove's proposal for a more active and informed role for consumers to play in making more ethical shopping choices, I would suggest that one useful step, based on the campaigns I studied, would be to exploit social media's opportunities for information sharing and exchange. I found that companies' use of social media tends to be quite specific in its outreach, limited to engaging consumers in contests and giveaways. Companies would do well to foster conversation and education about the implications of caring consumption for favouring particular logics of production and responses to addressing ecological destruction. Two rare examples from the campaigns are suggestive in this regard. Ongoing since May 2014, Shoplet's #CareShareGrow Twitter campaign, which the office supplies company runs with its tree planting partner, TFF (Choi 2014), airs tweets featuring environmental trivia questions and factoids, such as true/false questions comparing laundry washing alternatives (Shoplet, Twitter, 7/Apr/2016). In Shoplet's words: '#CareShareGrow is a social sharing initiative dedicated to spreading the word about our mission and generating conversation surrounding environmental issues' (Shoplet Website, *Green Initiatives*). Each time users post with the

campaign's hashtag, irrespective of whether they participate in the initiative, Shoplet donates a tree to TFF, the idea being that individuals care enough to share information with others, in the process making a tangible difference through planting.

Although this online campaign could be dismissed cynically as a way for the company to boost its eco-friendly visage, my suggestion emerges from what I hope is a more productive view. Given that most companies' social media interactions to this effect simply asked users to post a photo of themselves with a tree or with a company product (e.g. tentree, Instagram, 15-22/Apr/2016; Paper Culture, Facebook, 1/Jul/2015), which involves no *learning*, I would be interested in whether such a campaign could broaden its imagination of the kinds of information it relays to users. I myself grew frustrated at times and put off by companies' lack of response to simple queries, such as their planting goals and tally and criteria for sourcing, as I share in Chapter 7. Given that such knowledge is at the heart of companies' appeal as eco-conscious and ethical, it deserves a more visible and central place in the campaigns. Consumers might be invited to provide input in the companies' processes, opening up the campaign space for more activist interventions. Campaigns might thus usefully enrich consumers' sense of stake in shopping to plant trees and care, beyond the more typical aesthetic choices pertaining to products, as in Woodzee's call for consumer suggestions about what woods it might incorporate into future sunglass styles (Figure 6, see p.117). These choices, in my estimation, are more apt to keep individuals' participation in online shopping focused upon lifestyle enhancements as opposed to more ecological and ethical considerations.

My second example moves further toward this possibility of decolonising the perception of consumption based on lifestyle preoccupations. In December 2014, WeWOOD ran a month-long campaign inviting its social media followers to participate in a #TreeFreeHoliday by posting photographs of their efforts to create a Christmas tree from found materials, such as books, in place of purchasing a tree from the store or a farm. The company planted a tree for each photo posted (*Sustainable Brands* 2014). This example could be interpreted in line with Killingsworth and Palmer's suggestion (1996, 228) to meet individuals where they are in their path of becoming more environmentally conscious, rather than foisting upon them lifestyle changes that they may register as incomprehensible and which they may thus be more likely to resist. Populating the campaigns with more of these kinds of opportunities, can help rediscover social media as more than an advertising space, potentially encouraging ways of learning to care, not simply consume.

In relation to the campaigns' discourses of lessening ecological impact, the opportunity here is one, more fundamentally, of recalibrating the perception of consumption activities as constituting a dimension of 'meaningful environmental living' (Wapner and Willoughby 2005, 88) rather than a series of purchasing decisions. Toward the end of his historical tome on deforestation in Euro-American civilisations, Michael Williams foresees greater, not less, consumer demand for trees in the coming decades (M. Williams 2003, 492), as print materials, far from being displaced by a 'paperless, cyber-spaced world', are 'being produced in ever-greater numbers as literacy increases', while 'e-commerce puts an even greater emphasis on packaging for transportation' (ibid., 496). As darlings of consumption, whether industrial or craft, trees in their many sacrificed forms comprise the surfaces and insides of dwellings and places of work and play. What do these forms do for the trees, I wonder?

The campaigns tend to speak about trees as existing for consumption, and to this end, one might be moved to question the promotion of companies' products and practices with respect to how they serve the trees' flourishing. This investigation requires attention to what is not on display in the campaigns. Julia B. Corbett cautions that 'making claims about environmental attributes means negotiating a slippery slope' (Corbett 2006, 152). As struck me in the case of companies' posturing to their waste and recycling practices, 'green claims' may 'appeal to buyers' sense of doing the right thing, but tell buyers little about the true environmental costs of the products they buy' (ibid.). Consumer goods are depicted as positively kin with, and existing to serve, nature. Crafting products that tailor trees and tree products to buyers' specifications might make these products appear as 'the natural offspring of trees if we adopt the widespread imperialism that takes nature as nothing but a resource at our disposal' (Cheetham 2014).

While there is nothing unspeakable about finding usefulness in a tree, the repeated perception of trees through the filters of the commodity and trees' amenability to demands of consumption, does make nonsensical a framing of consumption that would, by contrast, bring into view the lack of care required to consume in this fashion. The words of Ko Hung, the founder of Chinese alchemy, are instructive here: 'That the bark is peeled off the cinnamon tree, that sap is collected from the mountain pine, is not what these trees want' (Radkau 2008, 17, quoting from Bauer 1976, 39). Much less, one would think, would trees desire to be branded as useful resources (Bryant 2013, 518) for a cause in which their station seems poorly positioned to work on behalf of their own interests. Researchers of digital cultures must learn to be attentive to the way in which digital

media situate human action and agency in ways that compete with the presence and care of the nonhuman. The posthuman sensibility of recent digital critique, while helpful in this endeavour for highlighting the intimacy of the human and the technological (Hayles 1999, 35), could be further calibrated with view to human and technological dependence upon ecological processes, factors, and nonhuman lives and labour, a suggestion I pan out further in the following chapter. In her call for a more embodied posthumanism, N. Katherine Hayles shares her vision for building societies in which information technologies are designed and used based on a fundamental understanding of the embeddedness of ‘human life’ (ibid., 5) that neither forgets nor forsakes ‘the fragility of a material world that cannot be replaced’ (ibid., 49). Caring through online shopping may appear to happen through digital devices, but underneath is a teeming force of nonhuman creatures whose cooperation, often forcibly acquired, is indispensable. The reason for their vital presence, the fact of their forced care for the digital, is grossly misrepresented by the mirage of endlessly renewable resources that grow to serve fashionable consumer care. Through greater, sustained interfacing with ecological care ethics, literature on digital cultures would be significantly better positioned to contend with the affordances of digital technologies as a more-than-human accomplishment. These affordances in turn could be surmised beyond the parameters of *user*, *human*, or even *machinic* agency, to understand the relational enactments of care (Puig de la Bellacasa 2017, 70–71), not always pleasant and never simple, that enable digital technologies to be useful at all, and digital shopping to serve as a medium of ecological action.

Chapter 5

Making time to plant and learning to care through apps, games, and crowdfunding sites

Introduction

In early 2016, the Heart of England charity announced a partnership with the UK chat application Tengi, a relative newcomer to the mobile chat scene. As an incentive to use the app, Tengi entered its users in weekly and monthly prize raffles.⁶² Winners of cash prizes could choose to donate their earnings to the charity, with every £5 planting a tree in Dorsington Wood. Reporting on the first few weeks of the initiative, a blog post on the charity's website exclaimed that 'the partnership had already put **250 trees** in the ground!' (Woodgate 2016, author's emphasis). Celebrated by the charity as 'the app that plants trees' (ibid.), Tengi is one of a number of attempts by companies since the late 2000s to integrate virtual activities into planting projects. Some, like Tengi (as reported on Facebook, 2/Dec/2016), were constrained by funding and relatively short-lived. Others, like the game series Tree Planet, which emerged in 2010, have been ongoing for several years. The kinds of actions users are asked to engage in are simple, and often interactive. They may involve clicks or watching ads, playing games or donating money through an app. For ease of discussion, when referring to these actions in general, I call them virtual planting activities, or VPAs.

In this section, I provide an overview of the various types of VPAs, using a few of the examples I draw on later in my thematic analysis of seventeen campaigns' promotion of care for the environment through internet and mobile applications, digital games, and online crowdfunding initiatives. This analysis is roughly organised along these categories of participation, as promotions for similar types of VPAs tend to revolve around similar themes. The discourses circulated in relation to different VPAs nevertheless converge in their espousal that planting and care are amenable, at least in part, to low cost and simple actions. Following the overview of VPAs, I summarise and subsequently detail the main arteries of promotion based on this proposition. I conclude by reflecting on the prospect of VPAs as mediators of making time for planting and learning to care about the environment and trees.

⁶² <https://www.groundreport.com/tengi-announces-national-launch-new-messaging-app-gives-back/>, last accessed April 2018.

Virtual planting activities (VPAs): an overview

The simplest type of virtual action is clicking to plant trees, similar to clicking to support e-petitions on the Care2.com site discussed in Chapter 1. On the website for Brother Earth, a campaign run by the office supplies company Brother, users can ‘Click for the Earth’ by clicking once daily to donate to a tree planting project.

Join in Click for the Earth.



Click for the Earth is one of the environmental conservation activities that Brother provides to work with you.



Choose one activity you want to support and click the "Donate" button every day. Brother will make a donation of one yen (approximately equal to one cent U.S.) per one click on your behalf.



Your daily click will help to regenerate forests and to stop desertification. Join us today and start making a difference in the world.

Figure 25 ‘Click for Earth’ process

Source: Brother Earth Website⁶³

⁶³ <http://www.brotherearth.com/en/top.html>, last accessed February 2018. The process is shown horizontally on the webpage. I have re-presented it vertically to facilitate reading.

By clicking, the topmost graphic suggests, users enter into a partnership with Brother (symbolised by the handshake) that signifies their love (suggested by the heart) for the environment. This partnership, the third step reveals, honours a commitment to forest conservation. All that is required of users is a meagre investment of time, i.e. the few seconds it takes to load the webpage and click 'Donate', and of money, i.e. 1 yen, or 0.01 USD.

The promise of saving time and money is repeated in a number of campaigns that promote free apps meant to slot into users' pre-existing routines. The search engine Ecosia is a good example. In addition to navigating to Ecosia's website (www.ecosia.org) to perform a search, users can download the app onto their smartphones, install the Ecosia browser plug-in for Firefox or Chrome, or use one of 16 alternative browsers that feature Ecosia as a search option (Ecosia, *Knowledge Base*, 'Other browsers'). Ecosia's operational infrastructure is largely supported by Bing and Yahoo, which also generate its ads. As a result, Ecosia has been referred to as essentially a 'skin for a system powered by Bing and Yahoo' (Henley 2013), 'enhanced' with some of its own algorithms (Fischetti 2015). Despite being backed by these corporate giants, Ecosia makes assurances regarding users' privacy, promising, for instance, to respect the 'Do Not Track' preference of users' browser settings and to refrain from using 'services like Google Analytics or social media trackers that expose your data activity on Ecosia Search to third parties' (Ecosia Website, *Privacy*).

Like other search engines, though, Ecosia generates revenue from advertising. For each click on a sponsored ad from the search results page, a user contributes 0.5 cents (Euros) to the company's tree planting fund, with an average of 45 clicks planting a tree (Ecosia, *Knowledge Base*, 'Personal counter'). A counter in the upper right corner of the search page indicates the number of trees that users' searches have helped plant through the Belgian non-governmental organisation WeForest. The company has planted over 32 million trees to date (Ecosia Website).

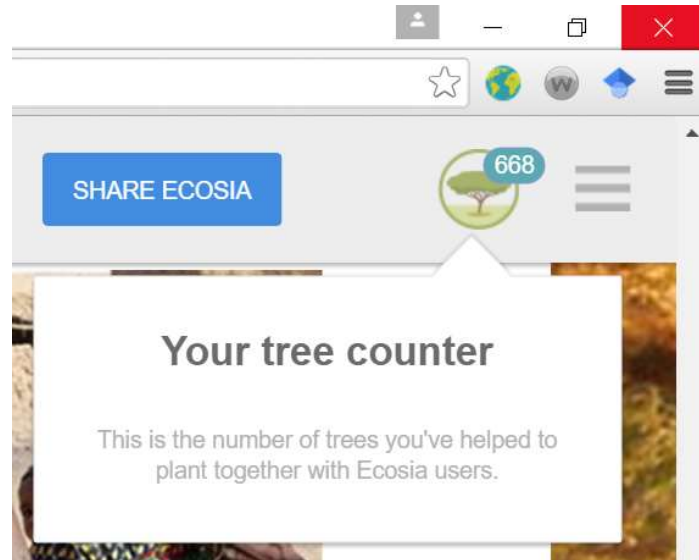


Figure 26 Ecosia tree tally

Source: My computer (Apr/2016)

Forest (www.forestapp.cc) is another app for browsers and smartphones. It rewards users with a virtual tree for every 30 minutes they do not disturb their phone or browser. The interval for focus can be set from 10 to 120 minutes. Each interval awards users with a set number of coins, which I found does not vary proportionately. For instance, 55 minutes will give a user 15 coins, while 60 will give them 21, and 65, 22. In the premium version, which can be purchased for 1.99 USD, users can put these coins toward planting real trees. However, 2500 coins are required for each tree, which in my experience equates to 350 30-minute sessions. Despite this time commitment, users have helped plant over 287,135 trees (Forest Website).

Undoubtedly the most common approach to VPAs has been gaming. Some games are unsophisticated in their design, requiring players, for instance, to blast bubbles in terrestrial and outer space environments (see below, Figure 27).



Figure 27 DreamScape game screenshot

Source: DreamScape, Facebook (1/Jul/2010)⁶⁴

Planting a tree in such cases is often tied to actions like installing the game on one's electronic device and in-game accomplishments. DreamScape, for instance, promised to plant 10 trees in honour of the 10 highest scores each day.⁶⁵

A greater number of games have adopted a more sophisticated narrative form of play. These games are commonly referred to as 'Serious Games', or 'Serious Fun', a genre of digital games created for the purpose of 'addressing real world problems' (Sandbrook, Adams, and Moteferri 2015, 118). Nicole Lazzaro, the Chief Executive Officer (CEO) of XEOPlay, the company behind the iOS gaming app Tilt World (www.tiltworld.com), explains that the premise of serious fun is to turn the time that individuals spend engaged with apps into 'fuel [for] solving the world's problems' (Lazzaro 2012b), with the hope that this time will also help raise awareness about social and environmental issues. Tilt World, for example, which was released in 2010, is marketed as 'an educational game about carbon & the environment' (Twitter, 11/Mar/2012) with a concrete impact.

⁶⁴

<https://www.facebook.com/DreamScapeGame/photos/a.138857669463938.25117.137314509618254/138859249463780/?type=3&theater>, last accessed July 2018.

⁶⁵ https://www.facebook.com/pg/DreamScapeGame/about/?ref=page_internal, last accessed July 2018.

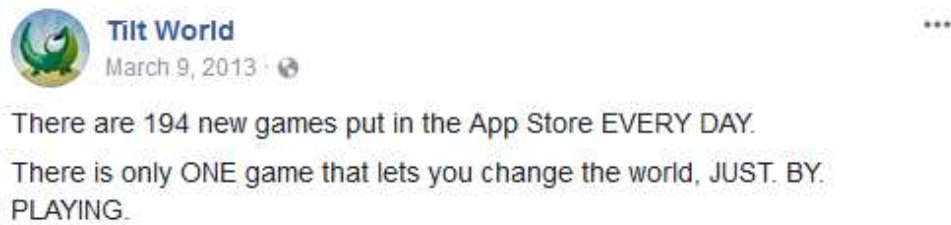


Figure 28 Making a real world impact

Source: Tilt World, Facebook

The object of the game is to help Flip, a tadpole, ‘catch seeds to restore the sunshine to Shady Glen’ (Tilt World Website), alongside vanquishing other ecological nemeses, such as toxins in the soil (Tilt World Website, *game info*). The points generated through play go toward funding reforestation in Madagascar through a partnership with WeForest. So far, over 16,000 trees have been planted (Facebook, 22/Apr/2014).



Figure 29 Tilt World gameplay

Source: My phone (Mar/2016)

The third type of game that has been used to plant trees aims to tilt the balance of entertainment and learning toward the latter. JohnnyAppl was a web-based app that ran during 2014 and 2015 and involved answering trivia questions on a plethora of topics that

players could choose from, from animals to environments to countries. Below is a screenshot of a sample quiz question.

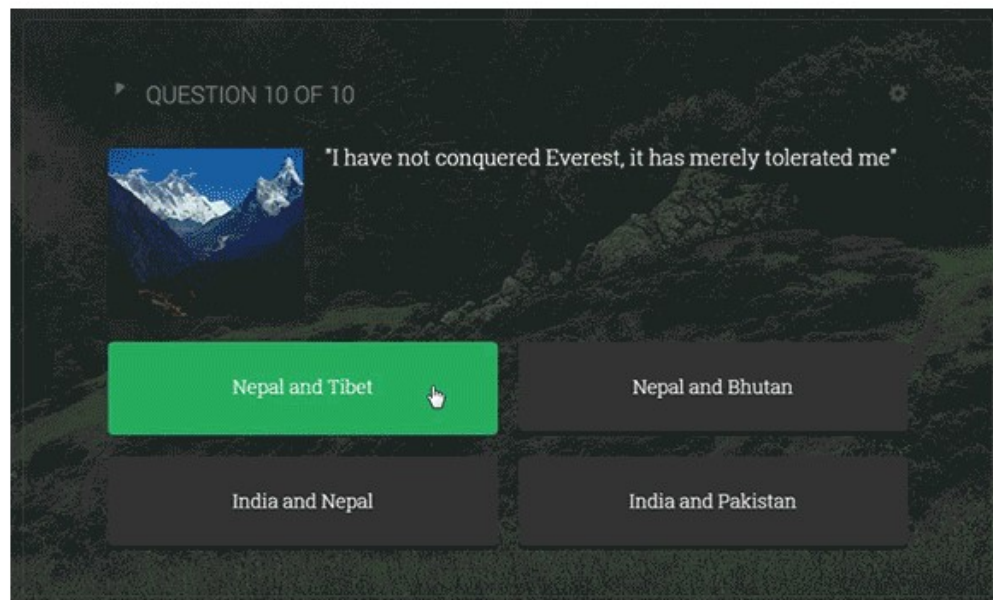


Figure 30 Sample quiz question

Source: JohnnyAppl, Indiegogo

Between 100 and 150 correct answers were needed to plant a tree (e-mail communication with Anthony Doos, member of game development team, 25/Mar/2016). In total, the game donated 593 USD to Eden Reforestation Projects, resulting in 5,930 trees planted.⁶⁶

The final type of VPA occurs through specialised apps and sites for grassroots crowdfunding. 1 Heart 1 Tree (1H1T) is an example of a crowdfunding app. Trees planted through the app go to one of seven ‘reforestation programs’ in Australia, Peru, the Ivory Coast, India, France, Senegal, and Brazil (1H1T Website). Users have a choice of donating a single tree or multiple trees, each costing 10 euros. To plant a tree, users place the tip of a finger on their phone’s camera sensor as the app proceeds to ‘take’ the user’s pulse, generating a neon green readout like that displayed on heart rate monitors. (In my experience, a readout is generated regardless of whether users follow this instruction.) The pulse line then morphs into the appearance of a tree.

⁶⁶ <http://www.edenprojects.org/johnnyappl>, last accessed April 2016.



Figure 31 1H1T app readout

Source: My phone (Feb/2016)

Users can choose to identify themselves as the donor, plant the tree in honour of a particular person, and write an accompanying dedication. So far, the app has funded 55,000 plantings.

In contrast to 1H1T, Tree-Nation (info.tree-nation.com) is a crowdfunding initiative that takes the form of a specialty platform. It is essentially a networking site that facilitates fundraising and communication between planters, companies, organisations, and individuals. Starting a project is free. The platform has over 100,000 active users, involvement from over 300 companies, and has helped plant more than four million trees (Tree-Nation Website, *Projects*). Each planting project has a dedicated page, furnishing basic information about the project (i.e. location, planting goals, purpose, benefits). To plant trees, individuals click on a project they want to help fund and, when applicable, select from among the available tree species. Another option is to become a ‘Serial Planter’ by committing 5, 10, 20, 30, 40, or 50 euros monthly to Tree-Nation, which then distributes the funds to various registered projects. A free planting option is also available. Each week, registered users receive a seed, to which they must then add content. Other users water the seed based on whether they like the posted content. To plant a tree this way, the seed must receive 100 water drops within 5 days (Tree-Nation Website, *Let’s Plant*).

Virtual planting as eco-ethical engagement

As this brief overview of VPAs demonstrates, an array of options is available to individuals who wish to get involved without expending sizeable sums of money, time, or effort. This lack of investment is a recurrent theme in many campaigns for VPAs requiring little user input or sustained attention. In this regard, the hyped advantages of VPAs parallel precisely ‘the priorities of efficiency, functionality, and speed’ (Crary 2013, 88) that distinguish contemporary societies wherein the adoption of digital technology is profuse. Ben Agger proposes understanding the resultant digital mediation of ordinary life in terms of ‘iTime’, a name he uses to designate the temporal organisation of everyday life by the thoroughgoing dependency on smartphones, laptops, and other computing devices (Agger 2011, 120–21).⁶⁷

Societies in which iTime is the norm are, to be sure, the very ones that target app users are members of. In the first section below, *Repurposing personal time for environmental benefit*, I consider how VPAs’ attempt to repurpose users’ personal time to care for the environment, both valorises the conditions that breed iTime and fails to account for the material and ecological costs that enable them. I argue that making time for environmental care must contend with time as not only a quantity consumed, but as importantly, a quality of engagement.

Thinking through this point, the second section, *Learning to care through play*, turns to VPAs that are premised on making the time spent in-app additionally valuable for orienting user attention to environmental concerns. Here, I focus on games and their assurances of learning about trees and deforestation while having fun. I focus especially on the notion of making a real world impact, and its grounding in anthropomorphic renditions of trees and mechanical portraits of deforestation. I suggest that greater attention to ecological details and context, along with experimentation with less human-like characters, would make for more eco-ethically enlightening, if more compelling, gameplay.

The final section, *Collective caring about deforestation and climate change*, foregrounds the situation of users contributing individually, while implicitly acting as part of a larger whole, thereby bringing about changes that would not be possible alone. Crowdfunding sites and apps are the focus of this section, though, as with the other

⁶⁷ *iTime* is a play on Apple’s signature naming of its product lines (e.g. iPad, iPod, iPhone, iMac) and a suggestion of the popularity of this computing brand among digital users.

sections, I refer to campaigns for other VPAs when relevant. I critique discourses on collectivity and solidarity, showing how these seduce rhetorically through celebrity backing, scientific statistics, and unifying language, to construct a vision of enacting large-scale reforestation in a compacted timeframe. In the end, though, these discourses envision a common future that is selective in whom and what it cares for, neglecting non-trivial inter-human and inter-societal differences.

Repurposing personal time for environmental benefit

Many companies claim that VPAs create a coincidence of personal time (time spent for oneself) and environmental time (time spent for the environment) in a way that contributes to the flourishing of both user and environment. In this section, I antagonise this claim, probing whether this coincidence admits time for ecological care. I take issue in particular with a key selling point of VPAs concerning how seemingly effortless planting becomes, as one article notes of Ecosia, ‘**almost TOO easy**’ (L. White 2015, author’s emphasis). Tracing how this point is strung across discourses stressing the convenience, inexpensiveness, and efficiency of virtual planting, I highlight tensions in how making time for virtual planting is conceived, based on the material, ecological, and ethical challenges that arise from exploiting this time within a framework of (digital) consumer choice.

Inexpensive and easy

The convenience and trivial costs of participation receive prominent mention in the campaigns. A user review of Ecosia effuses in disbelief, ‘I found that the results i got when i searched were virtually the same as google AND IT PLANTS TREES AT NO EXPENSE OF [*sic*] THE USER!!!!!!!!!’ (iTunes, 24/Aug/2014). Coupled with low or no pecuniary investment, individuals are assured, virtual planting is also a cinch. Anthony Doos, the game interface designer for JohnnyAppl, is quoted as saying: ‘I believe people fundamentally want to save the planet, but only if it doesn’t cost them anything’ (Doos, quoted in Studer 2015). The company assures prospective players that digital planting is much easier compared to its physical counterpart, reaching out to fans: ‘Want to help plant trees right now? Today we’re planting trees every time ten people click ‘Like’ above! Way easier than digging, right?’ (JohnnyAppl, Facebook, 27/Jan/2014).

This construal of virtual planting recalls the impressive outcome that the Heart of England charity claimed as a result of its partnership with Tengi, i.e. the automatic conversion of a digital action into a sapling. The overall discursive importance attributed

to this outcome sets up a partial relation between the virtual and the material, which is nicely captured by a visual equation featured on one company's Facebook feed:



Figure 32 Converting between the virtual and the material

Source: Ecoviate, Facebook (19/May/2015)⁶⁸

It is as though, ecologically speaking, using the app *only* plants trees, as a writer for *Scientific American* reinforces: ‘Highly abstract tasks, like searching the Web, can lead to something as tangible as a new tree’ (Fischetti 2015). This selective view of the interactions between virtual and material infrastructures is reminiscent of the choice of ‘cloud’ terminology to refer to file transfer and storage services such as Google Drive and Dropbox. As Allison Carruth emphasises in her analysis of ecological imagery associated with ‘digital technology and networked computing’, the immaterial evocations of *the cloud* ‘masks . . . what is an energy-intensive and massively industrial infrastructure’ (Carruth 2014, 342). But this visual and verbal ideological effect, she argues, is not limited to cloud computing. It affects, no less, users’ impressions of ‘platforms like Facebook, Twitter, and Instagram’ (ibid.). These impressions, ‘in turn, conceal from public consciousness underlying network infrastructures: the servers, wires, undersea cables, microwave towers, satellites, data centers, and water and energy resources that constitute networks, along with the programs and applications by which devices access those networks’ (ibid.).

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<https://www.facebook.com/EcoViate/photos/a.301646489947720.65019.252585878187115/722488231196875/?type=3>, last accessed March 2018.

A valuable insight furnished by Carruth's ecocritical analysis of cloud imagery is how online actions, given their situatedness in extensive network infrastructures, can be ecologically significant in a way other than as advertised by digital tree planting campaigns. Whereas campaigns sing of individuals' might in '[e]mpowering you [them] to help end deforestation' (Ecosia Website, *About Us*), Carruth underscores what she coins 'the *micropolitics of energy*—defined as the planetary ramifications of minute individual practices that are fueled by cultural values of connectivity and speed and that rely, above all, on the infrastructure of server farms' (Carruth 2014, 343–44, author's emphasis).

By, further, making user contributions contingent only on the fact of using an app, the factor of how and why users may engage with the app is also overlooked. Yet, the use of apps need not be ecologically oriented. User reviews of Ecosia admit, for example, 'now I can look up dumb stuff and plant trees. truly a blessing thank you' (iTunes, 23/Jan/2015), and 'Now I can save the environment while looking up porn!' (Google Play, 11/Sep/2014). As pacification for flippant curiosity and private indulgences, using Ecosia is like using any other search engine that does not 'plant trees', as the company proudly distinguishes itself (Ecosia Website, *How Ecosia Works*). This disposition toward web surfing as a techno-fix is tantamount to trading in one consumer gadget for another, while believing, 'in ecosia there is no such thing as a waste of time, because even if you cannot find what you are looking for, you are helping! I love it' (iTunes, 8/Sep/2014).

Although searches themselves do nothing to plant trees, the counter in the upper right of one's screen (see Figure 26, p.176) would suggest otherwise. Upon noticing the '668' in the screenshot I provided earlier from my browser, one might think I have contributed significantly to the company's planting efforts, whereas, in fact, I do not remember clicking a single ad. Ecosia, nonplussed by the potential for the counter to thus mislead, assures prospective users: 'The more monthly active users Ecosia has, the more relevant it becomes to advertisers' (Ecosia, *Knowledge Base*, 'Personal counter'). As these ads are delivered by Bing and Yahoo (Fischetti 2013; Kroll 2016), there is no reason the ads will privilege more eco-conscious brands or services or even, more socially minded companies and organisations. An indiscriminate reliance on advertising means that such tree-planting apps are enabled by an industry that thrives if only because of its ability to perpetuate interest in consumer goods and services.

The problems with marketing apps as quick and easy pathways to savoury ecological results, shine through in this lack of care about what it means to be planting

while one consumes digital products and services as usual. The turn to advertising, to this point, can be appreciated with respect to the broader consumerist orientation toward the use of apps to plant trees. A humorous but telling indication of this fact is one blogger's irritated remarks on the iPhone app iPhorest (4.99 USD), which planted a tree along the Gulf Coast through Conservational International for each download and subsequently for each virtual tree grown through the app (Colburn 2009). To plant a virtual tree, users had to make the motion of shovelling to dig a plot, then tap an acorn on the screen to make it jump into the plot, and finally shake the phone to induce rainfall, which prompted a sapling to sprout. After six rounds of rainfall, the sapling matured into an adult tree.⁶⁹

Effectively turning planting into a Nintendo Wii game-like experience,⁷⁰ with the added function of advancing a charitable cause, was not lost on one New York resident, who ridiculed the local scene that might ensue in a blog post:

There are enough people walking around my Manhattan neighborhood while jabbering on their hands-free cellphone devices, or worse, with those bizarre Bluetooth gizmos clipped to their ears. I can just see all the iPhone users in Central Park engaged in some weird form of iKung Phu as they plant their virtual cypress trees.

Okay, so I'm being grumpy. But apparently, the iPhorest idea originated at a TED conference. TED is supposed to be about inspired ideas from the world's leading thinkers and doers. Nice try guys. But I'd be more inspired if you could come up with an app that automatically plants a tree every time we turn on our iPods or boot up our MacBook Pros. Now that would reforest the world in a hurry.

(Marinelli 2009)

While the blogger complains about the effort involved in using iPhorest, she thinks nothing of the contradiction of increasing consumption to increase reforestation. Her reaction divulges an obliviousness to the ecologically demanding internet and manufacturing infrastructures involved in powering devices such as iPods and MacBook Pros. The reaction is equally insensitive to the fact that these infrastructures are also

⁶⁹ A one-minute dramatisation of the process can be viewed here: https://www.youtube.com/watch?v=9IisH_DCkX0. For another demonstration that shows what users actually see on-screen, see: <https://www.youtube.com/watch?v=D5N0oIZfVjg>. Both videos were last accessed March 2018.

⁷⁰ Nintendo Wii is one of the first gaming consoles to map players' physical movements onto on-screen gestures.

responsible for supporting the kinds of lifestyles the blogger is privileged to lead as part of a minority consumer group: a group in which owning these devices is not only affordable, but so commonplace that the choice is not whether to purchase such a device but how many, what type, and how soon to purchase.

Doing what one does, anyway

The lack of reflexivity concerning the privileged minority position of app users is reinforced by the attitude of companies, as well as that expressed by users in their reviews, that individuals need not carve out extra time for taking care of the environment, for VPAs can cash in on existing user habits. Ecosia's CEO shares: 'We [at Ecosia] think that the future belongs to products that allow users to cater to their own needs and simultaneously do good without any additional costs or effort, simply by capitalizing on a daily habit' (Kroll 2016). Online reviews of the search engine echo this sentiment, succinctly captured by one review in which the user rejoices, 'it feels great to save trees as I do what I do anyways! :)' (iTunes, 28/Nov/2013).

Similarly, games are badged as an ingrained pastime and hence, a strategic allocation of investment resources. One article explains: 'The theory is that people are going to play iPhone games anyway, so why not help them help the Earth and be environmentally responsible at the same time?' (Brucia 2010). Backpacking on this reasoning, the developers of one tree-planting game appeal to prospective sponsors: 'There are nearly 2 million mobile devices world-wide, and Americans on average spend 2 hours and 38 minutes on their phones everyday with 50 of those minutes dedicated to playing games' (Tree Story Game Website).

Notice how these sets of comments frame web browsing and gaming as taken for granted activities, thus casting the latter in the light of opportunity as planting mechanisms. As one Ecosia user spouts matter-of-factly: 'Where else can you surf the web and lower your burden on the earth' (Google Play, 26/Apr/2014). The implied intent is one of causing less environmental strain ('lower your burden'), as opposed to preventing the need for such strain. By figuring that certain popular consumer activities are the norm, this attitude also suppresses any need to consider the energetic and material costs required to supply digital content. Indeed, any such costs receive discursive bandwidth as afterthoughts. A review of the DreamScape game wonders, half-interestedly: 'It'd be interesting to know if the tree planted every time you earn a high score will offset the carbon emissions caused by burning up juice while playing. Still, the

more trees, the better, especially if you're an iPhone game junkie anyway' (Heimbuch 2010). It is in passing, as a casual aside, that the writer engages with an ecological consequence of gameplay. The mention of offsetting suggests, further, a notion of gaming as potentially sustainable: plant enough trees and gaming can continue.

A vision of environmental sustainability that denies the ecological limits of consumer economies is, as Kath Weston decides, doomed. Using the case of sustainable car designs 'that arrive just in time to stave off environmental disaster' (K. Weston 2012, 431), Weston challenges the idea of sustainable consumption that is conditioned by a prioritisation of consumer pleasures and comforts (ibid., 442, 446, 452). She warns: 'Creatures, ecologies, resources—all these have their limit. Things may run out—if not petrol or pufferfish, then perhaps that most ingenious of human inventions, time' (ibid, 446).

Free time well spent

The idea of finitude finds ironic expression in many campaigns, which manage to use it to hide further from the reality of ecological change. Taking time to consider how digital consumption impacts the environment is heartily discouraged by the marketing of VPAs as fitting into users' free time. The developers of Greenapp, a suite of three mobile games for Android devices, sought to convince users of how their free time could be productive. I received the following message on my phone:

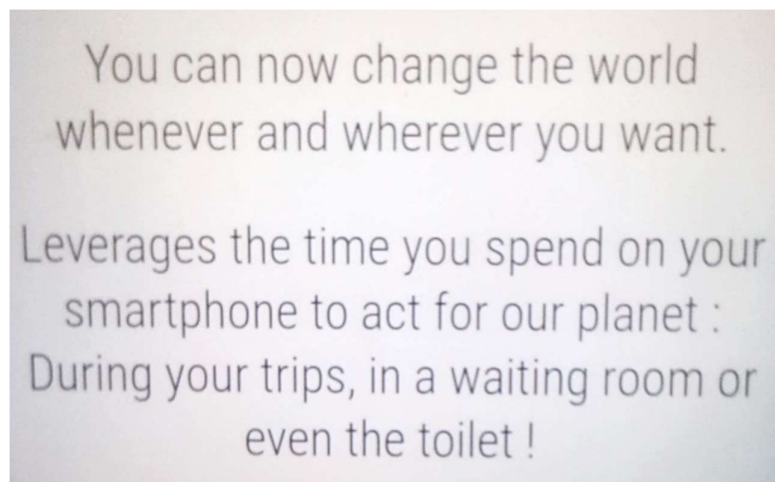


Figure 33 In-app message from Greenapp

Source: My phone (Mar/2016)

On the company's website, the founders profess their hope that in an ideal world, users

might be persuaded ‘to leave their smartphones in the drawers for the good of the planet’ (Greenapp Website, *How It Works*). Until such time, they figure, the reasonable course of action is to ‘make the time you [users] spend on mobiles more “useful”’, as Sébastien Burger, one of the co-founders, explained to me in an email. He reasoned: ‘There are a lot of people who spend time on mobile and more and more people want to make a better world. The match can exist’ (e-mail communication with Burger, 26/Feb/2016).

The simple tasks that players perform in order to earn 1000 ‘Gawas’, i.e. in-game points, to plant a tree, seem on the surface, perfect for vacuuming users’ wait time. In the games, players (a) chop bamboo, (b) complete a maze, and (c) select adjacent identically numbered tiles:



Figure 34a Chop as much bamboo as possible before the stalk reaches the ground

Source: Greenapp Bamboo Panda Google Play page

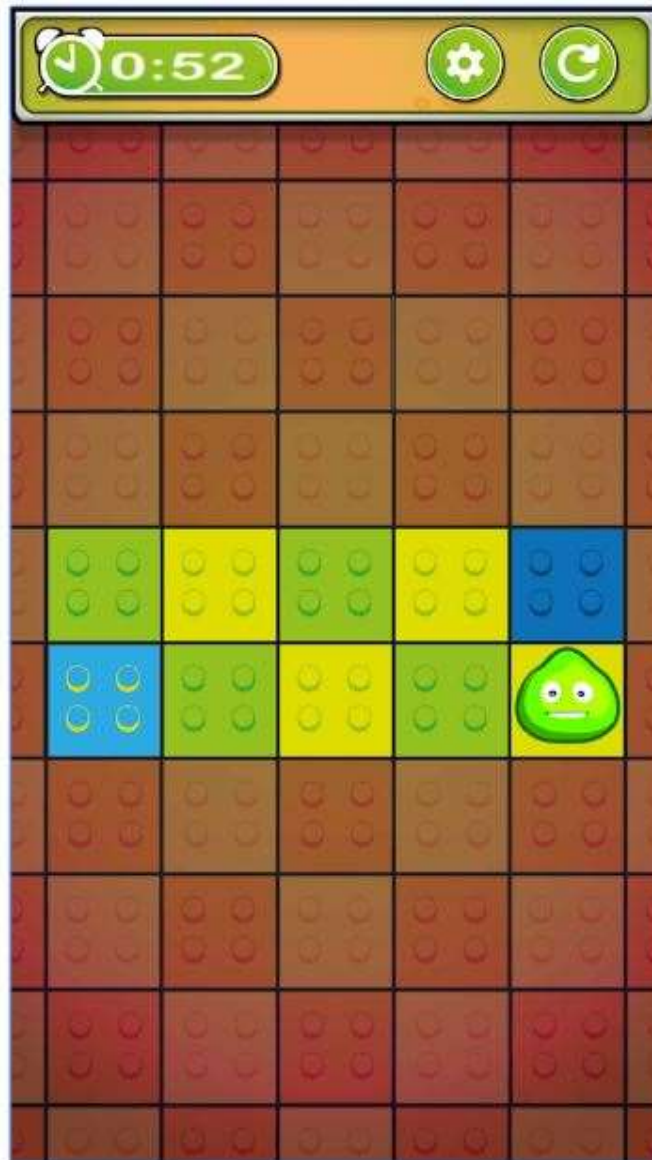


Figure 34b Start at one blue tile and end at the other, making certain to touch all yellow and green tiles in between

Source: Greenapp Blob Google Play page



Figure 34c Click on two tiles with the same number to form a sum

Source: Greenapp 2048 Google Play page

Between each round of play, users watch five-second ads to earn 100 bonus Gawas. These games, true to their intended purpose of filling gaps in the flow of one's day, ask only for a superficial attentiveness. The manner of paying attention is unreflective, ideal for waiting for an ad to finish or performing basic cognitive operations such as matching numbers. While serving the purpose of planting a tree, this quality of attention is lacking in a certain thoughtfulness. Crary argues that wait time has become something of an 'intolerable' phenomenon, what with the 'operating speed' of 'current systems and products' (Crary 2013, 88). The resulting infrequency and brevity of 'delays or breaks of empty time' scarcely afford 'openings for the drift of consciousness in which one becomes unmoored from the constraints and demands of the immediate present' (ibid.).

In suggesting that momentary time spent on one's smartphone is time spent working 'for our planet' (Figure 33, p.187), the Greenapp campaign is indirectly affirming core values embodied by iTime, namely, convenience, speed, and productivity (Agger 2011, 120–21). The fact, further, that a rather mindless quality of engagement is encouraged to plant a tree, reinforces that what matters here is not how one spends one's time, but the quantifiable results of spending time, specifically, how many trees one is able to plant in the limited amount of time one spends waiting.

This measure of importance is hitched to the basic organising principle of time within capitalist economies. As Christian Fuchs reminds: 'Time in capitalism has its specific economy: it is a precious and scarce resource that in the form of labour time organizes the economy' (Fuchs 2014, 102). This understanding of time, Fuchs explains, arose with the conception of clock time, the notion of time as linear construct, 'measured in constant temporal units (seconds, minutes, hours, days, weeks, months, years)' (ibid., 101). Replacing notions of time 'determined by the rhythms of nature (tides, day and night, the seasons, length of the day, etc.)', this abstract temporal accounting found its utility in Western Europe in the 1300s, as '[w]ork bells were introduced that rang to indicate the start and end of the working day as well as breaks. They helped in disciplining, organizing and controlling the workers' activities. The concern about productivity necessitated the measurement of output per unit of time, which in turn required abstract time' (ibid.).

Separating the temporal flows of nature from the temporal organisation of human life has, among its consequences, a miscalculation of how time comes to matter for ecological care. By relying on pockets of free time, many apps function within a register of time-keeping that cannot account for time beyond the quantities of time consumed; for this register displaces concrete reference points to the environment. Bastian captures this shortcoming in attempting to square timescales of everyday life with those of environmental change, observing how the

alarming acceleration of climate change seems to be occurring in a different realm from the everyday lives of many of us. We coordinate ourselves with work, school, and transport schedules, with periodic bill payments, public holidays, and anniversaries, while our efforts to respond to climate change are squeezed into the spare moments around this, if at all. So while the clock can tell me whether I am late for work, it cannot tell me whether it is too late to mitigate runaway climate change.

(Bastian 2012, 25)

In contrast to Bastian's reasoning, the campaigns insist that VPAs forge contact points between the time of everyday life and the time of ecological change. Whereas, as I show next, the campaigns celebrate time as a currency in which companies trade, I argue that this notion of time limits the kind of caring that users can realise through VPAs.

Making time to care

An underpinning assumption that is popularised by the campaigns is that time can be traded for trees. An online review article of Tree Story Game explains that the idea behind the use of gaming for fundraising is to '[turn] the minutes players spend in game into a form of currency, which can then be spent on causes, such as re-planting trees after deforestation' (Judge 2015). This statement packages in-app time in terms of units of trade-in value, an equation that is fully realised in the Forest app, in which time quite literally becomes trees.

With the slogan 'Stay focused. Be present' (Forest Website), the app promises to curb digital distraction, announcing itself as '[t]he best cure for phone addiction' (Forest, Twitter profile).



Figure 35 Defeat distraction by planting trees

Source: Forest Website

Echoing Forest's claim to redirect users' attention to what matters in their lives, a user writes that the app will 'help you concentrate on what's [sic] important in life', adding, 'Think of the trees!' (Google Play, 24/Mar/2015). What is 'important in life' is attending to one's personal affairs and simultaneously caring about the broader world beyond one's

life. Twinning these concerns makes for an intriguing take on flourishing that attempts to be interdependently personal and environmental, as an excerpt of one Forest user's blog post conveys:

Forest helps me soldier on. I start each day with my own square of digital earth, and then I plant a digital tree. If I can leave my phone alone and focus on my kid for the set amount of time, the tree will take root and the garden will grow. If I fail, the tree dies. Killing something fake bothers me much more than it should. Just imagine how my focus improved when I realized I can earn enough points in this app to get real trees planted in India or Zambia. Forget Captain America; we're saving the world with playtime.

(Beise 2016)

Whether it is inattention to phrasing or a genuine admission on the father's part, this passage insinuates that the app motivates the blogger to look after his child. Apparently, before using the app, this father experienced competing pressures on attention, in particular, leaving his phone alone or neglecting his child. Notably, his focus improved not so much because of the joy or satisfaction he felt through spending time with his child and not his phone, but rather because virtual trees translate into real trees. A similar story was relayed by another parent who shared how the app helped dissuade his children from using their iPads and iPods and, as a consequence, the children 'soon got into the idea and really cared about crafting the best forest each day' (Robertson 2016).

Given the target users of the app, it is not altogether surprising that an external incentive would prompt a change in how and how often one fiddles with one's smartphone or browser. An app designed specifically for chronically split attention will naturally attract users who feel they could improve their concentration skills. What is thought-provoking from an eco-ethical perspective, is how the commitment to let one's device be, also figures as a means of making time to take care of what matters. As one user exclaims, impressed: 'Holy crapolla—that's awesome! . . . It [The app] redirects your focus onto remembering that things take time in order to grow, which is such a difficult task in this fast paced cyber savvy world' (comment on an article⁷¹ retweeted by Forest, 10/Aug/2015).

⁷¹ <http://www.sofawnedlifestyle.com/stay-focused-and-present-with-the-forest-app/>, last accessed April 2016.

The emphasis on time as the factor affording Forest's intersection of personal and environmental care, is premised on a narrow conception of temporality, i.e. time as rationed unit. The 'time' that is the referent of this app is a meaningless duration that signifies only as an accumulated amount. Yet, this temporal interval is exactly what provides time, and time enough, to care. The app suggests a notion of affording enough time to allow what one cares about to flourish, for instance, one's relationship with one's son or equally, a virtual tree. In this respect, the app complexifies the issue of time as currency. In the context of the blog post above, for example, time is not purely a resource; it is also a reflection of how much the father cares. In this way, the app suggests the possibility of a rupture in the fabric of digital immersion that may offer useful 'interruptions to the 24/7 seizure of attentiveness' by internet and networking technologies (Crary 2013, 88). Rather than encouraging absorption in mindless activities to pass the time (to grow trees), a break from digital immersion may afford time to care about 'what's', as the app puts it, 'more important in life' (Forest Website, Figure 35, above, p.192).

The suggestion of using the app to do double duty, that is, of simultaneously attending to one's personal and environmental cares, raises another issue, however. While, in the case of Forest, this overlap seems possible, it also constrains the kind of care that can be given and received. For instance, the blog post suggests intersecting circles of care: for one's child and for tree planting in distant countries. The mention of 'India' and 'Zambia' without accompanying context or detail, as if listing off places, suggests the father has no experiential way of distinguishing between these two places; for him, they are simply places in need of planting. In other words, while the use of the app is a way of making time to care, this time becomes, in the case of caring about the environment, only enough time to care about whether tree planting is funded. Bastian (2012, 4) writes,

[I]n providing a blank, seemingly objective, framework, clock-time transcends our different scheduling tools, providing a means of translating between each one. In doing so the clock appears to promise that everything can be assigned to its proper time. However, one of the key problems is that even while the clock appears to be all-encompassing, it actually only affords certain relations, while obscuring others.

Bastian highlights the way that temporal constructs are good for keeping track of certain cares, but not others. For instance, although one can care about planting in a distant country, the relation afforded by leaving one's device untouched, or completing a maze,

or searching the web, is limited: the only care that seems to matter is care about whether a tree crops up as a result.

This kind of caring is consistent with the promotion of apps as mere routes to fundraising, in which the implicit regard for time as currency fails to understand the cost of so-called ‘free’ time used to plant trees. The very availability of apps depends on always-on internet computing. *This* time, of consuming energy and resources, does not stop passing. It does not wait until individuals use an app, but is perpetually incurred, as Crary stresses: ‘24/7 is inseparable from environmental catastrophe in its declaration of permanent expenditure, of endless wastefulness for its sustenance’ (Crary 2013, 10).

A more caring approach might take responsibility for how in-app time is also instructive for facilitating environmental awareness. In the next section, I turn to how time spent in apps, especially games, orients attention as to embrace particular ways of relating to the environment and encountering trees. In so doing, I engage with virtual time beyond a means to an end, highlighting why it should be appreciated as a window into learning to care.

Learning to care through play

The quality of virtual engagement is an integral aspect of gaming apps, which promise the experience of ‘[h]aving fun saving the world!’ (Tilt World, Facebook, 3/May/2012), as one game advertises on social media. Among VPAs, games offer a unique opportunity to ‘develop a sense of other living forms and our [human] relation to them’, in part because, as noted in Chapter 2, they ‘possess an affective quality, engendered by their uniquely interactive basis’ (A. Chang and Parham 2017, 10, 8). On a narrative level, games offer a platform for constructively experimenting with ‘environmental realism’, that is to say, games’ ‘attention to environmental detail’ (A. Y. Chang 2011, 76), including the degree to which gameplay replicates known ecological conditions, relationships, and constraints. In this section, I discuss a few games that help home in on the questions and challenges that arise in using play to map an ‘understanding of natural processes’ as well as to model ‘right relations’ (A. Y. Chang 2009, 15) between humans and nonhuman animal and tree others. I discuss some of the affective mechanics and ‘emotional triggers’ that ecomedia scholars Alenda Chang and John Parham foreground in terms of games’ ability to shift ecological awareness (A. Chang and Parham 2017, 8–10). I focus on how players are called on to relate to virtual trees and nonhuman animals as ‘cute’, and how an anthropomorphised aesthetic mediates the

imagination of relations of care. Finally, I consider the wider ecological matrices that games could open into, as part of a commitment to enliven the issue of deforestation in the real world in which games seek to make an impact.

Have fun and make a real impact

Tree planting games are based on the idea that having fun can bait players into making an impact. As one adult enthuses of Tilt World, ‘I can see this as a fun educational tool for kids to teach them the impact of pollution on our ecosystem as well. (Plus they would have fun playing it and not even realize they are helping plant trees, so cool!)’ (iTunes, 21/Dec/2011). However, the assurance that play can ‘actually affect the real world for the better’ (Kee 2012) is sometimes poor insurance for fostering care or imparting useful skills. One article reviewing the iPhone gaming app DreamScape observes, ‘The game has nothing to do with actually planting or caring for trees Instead, you’re zipping around the earth and outer space trying to line up different bubble combinations’ (Heimbuch 2010). Oddly enough, the article concludes that the game ‘blends play with advocacy and learning’ (ibid.). How, one might muse, would an individual’s ability to burst bubbles affect their aptitude for ecological care? This game would seem rather like target practice, preparation, maybe, for taking up archery or enlisting in the army.

A more concerted attempt at linking gameplay to offline impact is demonstrated by the Facebook game Ecotopia, which ran for a few months in 2011. Players created their own urban ‘ectopias’, receiving in-game credits, known as ‘Greenbacks’, based on environmentally friendly actions they performed in their daily lives, such as composting or opting for public transport. In this way, the game sought ‘to inspire real world behavior like planting trees, recycling and picking up litter’ (Skibola 2011), as players could then trade in Greenbacks for eco-friendly upgrades to their ecotopias, such as more efficient household appliances. Bonus allowances were granted for photographic evidence and for verification by Facebook friends (Gaudiosi 2011). Marketed as ‘a free-to-play Serious Game’ bearing ‘a social conscience’ (Alhadeff 2011), the game endeavoured to make the interface between virtual and real action a touchstone for learning to live green. As the company excitedly previewed gameplay: ‘While the game will certainly be fun to play, it also has many innovative ways for players to help the planet in real life, too!!’ (Ecotopia, Facebook, 18/Apr/2011). The peak of the game’s impact in this sense was its contribution to the ‘Plant a Real Forest Challenge’ to plant 25,000 trees through Trees for the Future in

São Paolo, Brazil (IGN Staff 2011). Ecotopia challenged players to plant 25,000 virtual trees in 25 days—which they reportedly did in 24 (Ecotopia, Twitter, 14/Jul/2011).

While a fine example of the powerful utility of games for fundraising, the game does little to contest the practice of living green as wholly consumer-friendly and individualistic. All the actions that earned Greenbacks, such as recycling and responsibly disposing of rubbish, support this assumption, giving the impression that an ecological utopia is one where consumerist thinking leads to the charge to greener paradises. Fletcher makes a similar argument in the context of his analysis of a couple of rainforest-themed mobile gaming apps in which, he admits, the game texts’ ‘focus on consumption is difficult to overlook’ (Fletcher 2017, 160). Analogously to Ecotopia, the games’ injunctions to, for example, recycle and curb paper consumption, position environmentalism within the ambit of consumerism (*ibid.*).

While it is sensible to strive to make consumption more eco-aware within an overall agenda of raising environmental awareness (“Ecotopia Launch Announcement” 2011), the game could do more to attend to factors such as the function of context and cooperation in enacting care. Players could, for instance, be called on to brainstorm and debate which actions, such as planting a tree, are ecologically justified for a particular player’s ecotopia. Doing so would instigate discussion and collaboration, making the game less centred on how well an individual is doing, seeing the latter’s efforts rather as part of a collective infrastructure where everyone’s imaginations and practices matter together (Maniates 2012, 65–66). To this end, the game could exploit a further opportunity in light of the numerous ambitious urban tree planting programmes that have emerged worldwide, a few of which were mentioned in Chapter 1 (p.24; see also Pincetl et al. 2013, n.p.). In this way, virtual action could pose an opportunity to test out variations and factor in variables. By directly informing and being informed by the perspectives of local residents and governments, virtual action could help orchestrate a very different kind of real impact.

Engineering a ‘tree planet’: human mastery and natural engineering

In addition to foregrounding incentives for consumers and individual recourses to act, as exemplified by Ecotopia, discourses guaranteeing impact in the midst of fun invest generously in human agency, construing trees as instruments for redirecting the course of environmental change. Take the case of Tree Planet, a South Korean company. Gameplay involves rescuing baby trees and slaying environmental pollutants (‘monsters’) (see

Figures 45 and 46, p.210). Along with the company's celebrity forest initiative (which I discuss later in the chapter, in *Celebrifying the cause*, pp.222–24), the games have sponsored more than half a million plantings across Cambodia, China, Indonesia, Mongolia, Nepal, South Korea, South Sudan, Thailand, and Tanzania (Tree Planet Website, *Forest Map*). The company aspires to 'make green the most visible color on our planet' and 'to create the most engaging means to plant the most trees in the world' (Tree Planet Website, *Company Info*).

Justifying these aims, the company's website bottles the 'impact of trees' into an infographic highlighting the ecosystem services of forests. These services are broken down in terms of the benefits accrued in 'cities', 'villages (third world countries)', 'oasification areas', and 'reforestation areas', and are separated into rows, stacked upon each other, together representing the fruits of a single tree.

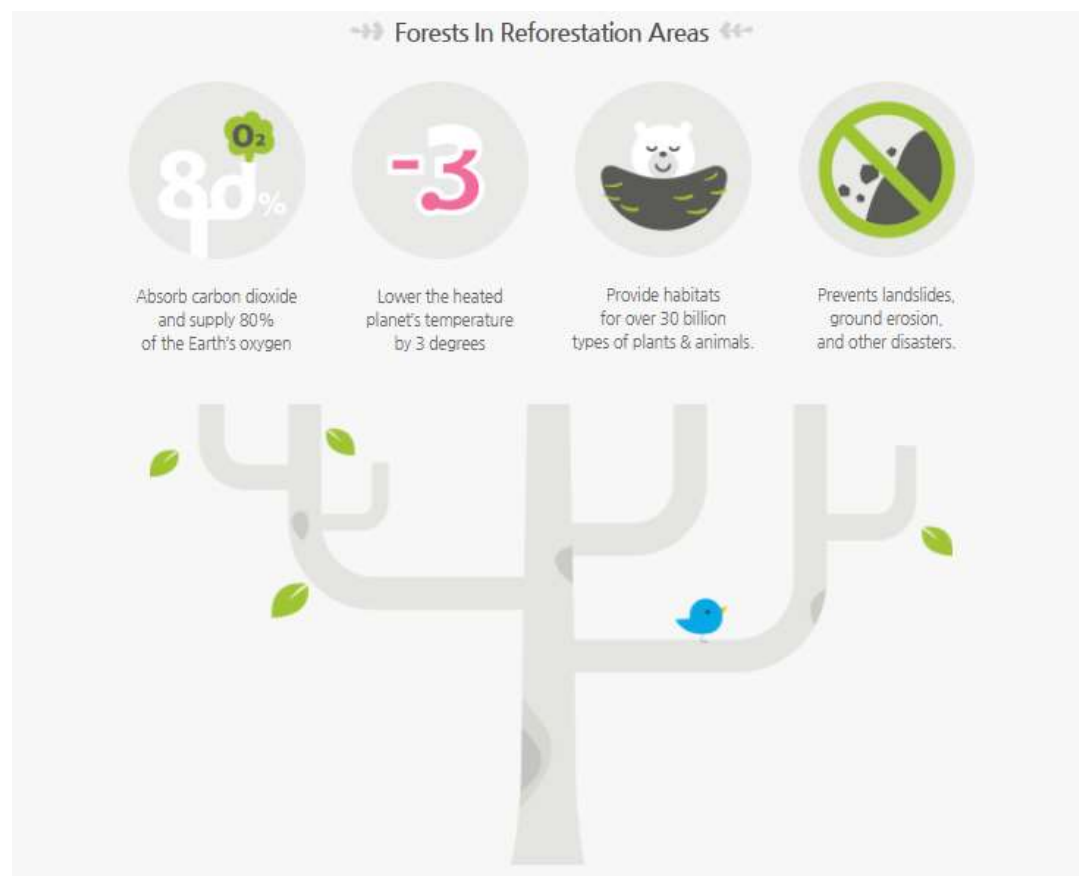


Figure 36 Snippet of 'Why Trees' graphic

Source: Tree Planet Website

The banner headlining the page suggests, in turn, that these impacts are cause for regarding trees as winning trophies for resolving environmental problems.



Figure 37 Trophy trees

Source: Tree Planet Website

In the vein of solving ‘our’ environmental woes, this construal of trees’ services to nonhuman and human life is not unlike a geo-engineering intervention, which ‘threatens to perpetuate the myth that humans can exercise surgical precision in diagnosing and addressing environmental ills’ (A. Y. Chang 2009, 2). A useful comparison is Chang’s commentary on the computer game Spore (<http://www.spore.com>), wherein players embark on a five-stage evolutionary mission which requires completing sub-missions, including tackling ecological crises on various planets. Critiquing the plot, Chang argues that whereas ‘tasks helpfully entreat the player to take on the mantle of environmental steward for colonized worlds’, Spore’s ‘espoused version of ecological care drastically oversimplifies life’s complexity’, hailing technocratic interventions as means of demolishing threats to ecological integrity (A. Y. Chang 2016, 302).

As opposed to orienting toward human mastery and displays of scientific and technological prowess, Chang appeals, ‘We need game environments that respond to human agency and yet seem to possess life independent of player actions: this would constitute a radical but constructive decentering, as well as a call to wonder actively at the place of people within natural environments, both real and virtual’ (A. Y. Chang 2009, 15). Though I sympathise with Chang’s call to decentre the human perspective, I find her offhand suggestion to substitute plants for machinery, wanting in the kind of wonder it can to evoke at inhabiting a more-than-human world. She writes: ‘Once begun, any warming trend can be reversed by again using your spacecraft’s superior machinery, but cannot, for instance, be naturally mitigated by the growth of more CO₂-loving plants on the planet’s surface’ (A. Y. Chang 2009, 3). The proposition of a more “natural” substitution is imaginatively stunted in its failure to shake loose from the instrumentalism and oversimplification of ecological care that characterise the command of ‘superior

machinery’ to reforest the planet. Opting for CO₂-loving plants instead of human-made machines to sequester carbon, is, after all, another way of enlarging ‘the size of ‘spaceship earth’ along those dimensions that are most significant for human existence’, much in the fashion that scientific and technological discoveries, such as more energy efficient light bulbs, have long been used (Ruttan 1971, 708). To say, in the context of brainstorming human responses to ecological dilemmas, that plants love CO₂, is to excuse the use of plants for carbon sequestration, given that humans would appear to be taking good care of plants if they are giving plants what they love. Although humans would, in a certain sense, be fulfilling plants’ evolved need for CO₂,⁷² growing more plants just so they sequester carbon, is not to care about plants. It is to ensure plants exist in order to fulfil a human ambition, which is different from allowing them ‘to live and grow for themselves’ (Hall 2011, 40).

In another context, the journalist Jim Robbins has referred to trees as *ecotechnologies*, a title he feels they ‘earn’ on account of their roles ‘in maintaining and enhancing the biosphere’ (J. Robbins 2012, 137). For Robbins, the function of phytoremediation, for example, ‘the cleaning up of toxic waste by trees, is a robust ecotechnology’ (ibid., 131–32). Robbins’s praise for trees as technologies of a sort, strikes me as distinct from the celebration of trees for their measurable services and impacts, seeing as his account emerges in the course of journeying alongside David Milarch, a Michigan nurseryman on a quest to find ‘champion’ trees to preserve and propagate. This quest has led to the formation of the Archangel Ancient Tree Archive, which seeks to ‘archive the genetics’ of old trees as a learning resource, and to cultivate the trees ‘before they are gone’ (“Our Mission,” n.d.). These trees are those, according to Milarch, which have withstood major and minor changes in environmental conditions, thus proving their ‘genetic mettle’ for survival (J. Robbins 2012, 8).

Milarch’s seeming attempt to play “god”, as players are invited to do (as humans) in Spore, is worthy of questioning. Curry notes that biotechnology and genetic engineering have become coveted industries for their promise of freezing and manipulating DNA from endangered groups, human and nonhuman (Curry 2004, 74–75).

⁷² In an article in the *New Scientist* some thirty years ago, Andrew Goldsworthy offers insight into the evolution of plant pigments, including why they have evolved to be green instead of black, seeing as black would seem the ideal colour for maximising the absorption of sunlight (see Goldsworthy 1987). Just as plants were not designed, as a manner of speaking, only to absorb sunlight, their lives need not be meant for maximising CO₂ sequestration.

The folly of human “mastery” in this case is evident: the thought that humans can ‘reconstitute a wild animal [for instance] without any habitat or ecosystem, learning, socialization or natural prey’ (ibid., 75). Sometimes, the more caring decision is to let the species die out; to relieve it from further, human-induced fight against extinction, when its chances for survival, much less flourishing, are at their dimmest (Sandler 2017, 76, 78–79).

With view to Milarch’s case, I feel it is important to appreciate the spirit in which the initiative has been undertaken. Milarch shares that he was inspired to pursue this path through contact with ‘plant devas’ (J. Robbins 2012, 12). These devas are ‘the overlighting intelligence and spirit—the deva—for each plant species’ (The Findhorn Community 1975, 78), ethereal beings like the ones who are believed to have helped transform some of what was, in the 1960s, the least tillable tracts of land in north Scotland, the dwelling place of ‘just sand and gravel’ (The Findhorn Community 1975, 4), into the now thriving Findhorn Garden. Pressing upon Robbins the need to acknowledge devas’ existence, Milarch declares: ‘We treat the earth like it’s dead, which allows us to do what we want, but it’s not dead’ (quoted in J. Robbins 2012, 12–13). Robbins’s concept of ecotechnologies owes, in some measure, to the influence of Milarch’s story, and the belief in an animate earth.

Like Tree Planet, Robbins espouses the importance of trees within a vision of architecting sustainable futures (see J. Robbins 2012, 196–97). Yet his push for “natural” technologies forms through an acknowledgment of plant intelligence, not mechanism. As he propounds: ‘Nothing that the human enterprise does can come anywhere near the elegance and efficiency of a robust global forest’ (ibid., 137). The concept of ecotechnologies does not so much assume that trees work *for* humans, as make plain that humans owe their ecological place in crucial part to the existence of trees.

Taking care of trees as (non)human others

Appreciating that what trees do, or that they exist, beyond human applications is important for conceiving relations with trees other than ‘those based on dominance and manipulation’ (A. Y. Chang 2011, 60). Compared with the perception of trees as the star tools in humanity’s reforestation brigade, the notion of ecotechnology instructs resistance against a mechanistic conception of trees as human instruments. This resistance invites in particular an animist rethinking of trees that can be fruitfully explored in the context of

gameplay that affords interaction with virtual trees. These interactions stage the human player in the position of carer for a tree, a great example of which is Tree Story Game.

In the game, players grow a sapling to maturity, after which a real tree is planted through one of the company's (Zig Zag Zoom) planting partners. Players care for a baby tree by monitoring its needs for water, food, sunshine, and love.



Figure 38 Laurel the Spokestree, urging players to look after their pet tree

Source: Tree Story Game iTunes page

The decision to imagine a tree in the likeness of the human form was a strategic choice, according to the company, which, the CEO and former Disney executive Thomas Kang explained, ‘wanted to create an anthropomorphic tree that you can make a connection with, that people would care about’ (Kang, quoted in Brightman 2015). The company’s eagerness to forge a connection with trees is on display in its attempts to interact with players outside the game on social media feeds. For example, weekly

#MondayMotivation posts features inspirational statements about trees and the planet (e.g. Ralph Waldo Emerson is quoted in a Facebook post: ‘The wonder is that we can see these trees and not wonder more’, 7/Dec/2015), while each Wednesday is reserved for ‘highlight[ing] different tree-planting organizations’ (Twitter, 2/Sep/2015). ‘Tuesday Trees Around the World’ posts show photos of various tree species around the world.



Figure 39 Sample post, ‘Tuesday Trees Around the World’

Source: Tree Story Game, Facebook

Occasionally, players are called on to partake in ‘Treebates’, which are voting showdowns, or ‘Treelections’, between potential new tree characters.



Figure 40 Sample post, ‘Treebates’
Source: Tree Story Game, Facebook

While these efforts to pique players’ interest in trees and in the game may help foster a generalised environmental awareness, they offer little reason for players to step outside the confines of knowing, and thus caring about, the tree other beyond a pretty image with apparent ecological utility. Gameplay, to this point, contributes to a model of care that is decidedly humanised, blocking the possibility of learning to care even as players are appealed to take care of their pet trees. The peculiarity of modelling care for virtual trees in terms of satisfying human needs is gestured to by one disappointed player’s remarks:

I really wanted to play to help plant trees. . . . All you do is water the tree, feed it food that trees do not eat (why are we feeding them burgers and french fries?? Would rather learn about trees and the kinds of fertilizers they need) tap to turn the sun on, and poke it for affection. . . . The cause is great, but the game itself is not.

(iTunes, 2/Feb/2016)

As the player notes, few in-game practices of care are realistic. Among these are providing sunlight, watering and pruning the tree, all of which the game could make more educational by varying them depending on the tree species the player is growing (elm, pine, magnolia, or rainbow eucalyptus). Other practices could easily be rethought as well. Instead of clothing the tree, for instance, players could monitor changes in bark health. Rather than showing affection by bouncing a plush toy bird in front of the tree, a gentle hug could suffice, consistent with how humans commonly express their love for trees, as well as for human others. Indeed, the norm of sociality promoted by gameplay treats the tree as a mechanistic reflex, whose love meter rises with each squeaky bounce of the bird. Players are not guided to learn to respond to the tree; they are steered to care for the tree to ensure their own delight. The choice of food reinforces this point, as nourishing the tree with unhealthy food customarily served in fast food establishments is clearly a ploy to provide entertainment. Even for a human, this choice would seem like an incongruous dietary “need”, not least given the game’s ecological pretext. Here, information about palatable soils, as well as partner species, such as fungi and ants, could enrich the educational experience and highlight the exchanges of care involved in producing and sharing food.

Ecofeminist educators Constance L. Russell and Anne C. Bell argue that learning to care about environments and ecological others involves challenging what one thinks one knows about the other (Russell and Bell 1996, 177). In the context of gameplay, Donna Haraway suggests that ‘a certain suspension of ontologies and epistemologies’ can be useful to playfully articulate and explore interspecies partnerships and relations (D. Haraway 2016, 88), if also the challenges that come with caring for an other unlike oneself in many ways. Defamiliarising the human sensibility of a body and what care should look like might offer rich ground for illuminating these challenges and provoking creative responses. A provocative possibility is suggested by the digital game *Dadliest Catch*, in which players assume the identity of a father octopus, ‘Octodad’, who interacts with other family members, who, incidentally, are human and do not realise his true identity.⁷³ Melissa Bianchi argues that by confounding the sense of human gestures and movement, the game is able to ‘estrangle the player from their digital embodiment’ (Bianchi 2017, 138) in a way that productively frustrates the player, especially ‘in moments when they cannot successfully make Octodad perform as a human despite their

⁷³ <http://octodadgame.com/octodad/dadliest-catch/>, last accessed April 2018.

own humanness' (ibid., 142). Whereas Tree Story Game presumes that emulating the human form represents the best chance for moving players to become interested in caring about trees, I would suggest at least a partial suspension of humanising referents is necessary to relay 'a sense of the living, material trees as nonhuman nature that cannot be contained with human paradigms of representations' (Alaimo 2016, 76). Feeling the strangeness of the tree as other than human, the tree as 'an arboreal subjectivity' rather than 'a human fantasy' (Perlman 1994, 89), is vital for cultivating players' capacity to learn to care for the tree.

Cuteness as a prompt for caring

Among the challenges that learning to care poses to apps and games is the representation of nonhuman others that players will be drawn to care about, as Tree Story Game confessed regarding its design of the virtual tree. The promotions and app reviews I examined indicate that other companies and users are also keen on 'cute' characters. This preference raises a concern to the extent it glorifies what are typically market-researched representations. While likely to catch audiences' interest, such representational formulas are apt to write out what is beautiful, inimitable, and incomprehensible about the nonhuman for the sake of achieving a mass uptake of characters and apps. Curry makes a similar observation in the case of Disney characters, who are routinely fitted with thoroughly sentimentalist trappings. Noting the characters' fashioning through a process of calculated investment in research and development to ensure mass marketability, he doubts their resourcefulness for encouraging genuine wonder and enchantment (Curry 2004, 134).

In the case of Tree Story Game, Kang, who, as mentioned earlier (p.202), was a Disney executive, shed light on the design of the game in an online news report: 'We are definitely leveraging the Disney experience. Disney has been great at creating connections to the users through stories and characters' (Kang, quoted in Brightman 2015). Although Kang claims this approach to storytelling is spun from the intent of 'democratizing doing good', 'to bring it to the masses' to raise awareness and 'prompt activism' (ibid.), exploiting 'what sells' is liable to block, or confuse, the ethical response, for what sells is appealing to audiences in no trivial measure because of exposure through marketing and popular culture. The 'adorable virtual pet trees' (Tree Story Game, Google Play) that Tree Story Game promotes to prospective players are the digital version of the hugely popular Tamagotchi toys that initially launched in the 1990s in Japan and that

shortly thereafter were released to other affluent markets. Similarly to Tree Story Game, the toy occupied their human ‘owners’ in looking after a virtual animal pet (Allison 2004, 170–76).

Anne Allison situates the Tamagotchi craze within a broader marketing trend in Japan which involved co-opting ‘cute’ portrayals to sell commodities (ibid., 38–40, 46–47). The function of cuteness in promoting and engaging with tree-planting apps works, analogously, to sell, based principally on how care-deserving nonhuman others look. In Panda Hero (2.99 USD), an iPhone gaming app, players took on the role of ‘Panda Heros’ on a mission to rescue pandas. For each rescue and instal of the game, a tree was planted.⁷⁴ Though active for mere months in 2011, the game funded 21,700 tree plantings across Comayagua, Honduras, and Kilimanjaro, Tanzania, through a partnership with Trees for the Future (e-mail communication with Trees for the Future, 29/Mar/2016). Post-rescue, players come upon a serene aesthetic:



Figure 41 Post-rescue panda sanctuary

Source: Panda Hero, Facebook

Soon after, players confront the reality of care, which seems to revolve around making the panda perform tricks to the human player’s delight:

⁷⁴ http://download.cnet.com/Panda-Hero/3000-20416_4-75203867.html, last accessed February 2018.



Figure 42 Panda Hero gameplay

Source: Panda Hero, Facebook (7/May/2010)

At one point, a panda named Tessie performs the moonwalk, as if a member of a touring circus. The crude aesthetic of the human hand directing the pandas' movements, coupled with a panda whose smile is slavishly fixed in place, make for a display in which it is the human player whose needs for entertainment are met. At times on Facebook, the company posted photos of real pandas, porting pronouncements of love into the register of cuteness:



Figure 43 'Cute' pandas

Source: Panda Hero, Facebook

This example demonstrates what Cole and Stewart suggest, in their analysis of human-nonhuman animal relations endorsed by online ‘farming’ simulation games, is a colonising cuteness. In spite of such games’ ‘novelty in relation to their exploitation of social media platforms’, Cole and Stewart argue that gameplay is ‘comfortably familiar insofar as that cute style has successfully colonized the socialization experiences of players’ (Cole and Stewart 2017, 403). For them, these games thereby

provide an opportunity to revisit comforting childhood experience of close affective relations with ‘cute’ representations of nonhuman animals that typify the Western socialization process. As such they are also colonialist in the broader sense of normalizing Western norms of affective relations with nonhuman animal representations.

(ibid.)

Imagining characters through such norms shores up the risk of reasserting hierarchical relations with nonhuman others founded on human superiority, as illustrated in the case of rescuing baby trees from deteriorating environments. Consider the opening scene to one of the Tree Planet games, in which players receive the details of their assignment from Tree Kim, the President of Tree People Union. Weeping and distressed, Tree Kim shares his sadness at the situation, his affect mirrored and accentuated by the helpless, crying baby trees projected on screen.

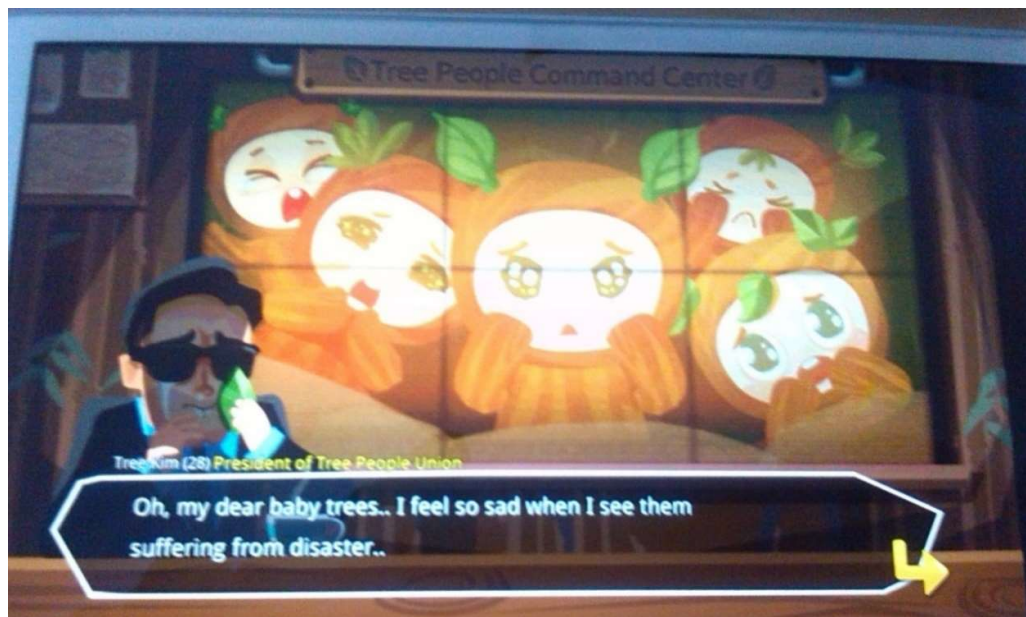


Figure 44 Introductory appeal to players in Tree Planet 3

Source: My phone (Mar/2016)

The baby trees express a range of emotion, albeit all in some way crying for help: (from top left to top right) wailing, frightened, shocked with concern, terrified, and too upset to bear to face the situation. Evidently, only the human player, 'Hero Tree', can save trees from the horrible end of environmental disaster, which manifests as polluting monsters.



Figure 45 Promotional screenshot, Tree Planet 3: Birth of Hero Tree

Source: Tree Planet Website, Game



Figure 46 Hero Tree

Source: My phone (Apr/2016)

Notice how in Figure 46, a baby tree cowers behind Hero Tree's determined stance as Hero Tree faces the monsters. The representation underscores the ability of Hero Tree, and by extension, the human player as a tree, to take charge of an ecological mess that threatens to take trees captive forever. Cleverly, the heroic portrayal downplays any role of the human agent in abetting the situation, including the fact that humans are the ones who hope for rescue from a ruinous end, as the earlier discussion of Tree Planet's campaign, with its preoccupation with trees' 'services', would suggest (see pp.198–99).

Accentuating cuteness in this scenario serves to heighten a sense of the human saviour, a relational and affective dynamic that Debra Ferreday argues is complicit in creating the 'Bambi effect'. The 'Bambi effect', Ferreday explains, refers to

an anthropomorphic and sentimentalised protective instinct which prevents humans wanting to kill or consume animals that possess human-like and childlike traits. [...] In imagining ourselves caring for big-eyed, innocent deer, humanity sees itself in a more flattering light in relation to nature; not as agent of mass destruction, but as caring protector.

(Ferreday 2011, 222)

As a means of eliciting concern from the human player, the sympathetic affect 'works' nonetheless 'to reinstate the boundary between human and nonhuman' (ibid.).

Understanding the implications of this effect for prompting care is complicated by the role of carer that players find themselves in, a role in which they are looking specifically after what they consider theirs in the sense of a pet. Filtering care through a notion of ownership may reduce caring to a relation based on obligation, sympathy, or even guilt. And yet, it may be that some users are more likely to attend to their virtual tree if they feel personal responsibility. A number of Forest users, for example, expressed upset at killing their virtual tree:

I find myself getting angry when I kill a tree... (Google Play, 2/Mar/2016)

...since I care a lot about nature...I hate ending up with a dead tree. (Google Play, 24/Feb/2016)

Actually I love nature and cannot let a tree die. (Google Play, 20/Feb/2016)

No one wants to kill innocent little trees. Does the job. (Google Play, 8/Feb/2016)

Installed @forestapp_cc yesterday to help me focus more on my drawing. Now I'm just sad about all the trees I've killed. (Twitter, 1/Feb/2016)

I am a tree hugger so the thought of killing trees keeps me focused. (Google Play, 22/Jan/2016)

I have a terrible habit of using my phone instead of sleeping, but killing a little tree would definitely help stop that! (Google Play, 25/Feb/2015)

...I would hate to kill a tree (iTunes, 21/Aug/2015)

Some users go further in explicitly highlighting their attachment to *their* virtual trees. For instance, while reporting a technical issue with Forest, one user whined: ‘Uninstalling would probably make me lose all my plants and coins and I don’t want it to come to that because I CARE FOR MY PRETTY PLANTS’ (Google Play, 13/Jan/2016). Another user likewise expressed their sadness at seeing their virtual trees disappear: ‘I got a notification from clash of clans and my tree died, pretty sad day, currently depressed’ (Google Play, 27/Jan/2016).

These reviews prompt me to wonder whether, and how, apps could turn caring enacted through a personal bond into an opportunity for learning to care within a more-than-personal context. As I show next, this opportunity is essential for encouraging an appreciation of planting beyond the sense of accomplishment that comes with planting single trees or ensuring trees do not die.

Tilting deforestation into social and ecological context through gameplay

Tilt World offers a tantalising view into the potential for games to imagine tree planting and care as exceeding the job of a capable human being. As noted in the *Introduction* (p.178), the game funds plantings in Madagascar through points generated in game. In addition to steering Flip the Mighty Tadpole to grab seeds and swallow carbon from the air, players earn points for activities such as recycling bottle caps and planting mushrooms to leach noxious substances from the soil (Tilt World Website), all while dodging the dreadful blight that has blanketed an imaginary place called Shady Glen.⁷⁵

The thrust of the campaign is raising awareness about the role of trees in mitigating climate change. Social media postings reflect this intention by, for instance, citing scientific reporting that corroborates the link between higher levels of deforestation and CO₂ emissions. In one tweet, the company posts a link to a NASA study on higher observed absorption volumes of atmospheric CO₂ by tropical forests to justify ‘Why we

⁷⁵ For a brief video illustrating the motions involved, see <https://www.youtube.com/watch?v=sCWmy0T73d4>, last accessed April 2018.

plant trees in Madagascar' (Twitter, 29/Dec/2014). Commenting on a climate model predicting changes in the concentration and flow of CO₂ around the globe, the company reacts, 'Beautiful and scary visualisation of CO₂ levels. Fight the Blight plant trees! And maybe instead of driving play more Tilt World?' (Facebook, 21/Nov/2014).⁷⁶ Echoing the logic that planting trees alone will reduce CO₂ levels, the Tilt World campaign cheerfully imagines, 'sometimes all that's needed to make things right is a change in perspective' (iTunes, *Description*), in this way reiterating the game's invitation to players, 'ready to tilt the world?' (Tilt World Website, *plant trees*).

Tilting the world into perspective amounts here to learning an equation in which the variables 'tons of carbon' and 'families supported' depend on manipulating the major independent variable, i.e. the number of 'trees planted!':



Figure 47 A measure of impactful play
 Source: Tilt World Website, *plant trees*

The claw of the tree planting apparatus is reminiscent of the mechanical cranes that feature in arcade games where the surprisingly difficult objective (in my experience) is to

⁷⁶ The visualization and post can be viewed at:
<https://www.facebook.com/TiltWorld/posts/759819697389178>, last accessed March 2018.

snatch one soft toy from amongst several toys piled atop one another. The image of Flip seated in another machine, this one with a scrubber arm, suggests he will be cleaning up the ‘blight’ (carbon pollution) with each tree plopped onto the map.

This interactive graphic is an upbeat and hopeful, yet sanitised portrait of Madagascar that shelters from awareness so much of what makes the current situation devastating. Ninety percent of Madagascar’s nonhuman species are endemic (Hannah et al. 2008, 590), their livelihoods bidden to the integrity of forests, of which 40 to 50% have been felled since the mid-twentieth century (Irwin et al. 2010, 2352). Lemurs are a prime example. Nine of the 10 species of lemurs in Madagascar can only be found there. Scientific studies suggest that lemurs are crucial to seed dispersal throughout Madagascar’s rain forests (Wright 2007, 386), and lemurs depend in turn for their reproduction on varieties of fruit trees (ibid., 392–93). Evidence of increasing droughts, compounding already existing fragmentation in the region’s forest ecosystems, is creating conditions in which the recovery of lemur populations is uncertain (ibid., 393). The upsetting of this ‘delicate balance between plants and lemurs mediated by climate’ (ibid., 385) has meant that rural families, who represent ‘the large majority of Madagascar’s human citizens’ (D. Haraway 2016, 72), are also suffering. As the number of farming opportunities declines, many of these residents, hopeful for cooking fuel and income, have begun felling trees for charcoal (Onishi 2016). Like lemurs, however, these humans are far from flourishing.⁷⁷

Withholding these details of all that and who cries out for care, Tilt World’s call to players to ‘help protect’ Flip’s ‘good friends’, namely, the many ‘endangered’ animals in Madagascar (Facebook, 11/Dec/2012), is charming, but inadequate to elicit care. Chris Sandbrook, Williams M. Adams, and Bruno Moteferri caution that games ‘might mislead if their modeled or synthesized environments oversimplify or misrepresent real-world problems. Thus, for example, a game may suggest that resources are inexhaustible (there are always more fish in the sea)’, or, in the case of Tilt World, always more seeds available for planting, and ‘that lives can be restored, that worlds will reboot in pristine form’ (Sandbrook, Adams, and Moteferri 2015, 122). While the target audience of Tilt World, like many conservation games, is young, and may thus impose limits on the ‘potential to inspire critical thought and engagement’ (Fletcher 2017, 160), I would suggest that gameplay could be modified to enrich players’ learning without

⁷⁷ An altered version of this paragraph appears in Desai and Smith (2018, 48–49).

compromising age-appropriate ecological comprehension. For instance, the game could reconsider the animal that catches seeds; here, the game could easily substitute a lemur in place of a tadpole. Even this simple substitution could imbue gameplay with a sense of the actual reality that is in need of caring, and which the game professes to be helping.

Collective caring about deforestation and climate change

The importance of getting the details ‘right’ in this sense becomes magnified as apps and social media grow in usage as means of taking on and addressing environmental change on an unprecedented scale. The final group of themes emphasises the perspective that sees individuals as contributing as part of a collective. As one campaign puts it, ‘the power of social media and crowdfunding’ to make change derives from not one individual, but ‘individuals—all of us’ who, banded together, constitute nothing short of a ‘a global, grassroots intervention to halt deforestation’ (Stand for Trees Website).

The final thematic section is structured around three interlocking discourses. The first concerns scalable solutions, underlining how individual contributions generate massive, measurable returns by way of ecological transformation. The second builds on this idea to envision a future planted into being and held in common by citizens of the earth. Reinforcing this positive vision, the third discourse revolves around celebrity promotions and the spectacularisation of care that celebrates virtualised and symbolic unity through crowdfunding.

By measure and magic of scale

Perhaps the most basic, and undoubtedly the most central, idea paraded by crowdfunding discourses is the match between the cumulative effect of VPAs and the need to rapidly scale up afforestation and reforestation. The demands on users’ time, which companies use to vouch for the advantages of VPAs as quick and easy (as outlined earlier in *Repurposing personal time for environmental benefit*, see p.182), are here folded into the urgency of acting now, and swiftly. One company appeals: ‘We’re all busy, I know. . . Just take a little time to take care of the planet that takes care of us’ (ForestNation, Facebook, 4/Feb/2016). The dwindling store of time remaining for action is in turn presented in a way to justify placing demands on what ‘little time’ users have. To this end, alarming word choice is often employed to compress time horizons. Words such as ‘emergency’ (Treesisters Website) and ‘crisis’ (Stand for Trees Website, *Why it matters*) pair with statements and links to news stories foregrounding the pace of environmental change, as, for instance, in the following tweets: ‘Deforestation in Zambia

has been dramatic, with no primary forest left and 250,000 hectares lost each year' (Tree-Nation, Twitter, 6/Sep/2012); and 'Organic matter in forests is breaking down more quickly with climate change accelerating carbon release' (ForestNation, Twitter, 23/Jan/2016). These images of breakdown and disappearance reiterate that 'time is of the essence' (Stand for Trees, YouTube, 'MAN vs EARTH', 24/Nov/2015).

Through individuals' combined efforts, tree planting can have simply magical effects on the land and human livelihoods on a grand scale. This potentiality is articulated concisely in the following infographic summarising users' 'awesome' work:

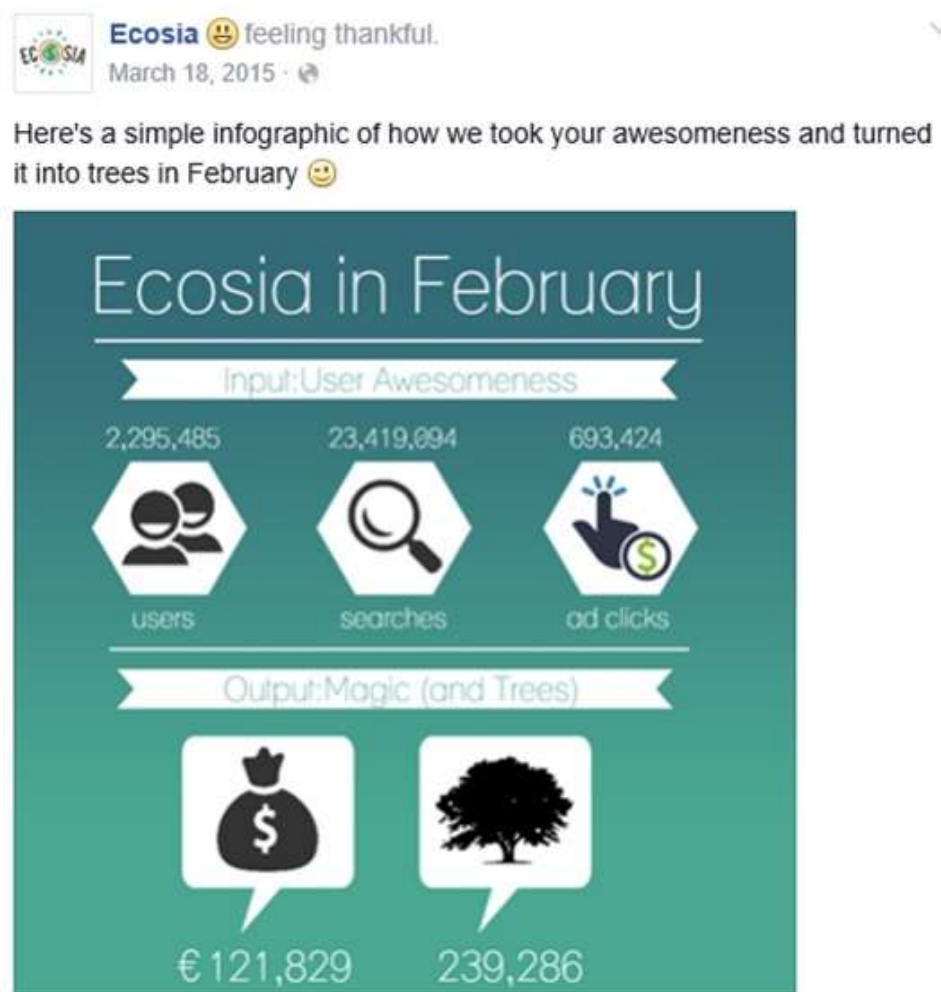


Figure 48 The magic of planting with searches
Source: Ecosia, Facebook

The two white banners read 'Input: User Awesomeness' and 'Output: Magic (and Trees)'. The magical output that Ecosia is here referring to are the composite effects of trees on ecosystems that spell benefits for local people and economies, assisting in the company's

efforts to help build the Great Green Wall in northern Africa to prevent desertification from advancing further south of the Sahel:

Turning deserts into forests

Ecosia uses its search ad revenue to plant trees in Burkina Faso in Africa, bringing water, plants and animals back to drought-ridden areas. The revived land means more jobs, healthier livestock and more independent people. A stronger local economy allows both women and men to earn their own income, meaning more children can go to school. Our forests are part of the international effort to build a "Great Green Wall" across Africa for increased environmental, social and economic prosperity.



Figure 49 Building the Great Green Wall

Source: Ecosia Website, Tree Planting

Ecosia's CEO and founder, Christian Kroll, explains that his vision for Ecosia was one of scale and mechanism from the start, crystallising as he noticed a 'connection between globalisation and climate change and how planting new trees could actually neutralize CO2 emissions on a big scale' (Kroll, quoted on Ecosia Website, *Knowledge Base*, 12/Apr/2016). The pair of screenshots that follow on the next page, drawn from another company's website, perfectly capture the mechanistic magic implied here.

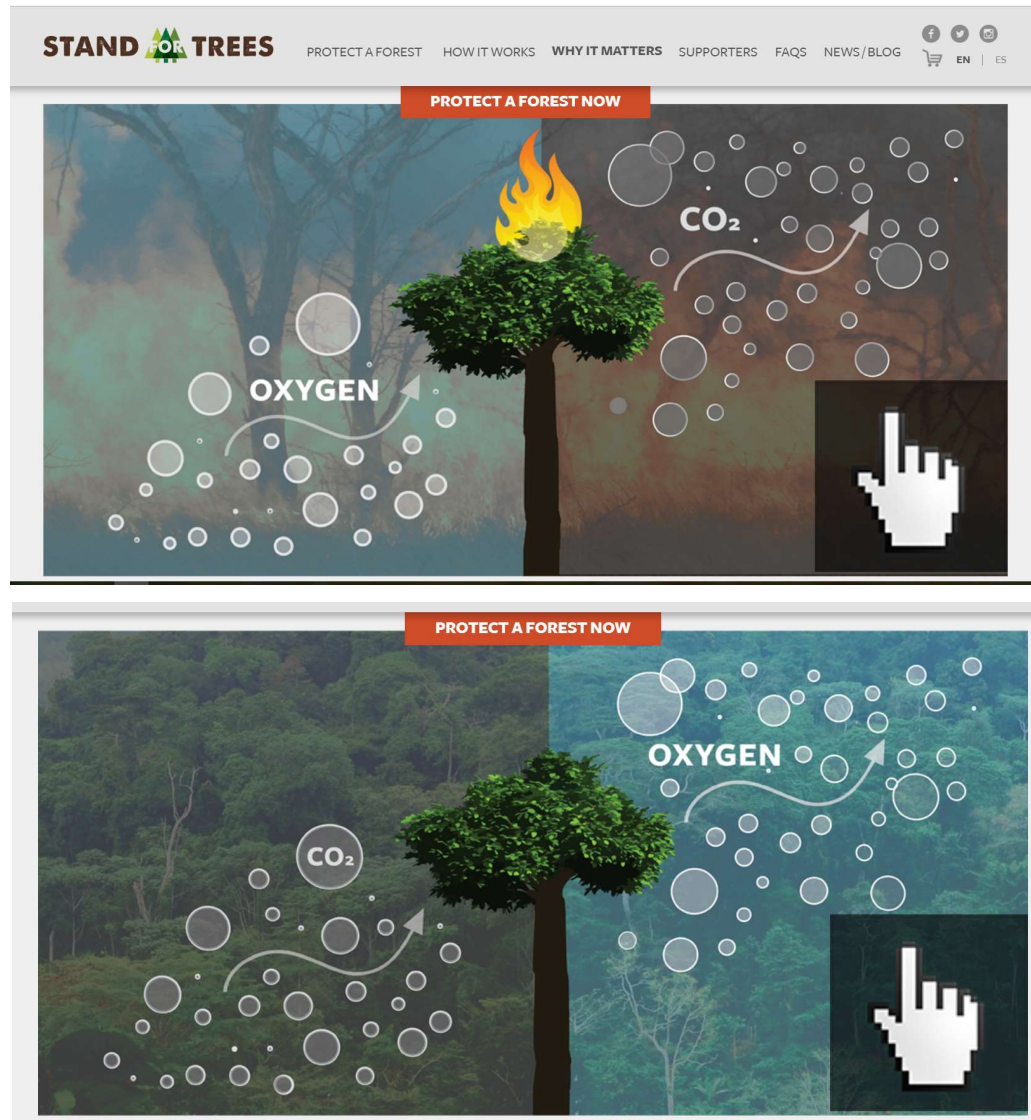


Figure 50 Magical tree mechanisms

Source: Stand for Trees Website, *Why it matters*

Clicking the hand icon in the bottom right corner of the screen toggles between illustrations of what happens when trees have CO₂ to process and when there are trees lacking to convert this element into oxygen. Trees are none other than ecological switchboards, moderating the chemical balance that is climate.

A shared future

This construal of tree planting and carbon sequestration, in service to human ambitions of scale, squeezes out any need for trees to exist for the sake of their own flourishing. It also misrepresents the path forward as one that can, quite matter-of-factly,

be planted into reality. Consider how the image of a shared future sprawls across the front page of Tree-Nation's website.

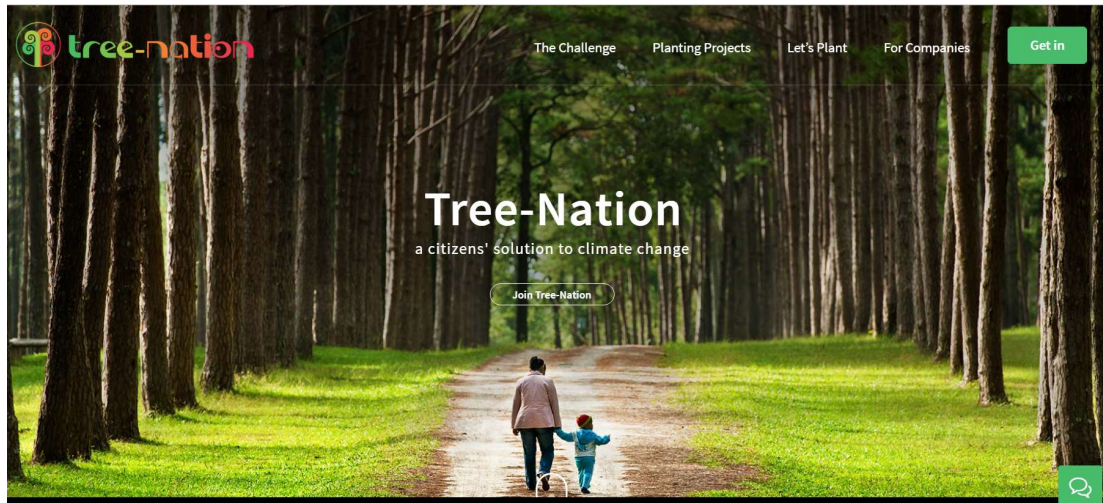


Figure 51 Planting the collective future

Source: Tree-Nation Website

The photograph imparts a sense of enduring across generations: the older woman and young boy, representing, respectively, an older human generation and an up and coming one, walk forward, supported by this path. The implication is that human generations will be successively reared through the labour of trees, who, fittingly, are lined up on either side, like faithful servants on standby. As Tree-Nation itself signposts, 'We are facing humanity's biggest challenges' (Tree-Nation Website).

Trees are as good as promised to future human generations, as Prince Ea, the face of the Stand for Trees campaign, emphasises in a YouTube video entitled 'Dear Future Generations' (20/Apr/2015). In the video, Prince Ea raps to an imagined future generation of human viewers. Exuding authority in smart grey-blue blazer and slacks, he delivers an apology with dried tree limbs at his side, resting on a flat, sandy, vegetation-less desert, an ominous foreshadowing of the future that only tree planting can banish.



Figure 52 A dismal future looms

Source: Stand for Trees, YouTube, ‘Dear Future Generations’

At one point, Prince Ea holds up a \$100 bill (USD) and expresses regret and shame at the human greed for ‘this’—money, which drove humans to destroy trees so that the generations watching the video now do not know what a tree is. He contrasts his learning about a Native American tradition of taking into consideration seven subsequent human generations, with his assertion that ‘most of us today don’t even care about tomorrow’. Notably, the invitation is not to work toward a more capacious respect for trees, for neither what they do nor what they are. Rather, the video is calling for caring through planting, in a way that merely substitutes the basis for valuing trees with another basis, whereby trees are more valuable alive than dead.

These visual and verbal impressions of sustaining human life into the future package sustainability in the terms in which it was first popularised through the Brundtland Report, as a future-oriented generational view, discussed in Chapter 1 (pp.30–31). As Alaimo observes of this definition: ‘Not only are the “generations” here usually taken to be human, but the lively world is reduced to the material for meeting “needs” (“Why do we care about forests and streams? Because of the children . . .”)’ (Alaimo 2012, 562).⁷⁸ Trees, and the natural world more broadly, exist as an unchanging backdrop to the lively human world, ‘a convenient stage to accommodate the human drama’ (M. Midgley 2005, 349, 350). In this respect, the ethical status of nature is ‘backgrounded’, and nature’s agency, negated, as forests and the earth are taken to comprise ‘neutral

⁷⁸ The report subsequently spells this point out: ‘In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations’ (WCED 1987, Chapter 2, paragraph 15).

surfaces for the inscription of human projects' (Plumwood 2002a, 21).

The sense of a shared future for humanity is further established through a discursive emphasis on kinship with human others as citizens of the earth. For instance, ForestNation speaks of participants as 'sisters and brothers' who in turn become 'ForestNation citizens' upon pledging to plant a tree (ForestNation Website). Similarly, Treesisters designates participating individuals as 'Treesisters' or 'Treebrothers' (Treesisters Website). While brokering membership in a family, these titles also work to blur the distinctions between local and global, here and there, and particular and universal, dissolving them into an imagined planet of citizen-planters. ForestNation envisions that by each person planting a tree, 'we'll plant Billions of Trees!', thus creating a 'ForestNation' that spans the earth (ForestNation Website).



Figure 53 Crowdfunding a ForestNation

Source: ForestNation Website

As the company writes in response to an honoured planting pledge, 'Thanks for growing this Tree and helping to create a #forestnation' (ForestNation Website, *Global Forest Map*).

The resulting ecological citizenship that individuals are granted is both geographically encompassing, as the use of *global* (e.g. 'global community of citizens', Stand for Trees Website) and *world* (e.g. 'the worldwide platform to plant trees', Tree-Nation Website) suggest, as well as apparently non-discriminating, as inclusionary references such as *everyone* (e.g. 'support the normalisation of everyone giving funds for

trees every month’, Treesisters Website, *Join*), *citizen*, and site-specific blanket designations (e.g. *Ecotopians*, *Ecosians*, *Treesisters*) imply.

While signalling a common stake in the planet’s future, these terms of collective identification embrace a notion of unity sieved through a homogenising mesh, as I show in the next section. I discuss how the use of star power, scientific data, and grand visual testaments of care figure in imagining a united front of individuals planting in solidarity, and suggest that this front could be more convincing if it endeavoured to communicate care as a practice taken up by and for a heterogenous citizenry.

Curating unity: celebrity, spectacle, and statistics

Celebrifying the cause

In the campaigns, celebrities function to stoke belief in the power of crowdfunding, as well as raise the profile of forestation initiatives to a level they may not otherwise enjoy. In addition to playing the Tree Planet games, for instance, fans can participate in planting by setting up ‘Star Forests’, which are funded separately through donations from other fans. These forests are planted in the name of a celebrity, i.e. a ‘star’. To initiate a Star Forest, fans create a campaign on Tree Planet’s website after a successful web application. Individuals can then choose to plant trees for that campaign by donating money.



Figure 54 Starting a Star Forest

Source: Tree Planet (2015, 3)

According to Tree Planet, Star Forests ‘have become must-visit places for fans from all over the world, where fans enjoy the forests while caring for trees’, as the two photos which follow this statement in the Star Forests online brochure are meant to illustrate:



Figure 55 Care for trees in Star Forests

Source: Tree Planet (6)

Star Forests were purportedly incorporated into the fundraising mix after ‘Tree Planet managers’ had ‘work[ed] with the gaming app for some time’ and ‘realized that there was another way to encourage young people to support tree planting’ (Shapiro 2018, 150). ‘Star forests’, accordingly, ‘capitalize on the extraordinary popularity throughout Asia of “K-Pop” or Korean music and drama stars. Fans pay for the planting of trees associated with their favorite star’ (ibid.). As a tree planting role model, the star behind a ‘star forest’ assumes in this context a new significance as a ‘green celebrity’, someone who effectively leverages ‘their star power to save the environment’ (M. K. Goodman et al. 2016, 679–80) or suggest to individuals how they might act along these lines (M. K. Goodman 2013, 81).

As the captions in Figure 55 suggest (photo on left: ‘share their feelings toward their stars’, photo on right: ‘care for their trees out of love toward their stars’), the Star Forests scheme is set up so that care can arise through identification with celebrities. Notice how the following tweet enthuses about a music group’s anniversary as the motivation to plant trees.



Figure 56 Planting to celebrate the anniversary of a music group

Source: Tree Planet, Twitter

Although this strategy ‘helps boosts the firm’s visibility in the public eye by leveraging the awareness of celebrities and well-respected corporations’,⁷⁹ planting trees may become, as a result, just another fashionable practice, anchored in a desire to emulate the celebrity’s publicised concern for the environment or to show one’s favour for the celebrity themselves. The caption for the photo on the right in Figure 55 suggests as much. In such cases, Goodman argues, there is a designed transfer of ‘care and emotion’ to the cause based on the celebrity, which are in turn priced according to willingness to give (M. K. Goodman 2013, 81). It could be argued, further, that these emotional ties to the cause and celebrities become ‘the basis of the production of imaginary communities’, as Igoe points out in his analysis of online videos published by prominent conservation organisations and initiatives. He explains:

At their most expansive these communities are invoked as *the* community: ‘all of us’, ‘we’, ‘humanity’. The Prince’s Rainforest Trust video weaves together statements from Robin Williams, the Dalai Lama and an Indian school boy. CI’s [Conservation International] ‘Team Earth’ video brings together Mahatma Gandhi, Martin Luther King, CI scientists, smiling villagers in CI t-shirts, Neil Armstrong, Katrina survivors, the Wright Brothers and a starving Somali woman with her starving baby. WWF’s ‘Earth Hour’ video celebrates the forging of

⁷⁹ <https://www.bcorporation.net/community/tree-planet>, last accessed April 2018.

global connections by ‘families, businesses, local councils and Hollywood stars’, by inspiring people around the world to turn off their lights for one hour.

(Igoe 2010, 383–84, author's emphasis)⁸⁰

Spectacularising care

This imaginative knitting of communities comes into its own in the 1H1T campaign, which is backed by a diverse celebrity constituency, known as ‘ambassadors’ for the campaign. Notable public figures include former UN Secretary General Ban Ki-Moon; Leonardo DiCaprio, who already has a record of association with environmentalism, as evidenced by his involvement as narrator and key backer of the 2007 documentary film project *The 11th Hour*,⁸¹ his reputed preference for hybrid automobiles,⁸² and a foundation to his name that dedicates itself to environmental causes⁸³; environmental philosopher Ervin László; and Felix Finkbeiner, the youth pioneer of the UNEP’s Billion Tree Campaign (1H1T Website, *Ambassadors*). 1H1T’s website also displays its endorsement by the UNFCCC and the French government, along with a number of corporate sponsors, such as Accor Hotels and Microsoft. Rows of icons representing local and international broadcast and online media outlets, including TV5Monde, CNN, *The Washington Post*, *National Geographic*, and *The Huffington Post*, further attest to the initiative’s wide-ranging support and far-reaching publicity.⁸⁴

The subsequent donation of 55,000 trees in a matter of weeks suggests that this publicity did its part to rally users to stand in environmental solidarity by planting trees through the application interface. From 29th November to 4th December 2015, the Eiffel Tower became illuminated with the names and messages of app users. One hundred

⁸⁰ In 2009, Prince Charles launched a public awareness campaign for rain forest conservation. The video that Igoe is referring to can be viewed at: <https://www.youtube.com/watch?v=boEDMVNAPk4>. The link to the CI video is: https://www.youtube.com/watch?time_continue=5&v=p5APwBNzqHc. The 2009 Earth Hour video is viewable at: https://www.youtube.com/watch?time_continue=87&v=1CRs-7IRIPo. All videos were last accessed April 2018.

⁸¹ <http://11thhourfilm.com/>, last accessed April 2018.

⁸² As Yahoo! news captures in a headline, ‘One look at his cars proves Leonardo DiCaprio cares for planet Earth’, <https://www.yahoo.com/news/one-look-at-his-cars-proves-leonardo-dicaprio-122048635.html>, last accessed April 2018.

⁸³ See <https://www.leonardodicaprio.org/>, last accessed April 2018.

⁸⁴ The graphic is viewable at <https://www.1heart1tree.org/wp-content/uploads/2015/02/medias.jpg>, last accessed October 2017.

thirty-five TV stations broadcasted the lighting of the monument, and 1.3 million online users tuned in through live streaming technology (1H1T, Google Play, *Description*).

The timing of the app's launch benefitted from its occurrence within an emotionally charged span of events garnering international coverage: first, the 13th November terrorist attacks in Paris, responsible for 130 reported human deaths, followed not a month later by the highly anticipated Paris Climate Conference (COP21). The blue, red, and white lights of the French flag that lit up the Eiffel Tower following the attacks became a bright green, buttressing the rhetoric that 'every [human] heartbeat becomes a living tree', and 'monuments become rainforests' (1H1T, Twitter, 9/Dec/2015). The celebrated cultural monument, called by one *New York Times* writer, 'the emotional heart of Paris' (Peltier 2015a), was remastered into an exhibition of a virtual community affected into acting environmentally.



Figure 57 Remediating the Eiffel Tower as an environmentalist monument

Source: 1H1T Website, Promotional video

Goodman et al. (2016, 681) write that 'spectacular environmentalisms' perform 'emotions that attempt to frame our own affective responses to save the world'. Insofar as these attempts are successful, they reason, an important question concerns 'the effectiveness' of such mediations and 'spectacular environmentalisms more generally: do they distract,

diffuse and dissemble or do they raise interest and awareness to the point of effective change?’ (ibid., 680).

Much like ‘[t]he short films of a collective ‘happening’ . . . often move people emotionally and garner feelings of community, collectivity, and humanity in similar ways to a good film’ (Garde-Hansen and Gorton 2013, 57), the 1H1T projection suggests a virtual community of care. The Eiffel Tower not only projected, but brought to fruition the app’s vision of a ‘citizen artwork’ that could ‘synchronise our heartbeats to collectively inspire our future’ (1H1T Website, *Presentation*). Though it may have made for a rousing and stunning media display, the spectacular display of a ‘rainforest monument’, so to speak, may have done little to unsettle the structuring conditions and practices that have landed the earth in this current state of needing to crowdfund forestation on such a massive scale. According to a *New York Times* report, the projection increased the Eiffel Tower’s energy consumption by 30% (Peltier 2015b). Meanwhile, Naziha Mestaoui, the artist behind the app, nonchalantly considered this fact, urging: ‘Let’s not reject the reality that we live in, that we depend upon and benefit from. Let’s rather figure out how to make these tools and technologies part of the solution’ (Mestaoui, quoted in Peltier 2015b).

Although the potency of this mediated display for moving people to act need not be denied, a more effective push for ecological care would involve greater thoughtfulness in its assessment of digital eco-activism, and in facing up to how ways of living are complicit in the expansion of consumerism through newer technologies. Mestaoui’s statement exhibits a lack of willingness to care enough about the ecological ramifications of technologies to admit the consumptive aspects of the display. The inability to concede the trade-offs of using digital media technologies to promote care is akin to posterising a caring message, while dismissing the depth of change needed to actually enact care, a point that Goodman et al. (2016) make in underscoring the necessity of bridging communication and practice in the case of the Live Earth concert. They observe that the concert ‘expended vast amounts of CO₂ to make vague gestures towards dealing with the climate crisis without critiquing corporate polluters or a model of economic growth that prioritizes increased production and profits – even of the “green” sort – above the environment’ (M. K. Goodman et al. 2016, 678).

Like Star Forests, 1H1T has proven its mettle in electrifying individuals to plant trees through what one might call a celebrified and spectacularised solidarity. Yet I feel that the notion of collective identity that it asks individuals to embrace is freighted with

the problem of not caring enough to contend with the reality and challenges of caring by and for a diverse populace spread among distinct places. As Igoe notes: ‘The limitations of these imaginary communities as movements are related to their claims to universal inclusiveness and their simultaneous excluding and editing out of inequality, ecological contradictions and the aspects of human difference that undermine their proposed solutions to the problems currently facing humanity’ (Igoe 2010, 384). In the final section, I shift focus to how, in messages of collectivity, difference is a regrettable afterthought, which ultimately compromises the message of caring as a collective. I demonstrate this point using the example of how crowdfunding initiatives bind the terms of community in questionable defence of CO₂ emissions.

Ties that (do not) bind: CO₂ matters

The following statement occurs as part of a promotion to commit to a monthly donation to offset CO₂: ‘Each year, your total annual emissions average 9 tons of CO₂, just because you live a normal human life’ (Tree-Nation Website, *Offset your CO₂*). The dependent clause ‘just . . . life’ sympathises with the likely positionality of the purchasers of offsets, namely, consumers able to participate in a market-based system of exchange. This sympathy is simultaneously generalising (what is a *normal* human life?) and presumptuous (*must* a normal life generate so many tonnes of CO₂?). This clause is not, moreover, emphasised. Instead, it is placed after the comma as if to suggest its status as an aside, nothing particularly worthy of scrutiny.

Analogously filtering the notion of responsibility through CO₂ offsets, the Stand for Trees campaign lists several CO₂-generating activities that an affluent consumer might be routinely involved in, such as air travel (from ‘London to Tokyo’ and ‘LA to NYC’) (Stand for Trees Website, *How it works*). It also provides an estimate of the number of trees required to compensate, ‘based on a medium to large tree in the Congo at 1m dbh (diameter at breast height-120 cm off the ground and 30m in height’ (ibid.). With these statistics in hand, individuals are invited to honour their membership in ‘a global community’, joining forces to fight climate change, which is framed as a phenomenon that, like this community of citizens, ‘knows no borders’: ‘Climate change is not limited to any individual region. Carbon emissions know no borders. A 2013 scientific study by Princeton University has linked Amazon rainforest depletion to significantly reduced rainfall and snowpack in California and the Sierra Nevadas’ (Stand for Trees Website, *FAQs*).

In these examples, the focus of what participants and others hold in common, commands attention at the expense of engaging adequately with issues of inter-societal and inter-human difference. Advocating care for a heterogeneous collective requires rethinking such basic premises as the normalisation of CO₂-generating activities that are clearly only accessible to an affluent minority, along with the use of CO₂ sequestration averages derived from a single size of a single tree species in a single region. To this end, the choice of statistics is particularly perplexing. Why, for instance, should ForestNation use the average of a tree in a boreal forest (ForestNation Website, *About us*) when all its organised projects are in Africa and Southeast Asia? This choice may be based on the reasonable assumption that participants would be located in boreal regions, where the company has a presence (namely, in the US and the UK), and so would be planting their own trees there. From a climate science point of view, planting in boreal regions is a counter-intuitive benchmark, given the concerns over whether increased tree cover in boreal regions might in fact increase warming (Betts 2000, 187; Bonan 2008, 1445–46).⁸⁵ The Stand for Trees campaign could likewise furnish more insightful statistics, reporting, for instance, on how much CO₂ trees in other tropical or sub-tropical regions are sequestering, and ideally, in the places where its reforestation efforts are taking place in Africa and South America (Stand for Trees Website, *Protect a forest*).

The defence of CO₂ emissions as a gesture of taking environmental responsibility is further undermined by a flawed logical comparison between regions. In the claim above regarding the borderless phenomenon of CO₂ emissions, the warming of a North American region is offered as an example of the negative effect of these emissions, a perfectly logical supposition. However, the warming occurs based on felling a tree in economically struggling societies, such as those in South America. This overly simplistic account explains away CO₂ generation in a rich country with reference to tree felling in a poor country. This cause-and-effect logic has the effect of faulting the countries which are often cutting trees down to either satiate consumer appetites in affluent societies or else, trying to stay alive, for CO₂ emissions. This unfortunate representation of the flow of CO₂

⁸⁵ This increase is attributed to the surface albedo effect, a measure of the amount of radiation reflected back to the atmosphere. Snow cover increases surface albedo, resulting in cooling. Satellite and local measurements indicate that the presence of trees however decreases the reflective effect, resulting in greater solar energy absorption and warming (Bonan 2008, 1445). Some argue that an increased albedo effect may actually offset any increases in CO₂ sequestration that follow from planting trees in boreal forests (Betts 2000, 188).

emissions only serves to feed the assurance provided to consumers that their emissions are unavoidable or ‘normal’ (Tree-Nation Website, *Offset your CO2*), such that the only responsible option available to consumers is minimising their emissions (Stand for Trees Website, *FAQs*). Caring enough to plant, in this context, becomes tantamount to exacting injustices whereby ecological activities in the global south can be manipulated in order to accord with the demands of ‘business as usual in the North’ (Forsyth and Young 2007).

Conclusion

In this chapter, I examined the terms of caring proposed by using VPAs to make time to plant. I showed that the tendency to focus on the use of VPAs for fundraising makes ample time for planting, as evidenced in both the urging of participation as a means of rapidly accelerating and expanding the scale of planting, and the outreach to users to squeeze virtual planting into all and any pockets of free time. Although VPAs may make planting easy and convenient for many, in this chapter I argued that the kind of environmental awareness that is being raised in the process, must be accorded comparable regard. This regard, I proposed, would be apparent in the way that virtual planting makes time to *care*. Championing ambitious planting goals while glossing over the particulars of the flow of CO₂ emissions across borders, is one indication that insufficient time is being given to highlight why, and how, users’ care matters.

The current discursive inclination to foreground virtuality and the swift conversion of online actions into trees, exemplifies what Maxwell and Miller notice in the representation of cloud computing, namely, that it ‘might as well result from invisible magic for all that we can see of it’ (Maxwell and Miller 2012a, 29). On the one hand, there is a need to construct ‘counter-narratives and alternative images that flesh out the all—too—real infrastructure supporting every stroke of the keyboard and swipe of the touchscreen’ (Carruth 2014, 343). On the other hand, more must be made of the way that the very ideas that endorse virtual planting can matter differently, through, for instance: a thoughtful consideration of inter-human and inter-societal justice (e.g. CO₂ emissions); alternatives to the proposition of staking human futures on tree labour (e.g. the human-centric discourse of planting a shared future); and the funnelling of imagined approaches to care through mechanistic lenses (e.g. plopping trees down in Madagascar to capture CO₂) that excite and delight more than they enlighten (e.g. caring for a human-like tree).

In addition to rooting virtual opportunities in more concrete ecological dimensions, a more concerted attempt must be made to define care in more-than-personal

terms. The attempt by many apps to mutually benefit personal and environmental cares, while preferable to giving no thought to this intersection, caters to users' desires in a way that hinders care for the environment. The idea that individuals can keep doing what they do, anyway, coolly condones an attitude of self-interest. Consider one player's take on Tree Story Game: 'As well as being fun, this game can make you feel like you are helping support the world just by playing a game. If you are [*sic*] always wanted to support the world but are either too busy or lazy, this game is for you' (iTunes, 25/Apr/2015). An Ecosia user similarly shares with glee: 'I love this search engine! You not only help save the Earth, but you can also get to be a lazy bum as well!' (iTunes, 7/Aug/2014). These players and users are normally too preoccupied to advance a cause, but evidently not so much that they cannot make time for their own interests. Although time may be used as a justifying factor for involvement, this defence may well mask that it is self-interest, rather than availability, that is the determining constraint.

This constraint brings to the fore an important tension in how time is valued as an input in ecological care. Writing about care in the context of the increasing uptake of digital technologies in everyday life, Judy Wajcman stresses that 'giving and receiving care involves slowness: "being there"' (Wajcman 2016, 129). For Wajcman, care is an easily overlooked necessity in digitally mediated societies by virtue of the 'frenetic pace of life' that has become customary (*ibid.*, 14). It may, of course, be that fast-paced living necessitates the search for an alternate understanding of how time factors into practices of care. If so, then surely it matters how time *is* consumed, when it is available. The incorporation of, and in some cases, reliance upon ads to fund planting presents an opportunity to rethink how time for planting can offer time for learning to care. Companies could, for example, consider partnering with educational institutions to replace in-app ads with more edifying content. For instance, in Tree Story Game, players can watch brief ads to unlock optional frills such as additional food choices. As an alternative to this activity, players could be asked questions about, or given insight into, the tree type they are growing, such as how the tree interacts with peer species in the destination habitat. The vision of fun welded onto learning, which is ascending in popularity, suggests opportunities for strategically combining VPAs, for instance, a trivia game with learning to care for a tree, or an app in which remaining undistracted must be paired with evidence of learning about distant ecosystems and the various intersections with the player's locale. In the end, though, no matter which virtual planting strategy is devised, both companies and users must confront the fact that caring is not a pastime.

This fact merits particular critical attention in relation to the qualitative dimension of care time, and specifically, the digital affordances of caring in ecologically efficacious ways. An oft spouted advantage of ‘new communication technologies’ is that they promise ‘to allow us to do things more swiftly’ (M. Davis 2013, 9), a promise echoed by the campaigns reviewed in this chapter. With this change comes a restructuring of time and proximity around virtual, rather than physical, encounters (ibid.). Although some would argue that this emergent reality necessitates a compromise in the quality of relations with others (ibid., 11), I would suggest that the ethical affordances of virtual time merit theorisation as a function of what kinds of proximities are being enabled, and importantly, in place of which other possibilities. For instance, I argued that the way in which the campaigns leverage the discourse of cuteness may move users to genuinely care about a virtual tree or tadpole, but in ways that compete with forging another proximity, namely, that with the actual situation and inhabitants of the places affected by the environmental issues that the games are trying to help address.

Such vital trade-offs in what or who gets cared about through digital interfaces cannot be understood by an account of digital time that revolves too decidedly around the distractive and accelerated elements of digital cultures. These elements do raise important questions in themselves, such as, ‘is there time enough to care?’ and ‘how much time is needed to care in the ways desired?’. Casual games and apps such as the Greenapp suite and Forest can help designers and theorists confront such questions, highlighting at the same time the possibility of reclaiming digital time through caring about how users’ attention is being engaged. For instance, the notion that digital time is fixed, and a measure of how much time users spend online, disconnects the human experience of clock-time from ecological timescales, downplaying the severe indebtedness of digital technologies and user affordances to more-than-human material infrastructures and processes. Taking greater care in choosing how and which offline environments and distant humans and nonhumans are represented and interfaced with through apps and games, can help draw users’ attention to the ecological interconnections that they, via digital media, rely on and affect in the pursuit of care. In this sense, digital experience can open up ways of spending time differently, of distributing attention less automatically: becoming, in this way, a series of moments of attending to how digital screens comprise interfaces that facilitate ‘touch[ing] and being touched’ (Anable 2018, 57–58) by distant others and environments.

In reflecting on the operationalisation of digital interfaces, Chun writes that habits of new media usage ‘link not only humans to other humans, but also humans to nonhumans and the environment’ (Chun 2016, 7). I am suggesting that this argument be pushed further to stress the material and ethical implications of considering the interface as a mediation of relations (Hookway 2014, 4)—such that habits of interacting with new media are seen not simply forces of bringing into connection, but more fundamentally, forces of bringing into existence, of making matter, literally as well as eco-ethically, in particular ways. Digital apps and games offer a multitude of interfaces for forming and acting on relations of care. Appreciating this possibility requires new kinds of theoretical engagement with digital time and attention that emphasise the relational and affective facets of digital encounters, however short-lived they may tend to be. Tugging on these facets can help to highlight the politics of digitally mediated proximities, of how technological devices work through configuring chains of encounter that affect the kinds of caring involvement realised (Puig de la Bellacasa 2017, 102–8). Shifting focus to these facets can thus offer a way to contend with the kinds of response-ability afforded by digitally mediated interfacing with human and nonhuman others, and a means of recognising that alternate interfacing can be imagined.

Chapter 6

Mining for bits and seeds of life

Introduction: the money tree in a digital era

Tree imagery features in allusions to money across societies and eras. Possibly the most famous image, the image of the money tree, has served as the subject of children's books, artworks, music, film, folklore, and advertising. Botanically, the money tree is most often associated with *Crassula ovata*, or the jade tree, native to regions of Africa, including Mozambique and South Africa.⁸⁶ And though it is called a tree, it looks akin to a midsized plant. *Lunaria* is marketed under a similar name, the money plant, or sometimes, the silver dollar plant, owing to the paper-thin appearance of its coin-shaped leaves (Bell 2009, 115). Although one could therefore think of money trees as referents for particular vegetal species, they are more widely appreciated through myth, as a means of attracting riches. In the Han dynasty, for example, the money tree referred to an ornamental object for bringing good fortune,⁸⁷ and continues to have a place in Chinese culture, particularly festivals such as New Year's celebrations (Huang 1991, 168–69). In addition to bearing mundane monetary fruits, this decorative artefact is thought to grant esoteric wealth, symbolising the Daoist journey from the worldly to the heavenly realms of experience and understanding (Trentelman et al. 1999, 170).

More recently, the money tree has taken on distinctly political and economic meanings. For the Palauans, the mythical Breadfruit Tree, maybe 'the most popular cultural image', today stands for not only Palau but also 'the wealth of its natural resources' (Nero 1992, 239). The image of the Breadfruit Tree is based on the cosmological story of the goddess Dirrachedebsungel, known as the Woman of the Chedebsungel Tree. Dirrachedebsungel, the tale goes, is starving, alone on an island, until one of her sons hears of her suffering and promptly punctures a root in the Tree. Henceforth, rolling waves sent fishes through the branches (ibid.). This goddess appears to be an earlier mythohistorical incarnation of Milad, the founding goddess of Palau (ibid., 241). Hence, the legend of the magical breadfruit tree is an allegory for the origins

⁸⁶ http://www.mozambiqueflora.com/speciesdata/species.php?species_id=174460, last accessed February 2017.

⁸⁷ A contemporary version of this tradition, perhaps, is the 'Money Tree' spell, which aspiring witches (and wizards) can cast with the help of a money tree (Gharavi 2006, 120).

of Palau, and while breadfruit itself carries little economic value compared with other staples such as fish, it is a rather special cultural currency for the Palauans.

In 1983, in the first of a series of eight plebiscite campaigns to establish a distinct constitutional identity and government, the Palauans debated the adoption of the US dollar as a standardised source of wealth. An artist crafted a billboard adapting the Breadfruit Tree story (for a photograph of the adaptation, see *ibid.*, 255). In the adaptation, money bags marked with ‘\$’ replace breadfruits, with a ‘YES’ scrawled across one of the bags of American currency already set aside. As Karen L. Nero admits, the billboard could be a gesture of either protest or submission to the proposal to adopt dollars as the Palauan currency (*ibid.*, 258). Whichever interpretation is embraced, the billboard posits a relation of equivalence between Palauan goods and dollars, be the relation favourable (accept the US dollar) or undesirable (reject the proposal). As this segment of Palau’s recent history moreover demonstrates, such relations can serve a strategic purpose for endorsing certain money forms.

In this chapter, I explore how digital campaigns for tree planting vie, analogously, to establish commensurabilities between trees and money. As I discuss in the next section, the notion that trees are money has become a powerful suggestion for governments and firms, affecting environments and economic decisions well beyond the borders of the Palauan archipelago. In relation to the campaigns, I discuss how re-envisioning what money is good for, affects the reasons and ways that trees are valued by digital tree planting campaigns. My discussion draws on an ecocritical analysis of twelve campaigns that promote digital forms of money (e.g. Bitcoin) and payment (e.g. e-donations), as well as ideas about money (e.g. money as gift of life) to facilitate tree planting and care. The campaigns are chosen to provide an account of four principal ways that monies and monetary concerns have been integrated into digital tree planting campaigns: (1) cryptocurrencies; (2) credit cards; (3) e-cards or e-certificates; and (4) online donations.

The chapter unpacks key themes from my analysis that correspond to three principal discursive mediations of money as a medium of care for trees and others, specifically: money as an ecopolitical force, trees as gifts and currencies, and the digital orchestration of ecological labour and responsibility. The next two sections preface my discussion, introducing key issues that affect caring about and for trees through digital money generation, exchange, and consumption. I first examine the entwinement of trees and money as a value proposition. I clarify my consideration of value within a framework

of care and the plurality of mediations of value, including financial value. I also take this opportunity to explain the mechanics of cryptocurrencies and digital payments, as they may be unfamiliar to readers. I describe how these mechanics are being championed to reinvent money as a social and environmental good. Rather than treating digital forms and uses of money as distinctive in and of themselves, however, I lay emphasis upon how they articulate value-laden relations among humans and between humans, trees, and the environment.

Transforming matters of money into trees for valuing

The clichéd saying ‘money doesn’t grow on trees’ seems to have first appeared in the tale of the animated wooden boy puppet Pinocchio (Collodi 1996, 40). The saying is commonly taken to mean that one cannot come by money easily. In the present climate of planting trees to generate digital monies, something of the reverse is being touted, as policymakers, businesses, investors, and charities advance the claim that ‘Money DOES grow on trees’ (Waline 2014) through a number of schemes which purport to make money and trees one and the same. From capital investments (e.g. Forest Carbon, <http://www.forestcarbon.co.uk>) (Lainton 2012), e-derivatives (e.g. WoodShares, <http://www.woodshares.co>), and digital currencies backed by standing forests (e.g. Treeshare, <http://www.treeshare.be/en>) to international conservation schemes such as REDD+, the idea that trees are monies, which can be priced and traded, pervades environmental and financial marketing. Lending this idea credibility is the argument that trees supply a ‘long term, stable source of value’ (Treeshare Website). This claim itself rests upon what has come to be known as the Payments for Ecosystem Services (PES) framework, mentioned in Chapter 2. Under this framework, trees accrue and lose value based on the measurable services they provide to the surrounding ecosystem (Sullivan 2009, 18), such as the tonnes of atmospheric carbon dioxide sequestered (Leach and Scoones 2015, 26).

Whereas the campaigns maintain that thinking trees in monetary terms is a way of ‘building value, helping the environment’ (Carboncoin, Twitter, 25/Sep/2014), critics of PES schemes stress that valuing trees and other nonhumans as ‘natural capital’ (Büscher and Fletcher 2015, 282) does not ensure ‘that we [humans] will embody practices of appreciation, attention, or even of love in our interrelationships with a sentient, moral and agential non-human world’ (Sullivan 2009, 26). The premise of offsetting seems, to be sure, hardly compatible with a relational view of ecological ethics and responsibility, as

trees and ecosystem services are equated in advertisements of ‘ethical money’ that read off the economic and environmental benefits of forest conservation (Nicholson 2007). Whereas language such as ‘natural air conditioners’ (Grow-Trees, Twitter, 22/Jan/2016) suggests that a consumptive attitude towards trees as cooling service providers is perfectly natural, establishing commensurabilities (e.g. trees are cooling agents) takes work (as I illustrate later, pp.249–50, 270–71). Trees do not deliver financially by default, nor, for that matter, by choice; they must be invested with earning potential, as I show in *The promotional, financial, and environmental currency of trees* (pp.257–68).

The ethical challenge of asserting relations between trees and money is how to fold in an appreciation of trees that is irreducible to money. For this purpose, it is useful to note that money is not meaningful in itself, but made so by ‘the cultural matrix into which it is incorporated’ as well as ‘the economic functions it performs’ (Bloch and Parry 1989, 21). Presuming money is exclusively numerical in nature is as misleading as shaving the value of trees down to units of currency. Consider the example of *Transformoney Tree*, an interactive sculpture that was staged in 2012 in the Black Rock Desert in Nevada. Highlights of the sculptural process, including participants’ responses, were subsequently compiled in a 20-minute docufilm the following year (see Noguiera 2013). Seeking to ‘question the value of money’ (ibid., n.p.), the process involved participants decorating banknotes with personally significant materials (e.g. a wedding memento, a drawing of a heart) and then gluing the notes to the bark of a large synthetic tree. The organisers explained that as the paper bills ‘lose their financial value’, their presence on the tree accentuates the (non-pecuniary) value of the artwork, which symbolises and showcases the collective valuation of non-quantifiable values (e.g. wedding memories, love) (Dadara 2012, n.p.). The divestment of financial value from banknotes, and their material and social reclamation by human creative activity, are political and ethical gestures, which invest in the hope of a future when money does not ‘mortgage’ life, and humans might yet ‘be able to pick things of real value from trees’ (ibid.).

Transformoney Tree’s attempt to disturb the normative standardisation of singular values into denominations of fiat currencies upsets any attempt to easily translate between money-value and other values. As one participant suggested, the sculpture emblematises the possibility of ‘investing in trees’ (Noguiera 2013) in such a way that trees are not commissioned to preside as the merchants of financial markets, as fiat currencies have been. Rather, the participant implies, they are to be appreciated, as one might appreciate

persons whom one values, for making life possible and meaningful. In this view, trees offer value primarily for living and secondarily for trade. Hence, whereas the promotion of investment in trees *qua* carbon stock presupposes valuation within a framework of inanimate exchange relations, *Transformoney Tree* conceives of investments that express relations that are faithful to the requirements of living.

The possibility of a relationally minded investment is consonant with an interest in rethinking money and more generally, relations of exchange, without preconceiving either as problematic for forming relations based on care. As Raddon summarises: ‘Money relations can be moral when submerged in a context that reveres the sense of relatedness’ (Raddon 2002, 26). According to Raddon, at issue is the ‘social process that split caring and money’, prompting the need for re-embedding money in values ‘that motivate and guide caring work’, which, as noted in Chapter 2, ‘are, at minimum, the values of human relatedness and interdependence’ (*ibid.*). In focusing on human caring of trees, my analysis extends Raddon’s consideration to human relations with nonhumans. This consideration is undertaken with respect to the invisible digital machinery that, companies may lead one to believe, grows money from the earth (pp.270–75). In the next section, I describe the technical process behind cryptocurrency and propose that not only cryptocurrencies, but other, peer digital mediations of money transactions, be understood within the wider context of making change with care.

Digital monetary interventions for tree planting

In 2014, a senior member of a Bitcoin forum started a thread entitled ‘Plant trees with crypto!’ and posted the following message:

It is finally time to give back to Nature in correlation with involving crypto in our society!
Here is the chance to show our support to the planet!
For every ~2\$ in donations we plant a tree!⁸⁸

Although donations are routinely solicited for tree planting (S. Cohen 1999, 426), the proposal to ‘give back to Nature’ is distinctly meaningful because cryptocurrencies are notoriously energy-intensive. Of these, Bitcoin is the earliest known and so far, most frequently and widely traded. It belongs to a new generation of *cryptocurrencies*, so named because they employ cryptography to mine (i.e. generate) currency (e.g.

⁸⁸ https://bitcointalk.org/index.php?topic=464945.msg%0msg_id%0, last accessed February 2017.

‘bitcoins’) and transact anonymously and securely over the internet (Nakamoto, n.d., 1). The mining process consumes considerable computing and electrical power owing to the difficulty of parsing the software code to extract a new bitcoin (Böhme et al. 2015, 218). A bitcoin is essentially a unique segment of code, and all mined segments constitute the basic data that form the blockchain, a digital ledger that approves and records transactions. The blockchain runs on a distributed network of computers that are actively running the cryptocurrency software (Narayanan et al. 2016, 90). Modifications to the blockchain require verification with both public and private ‘keys’, or digital signatures. The public key is a string of code known to all network users, while each user possesses an additional, private key for completing transactions that identifies them as the intended recipient or sender (Böhme et al. 2015, 216). Through its built-in verification protocol, the blockchain affords an unprecedented degree of confidence in the integrity of market transactions, ensuring their irreversibility as well as eliminating the need for intermediaries, such as lending institutions and audit agencies (Maurer, Nelms, and Swartz 2013, 266–68).

Proponents of cryptocurrencies stress the blockchain’s decentralised functionality, public visibility, and infallible encryption. The blockchain, they argue, encodes trust in the value of the currency into the very operation of the currency (Tapscott and Tapscott 2016, 6–11). However, the fact that the technological platform may well be designed to emancipate financial affairs from hegemonic governance prevents miners from neither pooling resources and forming alliances to control a majority share of coins (Cooper 2013), nor committing other objectionable uses of the platform, as evidenced by the Silk Road scandal, an underground Bitcoin marketplace that facilitated the sale of illegal goods (Greenberg 2014). Hence, although digital monies may provide flexible opportunities to express financial arrangements in code (Tapscott and Tapscott 2016, 7), the use of these monies is nonetheless imprinted with social and cultural values (Betancourt 2013).

To this point, several emerging innovations in currency and payment demonstrate that money is more than an instrument for commodity exchange and financial accounting, that is to say, ‘a measure and store of value, a means of payment, and a unit of account’ (Carruthers and Babb 1996, 1556). Efforts to develop alternative forms of credit (e.g. time and service vouchers, see Seyfang and Longhurst (2013, 69)) community currencies (e.g. the Bangla-Pesa programme in Kenya, see Bendell et al. (2015, 10–13)), and mobile money (Maurer 2012, 593–94, 600–601) are founded on a vision of rearticulating money

through relational commitments and connections (Raddon 2002, 26). Here, ‘making change’ entails both creating financial value and in doing so, rearticulating social relations to reflect human values (Maurer 2003, 330), such as care. The ‘power and potential’ of cryptocurrencies (Tapscott and Tapscott 2016, 9) and other digital mediations of monetary exchange stand to be usefully surmised against this backdrop of ‘reconstructing and revaluing money’ with care (Raddon 2002, 26). As Nigel Dodd observes, digital technologies ‘are not only influencing the ways in which we pay, but, more fundamentally, opening up new possibilities for using money as a means of forging new forms of association’ (Dodd 2014, ix).

In thereby supplying ‘the conditions of possibility of finance’ (Lovink and Tkacz 2012), the digital mediation of money exchange must contend with the fact that, if money itself is ‘a medium of global interconnectedness, then those connections are hardly uniform’ (Senders and Truitt 2007, 117). Ming Fay’s mixed media installation *Money Tree & Monkey Pot: An Installation of Montalvo Specimens* (2004) speaks to this need to attend to how the global circulation of trees as financial agencies can create inequalities (for images, see Machida 2008, 208–10). The artwork incorporates living trees known as *monkey trees*, which are native to the Amazonian jungle. Their name derives from the pot-like shape of their seeds, which are said to seduce monkeys, which can become trapped in the tree while gorging on the seeds. Fay chose the tree to gesture to humans who ‘are caught by their own desires’ (Fay, quoted in Genocchio 2005), chiefly, here, the seemingly insatiable desire for consuming wealth. With the sculpture, Fay additionally critiques the colonisation of the tree and its introduction in transnational networks of exchange by the British Empire. By exhibiting the artwork in Saratoga, California, Fay plays on the locatedness of the ‘monkey tree so far from its geographical origins’ to recall and problematise the transplantation and cultivation of trees to arrogate wealth to the Empire via port colonial cities, such as Singapore (Machida 2008, 208–10). As I discuss in *Caring for the capital of the global environment* (pp.282–86), the campaigns fail to comprehend the use of money as a situated encounter with geo-cultural difference. I comment on the implications of flattening differences for caring at a distance, including how difference could be used to enrich, rather than, as the campaigns appear to assume, obstruct the attempt to value trees.

These opening sections have touched upon issues that I will discuss in more detail, using examples, over the next section. There, I divide discussion into three parts

corresponding respectively to the role that the campaigns attribute to money, trees, and technology in caring.

Making change with care through money, trees, and technology

Digital money is an ecopolitical force

As noted in the previous section, the campaigns premise doing good on making money accountable to a socio-environmental purpose. Consider how Carboncoin establishes the claim that its currency does good on behalf of a broad societal and scientific constituency: ‘Carboncoin is the currency for the inconvenient truth’ (Twitter, 23/Sep/2014). This statement is probably a pun on former US Vice President Al Gore’s book *An Inconvenient Truth*, which draws on climate science to narrate global warming as an anthropogenically induced ‘planetary emergency’ or ‘climate crisis’ with cataclysmic effects for long-term terrestrial life. The book prescribes large-scale scientific and political mobilisation alongside drastic social and cultural change to reshape moral attitudes toward the environment (for a summary, see Gore 2006, 10–11). The pun elevates investing in Carboncoin beyond the moment of a personal decision, affecting a single individual’s life, to that of a worldwide moral and political movement. This *moment* of using money, repeated enough times, will enable money to *move* environmental change in the favoured direction. Individuals are urged to join ‘the movement’ (e.g. Carboncoin Website; BitSeeds Website) and plant a tree (Leafcoin Website). The overplayed rhetoric of completing an individual action or planting a tree to save the world, planet, and/or environment (S. Cohen 1999, 428), undergoes some modification here, namely through the addition of a decision, as, for example, in calls to pledge one’s support: ‘Take a pledge. Plant a tree. Save the environment. #IPledgeATree’ (Grow-Trees, Twitter, 28/Aug/2014).

As this invitation to tweet a pledge intimates, the campaigns package the requirements of action as providing maximum environmental and moral bang for one’s financial buck. Credit cards, for instance, are marketed as an ‘easy way to give’ (Dilworth 2015) that ‘reduces your carbon footprint with every swipe’ and simultaneously ‘fosters social change’ (Sustain:Green Blog, 10/Jul/2015). Thus one is guaranteed to ‘[m]ake a difference’ with each spend (Sustain:Green, Facebook, *About*). Making any such ‘difference’ intelligible in terms of the environmental harm offset may well make one wonder, though, what, in effect, consumer spending facilitates caring for. Consider the promise to ‘plant five new trees, offsetting the amount of carbon dioxide emitted in one year’s worth of driving’ when Woodland Trust credit card holders activate their new

account (Qureshi 2006). Is the Woodland Trust advertising a card that saves a patch of earth or the chance to drive cars? The claim to save nature from further degradation, as some commentators have noted of nature and biodiversity protection schemes (e.g. Büscher and Fletcher 2015, 273; McAfee 1999, 148, 151), seems at times rather married to a commitment to save the status quo of financial capital from change. Saving nature, then, becomes paramount to ensuring its continued availability and viability for trading (Sullivan 2013a, 200). The next three subsections unravel how this paradoxical stance toward tree planting takes shape in the campaigns through the vocabularies of disruption, embrace, and opportunity. I argue that while aiming to figure digital money as an eco-ethical and collective good, these vocabularies betray their claims through the counter-languages of conversion, marketisation, and costs, respectively.

Disruption and conversion

Digitally based donation and currency schemes aspire to be ‘the disruptive currency for the #PeoplesClimate’ (Carboncoin, Twitter, 29/Sep/2014) by introducing ‘new, disruptive ways of tapping support’ (Higgins 2015). However, the campaigns’ recourse to conversion short-circuits this aspiration, as the campaigns make environmental change actionable in terms that keep intact pre-existing attitudes toward, and habits of, spending. For instance, Sustain:Green rallies consumers, ‘Unleash the power of your purchases to fight climate change’ (Facebook, 12/Mar/2015). The cover photo that headlines Sustain:Green’s Facebook Page and website marches in line with the spirit of fighting, reiterating the battle mentality invoked in framing trees and currency as fighters for life, which I later show in *Trees give and protect life* (pp.250–52).



Figure 58 Fighting for life through credit card spending

Source: Sustain:Green Facebook cover photo

In this rendition of the *fight* frame, however, it is not trees, but humans and more specifically, consumers equipped with Sustain:Green credit card gear, who are doing the legwork. This push to use a biodegradable credit card is disconcerting with respect to the environmental ramifications of continued or worse, increased consumer spending. Sustain:Green insists that its credit card scheme is only meant to offer an alternative for existing credit card holders. In online comments, customers echo this insistence, sharing, for instance, that they used the card ‘to buy something I would anyway’ (Sustain:Green, Instagram, Jun/2015).

This logic of substitutability would nonetheless seem to encourage an uncritical subscription to an agenda for sustainability. In sustaining ‘green’, is one also sustaining the habit of consuming credit? The prevailing orientation to enlightened consumerism, as suggested by references to ‘heightened consumer awareness’ (Grow-Trees Website) and ‘a more environmentally responsible lifestyle’ (Mokugift Website), seems poised to rearticulate the purpose of consumer spending as that of surmounting barriers to consumption. For example, Sustain:Green’s founder, Arthur Newman, reveals that consumers comprise a still largely untapped market for trading voluntary carbon offsets. Programmes for adding offsets to consumer purchases such as computers and airplane tickets, he explains, are costlier to consumers, who must purchase those offsets (Sater 2015). The head of the Sales & Trading division for a partnering business concurred, ‘The free and automatic nature of the rewards removes all the traditional barriers consumers have faced’ (Sustain:Green Blog, 15/Jul/2015).

As a move to enlighten rather than disrupt consumerism, strategies to ‘reward consumer action’ (Mokugift 2010) blunt the potentially radical proposition to change how money is valued and what it is spent on by ‘giving people a way they can do something about it that’s not really disruptive to their life’ (Newman, quoted in Dilworth 2015). At the level of business management, a similar stance of non-interference prevails. Mokugift, for example, writes: ‘The campaign was created to show that businesses that are not traditionally categorized as ‘green’, can easily turn parts of their business green without disrupting their business model, goals or market focus’ (Mokugift 2010). Notice, similarly, how Grow-Trees advertises the idea of ‘green initiatives as a source of competitive advantage’ (Grow-Trees Website, *Corporate Programs*). In pitching a planting project to prospective business partners, the social enterprise explains: ‘This unique project has enormous Global PR value’, which can be realised through ‘media coverage’, including publicity of the ‘green initiative benefitting endangered species

through its website, brochures, annual reports, advertisements, social media' (Grow-Trees Website, *Trees for Indian Giant Squirrels*).

The element of publicity, while a typical factor in mediating the campaigns' messaging, is noteworthy because of the overt pride taken in reputation building. Cohen notes that the promotion of tree planting in the US, 'whether [by] public, private, or governmental [parties]', involved publicising 'quantified self-congratulations' while inviting others 'to share the moral wealth' (S. Cohen 1999, 430). Cohen suspects this invitation accompanies organisations' attempts at virtuous self-representation, while their environmental impact remains less than remarkable (ibid., 439, 441). In the next section, I take forward Cohen's worry about such campaigns' environmental impotency in the face of promotional indications to the contrary. I show, specifically, how the language of financialisation and consumerism co-opts the campaigns' eco-ethical imagination, straining the possibility of caring through a constrictive concern for prices and market valuation.

Embrace and marketisation

Invitations such as 'reimagine what your credit card can do' (Sustain:Green, Twitter, 8/Apr/2015) and affirmations that 'you can become a greener consumer' (TreeGreetings Blog, 15/Nov/2007) suggest the efficacy of consumer involvement in tree planting. For such marketing slogans 'reimagine' tree-planting as a consumer enterprise. As one customer exclaimed of Your True Nature's e-card scheme: 'What a cool way to shop!' (TreeGreetings Website, *Media and Customer Comments*). Leafcoin analogously expresses its vision that the LEAF Android wallet could 'be a logical extension to the eCommerce oriented possibilities', at the same time helping 'environment enthusiasts to manage their 'green' currency better' (Heggurn 2014).⁸⁹ In their embrace of mainstream paradigms of consumer spending, these examples imply that an effective horizon of eco-ethical transformation can, or ought to, be delimited by the imagination of opportunities for enterprise and consumer spending. In support of these tacit limits, the campaigns promote their for-profit missions as superior to non-profit or state interventions, which they characterise as exploiting government money that 'could be spent for other essential purposes' (Grow-Trees Website). In their eyes, the business angle is not only pragmatic but also a source of esteem. For example, the founder of TreeGreetings was 'happy' to

⁸⁹ This wallet would make LEAFs tradeable through mobile devices with Android operating systems.

inform his customers that the parent company, Your True Nature, ‘will not be participating in the Government’s \$25 billion dollar hand out!’ (TreeGreetings Blog, 22/Dec/2008).

The portrait of business as an efficient infrastructure for capturing and distributing ecosystem value, conceals the tremendous sacrifice of the many non-monetisable environmental values for the sake of achieving this efficiency (McAfee 1999, 139). The corollary supposition is that market-based and commodity incentives will best prevent ecological deterioration (*ibid.*, 144; Sullivan 2010, 127). In the campaigns, this supposition assumes the form of an insistent claim that deforestation stems from market inefficiencies and improper valuation. By confining greening to market mechanisms, the campaigns are able to reason that markets are ‘the only instrument that will effectively implement any change’ (Carboncoin, Community forum). Describing the organisation that Sustain:Green helps support through its fundraising, the Sustain:Green founder writes: ‘They come up with market-based solutions for deforestation. In other words, they’re looking for the root causes of deforestation’ (Newman, quoted in Sater 2015). The reasoning underlying this claim, namely that planting trees will rectify deforestation, confuses a phenomenon with its effect. This confusion is made explicit in the statement, ‘BitSeeds has a goal of planting a billion new trees in order to cut down on deforestation’ (L. McQuarrie 2015). Planting trees may temporarily redress the absence of trees, which does, in a superficial respect, result from deforestation. Planting does not, however, also lessen deforestation—merely the latter’s effect (i.e. fewer trees).

This elementary fact is lost from understanding by recasting environmental stewardship as a financial issue, as a result of which care becomes reducible to selecting the right type and amount of currency. As Carboncoin emboldens individuals, ‘Take control of your finances and fight #climatechange at the same time with #Carboncoin’ (Twitter, 13/Oct/2014). Submitting environmental problem-solving to financial thinking not only advocates the internalisation of previously externalised environmental values. It also manages the ethical response to accord with what could be called, following Cohen (1999), ‘chequebook environmentalism’ (426), as the case of ECO coin demonstrates.

On its website, ECO coin poses the question ‘Would the rain forest still be destroyed if we could pay people to let the trees stand?’ The logic of this question has always found a home in attempts to affix to landscapes the anticipated financial returns of conserving them (Ehrenstein and Muniesa 2013, 166–67). This logic, as the ECO coin campaign makes plain, dials up concern for human others, if only financially, while

leaving empathy for nonhuman others by the wayside. Using a hypothetical example featuring ‘Alberto’, a farmer with a wife and children, ECO coin appeals: ‘Rather than preaching Alberto on his moral obligation towards the environment, we should economically compensate him to steward the rain forest’ (ECO coin Website). This vignette insinuates that local ‘forest residents’ like ‘Alberto’ are the ones behind activities such as ‘logging and ranching’ (Dove 1994, 3) that threaten the value of trees as living life. This blame on another human being is a clever strategy for triggering sympathy for the plight of a fellow human, who may have no choice but to destroy the forests. The story of a human at a distance, with which most website visitors will not be able to relate experientially, is meant to forge an inter-human connection nonetheless, which can serve as the affective basis for supporting ECO coin. Yet this narrative connection is established at the expense of working toward building links with the trees and the land that will be looked after. The effective shift in ethical attention from nonhuman other to human other manages to price the life of trees in a way that, as Kathleen McAfee notices of green development programmes more generally, ‘offers to nature the opportunity to earn its own right to survive in a world market economy’ (McAfee 1999, 134, emphasis removed). Figure 59 succinctly encapsulates the suggestion that nature is set to work to earn, literally, its continued existence.



Figure 59 Billing the rain forest for its services

Source: ECO coin Facebook cover photo

My first encounter with branded landscaping was nearly three decades ago, in the backseat of a car as my parents drove along a main highway that could deposit us to most places of mundane interest: the market, a park, school and work, and shops. It was at one of the numerous petrol stations that I spotted shrubs sculpted into the letters H-E-S-S,

plants made to speak in the name of oil companies. I remember feeling the ugliness of the sight; yet the word *HESS* also seemed nothing more than the name of a business.

Although Figure 59 is likely a doctored visual, it now strikes me as a revelation of what I might have been seeing, in part, as a child. The shaping of the river and forest in the form of a dollar sign makes unsettlingly visible the intention to bill vegetal life as the clean-up crew of commercial activity.

The insinuation that eco-ethical concerns are soluble in financial mechanisms leaves no room to be moved by such affects. What reason, too, remains to deliberate the ethical premises of currencies or monetary gifts if these premises express themselves in money amounts? Moral philosopher Peter Singer is an ardent advocate of donating a hefty portion of one's income to assist resolution of global issues at a distance, asserting at one point: 'Like it or not, for the foreseeable future we seem to be stuck with some variety of capitalism, and along with it come markets in stocks, bonds, and commodities' (Singer 2015, 50). While I agree with Singer that interim strategies are worth pursuing, making the transition to more ethically progressive systems of exchange cannot occur without insisting on money's ethical accountabilities. Reducing money's moral function to decisions over the right size of monetary contribution, to the right recipient, forgoes an important opportunity to wrestle with the ethical and relational costs of adopting various currencies. In the next section, I elaborate on this point, and show how campaigns tend to suppress the importance of these costs.

Opportunities and costs

The campaigns often make use of a rhetoric of revalued consumer participation that invests in the register of feeling, infusing the use of money with a feeling of personal accomplishment. Note how the following marketing pitch allies the notions of opportunity and alternative: 'Grow-Trees.com offers you a green alternative to the greeting card, and an opportunity to offset carbon emissions' (Grow-Trees Website, *FAQs*). This statement happens to make explicit the relation between the two notions; more often, this relation remains implicit. In both cases, the effect of the constructed relation entwines the notion of opportunity with the promise of ease, such that alternatives become options for maximising convenience. Participation, users learn, demands minimal time while guaranteeing avoidance of load-bearing activity. One Tree Planted assures individuals: 'Don't have the time to go out and plant a tree? We can do it for you' (One Tree Planted Website). Recalling the promises of campaigns in the previous chapter, the

opportunity consumers are being granted is not merely easy. It is also cost-effective, the goal being ‘to remove the cost factor inherent in #afforestation’ (Carboncoin, Twitter, 26/Nov/2014).

The ‘cost factor’ is itemised in terms of time, as expressed, for instance, in the appeal to ‘time-challenged holiday shoppers’ (Your True Nature 2007), and technological accessibility, as in the declaration (referring to Mokugift’s campaign) ‘consumer oriented technology can help [*sic*] developing a cleaner world, by making what the Internet can do best: eliminate barriers’ (Picker 2010). The amount of the donation is also, of course, factored into the presentation of costs. Compared with other costs the consumer may incur, though, this amount emerges as negligible. A newspaper article applauding Grow-Trees’s enterprise reasons that an e-certificate, which costs 85 Indian Rupees, or approximately £1 according to Grow-Trees’s currency converter, is practically identical in price to ‘a conventional greeting card’ (Sharma 2011). Statements such as ‘For just \$1 per tree’ (Mokugift Website) reinforce the trifling amount of the donation, as the word *just* seems to stand in for *merely*. At times, the promotional hooks not only exaggerate; they misguide. Carboncoin claims, for example, ‘It [Participation] doesn’t cost anything’ (Twitter, 8/Oct/2014). Carboncoin is clearly downplaying the cost of participation, as users must spend money to first own and then trade the coins. The statement nevertheless permits the company to emphasise what it deems to be the more significant investments, those of physical effort and time. As the company assures potential Carboncoin supporters: ‘Download your wallet today – our charity will do the rest’ (Carboncoin, Blog).

Construed as a cost that can be written off, money can be taken for granted as the minimum, if foundational, cost of planting. Consequently, time, online connectivity, and manual labour become discursively legible as the true costs, while money becomes the facilitator of payment *for* costs and thus, exempt from consideration as a cost. Foregrounding money, in this way, as the medium of (ex)change, enables the cost of using money to recede into the background. This cost is not monetary in the least; it is ethical. Leaving the charity to ‘do the rest’, users can, through digital payments, pass care off to another, willing party through the deliverance from responsibility that a monetary gift affords. Is the cost of sanctioned write-offs, writing off care?

Above, I asserted that the true costs of individual participation are misleadingly pegged to measures of time and technological accessibility. I would argue that the cost unaccounted for by these measures is the cost of practising caring discernment, for

instance, the thoughtful consideration of how to express concern and what is a helpful action (e.g. is it donating money?). Still more fundamental than the issue of these ethical labours is the cost of becoming aware, including the cost of remaining unaware, of trees and tree planting as variously valuable and worthy of care. The next set of discourses brings to the fore how individuals are encouraged to become aware of trees firstly as good for the environment and subsequently, as kinds of monies. These discursive arms of the campaigns pave the logic for crowning digital technology, along with the exchange and payment “opportunities” it creates, as ethical proxies for insuring environmental stewardship. In shadowing this logic, the final set of discourses makes evident the necessity to care more, to conceive more attentive, less automated logics of exchange.

Giftng trees of life and care for the earth

Trees give and protect life

Trees garner acknowledgment throughout the campaigns for their life-giving abilities. Sometimes this acknowledgment goes unelaborated, as in a testimonial for TreeGreetings that expresses gratitude ‘for giving life to our world’ (TreeGreetings Website, *Media and Customer Comments*). More often, it empowers a chain of rationalisation that assumes the worst in the absence of trees, and therefore insists on planting trees in order to sustain livelihoods and ensure environmental health more broadly speaking. Note how Grow-Trees warns of the mayhem that erupts following the loss of trees: ‘Destruction of forests creates numerous environmental catastrophes, including altering local rainfall patterns, accelerating soil erosion, causing the flooding of rivers, and threatening millions of species of plants, animals and insects with extinction’ (Grow-Trees Website, *Why Trees*). Trees’ life-preservation and protective power booms in this warning through the amplification and scalar extension of phenomena, resulting in not incidents, but ‘catastrophes’, which manifest as not one rain shower, but a veritable trend in rainfall (‘patterns’); not runoff, but erosion; not overflows, but floods; not one river, but multiple rivers; not several populations, but entire species; not death, but extinction.

Sounded within a polarised account of the state of the world with and without trees, such warnings acquire rhetorical might through their pairing with glowing portrayals of trees as worldwide benefactors of terrestrial life. Adopting a different tack than its previous statement, Grow-Trees assures prospective participants in its e-certificate scheme that they will ‘benefit rural communities, improve wildlife habitats, de-

carbonize and thereby fight climate change and benefit the world’ (Grow-Trees Website, *FAQs*). These benefits become apparent through emphases on trees’ protective capabilities. Trees give life as well as preserve it. The narration has disconcerting ethical consequences: as it imputes, if selectively, agency to trees, it at once weaponises them, not only enlisting their services—yes, their very lives—to compensate for a human failing, but worse, ignoring the disregard for trees that helped ignite that failing. The same breath that champions trees as agents of ecological rejuvenation, construes them as combatants of ‘soaring emissions’ (Carboncoin Website, *About Us*) and deforestation (e.g. the ‘critical’ requirement of rainforest preservation in ‘combating climate change’, Newman, in Abdelhamid (2015)). The iconography of battle—visualised through such figures as a warrior bearing an East Asian likeness, who is mildly reminiscent of the chief protagonist ‘Link’ from the Nintendo game *Zelda*⁹⁰ (Figure 60), and a muscular man with a bandana who appears to be the beneficiary of steroid drugs and a possible relation to the Teenage Mutant Ninja Turtles⁹¹ (Figure 61)—works hand in hand with verbal insinuations of battle in appeals to ‘fight climate change’ (Mokugift 2010) and matter-of-fact declarations that ‘the forests that have long been a buffer between humans and planetary destruction are under attack’ (Sustain:Green Blog, 22/Apr/2015).

⁹⁰ An image of Link is available at <http://www.zelda.com>, last accessed February 2017. The game *Zelda* is not environmentally themed, though it revolves around a rescue-the-princess plot (Princess *Zelda*) that could be likened to the rescue-the-earth mission imagined by the campaigns. However, it is unclear whether the figure is truly generating restorative currency and by what means. Is he slicing through blades of grass to produce ‘leaves’, the currency of the brand the leaf represents, Leafcoin? This interpretation is supported by the lemon and lime shades that tinge the grass and his clothes and sword. Conversely, he may be wielding a sword to guard against threats to the continued generation of leaves (money and trees) from the surrounding land. In addition, the terrain is grassy, not wooded, an odd choice for a reforestation campaign, and more so given the choice of leaf as the currency’s symbol and unit of trade. I return to the topic of the arboreal imagery of currency in the next section, *Trees are gift currencies*.

⁹¹ This relation is particularly suggested in the case of the characters from the eponymous movie. See, for instance, the following promotional image: <https://www.instagram.com/p/BGZpefVM8Hk/?taken-by=tmntmovie>, last accessed March 2017.



Figure 60 Combating ecological threats with 'leafs'

Source: Leafcoin Website



Figure 61 Eco-warrior ninja

Source: One Tree Planted Website, *Get Involved*

This synchronicity of visual and verbal cues explains deforestation and global warming through a win/loss frame (e.g. ‘score a goal for the environment’ (Abdelhamid 2015)). This frame justifies wielding control over forest habitats as well as the future, lending credence to manoeuvres of protection, preservation, and defence to ensure victory over external, vague threats precipitated by human factors. Note how the following explanatory statement defends restoration in the passive voice, and by attributing causality to generalisations of certain human tendencies: ‘Forests in Tamil nadu have been neglected and destroyed by modernization, Industrialization and legislation. Also, threatened because of increasing pressure from population and livestock’ (CHHASE Website). References to human-induced ecological destruction (e.g. ‘the human factor are [*sic*] harming the valuable forests’ (Bookchin 2014)) abound, yet the prevalence of passive voice to propose solutions, identifies deforestation as an actor without an agent or a cause. As a news report sympathetic to BitSeeds’s rainforest preservation scheme informs readers, ‘deforestation has ravaged countless acres across the globe’ (Fidlin 2015).

The lack of specificity concerning human contributions to deforestation and forest degradation shifts the attention to ecological harm to the conspicuous effects of these contributions. These effects are strongly registered in the campaigns through visuals, which show up as either photographic image or statistic, and frequently both simultaneously, augmenting their individual affective effects. Consequently, the element of trees’ absence/presence becomes a, if not the, decisive prompt for ecological action. Deforestation becomes meaningful as the absence of trees, while an effective solution means, quite simply, reinstating the presence of trees. Consider how statistical data, a first person plural verbal script, and visual imagery coalesce in the BitSeeds campaign to tell a tale of rain forest logging. Within this narration, trees come to visibly matter in the light of the enumerable and measurable ramifications of their existence for human and nonhuman life, while human responsibility contracts to bite-size consumer actions.

Deforestation Is A Global Problem

Each year about 25 million acres of forest are destroyed. Most of this destruction is happening in the tropics, where in the past 50 years we've lost half of the world's rainforests. Each second one more acre of rainforest is destroyed.



Figure 62a Visual dramatisation of deforestation

Source: BitSeeds Website



Figure 62b Infographic of deforestation

Source: BitSeeds Website

Using thin tree poles strewn amidst half-scorched stumps, Figure 62a assembles an image of utter desolation, the miserable aftermath of felling trees. With respect to the

emphasis on trees as agents for solving human problems, the choice to foreground the human figure, posing against the backdrop of a charred landscape, is telling. It is as if the landscape is talking for the boy, by surrounding him and presenting him to the viewer. Agency is ascribed to the landscape, though only by actualising that agency as another's, namely, the boy's. Given the use of 'we', this agency can be understood, metonymically, as humankind's. The infographic in Figure 62b, which, on the website, appears beside this photo, lends Figure 62a a back story that swings from the disappearance of hope, signified by the 'current state' of the landscape, to its subsequent retrieval through reforestation. Thus, whereas the website first provokes a feeling to mirror the helplessness of the lone boy, it speedily resolves this affect as one's gaze shifts a few centimetres to the right, upon reading the question WHAT CAN YOU DO TO HELP?. The yellow colouring of YOU, set apart from the white of the other words, announces the fated role of the visitor in rescuing 'our forests' from the devastating fate foreshadowed by the 'current rate of deforestation'. The cause is rainforest felling, the vital effects explicable as generic categories ('global warming') and groups ('plants & animals'), and the lone constructive response is replanting.

Visitors to the website confront changing scenery that reinforces this three-part narrative. Sometimes, the scene guides one's sight along a lazily moving river, protected from the din and destruction of the beyond. Dense forest encloses the scene from the sides, crowned by a stock blue sky with white and grey rain clouds, as if the sight captures any given day, in any given rain forest (Figure 63a). Other times, the scene features a vigorously flowing waterfall set within a rain forest in the prime of its sunny green splendour (Figure 63b).

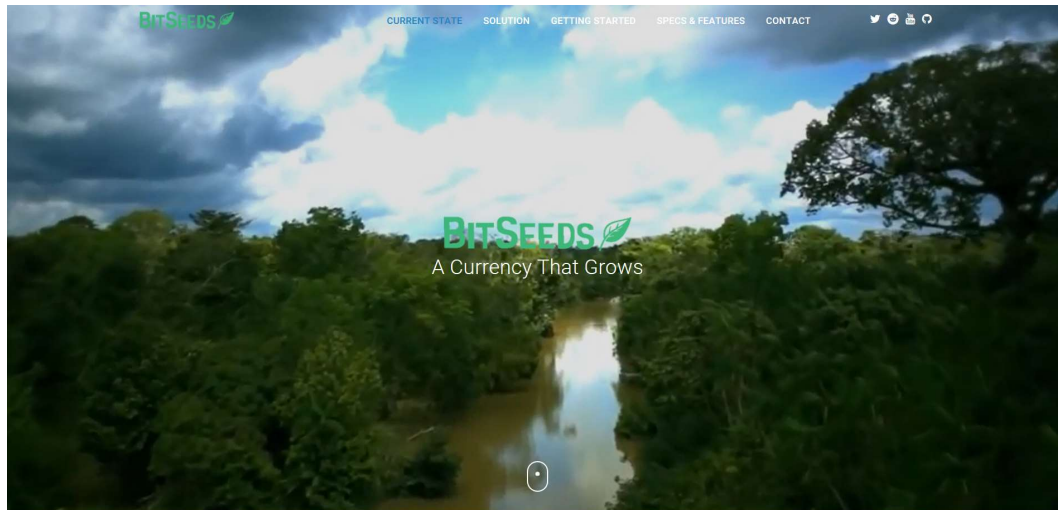


Figure 63a A lazy river pathway through a rain forest

Source: BitSeeds Website

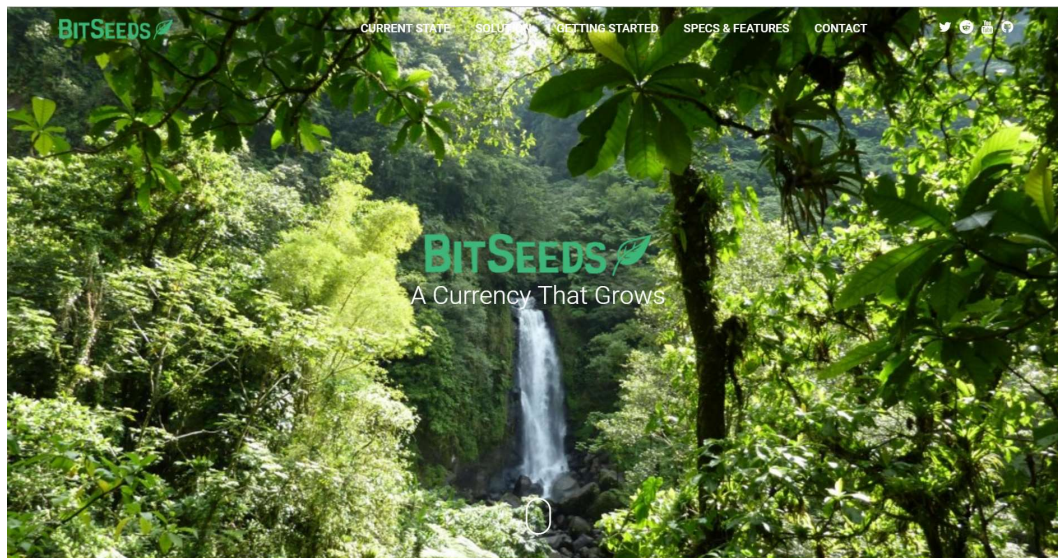


Figure 63b A waterfall in a healthy rain forest

Source: BitSeeds Website⁹²

The fact that the BitSeeds logo overlays these scenes suggests, moreover, that pursuing the advised course of action to buy and trade with BitSeeds will dispel the threat to life

⁹² The white oval icon positioned at the bottom centre of both images is the button that users click to scroll through to subsequent scenes.

conveyed by the bleak visuals and statistics and, in its stead, erect a shining Amazonian paradise signalling all is again as well as ever.⁹³

Linking the brand of currency to the regenerative potential of forests is not a representational strategy exclusive to the BitSeeds campaign. As the next section testifies, across the campaigns, this linkage confronts viewers as the result of a near-magical, albeit no less logical, conversion of trees into money, and money into trees.

Trees are gift currencies

Many companies exploit tree imagery to portray trees as various kinds of promotional, financial, and environmental currencies. As a result, money and trees discursively emerge as partners in tree rescue: both, it seems, are gifts, if only of differing names and substances, with the shared goal of stimulating and maintaining ecological and economic growth.

The promotional, financial, and environmental currency of trees

The symbolic entwining of trees and currencies is readily detectable in the choice of campaign names, logos, and tag lines. Names such as *Carboncoin*, *Eco Coin*, *Leafcoin*, and *Treeshare* suggest a synergistic union of environment and economy, conjoining financial terminology, either ‘coin’ or ‘share’, with an environmental signifier, i.e. ‘carbon’, ‘eco’, ‘leaf’, and ‘tree’. Other names, including *Grow-Trees*, *Sustain:Green*, and *Tree Greetings* (including its parent brand, *Your True Nature*), give the impression that purchases and donations are cultivating a lasting (e.g. ‘sustain’) and authentic (e.g. ‘true’) offering to the earth, an impression that the currencies’ association with gifting bolsters, as I elaborate shortly. Figures 64a-f display some of the iconography at work in cementing this impression.

⁹³ This discourse of magical transformation is reminiscent of the discourse of turning deserts into forests discussed in Chapter 5. While similar to the latter, the current discourse is additionally and particularly insightful from the view of trees as currencies, that is, in terms of the transformation having a magical *value*, not only effect, as is the emphasis in the previous chapter (see pp.215-17).

Cryptocurrency Examples



Figure 64a Leafcoin symbol

Source: Leafcoin Facebook Wall



Figure 64b Treeshare symbol

Source: Treeshare Website

E-Card Examples



Figure 64c Grow-Trees logo

Source: Grow-Trees Website



Figure 64d TreeGreetings logo

Source: TreeGreetings Website, Press Pack (Nov/2007)

Credit Card Example



Figure 64e Sustain:Green symbol

Source: Sustain:Green Website

Donation Example



Figure 64f Mokugift symbol

Source: Mokugift Twitter profile

Whereas each campaign advances a distinct tree-planting agenda, and so, the various logos carry meanings specific to that agenda, the logos share a commonality in how they picture the tree and plant, as if, namely, to communicate that the latter are in service to a cause greater than planting trees. Leafcoin's leaf (Figure 64a) and Treeshare's tree (Figure 64b) are colourfully engraved on a coin, which is the ultimate object of portrayal. Outstretched with limbs raised, Grow-Trees's trees delight and feel empowered in offsetting (Figure 64c), while Your True Nature's Tree Greetings enterprise grows trees

for e-messaging (Figure 64d). Sustain:Green's leaf keeps wallets stashed with eco-friendly cash (Figure 64e). And Mokugift wraps trees to offer as presents, as the ribbon appearing to take hold of the very roots of the tree, tying them into a bow (Figure 64f).

In each case, both the implied cause and trees grow together. Consider the BitSeeds motto, shown earlier (Figures 63a, b): 'A Currency That Grows'. The verb *grow* doubles here, conjoining organic growth with the growth of financial capital. Read in conjunction with the other logos, the green hues of the logo appear to symbolise signs of "green" growth in this twinned sense of eco-friendly economic growth and naturally green tree growth. The variety of distinct shades of green affirms the rightful place of the campaigns in advancing a truly green cause while it multiplies the campaigns' green merits. The vivid colours and gross shapes of the logos also appear patently artificial. For instance, the tops of the two monocoloured trees in Mokugift's logo take more after cheerleading pom-poms, twin shrubs, or heads of crimped human hair than they do densely filled tree crowns (Figure 64f). In its unsophistication, this aesthetic appearance is, in a certain sense, apt for conveying the campaigns' intentions as straightforward, that is, lacking any intention to dissimulate or smarten. From this roughly cut sense of tree growth as the blooming gift of a one-dollar donation, one may feel the designers thought the aesthetic outcome was hardly worth the creative time and design labour. Interestingly, a lack of time and effort required to participate in gifting is exactly what Mokugift promises, as noted in *Opportunities and costs*, p.248). By the same token, not setting aside time to curate a more attractive aesthetic could mean the campaigns are busy engaged in the "real" work of planting. Echoing this impression, the campaigns fashion trees as gifts that require no effort to prepare for sale, as I discuss shortly in *Gifting legacies of care and growth*. As a result of this depiction, the process of transforming trees into marketable gift currencies becomes less conceivable through the limited artistry and matter-of-factness of the aesthetic choices. As if alchemically, trees become currencies, which usher forth a wondrous world of fantastic greenery.

The example of Leafcoin supplies multifaceted insight into the possible elements of such alchemy. The pair of photos that follows illustrates a transition from I would call setting the mood to setting the agenda.



Figure 65a Fantasy forest

Source: Leafcoin, Facebook cover photo (Dec/2016)

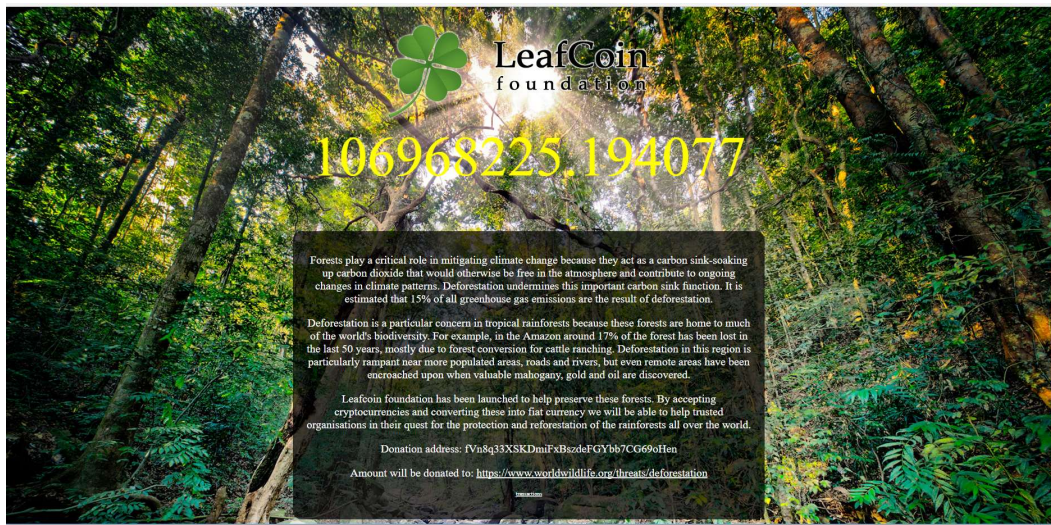


Figure 65b Leafcoin promotion

Source: Leafcoin Website

Enlarged view of text box:

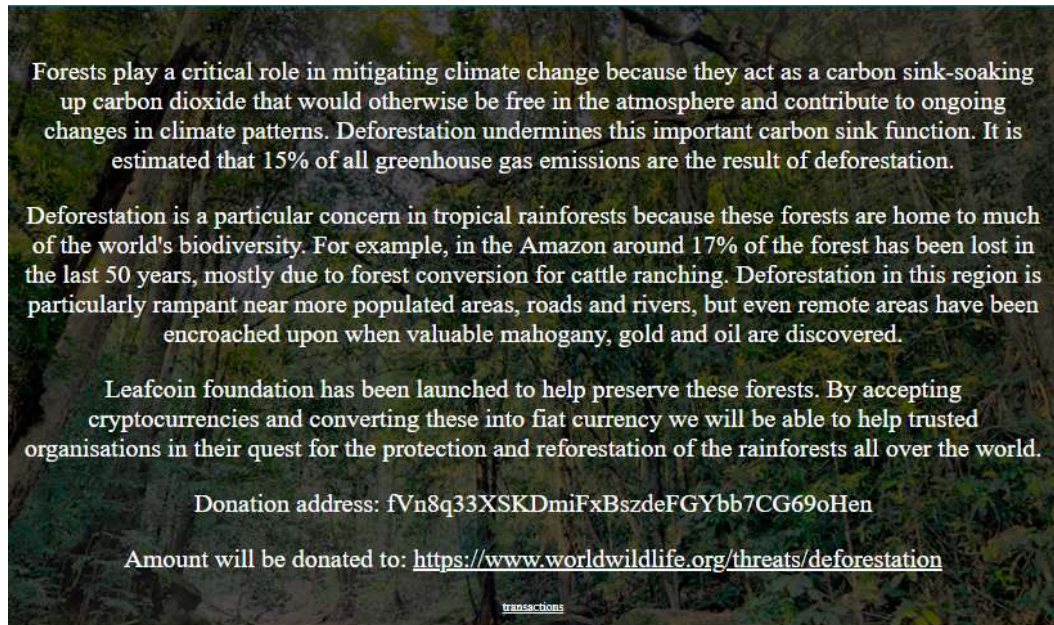


Figure 65a captures the initial phase of promoting Leafcoin purchase and exchange, which I am calling setting the mood. Trees serve here as a kind of promotional currency to garner interest in Leafcoin. A magical mood sets upon the trees, in part through the gleaming ray, originating in the distance, beamed from the sky as if ordained by the heavens. One can detect in this lighting effect an emotional message as well, congruent with the saying that there is ‘a sparkle in one’s eye’ when one feels buoyant, joyful, or unusually interested. Such an interpretation could very well fit with the sense that the powers above are smiling down on and blessing this union of digital silver and tree capital. The magic is also fabled into the photograph with popular cultural associations. The idyllic glow of the yellow, green, white, and brown ensnares one’s imagination of place, coaxing viewers to believe they are in The Shire in *Lord of the Rings* or amidst the jubilant lime green that carpets the rolling hills of another pastoral countryside.⁹⁴


In a move analogous to BitSeeds’s self-promotion against the backdrop of a rain forest, Leafcoin retains the scenery in Figure 65a as an underlay for setting its agenda, as it broadcasts its official vision to prospective Leafcoin traders (Figure 65b). The four-leaf clover stands in for the rarity of good fortune, and by associative extension, Leafcoin. Extending this symbolism, Figure 65b testifies that Leafcoin generates currency of an

⁹⁴ Such as in New Zealand, where ‘The Shire’ was set in the *Lord of the Rings* films: <http://www.hobbitontours.com>, last accessed February 2017.

exceptionally fortunate and uncommon nature. The green silver of the Leafcoin (Figure 64a, p.258) thus assumes, in this vein, a special meaning as a green silver currency fantastically generated,⁹⁵ which can be mined through the enterprise and correspondingly, in the landscape, as Leafcoin sets its Twitter location to ‘All around, in nature’ (Leafcoin, Twitter profile).

The magical linking of trees and money in turn underpins the idea that both are green gifts. For example, Grow-Trees markets ‘The Grove’ as its ‘latest product’ and ‘green gift’ (Grow-Trees Website, *About Groves*). Reinforcing the suggestive link between trees and financial products, Grow-Trees represents trees as bank deposits, writing: ‘Plant now, “bank” your tree, & dedicate them’ (Grow-Trees Website, *Reasons to Plant*). The image of Grow-Trees as a financial institution, outfitted with stately pillars (Figure 66) communicating the qualities of strength, stability, and endurance (Schroeder 2015, 288), serves as the visual seal branding yet another photo of a luminous forest. Notice how the light shoots down into the centre of the image, setting ablaze the frame of the seal, activating its authority as a steward of, one presumes, the surrounding forest.

⁹⁵ I return to the theme of fantastical generation later in the chapter, elaborating on it in *Trees are inputs in digital labour* (see pp.274–75).

 **Grow-Trees.com** April 27, 2016 · 🌍

What is a Grow-Trees TreeBank account?

Grow-Trees.com allows you to plant trees now or every month and store in your TreeBank account. You can then dedicate one or more of these trees with eTreeCertificates (like a Greeting Card) at Diwali/New Year or any occasion of your choice!

Why TreeBank? Benefits include avoiding to fill up transaction details each time, you can open a TreeBank account and plant at a time as many trees as you wish. The TreeBank also allows you the convenience to plant at one time for delivering different messages to different people for different occasions in the future, and your messages will be delivered by email on the due dates, with no risk of forgetting those special occasions!

Bank Trees now, Dedicate later! Plant real trees and greet friends after registering @ <https://www.grow-trees.com/register.php>

#GrowTrees #Trees #TreeBank #PlantTreesNow

Image via Nova



Figure 66 Tree Bank promotion

Source: Grow-Trees, Facebook

Although light peeks strategically into this background photo as it did in the photo used by Leafcoin (Figure 65a), the differences in the two photos direct attention to the distinct messages the respective campaigns appear to be communicating about trees as eco-ethical currencies. Leafcoin's image is set in what one may assume is a pre-existing forest: the trees, though practically homogeneous in appearance and height, still occasionally lean at

undisciplined angles over rocks or against each other and are planted in an area that would seem problematic for harvesting timber.

Compare this scene with the backdrop of the *Tree Bank* promotion (Figure 66), where one finds trees like skinny poles, as if they were the rods of streetlamps painted to resemble bark. These poles stand amidst a sylvan terrain that seems out of place somehow, as it cups the bottoms of trunks that appear surgically placed. A different conjuring of arboreal currencies thus occurs in this scene. The magic does not reside in the landscape, awaiting discovery, but emerges through the conversion of trees into money. As Sullivan writes of a brochure marketing international PES, one might say that Figure 66 ‘conveys the alchemical optimism of attaching financial signs to measures of ecological health: money will, it seems, grow on trees’ (Sullivan 2010, 117).⁹⁶ As the constitutive components of a bank promising a future of wealth, trees become the ‘repositories of hopes, dreams, and anxieties’ of the human patron (Schroeder 2015, 288). The trees become, by extension, ciphers for the goals of monetary investment. Notice how the graphical menu for e-certificate options (Figure 67) suggests, the grove is a standing reserve for honouring a special occasion. The growth of leaves atop and around, encircling and colouring the icons representing each occasion, proclaims the grove as existing for human use.

⁹⁶ The relevant image from the brochure can also be viewed at http://www.unep.ch/etb/areas/pdf/IPES_IUCNbrochure.pdf, last accessed March 2017.

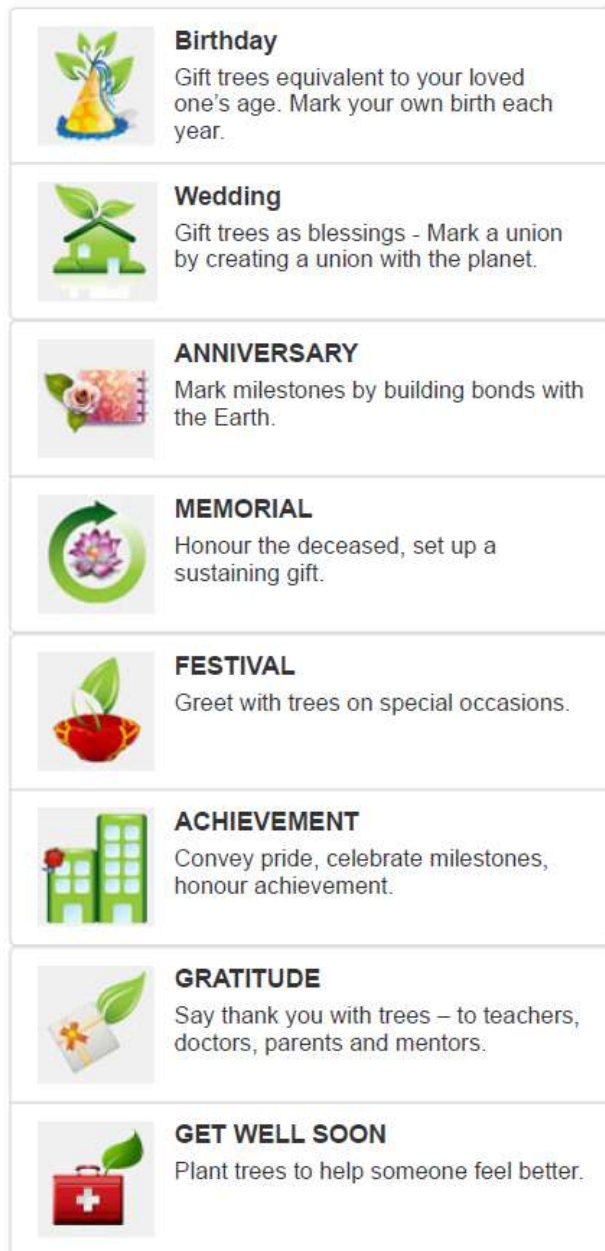


Figure 67 Grove menu

Source: Grow-Trees Website, About Grove

The stacked rectangular array of choices can be likened to a virtual version of a vending machine: all one need do is insert currency (cards or cash) and press a button.

Whereas such conversions between trees and money are obvious in this campaign, the transactional mindset is subdued in others, which imagine trees as not the stuff of profit, but the substance of miracles. For instance, browsing Your True Nature's inventory of e-cards, one notices they are ordered by nonhuman creatures instead of by

occasion. The cards begin ‘Advice from a ____’, with the blank featuring the common name of a nonhuman animal or a plant,⁹⁷ imparting the sense that one is literally purchasing nature’s wisdom. The most conspicuous aspect of the shopping experience is the musical tone that sounds upon loading a preview of an e-card. The tone is a jingle redolent of Christmas celebrations: the sound of pixie dust—perhaps Tinkerbell’s from the Disney classic *Peter Pan*—being sprinkled into the air, preparing the listener to be awed by one of many miracles that occur in a Hallmark holiday television special.⁹⁸ Set within a fairy tale e-shopping experience, the prospect of purchasing an eTreeGreeting stands to make the impossible, possible, all through caring enough to purchase a gift that grows. TreeGreetings calls out to potential e-greeters: ‘Thousands of trees growing in tree nurseries in El Salvador, Guatemala, and the United States are eagerly awaiting the good news that they will grow in celebration of your birthday, anniversary, holiday, a new birth, wedding or other special occasion’ (TreeGreetings Website, *Tour Planting Sites*).⁹⁹ As I discuss next, the tree’s service to human beings for any number of reasons aligns with a twofold stipulation of trees as gifts that resounds through the campaigns. Namely, trees grow with human care, and as trees grow, their ability to care for the earth and humans grows. In this way, the campaigns package the language of growth in the language of care.

Gifts legacies of care and growth

The dominant use of the word *gift* within the campaigns is in the sense of ‘tree gift’. *Mokugift*, which translates from Japanese to ‘tree gift’ (“Site 5 and Mokugift Combined to Help Reforestation” 2009), captures this sense, while alluding to the centrality of the notion of gifting in differentiating e-certificates, e-cards, donations, and even currency exchange from what are otherwise purchases or trades. The campaigns distinguish between these two senses of money by associating the tree gift with giving back rather than with consumption. Notice how the endorsement retweeted by Grow-

⁹⁷ According to owner and founder Ilan Shamir, the e-greetings business was inspired by his first poem, ‘Advice from a Tree’ (Your True Nature Website).

⁹⁸ The tone sounds like the first seconds of the song “Pathways to Heaven” by Philip Chapman from the album *Heavenly Realms*, which can be streamed on YouTube: <https://www.youtube.com/watch?v=FZvBOPVKsqE>, last accessed April 2018.

⁹⁹ This statement is confusing, implying as it does that trees have already been gifted because they are clearly growing. If trees are waiting to grow, then they would not yet have been gifted and thus planted.

Trees aligns caring for the earth with a life-giving, as opposed to a life-consuming, gift: ‘Pl gift trees instead of lifeless stuff’ (Twitter, 28/Feb/2012).¹⁰⁰ In this endorsement, a contrast ensues between tree gifts and other, manufactured (i.e. non-living) gifts: the insinuation is that commodity gifts lack vitality and pertinent value in this context, whereas Grow-Trees’s social enterprise advertises a highly valuable ‘living and breathing gift that lives for several decades and significantly benefits the planet’ (Grow-Trees Website, *Reasons to Plant – Gift and Greet*).

Your True Nature/TreeGreetings founder Ilan Shamir’s recollection of a ‘tree-gift’ he received as a youth illustrates the narrative strategies that script trees as such gifts, highlighting the symbolic function of the latter in a wider web of ecological and cultural signification. When Your True Nature’s website features the exclamation ‘What a wonderful gift for you AND the earth!’ to promote the e-certificate scheme, Shamir divulges the inspiration of the scheme in a blog post: ‘I am reminiscing about the first tree-gift I received years ago. It was a young magnolia sapling given to me as a birthday present and it brought me years and years of joy’ (TreeGreetings Blog, 29/May/2008). Shamir’s sentiments resonate with his insistence that consumers ‘would also be giving someone a WONDERFUL AND LASTING gift’ (Facebook, 18/Dec/2013). Shamir explains that his long-standing passion for caring for trees took root in his experience of caring for his magnolia tree (Your True Nature Website, *FAQs*). It is not only affective ties with a sponsored tree gift that endure and delight, but equally, what the tree becomes. Within an overview of its tree planting operations, Your True Nature describes the evergreen trees it plants: ‘Deep green and keeping their foliage all year, the fragrance of these trees brings memories of life and celebration’ (Your True Nature Website, *Tour Planting Sites*). This description suggests that trees grow into the gifts that they are—gifts of life, aesthetic pleasure, and remembrance.

The growth element in this suggestion concords with the favoured construal of currency as expanding in volume or wealth. At the same time, trees are cultural, community, or family legacies, which not only grow over time, but grow stronger and more established. Thus is prosperity linked with posterity. Because money moreover gifts trees, the implication is that trees and monies can function interchangeably as mediums of care, both environmental and economic in kind. In discussing the final set of discourses, I turn attention to the tipping point of this alleged interchangeability. I focus on the

¹⁰⁰ In mobile and social media messaging, ‘pl’ is common shorthand for ‘please’.

implicit, inadvertent, and blatant imputation of agency and labour to digital technology that attests to the capability of mere money to grow trees. I discuss the implications of this mystification for promoting ethical responsibility in light of representations of trees and distributed stewardship that allude to the possibility, and necessity, of a less “cryptic” method of caring.

The digital orchestration of ecological labour and responsibility

In 1652, the British crown granted Massachusetts permission to mint shillings. The shillings subsequently circulated throughout other New England colonies, becoming a standard of exchange. The faces of the coins featured at first a willow, then an oak, and finally a pine (Safford 1983). Some scholars maintain that the emblem of the tree was chosen to maintain civil relations between the American colonies and Great Britain (Akin, Bard, and Akin 2016, 53). This explanation does not adequately explain why a tree, however, was uniquely able to ensure political neutrality. Interestingly, pine trees were used as exports for ship masts and thus constituted a source of income (“Massachusetts Pine Tree Shilling,” n.d.). In at least the case of the pine tree, then, the coins recall an important source of the colonies’ income.

As I reflect on this historical titbit, the choice of the tree, whether an indication of primarily political or economic circumstances, seems nevertheless to constitute a token of collective memory and place-based identity. For the shillings refer to the situation of the New England colonies in its political, economic, even environmental dimensions, given the selection of tree species native to the region. By contrast, digital monies obscure the embeddedness of trees in their referring environments. This obfuscation of the living place of trees occurs especially through the figuration of digital technology as the supreme motor of stewardship and monetisation, as I show next. I discuss the implications of thus vesting this ethical and financial power in technology for learning to appreciate trees as other than digitised units of financial exchange.

Trees are inputs in digital labour

‘Arise trees, arise! Donated a LTC’, writes a Litecoin user in an online forum (23/Jan/2014).¹⁰¹ The user’s light-hearted, expectant exclamation captures the glittering enthusiasm expressed by backers of digital currency generation. In this case, the user is

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https://www.reddit.com/r/litecoin/comments/1vyuvl/100000_tree_project_fundraiser_with_edden_projects/, last accessed July 2018.

commenting on the news of Litecoin's successful partnership with Eden Reforestation Projects in 2014 to plant 100,000 trees in Madagascar. Litecoin, so named because it promises speedier and more efficient transactions compared with Bitcoin, construes its fundraising success as the natural by-product of technical automation. As Figure 68 implies, the most recent chapter in the symbolism of the money tree features trees as the fruits of technical labour.



Figure 68 Promotional tweet

Source: Treeshare, Twitter

At first glance, Twitter serves here as a promotional medium, appropriated to draw attention to the digital nuts and bolts of the currency software. Social media like Twitter also function, though, as media for planting. Campaigns liberally use Facebook and Twitter to support the notion that ‘planting is a cinch’ (Mokugift Website). A key strategy involves sharing social media content to either earn the satisfied feeling of having planted a tree by proxy (e.g. ‘Retweet this post & we’ll plant a #tree for you!’), Grow-Trees, Facebook, 15/Aug/2013) or a consumer prize. The latter particularly applies here to cryptocurrencies. Carboncoin’s request to followers to retweet a video promoting the company highlights how social media triple as promotional, financial, and moral media: ‘Retweet ow.ly/CkFBZ and like us facebook.com/carboncoin for a chance to win £50 worth of #Carboncoin this month. #PeoplesClimate’ (Twitter, 6/Oct/2014). In referring to

a collective mission, the final hashtag softens the promotional bent of the tweet, punctuating the pitch in a way that recodes the incentive as devised principally to take forward the company's ecopolitical mission. Digital technology is, by extension, serving a mission to help the environment.

The campaigns see this technological productivity as, interestingly, not only an attribute of money itself, as the first set of discourses explored. For it also stands for a transparent reflection of the user base's moral aptitude. Notice how the following excerpt from an online news article effuses at Litecoin users' accomplishment with Eden Reforestation Projects:

If You believe that cryptocurrency users are geeks and nerds living online, missing out the reality and being unable to answer the plain question about the season outside their lair – be ready to suffer a shock as it is not true. For example, Litecoin users are bothered by global environmental problems and were able to raise 10000 [US] dollars to provide [*sic*] solution to a vital problem of Madagascar.

(Bookchin 2014)

In *Embrace and marketisation*, I used the BitSeeds initiative to underscore the temporary nature of any such 'solution' afforded by fundraising (see p.245). Here I find noteworthy how the excerpt characterises users as possessing a commendable environmental attitude, which they can furthermore display through their monetary contribution. One might infer, therefore, that users are the agents of care, or at least, that their caring matters. That inference, however, would be only superficially accurate. The idea that trees will somehow 'arise' from the soil of Litecoin activity, for instance, resolves ecologically productive labour into digitally mediated transactability. The example of Sustain:Green provides a more detailed view of this resolution of ecological labour into digital exchange.

Sustain:Green's credit card does not simply assume the role of environmental steward, as the slogan 'safeguarding trees with your credit card' (Sustain:Green, Twitter, 14/Jul/2015) implies. It *is* an ecological actor. The characteristic of biodegradability distinguishes Sustain:Green from other, plastic credit cards, which lack this eco-friendly attribute that serves to facilitate the ecological cycle. Credit is a bioengineered fertilizer: 'LET'S GIVE MOTHER NATURE SOME CREDIT' (Sustain:Green Website). Sustain:Green cards grow trees; they do not merely make trees worthy of growth, which would be set in motion through spending. Whereas the card's composition yields a

promotional advantage, the rhetorical effort to obscure the qualitative difference between biomass (for soil fertilisation) and credit card mass, amounts to an ecological claim. The positioning of the credit card amidst vegetation (Figure 69) would suggest an amicable relationship with greenery, which appears to be playfully swaddling it.



Figure 69 Sustain:Green card encased by vegetation

Source: Wilkinson (2015)

It could be argued, further, that digital monetary instruments live up to their eco-ethical reputation to the extent they grow trees and/or fulfil the ecological functions ordinarily performed by trees. With respect to the latter, Sustain:Green boasts: ‘Our biodegradable MasterCard shrinks carbon footprints and preserves rainforests’ (Sustain:Green, Instagram profile). Evidencing the former, Figure 70 (next page) shows a human hand in the front left planting an acorn. Nonetheless, it is the dollar that sets this planting into motion by “growing” from the earth. Thus, the digital remediation of money also benefits human productivity. As an online article describing a socioeconomic effect of Litecoin’s joint campaign with Eden Reforestation Projects begins: ‘Virtual currencies . . . are now producing jobs in Madagascar’ (Moran 2014).



Figure 70 Sowing seeds of money

Source: One Tree Planted Website

Represented as the doer of ecological deeds and the bestower of labour opportunities, digital technology seems to take care of the work that life, both human and tree, does to enable digital transactions. It is trees, after all, that labour to generate financial capital, and humans who labour to encode technical protocols and software, as well as plant and tend to the trees. Here, of course, humans cannot be singled out: they work alongside pollinating insects and agents such as wind, sunlight, rain, climate, microorganisms, fungi, ants, and a variety of nonhuman forces blotted out by the campaigns. The campaigns turn this distribution of labour on its head, as if money could beget trees, and as if economic viability is not beholden to ‘the finite earth’s natural life-support system’ (Noonan 2010, 109). The two implicated factors of price and technology suggest a formula of ecological labour in which trees are mechanical inputs in a digitised protocol. This mechanised expression of trees’ value is what enthused supporters of digital planting might well esteem. As Don and Alex Tapscott argue in the case of blockchains, the technology could manage ‘virtually everything of value and importance to humankind’ that ‘can be expressed in code’ (Tapscott and Tapscott 2016, 7).

Consider, though, how the reduction of user contributions to a price, renders the source of ecological labour irrelevant. It is only the price equivalent of this labour, in effect trees’ ecosystem services, that matters. Thus can the complexity of labour reduce to a numerical unit to facilitate anonymous exchange. Marx argues that the capitalist system produces money by transmuting sensuous matter into abstract exchange-value (Marx 1887, 1:63). Ever more money materialises—from money, through ‘the alienation of

labour' (Neary and Taylor 1998, 115). That is, labour-power, i.e. 'the capacity to labour' (ibid.), or living labour, becomes increasingly subordinated to the process of accumulating capital for its own sake. Because the products of labour are priced to enable their market exchange, it is in money that all entities designated tradeable, including saplings and seeds, express their value (Marx 1887, 1:63). In thus concealing the source of entities' value, which is living labour, not market pricing mechanisms or currency, money appears magical to the degree it is severed from its origins of production and the chain of equivalences that inform its valuation (Neary and Taylor 1998, 115). As the infrastructure for valuing and promoting monetary contributions, digital technology crucially mediates 'the magic of money' (ibid., 64), influencing whether and how the mystification of ecological labour becomes possible. This mediation prompts the question of whether digital media are simply enabling trees 'to be entrained within new circuits of monetised exchange' (Sullivan 2013a, 200), or if they are remediating human-tree relations toward other-than-financialised futures.

The next section pursues this curiosity, discussing how the promotion of trees as good involves important representational choices, which pertain, in particular, to the rendering of trees as relatable, despite appearing to be swiftly transactable. I then discuss the (dis)embedding manoeuvres that build upon these choices, and the implications for fostering ecological responsibility and caring across spaces.

The good(s) of trees: between resourcism and humanism

The manner in which the campaigns admit trees into discourses of digital money for good suggests particular possibilities for human-tree relations. If trees are, as the previous discourse maintains, merely inputs in a process of technical fabrication, then they are primed to serve as resources for human consumption. The campaigns do not, in fact, shy away from word choice that remakes trees into a 'service-providing entity' (Sullivan 2013a, 205). Most commonly, this phrase refers to carbon sequestration (e.g. 'kilos of carbon' absorbed, Grow-Trees Website, *FAQs*) and oxygen. Phrasing such as 'valuable oxygen' (Sustain:Green Blog, 22/Apr/2015) is doubly meaningful, indicating at once the financial value of the volume of trees' emission of oxygen and the life-giving value of 'oxygen producing trees' (Grow-Trees Website). Through the life of trees, as it were, the language of resourcism becomes an accomplice to the language of consumption, which in effect renders humans themselves little more than consumers, who, for example, '[consume] about 386 lb of oxygen per year' (ibid.).

Noticeably, the word *resource* itself does not appear in this context as much as statements of goodness (e.g. ‘unequivocally good’, Carboncoin, Facebook, 16/Jul/2016). This lexical substitution affords rhetorical evasion, as thinking in terms of trees’ goodness does not obviously instrumentalise trees. But categorising tree planting as one of ‘the most obvious’ activities that are ‘most beneficial for our environment’ (“Carboncoin-a Very Brief Introduction” 2016), as evidenced by trees’ manifold life-protective functions, encourages a lazy regard for trees. Expressing care for trees in a consequentialist register withdraws the possibility of caring more dynamically and attentively. There is an end, and a future, for which trees will prove their worth as deserving of care. Circumscribing the value of trees within particular expectations of ecological performance, also marginalises consideration of trees as other than instrumentalised life. In a rare upset of this valuation, one TreeGreetings customer writes, ‘I am teaching my grandchildren that trees are our friends – thank you for growing friends for the future’ (TreeGreetings Website, *Media and Customer Comments*). The infrequent appearance of such statements in the campaigns suggests an opportunity for re-examining the conceptual and perceptual lenses through which the campaigns celebrate trees as currencies of life. An instructive example is Grow-Trees’s social media coverage of Indian artist-activist Kisalay Vora. Vora’s work raises the crucial issue of agency, and how the campaigns inevitably participate in redefining trees as either actors or mere inputs in environmentalism.

Vora constructs sculptures with trees or tree parts with the aim of moving fellow humans to appreciate the importance of trees for Indian cities. Through the Grow-Trees campaign, one learns of two of Vora’s projects, in which bandages and red paint were applied to tree limbs (see Facebook post in Figure 71a, with comments in 71b) and loose trunks were dressed and arranged to mirror the presentation of soldiers slain in battle (Figure 71c).



Grow-Trees.com added 6 new photos.

May 23, 2018 · ©

The HEAL Project by Artist Kisalay Vora

He along with his team went around bandaging trees branches in Mumbai, India and says, "the only way to bring the situation to the notice of the common man, is to communicate it to him in a way that he is familiar with...human expressions of pain. The bandages symbolise healing of the pain mother nature feels at our taking her for granted."

He wants to bring to light the apathy of the authorities and the public at large towards the sorry state of one of our city's silent warriors... Our Trees!

Save Trees & Plant Trees Today! You too can help mother nature by planting trees and greeting friends with an eTreeCertificate @ www.grow-trees.com

#GrowTrees #Trees #TreeArt #HEALProject #Mumbai #UrbanTree



Figure 71a *The HEAL Project* (2016)

Source: Grow-Trees, Facebook



Figure 71b Replies to post in Figure 71a

Source: Grow-Trees, Facebook



Figure 71c Vora, preparing *Murdered by 'Civilization'* (2015)

Source: Grow-Trees Blog (30/Jun/2016)

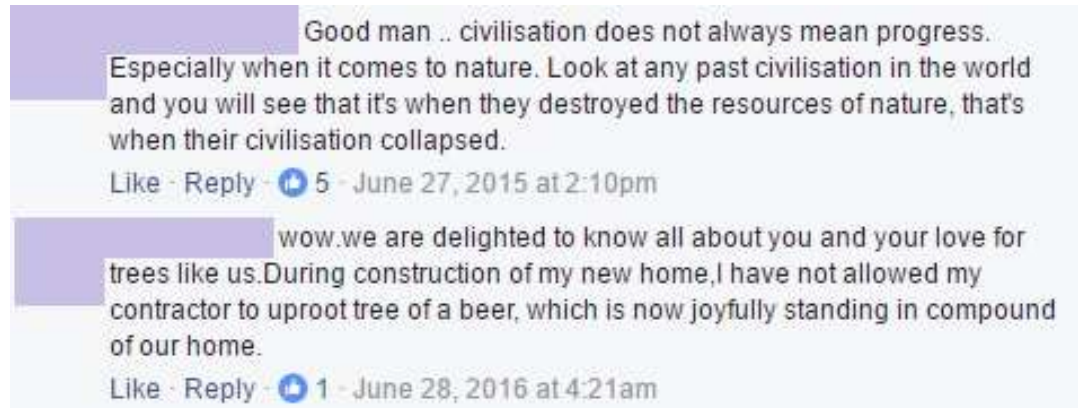


Figure 71d Two representative replies to Grow-Trees's feature of *Murdered by 'Civilization'*¹⁰²

Source: Grow-Trees, Facebook

The Facebook post reveals Vora's intention to humanise trees to restore to visibility the fact that trees are living beings. This gesture of humanisation, which could be slighted as anthropomorphising, has appeared in other artists' and writers' works in the recent past. For example, with the goal of reaching a wide public and questioning the widely taught maxim that plants are living yet mere objects, Peter Wohlleben's *Hidden Life of Trees* distils scientific findings of tree communication and responses to ecological conditions that suggest sentience, and he often speaks of trees as humans (Wohlleben 2015, 241–45). Seeing as Wohlleben is a former forester (ibid., xiii), his account may compel the reader accustomed to thinking in terms of the quality of cuts and the readiness for market, toward a more empathetic perspective of trees as living beings. As he writes: 'When you know that trees experience pain and have memories and that tree parents live together with their children, then you can no longer just chop them down and disrupt their lives with large machines' (ibid., xiv).

In a creative context, the artist Yeka Haski has taken on the issue of illegal logging in a province within Leningrad, Russia, in her project *Tree Ossobuko*, of which images are available on her website.¹⁰³ Glossing the ends of logs with the red and pink hues of marrow, Haski's art activism frames the murder of nonhumans as a homicide of fellow humans. Her efforts effectively problematise the common indifference to trees

¹⁰² Other comments likewise express congratulatory remarks and praise for Vora.

¹⁰³ <http://yekahaski.com/Tree-ossobuko>, last accessed March 2017.

because, evidently, their limbs do not register the marks of pain that humans are used to looking for, such as streaming blood and audible wails of pain.

Finally, in a literary context, one notable passage occurs as the main character of Ben Okri's *Famished Road* encounters a clearing in the forest: 'The clearing was the beginning of an expressway. Building companies had levelled the trees. In places the earth was red. We passed a tree that had been felled. Red liquid dripped from its stump as if the tree had been a murdered giant whose blood wouldn't stop flowing' (Okri 1991, 10). The tale of forest conversion into automobile highways may be familiar to many individuals who grew up during the twentieth century, though the story still has resonance today as commercial and real estate developments vie for further land. The oozing red from a tree stump, the red shine of the earth, are simple, but screaming reminders of the lives who must die to feed the elective expansion of human industry.

Assigning demerits of anthropomorphism to these works would neglect the context in which these works may appropriately shift audiences' perspectives. Such works may be apposite reactions to the normative construal of trees in money valuation frameworks as less than human, and thus, less than deserving of the kind of care and consideration that would be a prerequisite for fostering ethical interpersonal relations between humans. As such, these works may be better thought of as supporting 'critical' anthropomorphic perspectives. Alexa Weik von Mossner writes that some degree of anthropomorphism may be inevitable in the narration of human stories that engage humans in the lives of nonhumans. Thus, she suggests that ecocritically, 'of interest' is the reason that such narrations prompt care and whether this caring includes 'ethical and moral dimensions' (Weik von Mossner 2017, 107). In contrast to the 'anthropomorphic fantasies of Disney animation' (ibid.) discussed in the previous chapter with reference to cuteness, 'critical anthropomorphism' is a 'self-reflective version' of anthropomorphism (ibid., 113). The narrator admits their 'inevitable anthropocentric bias' while earnestly imagining how the other may be experiencing in a way that humans could relate with, or even better, learn to understand anew (ibid.).

Critical anthropomorphism is a concept conceived by ethologists, but I would suggest it can be fruitfully applied to human accounts of plant others, too. Commenting on the French author and political figure François-René de Chateaubriand's self-documented interactions with trees spanning the late eighteenth and early nineteenth centuries, Giulia Pacini notes how Chateaubriand refers to trees as 'unique and beloved individuals', love for whom he 'expressed in terms of the plants' needs', as opposed to

‘their use value to him’ (Pacini 2016, 188). While, Pacini considers, Chateaubriand ‘may certainly have domesticated and anthropomorphized’ his trees in calling them ‘his friends and “children”, or when he imagined the possibility of their reacting sympathetically to this presence’, Chateaubriand ‘also naturalized himself by imagining his own life in arboreal terms’ (ibid., 189).

This two-way projection of similarities accomplishes an imaginative and reflexive feat different from what the works above attempt; in this respect, it is suggestive of the possibility of experimenting further with a critical anthropomorphic representation of tree life toward encouraging appreciation of the limits of human understanding of trees, while highlighting how that understanding may register in the human psyche in terms of empathising with the other. For the present purposes, I am interested more immediately in the underlying transformative features shared by Chateaubriand’s writings, as interpreted by Pacini, and the works described above, along with Vora’s artistic interpretation of human-caused harm of trees. These various representational interventions in human regard for trees exhibit an unconventional manner of perception that moves the human to take notice of the tree as an ecological relative. They offer inroads to unsettling the taken-for-grantedness of the tree as unaffected by humans’ ethical practices.

In line with this strategic representational approach, Vora hopes the staging of his work in Aarey, popularly called the ‘green lungs’ of India’s capital city of Mumbai (Chatterjee 2015), will spur a nationwide movement protesting development at the expense of environmental conservation (*Afternoon Despatch & Courier* 2016). I would stress that the characterisation of ‘green lungs’ that otherwise permeates technocratic discourses of tree planting serves here a somewhat different strategic aim. Here, this characterisation is motivated by local desperation to preserve a place (Aarey, their home) that residents feel is at risk of appropriation by a large city seeking to fulfil resource requirements. This attempted bridging of local and trans-local contexts of conservation and development suggests, furthermore, a more human scale of caring that refrains from conflating distinct contexts. In this way, the choice between genericising trees as exchangeable resources and humanising them, pivots around the issue of how different places, and their different trees, matter. The conviction, for example, that ‘you can never grow too much [*sic*] forests’ (Treeshare Website) or that, in spite of rising temperatures and changing climates, ‘the more trees we plant the better’ (Carboncoin, Twitter, 4/Nov/2014), blindly embraces trees as good for addressing all environmental problems. In the next section, I show why this embrace is founded upon a problematic

understanding of trees as identical in value. Although this understanding may inspire a sense of concern for an abstract conceptual entity, such as ‘the planet’ or ‘the environment’, it will undermine a thick appreciation of the web of ecological relationships that would lend any such abstraction a substantive basis.

Caring for the capital of the global environment

In acclaiming the goodness of trees, mentions of ‘our environment’ affirm a more-than-human matrix of life. For instance, Grow-Trees states that its ‘objective is to benefit people, insects, birds and animals’ (Grow-Trees Website), while Your True Nature imbues this objective with a sense of a community in relation: ‘Imagine your tree or trees growing in the warm sun, nurtured by rain and bringing shade, oxygen, fruit, color, and homes for birds or animals to make this a better world for all of us’ (TreeGreetings Website). Nevertheless, who or what belongs in this ecological matrix remains unclear. Whereas ‘We being The Planet’ (Carboncoin, Facebook, 29/Oct/2015) suggests an inclusive community of life, it can just as readily be a comfortable blank space in which differences do not require accounting for. A similarly ambivalent example is the statement ‘This is the only planet we have’, leading to the claim that therefore it is ‘imperative’ to ‘minimize’ and repair ‘damage’ (“Site 5 and Mokugift Combined to Help Reforestation” 2009, 5). This language could mean that humans are taking responsibility for the ecological harm they have caused. Just as well, it could mean that for humans to continue to claim some ownership of the planet, they must care for it better.

I believe the ambiguity concerning the membership of the ecological community refracts the terms of interrelating environmental and economic factors. Using the case of Carboncoin, which aspires to be ‘an environmental community’ (Carboncoin, Facebook, 20/Dec/2015), I will clarify what I mean by this refraction, including its geographical dimension. Carboncoin premises its mission on supplying ‘unlimited funding for biodiverse forestry’ (Facebook, 22/Jun/2015), based on an unidentified year-long study credited to Oxford University. The study purportedly concluded that if ‘money was no object’, then ‘the most pragmatic way to address the problem of greenhouse gases and climate change’ would be to plant ‘biodiverse forest on land which could not be used for anything else’ (Carboncoin Website, *Our Environmental Impact*). As noted in *Digital money is an ecopolitical force* (see p.241), for Carboncoin, money *is* an object, of moral, political, and environmental significance. The campaign’s perception of Carboncoins as only virtual objects stands at odds with the attempt to comprehend money as an

ecological force. This situation of (in)comprehension is made stranger by the fact that Carboncoins are supposed to also plant trees to offset the emissions that the currency generates through mining and transacting, for these offsets clearly constitute ecological effects of seemingly virtual currency. Whereas the campaigns may wish to mobilise users to give money to plant trees, I question the campaigns' celebration of planting as a virtual quotient, which seems to rally behind a hands-off, thoroughly quantified environmental response, unable to register the fact that digital transactions draw users into relationships with others. Prioritising numerical over qualitative difference as a source of valuation, leads to the treatment of distinct places as a lump ecological sum: 'Since climate change is a global problem, the location of the offsets are [*sic*] unimportant' (Sustain:Green Website, *Credit Card*). This approach 'enables carbon production as one thing (eg industrial emissions) in one location, to be "offset" against its storage in another, qualitatively different thing (eg tropical forests) in another location', rendering 'the earth as a carbon matrix in which all production and activity can be reduced to the concentration and profitable exchange of the chemical element carbon' (Sullivan 2013a, 201). The corollary conception 'of the "global environment"' is one that reinvents the earth 'as a sort of abstract global ledger' based upon the fungibility of beings and places (ibid., 202). The privileging of an 'instrumental 'global gaze'' (Bäckstrand and Lövbrand 2006, 63) as the point of reference for change, empowers visions of a world that release citizens from the call of relating to one other. For, in this view, 'nature is transformed into a tradable commodity and local people in the South are reduced to homogenous project participants' (ibid.).

Carboncoin's focus on 'planting biodiverse forestry' (Carboncoin Website, *Manifesto*) might appear, at first, to reintroduce distinction and a sense of the ecosystemic context of planting. By belabouring the value of the ensuing carbon offsets, however, its campaign capsizes the possibility of genuinely contending with qualitative differences. As Büscher and Fletcher explain in another context: 'Once a particular patch of forest, for instance, has been certified capable of providing a given quantity of carbon credits, these credits are then detached from direct connection with this forest and can be purchased by anyone anywhere for purposes of emissions offset and mitigation' (Büscher and Fletcher 2015, 287). In 'free[ing] capital from the limitations of investment in fixed resources' (ibid.), the marketisation of tree planting furthermore turns 'biodiversity' into a signifier not for the 'intricate ecological and social relationships' in which it is in fact 'embedded'

(McAfee 1999, 144), but for the probability of carbon emissions mitigation. It would seem, then, that it is capital, rather than the environment, for which care is being provisioned.

Attending to the intersection of local and global interests helps clarify this suggestion. An online news article in 2015 craftily foregrounds a local leader's perspective to represent the decision-making process of adopting REDD+ in Papua New Guinea. The leader, named Frank Nolwo, is quoted as realising, 'This is to save the life of the world' (*The Guardian* 2016). The writers of the article are careful to preface this quoted fragment of a probably lengthier conversation with how Nolwo was 'considering the [local] trees in a new light', as his 'mind filled not only with financial possibilities, but with the chance to contribute to a project of global importance' (ibid.). Bolstering this image chiselled from optimism, readers are also shown snippets of the awesome conserved surroundings amidst which REDD+ talks reportedly transpired, and the river that slowly, through no modern technological assistance, transported the leader from his home to the talks. This account of 'the incredible plan to make money grow on trees' articulates global problems in a localised register, and relocates local problems in the global sphere, with troubling ethical effects. This portrait, similarly to the earlier one of 'Alberto', seek to forge common environmental ground by marketing an ethics that promises a world to its subscriber (Neyland and Simakova 2009, 778, 781, 784): a world in which common ground requires dissolving the materiality of trees into tradeable currency. This currency is indifferent to the situation of the trees, as are the carbon markets that the circulation of currency constructs and maintains. As Sullivan pointedly puts it, the 'fallacy', in her view 'idiotic', 'at the heart of these proposals is that markets do not in and of themselves embody or produce moral behaviour. Markets do not care if rainforests fall . . .' (Sullivan 2010, 127).

The campaigns seem intent on disproving the grip of any such fallacy on their framework for making change. But their creation of new discursive worlds in which 'new #forestsforlife' (Carboncoin, Twitter, 26/Jan/2016) promise to '[make] the world a little better' (Leafcoin, Reddit forum, 24/May/2014), mistakes 'barriers' to addressing environmental change (Picker 2010) as barriers to smoothening geo-cultural differences. A final example from the Grow-Trees campaign helps illuminate the need to re-examine how such worlds propose caring across distinct cultural and socio-spatial contexts.

Grow-Trees is an Indian social enterprise, operating out of India, whose founders and employees are all Indian. The fan base on social media is, judging by names and

cultural references, predominantly Indian. Curiously, all the company's advertisements feature exclusively white individuals. Consider how this combination jars in the following advertisement for sending an e-card for Raksha Bandhan, an annual event when sisters tie a 'rakri', a small thread bracelet, on their brothers' wrists to signify protection, in return for which brothers give their sisters a token sum of money.



Figure 72 Gifting in honour of an Indian holiday
Source: Grow-Trees, Facebook (11/Aug/2016)

The choice of white models is confusing, given that Raksha Bandhan is a tradition specific to cultures of the Indian subcontinent. In this case, the photo also reflects nothing of the actual process, and the boy is of course too young to have any money to his name that he could give his sister.

If this approach to advertising reflects an attempt at amassing a more global following, then *global* means something exclusive here, i.e. non-Indian digital consumers. And yet, Grow-Trees only plants trees in India, and its projects are based either in village communities or sacred and protected conservation areas (Grow-Trees Website, *Projects*), where it has planted over two million trees with the promotional backing of international NGOs such as WWF, the UNEP, and corporate sponsorships from within and without the

country (Grow-Trees Website, *Corporate Supporters*). This representational rift between the target, affluent, white, middle-class audience of the advertisements and the poor, brown human (Figure 73) and barren land recipients indicates much more by way of the realities of learning to care about others at a distance, than does any claim to the ease of caring ‘with just a few clicks’ (Grow-Trees Website, *Vision*).



Figure 73 Sample photo of planting project beneficiaries

Source: Grow-Trees, Facebook (30/Aug/2016)

Are local Indians incapable of caring financially? Can they only care in ways that require them to toil? Conversely, are only privileged, youthful whites able to contribute financially? Does this contribution capture how they would be best able to care?

This example sheds light on the relevance of understanding which humans are presented as able to care, and to care in particular ways. Such an understanding may help highlight how cultural and geopolitical axes of human relations become mapped onto human-tree relations. Unpacking whether and how trees can be taken care of from afar therefore concerns who (e.g. which humans) and what (e.g. money) get to participate in caring.

Conclusion: revaluing money for tree planting and care

In 2003, the US government awarded a patent for an Internet marketing method for interactive consumer advertising (Lynn 2003). The patent application demonstrates the method with a hypothetical game, the TreeLoot Game, which sets to work the

symbolism of the money tree. In the game, consumers click various points on a pixelated tree in attempts to win a sizeable monetary sum (e.g. 1000 USD, *ibid.*, 3). Incentivising consumers with cash rewards benefits a company by the fact that consumers stay on the website long enough to view multiple advertisements. As I noted in Chapter 5, digital games and apps commonly incorporate ads to monetise user activity and generate income. In contrast to campaigns for these apps, however, the TreeLoot Game swings the attempt at monetisation into a distinct promotional register that capitalises on audience familiarity with trees as monetary symbols. Although the patent documentation alleges that the choice of ‘the money tree’ image is arbitrary (*ibid.*, 12), the crude, inanimate symbolisation of trees as slot machines dispensing ‘thousands of dollar bills’ (*ibid.*) speaks to a surge of efforts in recent decades to transfigure trees into sustainable, or rather inexhaustible, streams of financial capital. Against the background of these efforts, ideas about and images of trees promise rhetorical utility, such that the promotion of trees as money and money for trees is as much about reimagining the purpose of money as it is about orienting ethical attitudes toward trees. While these attempts are marketed to appear to return to trees, a value of which they have been robbed for so long under conventional capitalist accounting systems, I have argued that these efforts nonetheless operationalise a perception of trees that sees them as void of ‘bankable’ value otherwise (Sullivan 2013a, 206–7, 209, 212). In marginalising the existence of trees beyond financial causes, these efforts are far from exemplifications of how money might be reconceived with the values of ecological care.

The relational implications of financialisation, and financialising environmental stewardship, which are so vital to thinking about money in terms of care, are expunged from consideration when scenes are contrived to display scenarios of what will happen if action is not taken to plant trees (Ehrenstein and Muniesa 2013, 161, 163, 180). By this representational feat, the campaigns enclave action within absolute parameters of the right thing to do, rather than considering which particular ecological connections are at stake. Not only does this proposition seem to ‘encourage abdication of both thought and action’ (S. Cohen 1999, 441), but the representation of deforestation in terms of an absence of trees can advocate only a ‘superficial response’ because of the focus on ‘partial remediation of the symptoms of exploitation, rather than their causes’ (*ibid.*, 426).

The promotion of ecological responsibility within the framework of monetary resolutions by invoking such aesthetic and ethical logics, serves in turn to create a situation in which the web of life that trees are promoted as sustaining and protecting,

degenerates into a web of anti-ecological, consumer-oriented interests. The habit of consumer spending is reinforced through monetary alternatives and marketisation, such that ‘the market is constituted as an irresistible force, which . . . provides the means by which to live the good life’ (Livesey 2002, 131). Similarly to Livesey’s findings about how ExxonMobil undermined climate change through advertorials in *The New York Times*, this discursive constitution in the campaigns occurs through a ‘rhetorical transformation’ whereby ‘life’ signifies as ‘life-style’, a marker for ‘what is accepted in the industrialized parts of the world as a taken-for-granted standard of living, instead of meaning nature’s gift and the foundation of human existence’ (ibid., 130). Sustaining consumer lifestyles is in effect presented as ensuring a ‘basic social necessity’ (ibid.), rather than an issue for debate. Thus, although the campaigns declare their goal of valuing money and trees differently, they are unable to come to terms with the fact that monetary exchange is a relation firstly, a transaction, only secondly. In their enthusiasm to employ digital media to transact across distances, they forget that for transactions to matter, these must affirm the existence of a world worth feeling concern for, where tree and human others retain something of their non-monetisable mystery, and money mediates, but cannot constitute, the capacity to honour this concern. Rethinking transactions in this way forces a necessary and more considered reckoning with the way that digital interfaces mediate monetary relations, and how they could mediate these with greater care.

To this end, the endeavour to make change by re-embedding social relations in monetary exchange (Helleiner 2002, 264–66) merits understanding more expansively with respect to ecological relations, for making change means constructing new environments and valuing human-environmental relations differently. This point is evocatively illustrated by John Klima’s digital artwork *ecosystem*. The artwork visualises how the commoditisation of money by capital markets exploits nonhuman creatures and natural habitats to propagate global flows of financial capital. Using real-time market data, Klima simulates an ecosystem in which flocks of identical virtual bird images move to reflect changes in the published value of various fiat currencies. Viewers use a provided joystick to navigate the environment, which comprises identical trees, each of which signifies a different country’s ‘leading stock market index’ (Klima 2000, n.p.). The birds’ behaviour animates the volatility of and competitiveness among national currencies (ibid.), while the trees are suggestive of economic territorial power, secured by amassing monetary wealth and homogenising the physical forms, social functions, and ecological

and material effects of financial capital across distinct places and times (Raley 2003, 74–75, 77–78).

Klima's digital artwork underscores the value of theorising the interface as 'a form of relation' among entities (Hookway 2014, 4). *ecosystem* expresses a crucial ecological dimension of the issue of valuation of nature in the case of fiat currencies and capitalist market exchange. Changes in national currencies are aesthetically figured as underlying nonhuman nature's ability to manifest as agency and value. Like the joystick, which is there for the user to navigate the virtual representation of market transactions, in their ebb and flow market prices dictate the flows of nonhuman life (symbolised by birds and trees). Through this setup, Klima illustrates an incisive analogy concerning how agency, care, and money values co-express within the current capitalist framework of exchange. Money, treated as a means to economic profit, subdues and subjugates nonhuman existence to serve its ends. Money in this context is agential, if autonomous, while nonhuman life is evacuated of meaningful agency (Sullivan 2009, 24). Attempting to care about nonhuman others and the environment through the use of digital monies, while keeping this regard for money intact, merely reasserts the intent to dominate nature and continue on the path of ecological disregard. Planting trees becomes tantamount to a publicity stunt, as digital monetary exchange is reduced to a vacuous promise for enacting change, which merely switches out the surface forms of money.

A critical space for intervention emerges, however, through engaging with the distinct affordances of digital interfaces to enact monetary change. Interfaces enact contingent and selective configurations of entities and agencies (Hookway 2014, 10, 15–16). By means of any encounter through the interface, some agencies are enhanced, while others are diminished. Along these lines of understanding, the crucial theoretical problem prompted by the interface does not circle around 'the form and protocol by which communication and action occur' (ibid., 40). It concerns more fundamentally 'how a relation' between entities 'may come into being' through an encounter with the interface (ibid., 14), and how, as a result, the interface is implicated in shaping affordances for exchange, and for care. The current campaign discourses used to advocate digital payments as a means to plant trees and care for the planet are lacking in this basic reflexivity concerning 'interface effects': that is, the effects of the processes of translation between realities that must take place for digital media to orchestrate exchange (Galloway 2012, 33). The possibilities of caring through digital monetary exchange can surface only

when digital interfaces are plumbed as thick processes of mediation, as opposed to being taken for granted engines of value conversion between, say, a tree and a dollar.

Reflecting on the translation and creation of value through digital interfaces, Alexander R. Galloway names markets as prime arenas ‘where the standardized exchange of qualitatively different entities takes place in a naturalized, unfettered fashion’ subject to certain prespecified rules of exchange (Galloway 2012, 133). Many of the critical voices I engaged with throughout the chapter are inclined toward criticism of how, by design, the current market system seizes and commodifies nonhuman life forms for its own end. This criticism, while inclined toward cynicism, is necessary for pulling critique of the possibility of caring through money into the light of how such a system could be imagined and operated differently. There is a need, firstly, to concede that money itself—what it stands for— could be rethought, and its alliance with capitalist values, disrupted. The *Transformoney Tree* artwork that I discussed early in the chapter conveys the significance of this acknowledgment: if the conditions for life, such as care work, are valued above the opportunities for trade, money can serve to bring life forms and their dependence upon each other into relation (pp.237–38).

Rather than taking money for granted as a form of *exchange*, which, of course, it does function as, it needs to be foregrounded in its less utilitarian dimension, namely, as a form of *relation*. This shift in emphasis marks a vital initial step in imbuing digital monetary exchanges with a semblance of awareness of the vast and dynamic web of ecological relations that are interfaced and exploited in completing transactions. Contesting the commodification of nature is only possible with greater awareness of these ecological labours. This awareness grows possible, moreover, to the extent that digital payments are highlighted as forces of bringing into relation, instead of being equated with their computational functions. Value conversion is an inescapable component of any exchange process, and the values that are chosen for expression therefore matter. Choosing to unpack monetary values in terms of the nonhuman and human varieties of caring work enabled by digital exchange, lays open the possibility of affirming a more-than-human basis of valuation whose sustainability is worth paying for.

Chapter 7

Conclusion: learning to care about distant tree and human others through digital consumption

I began this research journey with the aim to peer critically into, and respond to, the kinds of ethical care and consideration that trees command within digital tree planting campaigns. I sought to contribute to the discussion of how care for the earth and distant others is being, and might be, reimagined in an era in which awareness of ecological issues is increasingly formed and acted upon in western societies through an expanding ensemble of internet and social media technologies and mobile devices. My starting point was therefore not that the campaigns *exemplify* an ecological ethic of care, but that they could be used as sounding boards to encounter and engage with the challenge of how distant caring might be constructively thought of and facilitated in this time of widespread ecological disturbance.

I have proceeded with the belief that planting trees, much like the use of digital technologies, is neither favourable nor undesirable in itself; it demands a context to become so. As I draw this chapter of research to a close, I wonder whether the equation of trees with goodness, planting trees with caring for the earth, and digital media with functional tools, are blinkers that shade the perspectives of digital consumers. Most of the material I encountered in the course of my research would suggest the campaigns are speaking to audiences who are ready to accept these equations. While the empirical chapters endeavoured to disturb these equations in various ways, in so doing, they crystallised a sense of how much care stands to be directed to the situating of trees in relations of human care, the adoption of digital media to facilitate ecological care, and the multiplying and intersecting lines of relation with distant others and places that are shaped through, and impress upon, the ethical imagination and practice of ecological care.

In this closing chapter, I reflect on certain themes and issues that emerged around these opportunities for extending care, focusing on how they invite further developing the present research, and approaching it from fresh angles. I conclude with a summation of my intellectual contribution to ecocritical discourses on care as a relational project.

Humbling and reorienting conceptions of human care about and for trees

All three empirical cases were defined by a concern with how human care about and for trees is conceived. I worked, in particular, to examine the role that trees play in

validating and structuring discourses of planting and care through various kinds of digital consumption. I showed that being attentive to the constitution of trees as subjects of environmental discourse offers ethical openings into alternative ways of thinking about taking care of the environment, and about the values placed upon trees in doing so. Such attentiveness brings the tree into renewed, critical visibility, providing a means to productively dispute the celebration of planting trees as unequivocally good. It also reveals opportunities to think with, and through, the notion of care.

To this point, I am hopeful that the kind of attention I have called to trees compels care ethicists to treat plants with the dignity that they have shown to animals. In Chapter 4, for example, when discussing the purported sustainability of cork bark stripping, I questioned the orthodox definition of ‘cruelty-free’ and ethical business practices as refraining from specifically animal harm. The selective parameters of this ethical inclusion, I pointed out, become readily apparent in light of extending the disposition of care to tree others, where trees’ bark is shown to provide life-supporting and protective functions akin to those of animal hair and fur, and human skin. In this respect, my analysis strove, indirectly, to challenge the partiality shown to animals over plants in some versions of care ethics. A case in point is celebrated feminist animal care ethicist Carol J. Adams’s remarks on this topic, which allude to how the case for respecting plant life in the context of dietary choices may be denigrated as unworthy of making at all: ‘While feminists encountered the response that ‘men need liberation too,’ vegetarians are greeted by the postulate that ‘plants have life too.’ Or to make the issue appear more ridiculous, the position is forwarded this way: ‘But what of the lettuce and tomato you are eating; they have feelings too!’ (C. J. Adams 2015, 73). She adds, ‘Can anyone really argue that the suffering of the lettuce equals that of a sentient cow who must be bled out before being purchased?’ (ibid.).

Adams’s stance exemplifies a classic case of appealing to what is similar between nonhumans and humans as a basis for endorsing ‘a strong discontinuity between plants and animals’ (Plumwood 2004, 54). In its recourse to culturally conditioned views of which others can be empathised with (i.e. those most like humans) (Gruen 2015, 72–74), this view discounts the possibility of sensitising human perception to tree others in ways that could facilitate empathetic encounter (see e.g. Collins and Collins 2016, 110–13, 124). I engaged more directly with this aesthetic and ethical closure in Chapter 5, in relation to the tree planting games and apps that feature ‘cute’ and human-like tree characters. Learning to care about trees, I argued there, must give space for the tree to

exist as other-than-human. This allowance creates opportunities for coming to know the tree in ways that usefully defamiliarise human perceptions of what trees are, indeed notions of why they exist at all, which, as some campaign imagery would have it, should be entirely carved out by exchange values. Examples of this position are expressed in the focus on the enumerated benefits for human uses and the notion of a ‘giving tree’ (Chapter 4); the Tilt World website diagram that plots trees planted by CO₂ sequestered and human families helped (Chapter 5); and the reduction of trees to their economically expressed ecological values as carbon sinks (Chapter 6). It seems to me, following Cohen (1999, 429–30), that the accompanying emphasis on the number of trees planted works to both shore up a sense of urgency, as discussed in Chapter 5, and simultaneously vouch for the success of the campaigns in terms of the expressions of exchange value just mentioned (e.g. tonnes of CO₂ sequestered, number of families helped). In imagining the value of and care about trees thusly, the agency and liveliness of trees are prohibited from participating in environmental discourse and practice, such that human care inadvertently takes forth a disregard for trees as trees.

Consider, for example, the comparisons of desertified and denuded landscapes, as shown in Chapters 5 (from deserts to forests) and 6 (from parched land to verdant paradise). In my view, this representational choice sensationalises tree planting as a vital and dramatic rescue effort. At first blush, this sensationalist account appears to bestow upon trees a gratitude for enabling this transformation. Reading more closely, however, one notices that it also downplays the human agenda, as it emphasises ecological and human flourishing, but does little to attend to what trees want, as pointedly expressed at the end of Chapter 4 with respect to consumer goods marketed as earth-friendly as being hardly good for trees. In this respect, such accounts disaffect humans from learning to care about trees as independent life forms. Cohen (2004, 19–20) writes,

it is often the case that planting trees, rather than truly connecting with nature, serves as a mechanism for dominating nature. For even if the planted tree grows according to its own design, its function is packaged and promoted within the context of environmental manipulation. Such manipulation draws upon deep-seated concepts of nature, including the idea that human beings are able to repair or improve nature’s flaws

Further to this point, the rhetoric of ecological transformation also undermines the fact that forests can, very often, regenerate without human intervention. As Dove writes in the case of Indonesia, with its wretched history of forest exploitation, ‘all of the natural

environmental forces . . . are predisposed toward generating tree growth' and 'it is only human agency that retards this' (Dove 2003, 117). Dove accordingly advises addressing 'human factors' firstly in attempting 'to reverse deforestation' (ibid.). It must be remembered that trees 'have the ability to grow, survive and reproduce independent of human management' (O. Jones and Cloke 2002, 45). They 'are not just passive recipients of human interventions' (ibid., 49).

Reimagining ecological care through planting trees calls for a more humbling conception of human agency, which does not instrumentalise trees as soldiers on the front line of resistance to ecological change, but looks upon them as peer life forms in a more-than-human web of ecological relations. Ethical humility serves the aspirational commitment of an ecological ethic of care, which is to 'cultivate the ability to care about earth others . . . as earth others . . . not simply as sources of enjoyment or other benefit for humans' (K. J. Warren 2000, 121). As Diehm (2008, 13–14) eloquently conveys the message:

Trees, we will want to say, matter not solely for what they can be made into or otherwise do for us, but for what they themselves are: each tree, we will want to assert, is a wonder, a real-life marvel making a way through the world, fully deserving of admiration and respect on its own terms. Without denying the countless ways in which trees are useful, we will insist that such utility points us towards the biological realities of trees, and that these realities are surely as worthy of appreciation for their own sakes as for any other reason.

At a time when ecological ties are at their most vulnerable, greater effort must be put toward inspiring ways to care that acknowledge human dependence upon trees and the nonhuman world more broadly, and the ways that human actions can, no less, affect this world, and not always for 'good', however well-intentioned. The role of digital media, to which I now turn, in advancing this effort, must be looked upon with a likewise less instrumental gaze, mindful of the mediations of ecological impact and connections these technologies affect and enact.

Practising eco-ethics at a digital distance: comprehending the affordances of digital media for ecological care

The role of digital media in mediating environmentalism grows more influential and thus more important to examine 'as we continue to "app-ify" environmental conservation and ecological politics' (M. K. Goodman et al. 2016, 682). One of my goals has been to nuance the critiques of digital eco-activism as 'clicktivism' and 'slacktivism'.

Both are disparaging assessments that I feel do little, on their own, to illuminate the efficacy and appropriateness of caring through what are in actuality various types of actions. Dismissing the caring potential of actions for this reason—i.e. that they can be descriptively reduced to a sequence of clicks of keys and the mouse—is often based on attachment to a certain kind of civic society and political culture in which face-to-face and physical gatherings constitute the only proven mode of activism. It is important to acknowledge that forums for participation are often appropriate to the kinds of societies and issues to which they are meant as a response. Although it would be folly to resolve all ecological action into a digital mode, the opportunities for learning to care about the environment and others at a distance are, I feel, just beginning to be explored.

To this point, theoretically, there is a need to unpack the way in which digital engagement brings both possibilities and challenges to the realm of distant caring. This proposition requires a far more nuanced and patient consideration of digital care than that suggested by the idea that contemporary digital interfaces are, by design, corrosive to ethical responsiveness. Frosh argues in this vein that as new vistas for practising response-ability, digital interfaces must be theorised with respect to how they extend ‘moral choices regarding distant strangers’ based on a kinaesthetic understanding of digital interaction as embodied action—‘the vicissitudes of our wandering gaze, the tips of our fidgeting fingers . . . and the minute movements of our cursor-selves on the screen’ (Frosh 2018, 364). Digital consumer media should be treated with care in analysis, with an eye not merely to the instrumental effects they seem to have been devised to bring about (e.g. register votes, sign a petition, plant a tree), but to how they mediate practices of caring (Metzger 2014, 1003; Stiegler, in Crogan 2010, 166). What consequently become available for critical perception and practical intervention are the distinct ways in which care is impeded or enabled by different types and representations of virtual actions.

Because of the ease and convenience of access promised by portable digital devices and networking technologies, an argument could be made that digital actions may help enlarge ‘the circle of participation’ in environmentalism (Killingsworth and Palmer 1996, 235), providing, at the least, a ready channel for raising awareness. Several aspects of their current application to digital planting, however, subvert the possibility of constructive and caring involvement. For one, digital engagement tends to be individuated so as to discourage a more relational conception of involvement, which would come to terms with the fact that even a click is not accomplished independently, but depends on a great number of other systems and connections. Goodman et al. suggest

that the use of various internet and social media to care at a distance ‘tend[s] to individualize our response at a time when a more collective social and sustainable response is warranted in the face of the structural imperatives of global environmental and climactic change’ (M. K. Goodman et al. 2016, 682). At points in the case discussions, I shared their concern, while noticing, importantly, that the resolution of care into digitally mediated action tends to be ideologically and thus practically limited by the underpinning assumptions of individuals *as* consumers. Discourses that extol tree substitutes and recycling (Chapter 4), virtualise digital planting without accounting for the ecological ramifications (Chapter 5), and embrace consumer spending (Chapter 6), leave unproblematised, and are thus likely to perpetuate, care-less environmental orientations premised on a fantasy of ‘limitless consumption’ (S. Cohen 1999, 426). These discourses reiterate the campaigns’ lack of reflexivity over the premise of needing to consume. In the absence of such reflexivity, what the campaigns stake their claim to care on is an offset mentality, as suggested in all three chapters, for example, with view to the use of hemp, bamboo, and other ‘tree free’ alternatives to replace the demand for wood (Chapter 4); in making up for the ecological footprint caused by taken for granted consumer activities, such as powering up a laptop and playing games (i.e. ‘doing what one does, anyway’, Chapter 5); and in recreating opportunities for spending that claim to compensate for ecological damage, yet only in order to preserve the integrity of the consumer-oriented way of life (Chapter 6).

The consumptive investment in individual action is underwritten to a great extent by an instrumentalist conception of digital technologies as agents of planting. This stance is demonstrated by how digital activities are construed more as fundraising activities than as awareness-raising mediums. An example of this functional orientation is demonstrated by how tree planting has been ‘updated’ for the digital era. At one point in his analysis of tree planting discourses, Cohen cites an ad for Arbor Day sponsored by Global ReLeaf, an arm of American Forests, in 2000: ‘No time to lift a shovel to help plant 20 Million trees for the new century? Plant trees by phone!’ (S. Cohen 1999, 431). Today, ‘phone’ has been replaced by ‘app’ as the planting mechanism of choice, recalling, from Chapter 5, the trivia game JohnnyAppl’s promotion of clicking to plant trees as an alternative to digging, or the short-lived iPhorest app, in which players made the motion of digging to plant a virtual tree.

The emphasis, in such cases, upon the efficiency of planting with apps and the reduced costs of participation, reinforces the understanding of digital media as functional,

value-free tools. In the face of the campaigns' suggestions of how 'magically' digital media work to plant trees, as especially exemplified by the promotion of cryptocurrencies (Chapter 6) and apps (Chapter 5), I argued that digital activities are profoundly material, 'dependent on devices that demand rare earths and large amounts of carbon-rich energy' (Sandbrook, Adams, and Moteferri 2015, 123). The instrumentalisation of digital technologies serves to mask their contribution to ecological destruction, while providing an innocent canvas upon which to project new ways to consume because of how online actions facilitate care. For the general recommendation being set forth appears to be one of switching out one form of activity for another, where little needs tinkering with apart from the items one buys, the online sites one visits, the ways one pays, or the apps one downloads.

In its promise of a sure-fire, trouble-free solution vouched for by technological efficacy (Igoe 2013, 23), this recommendation vests a given digital activity with ethical responsibility. I worry that the individual is thus being discouraged from cultivating a more active, discerning ethical disposition. One might as well outsource one's activity to an automated computational agent. It is not merely, therefore, a detached disposition to care that is worrying in scaling up these types of activities, as is commonly emphasised in relation to clicktivism (Morozov 2009); it is also that users are not challenged to think for themselves about the significance of their actions.

In subsequent research, it would be important to intercept these observations concerning the lack of initiative asked of users with a critique of how digital media are designed, operated, and financialised through capitalist, neoliberal, and consumerist infrastructures. My goal in the current project has been to emphasise the importance of waging critiques of digital experience and affordances in ways that speak to the ecological, relational, and material dimensions of digital media technologies. I have argued for a theoretical comprehension of digital media less 'as objects' and more as interfaces 'of mediation' (Galloway 2012, 120); in doing so, I have sought to open a pathway for politicising the digital medium 'as an ethic or a practice', which 'introduces a structure of action' or a way of acting to achieve certain ends (*ibid.*). How digital interfaces mould data into visible form and figure them thus as actionable information, produces aesthetic effects of political, ecological, and ethical import (Galloway 2012, 81–82; Houser 2017, 359–62, 2014, 328–29, 335). In particular, I have suggested that understanding the interface as 'a form of relation' (Hookway 2014, 4) helps politicise the ways in which the interface 'is more and more unavoidably the means of representing that

which is otherwise unrepresentable, or of knowing that which is otherwise unknowable' (ibid., 1). This understanding is powerful for questioning the pedagogical effects of certain aesthetic strategies for engaging users, such as those operative in discourses of cuteness, and thereby hatching thinking on the possibilities of more innovative kinds of engagement with nonhuman others and digital technologies as platforms for care. For instance, in Chapter 5, I suggested that the opportunity for ethical proximity tends to be flattened by an aesthetic that privileges cuteness *to the exclusion* of alternate modes of coming to know animated tree and animal others through apps and games. This interface relation exploits attractiveness according to a specific commercial register in order to resolve the unknowability of the nonhuman other into a humanised other. Favouring, instead, aesthetic logics that confront and engage with those facets of the nonhuman that are unfamiliar and that expose them as other-than-human, may help instigate interface relations that create different kinds of subjects to care about, while encouraging awareness of the environment as *more-than-human*.

Thinking with care about digitally mediated webs of dependency

The 'invitation to care' through online media elicits attentional dispositions with affective and ethical implications (Knudsen and Stage 2015, 94), a fact which must be especially theoretically respected and mined as ordinary digital experiences become the ground from which relations with and understandings of others and ecological issues are forged. Digital experiences are not merely incidental or casual, even if they are fitted into seemingly casual or 'spare' moments (Anable 2018, 73); digital cultural texts such as games express 'ways of being in the world' and encountering it and others (ibid., xii, 38). In this way, participation in digital cultures is suggestive of 'a kind of everyday entanglement', sewn across bodies, code, screens, devices, and environments, that is at the same time a pulling near and making present of others and other places through digital code (ibid., 38, 43-44). This entanglement not only speaks to new forms of political, affective, and technological connections across times and spaces, objects and beings; it also calls attention to the material and ecological effects of being entangled in this way, and how digital choices mediate these effects. On this note, within literature on digital cultures, there is room for extending theorisations of digital experience and affordances in ways that adequately and pointedly respond to the situatedness of digital platforms in more-than-human, ecological constellations. In the current research, I focused on the notions of time, attention, affect, and materiality, which I feel furnish key conceptual and

practical touchstones for fleshing out the eco-ethical significance and consequences of coming into relation with others and environments at a digital distance. Many scholars stress the time pressures that digital experiences both exemplify and intensify. The ‘fleeting, episodic’ quality of time spent interacting with digital devices (M. Davis 2013, 8) certainly brings into question the capacity for digital media technologies to foster a sense of ethical agency that takes time to become potent. A persistent lack of time to digest on-screen information (Nixon 2011, 275–76) and form appropriate, thoughtful conclusions (M. Davis 2013, 14) can easily withdraw the opportunity to be ethically proximate with what is being perceived digitally. And yet, it is important to recognise the opportunities for ethical proximity that are nevertheless enabled. While digital interfaces may encourage a wide lens of attention, such that one’s attention can be pulled at any moment into the next pop-up advert or embedded hyperlink, at the same time, the paradigm of digital interaction introduces novel, multisensory forms ‘of contact between physical and virtual bodies’ (Frosh 2018, 362). It matters how others are represented, as digital interfaces are increasingly the means of moving individuals to respond to others and environmental issues.

This digitally provoked ‘bodily and emotional potential of ‘being moved’’ should not be underplayed in critiquing the ostensible shortcomings of a constant state of partial attentiveness (*ibid.*, 362, 360). Nor, equally, should the political and ethical repercussions of the proximity afforded by digital interfaces be lost in the typical theoretical emphasis on the ephemerality of engagement. Chun writes that the new, neoliberal promises of empowerment that accompany social media, and the multiplying ways they allow for ‘clicktivism’, seem to popularise the use of new media for taking action in ways that endorse the notion of ‘super-empowered subjects called on to make decisive decisions, to intervene, to turn things around’ (Chun 2016, 3). Certainly, the compressed timescales of action bring up for questioning the actual possibilities for ethical agency and expression through popular media such as Facebook. Thus, one could argue that the relational encounters otherwise made possible by digital interfaces are rendered superfluous, foreclosed by the speed of contact and relating that is typically enforced by opportunities for liking, clicking, shopping, and spending to care.

However, much like recourse to ‘slacktivism’ is a poor excuse for failing to contend with the various forms of digital care, it is far too simplistic to consign the affordances of digital engagement to the realm of distraction and speed. Doing so would miss crucial opportunities for plumbing the ethical, ecological, and material consequences

of the aesthetic logics and affects deployed to move users to care. By contrast, I have striven to show the possibilities of care, and thus, the theoretical apertures, that become available when conceptualising digital experience and encounters within a more-than-human context attendant to the material and ecological connections between humans, digital technologies, and nonhuman others. As daily moments become ever more swathed in ‘digital media forms’ of various kinds (Lagerkvist 2016, 98, 96–97), and digital devices such as mobile phones and video games emerge, as a result, as mediums that ‘we live through and with in various and complex ways’ (Anable 2018, xiii), a ‘posthuman’ articulation of digital agency and subjectivity may offer a valuable framework for surmising the opportunities and difficulties of forming ethical relations with unknown and distant others. Hayles highlights the potential of the posthuman view for attacking the myth that humans have ever been in control. She finds in this view the opportunity to conceive ‘a dynamic partnership’ between humans and information technologies that takes the place of ‘the liberal humanist subject’s manifest destiny to dominate and control nature’ (Hayles 1999, 288).

Yet, ‘craft[ing]’ a version of the posthuman that is conducive to the long-range survival of humans and of the other life-forms, biological and artificial, with whom we share the planet and ourselves’ (ibid., 291) poses no small difficulty to current and proliferating habits of digital usage. As I asserted in the previous section, these habits are exceedingly consumerist and environmentally burdensome in their manifestation. I believe the chance to move beyond these habits into a more ecologically conscious way of being with digital media would need to consider how current media habits express through the register of care. Chun’s notion of ‘constant care’ is suggestive here. Conceding the perpetual updating required not only of digital systems in order to keep content ‘live’ and ‘active’, but also of users vying to stay ‘current’ and visible on social media, Chun suggests understanding these basic update operations as indicative of what is kept alive and therefore, what is cared for (Chun 2016, 70, 78). This understanding forces into conscious awareness the way in which digital systems and users continually labour to maintain a presence. Making these labours conscious may assist, as Chun notes, in shifting away from treating digital media as a means to an end (e.g. plant a tree), ‘toward actively engaging and taking responsibility for everything we want to endure’ (ibid., 90). A constant vigilance, in other words, can highlight the content and operations of digital interfaces as things that refresh, continually, if only because they are cared about. Constant care may prompt a re-engagement with digital interfaces as ‘constant ethical

encounters between the self and other' (ibid., 91). While 'a simple [web] search can lead to hours of tangential surfing' (ibid., 76), perfectly capturing the restless and distractive susceptibilities of the digital experience, insisting on digital media as ethical encounters (Frosh 2018, 356, 364–65) creates a much-needed critical opening for imagining how greater attunement and responsiveness to others can come to take residence in the very mediums that, as my analysis of digital tree planting campaigns has shown, are too often oriented by consumerist logics.

In light of how I have conceptualised care as a more-than-human enactment woven through unending dependence on the earth and others (for a summary, see pp.14–15), I would suggest that the practice of constant care be assisted by a commitment to learning to be conscious of the ecological webs of dependency through which digital actions occur. The promotion of digital activity as a virtualised solution, with much to gain and nothing to sacrifice, save a few moments of a user's time (Chapter 5) and money (Chapter 6), dissociates human care from webs of dependency, reasserting the position of superiority that proclaims, 'we can have our forests and consume without care' (S. Cohen 1999, 436), which is to say, 'we can enjoy the fruits of nature without having to modify our behaviour' (ibid., 438). This suggestion is loudly articulated by discourses of forest conservation that advance nature consumption, through, for instance, the experience of the wilderness with a pair of sunglasses or a trip to the seaside with tree-free mobile phone accessories in tow (Chapter 4). It is also suggested by the subscription to time as an indicator of the quantity of available moments (Chapter 5). This understanding of time, which explains the latter as a measure of ecological productivity (e.g. planting x number of trees in y seconds or minutes), is inadequate for honouring and caring for ecological relations (Puig de la Bellacasa 2017, 186–87). When seen as having relational and material ecological consequences, the quantity of time spent caring (or not caring) about various causes online, brings to the fore the fact that nonhumans are labouring around the (human) clock to give individuals the ability to graze the internet at their leisure or necessity. Care time is a qualitative, more-than-human phenomenon and demands being contended with as such (Bastian 2012, 25, 31, 37).

Digital payments must similarly be comprehended through a more-than-human context of valuation. In the pursuit and theorisation of care through digital monetary exchange, the rules of exchange cannot be taken as given, as they currently are in the presumption that consumers need only switch out one form of money for another (as shown in Chapter 6). These rules must be treated instead as contingent bridges that

involve sacrifices, of both humans and nonhumans. As an example, one could conceive of a way to exploit the interactive feature of the digital interfaces that individuals must use to complete transactions: for each potential transaction, whether that be to produce money or to use it, users could be privy to the myriad labours, human and nonhuman, which are involved in enabling the transaction. How exactly does a tree get planted? A responsible answer bears no trace of the fetishistic portrayal of digital payments as growing trees (see Chapter 6, *Trees are inputs in digital labour*). The possibility of digital care would necessarily take on a considerably more nuanced and realistic visage as the ecological labour of exchange is, to a partial degree, demystified, and the work of caring for the environment is revealed in its fundamentally noninnocent aspects (D. Haraway 2016, 2, 71) as the unavoidable sacrifice begot by exchange. In this context, inhabiting responsibility requires comprehending digital monetary exchange as a constellation of choices surrounding how to take care of and live well with others, trees and humans, through the increasingly digital processes of contemporary cultures.

Whereas a capitalist framework forces the suppression of ecological labours and lines of human and nonhuman dependence, digital interfaces have the potential to challenge the commodification of nonhuman nature that is enforced through this invisibility. In contrast to users of earlier forms of media, users of digital technologies are uniquely positioned to influence ‘the presentation’ of content or to supply ‘feedback’ about it (V. Miller 2011, 16). In the context of exchange and consumer purchases, the individual has previously unavailable options concerning participation in transactions, as well as access to information through web searches or digital contacts. This underdetermined aspect of the digital encounter suggests the intriguing possibility that digital interfaces could be employed in ways more subversive and strategic, in contrast to their predominant functioning within tree planting campaigns as fundraising and consumerist mediums. Digital interfaces can help reintroduce an appreciation of webs of dependency by bringing contextual information into view, and apps and games especially are well suited to experiment with more realistic ecological encounters that could generate more nuanced sensibilities for care. For example, in the Facebook game *Fraxinus*,¹⁰⁴ players ‘identify patterns in the genetic code of the *Chalara* fungus that threatens ash trees’, thereby ‘helping researchers develop resistant strains’ (Sandbrook,

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https://apps.facebook.com/fraxinusgame/?fb_source=bookmark&ref=bookmarks&count=0&fb_bmpos=0, last accessed June 2018.

Adams, and Moteferri 2015, 122). As a way of opening digital engagement into real world scenarios, using actual on-hand data, this approach to gaming suggests how contextual considerations may energise motivations for designing digital activities. It also highlights some of the areas that my research approach could not touch. Whereas I criticised gameplay, for instance, for the kinds of imagery and interactions it promotes, factors such as the competitive pressure companies may be responding to (e.g. Fletcher 2017, 158), sit outside the frames of my analysis. These factors might be illuminated through interviews with the companies and app developers, which I speak further to in the next section. Through this section and the others that follow, I suggest delving into research pathways that may equip the promotion of digital care with contextual sensibilities that I feel are currently lacking, through potentially new investigative approaches to the promotion of care.

Conversations with companies: burrowing into the marketing and operational processes

Marketing digital consumption as ‘eco-friendly’ and ‘ethical’ may work to help allay individuals’ ‘concerns that consumption may be harming the environment’ (Büscher and Igoe 2013, 291). As Büscher and Igoe suggest, however, there is a cost for ‘supporting others who will save the environment on their [individuals’] behalf’ (ibid.), which is paid, if unwittingly, in the form of the trust vested in companies’ online claims and representations (Holloway 2002, 77–78). This resulting situation of incomplete knowledge, and often unwitting ignorance (Büscher and Igoe 2013, 292), is effectively summarised by artist, author, and spoken word poet Khairani Barokka (2016, 6):

We live in a world where what we ingest, peruse in bookstores, slather on and wash off are all direct products of unsustainable forestry systems, where the crises of ecosystems may not enter the consciousness of those who consume their fruits on a daily basis. We are all just trying to live a good life, and for many of us that entails access to products, whether “budget” or “luxury”, that are tapped from jungles we’ve never even been close to.

The campaigns I examined claim to be ones that wish to intervene in unsustainable systems of development. I imagine there are many aspects of company operations and the campaigns that may interest individuals, and affect how they respond to such initiatives to facilitate care. At the end of Chapter 4, I suggested a couple ways in which companies could engage social media toward putting campaigns in the service of more eco-

educational aspirations. Here I want to outline a more specific possibility that rests upon making the companies more accountable to those they endeavour to reach, while encouraging more collective digital expressions of consumer care, and possibly more collaborative research spaces. In attempting this, I am also emphasising the link between the commodifying orientations toward the environment that hamper the possibilities of digital care, and the way in which consumer practices leveraged for this purpose also rehearse commodifying orientations toward social media. In order to carve a place for digital consumption to hold out the possibility of care, the rules of digital engagement must themselves be scrutinised. As I underlined in the conclusions to Chapters 4, 5, and 6, a critical look at how digital media are enlisted to facilitate caring through shopping, apps, games, and payments reveals the ethically incompetent basis upon which digital care is currently staked—namely, linking digital activities to a good cause, while championing the very consumerist orientation that reinforces ecological disregard. Building on this understanding, the following discussion stresses the value of considering individuals as active users, rather than passive consumers, of media, toward discovering new ‘new media habits’ (of usage) (Chun 2016, 7) that underscore response-ability through undermining the consumptive function of these media that is presently foregrounded.

Currently, the suggestion of digital planting campaigns is that online actions consummate care in the style of a transaction. This suggestion features in the imputation of care to the commodity (Chapter 4); the ability of digital apps and games to rectify ecological problems through a simple click of various kinds (Chapter 5); and the agency ascribed to digital money forms in effecting care for the environment and growing trees (Chapter 6). These transactional exchanges assume that the activity on offer has been vetted by the sponsoring companies and their tree-planting partners to a degree that warrants investment and scaling up. In my experience with reaching out to companies through social media and email, I feel individuals need to become involved to a much greater extent, forcing the justifications and operations of the activities into greater transparency. In suggesting this, I am also pointing to a direct intervention whereby consumers can have a meaningful role in mediating care that is based upon a collaborative orientation, and that would depend on their being able to contribute as individuals. Against what I find on offer in the campaigns, namely, a primarily ‘celebratory individualism’ (Littler 2011, 33) devoid of reflexive connections to wider ecological and social contexts, establishing the conditions for participatory and anti-

consumerist engagement might involve ‘hijacking’, in a sense, campaigns’ social media spaces, motoring them with more dialogical and political, rather than advertising and consumptive, motivations. In particular, I envision that research could be conducted openly with companies online, based around a set of issues that are deemed ethically and ecologically impactful in the facilitation of care for the environment and others. The following are a few of the issues I would nominate as entry points into this digital dialogical intervention in how consumers are prompted to care. These issues are drawn from some of my online exchanges with companies that took place as I sought to clarify aspects of their campaigns.

For one, it is possible to mine the source of companies’ choice of materials and the criteria used to assess the ethical standards of their production. When I probed bamb-u, an Australian maker of bamboo sunglasses, about how and where its bamboo is sourced, I received an unexpected admission that the company does not know precisely, except that the bamboo is obtained from suppliers that it trusts to uphold its ‘ethical values’, and hails ‘from several parts of SE Asia’ (Facebook messages, 6-9/Sep/2017). I had asked about the labour practices, such as worker treatment, of the suppliers that the company was working with, and any agreements it had concerning ‘methods for growing and looking after bamboo’ (7/Sep/2017). In reply, I was informed that the manufacturer oversees the sourcing (7/Sep/2017) and was given a link to what FSC certified means in the case of bamboo: <https://simplybamboo.co.uk/pages/bamboo-fsc> (9/Sep/2017), a page that appears, interestingly, on the website of a UK bamboo flooring company. Perhaps the most intriguing aspect of the entire conversation was that, in reaction to my inquiries, the company decided to take steps to ensure its bamboo was FSC certified (19/Sep/2017), which was encouraging to hear, but also shocking to learn, considering that on its website, bamb-u makes explicit assurances of the sustainability of source materials and harvesting techniques.

Following this conversation, I felt more entitled to question what companies posted on their websites, as well as inspired to rework my case discussion in Chapter 4 to address how the choice of materials was represented as eco-ethical to prospective consumers. While I believe this reworking has enabled the case discussion to raise ethically valuable questions about how consumer production mediates caring about trees and other plants, an understanding of how companies frame the ethics of their production and procurement processes, and how they make decisions about both this representation and the processes themselves, would be useful for unpacking the companies’ values and

the notion of care that these companies' campaigns back. I was struck by the lack of response from some companies and the unwillingness of others to share information that I considered relatively basic and general. For instance, when I asked Original Grain how many trees it had planted with Trees for the Future, an employee directed me to a page, which I had already mentioned I had seen, that provides a generic figure of how many thousands of families have benefitted from Trees for the Future's planting programmes (Facebook message, 8/Sep/2017) and evaded my question by stating that the company contributes in dollar amounts, not trees (12/Sep/2017). After I clarified that I was hoping for an estimate of some kind of what Original Grain itself had contributed, and elaborated on my research interest (13/Sep/2017), the company stopped responding. I have since, however, found that Trees for the Future has updated its Original Grain sponsor page with this count (409,010 trees).¹⁰⁵

Sometimes, I suspected that I had broached a topic that a company preferred not to address. For example, I enjoyed a few generous email exchanges with one of the founders of the Greenapp games (26/Feb-21/Mar/2016) until I asked about the representation of the panda dressed in suspenders using an axe to chop bamboo (Chapter 5, Figure 34a, p.188). I thought the character bore an uncanny resemblance to an image of the American lumberjack legend Paul Bunyan I discovered on the internet (and which I enclosed in the email) (22/Mar/2016).

Although conducting interviews would certainly provide one approach to investigating some of these curiosities, I feel it is imperative for individuals to 'show up' in these conversations as people with actual concerns and independent voices, and whose lives extend well beyond the domain of digital consumption. Researchers could consider creating a blog that documents, responds to, and possibly hosts, the conversations from not only their perspective, but crucially, the perspectives of those individuals involved, whether as active questioners or observers. Such research may not only help to directly connect research on care to its practical applications. It would also take seriously the input of individuals who may not be academic researchers, as research collaborators (Morrow, Hawkins, and Kern 2015, 539), potentially inspiring in these individuals, greater attentiveness to how they spend their digital time, and more broadly, to their perceived role and capability in exercising ecological care. As Andrea Prothero and James A. Fitchett assert, the task of inspiring positive ecological change seems to be one

¹⁰⁵ <https://trees.org/sponsor/original-grain/>, last accessed June 2018.

that depends crucially on ‘motivating individuals and institutions’ to act on their existing environmental ‘awareness’ (Prothero and Fitchett 2000, 52). As I am arguing in part with interrogating companies’ representational and ethical practices, this awareness itself could be further developed. Theoretically, understanding how digital shopping both enables and disempowers ethical consumers as well as the distant others and situations they are drawn to help, is key to developing an adequate critique of the affordances of digital media for contesting commodified relations between users and tree and human others, and in doing so, for disrupting the way in which, through their digital devices, users participate in commodifying practices of consumption. In the next section, I draw on the case discussions to suggest ways of expanding consumer awareness and creating new ways to act upon it with care, with view to sociocultural and ecological contextual factors.

Mapping personal, cultural, and geographical inflections of digital care

Acknowledging that ‘individual choices, actions and experiences in particular localities have increasing global relevance’ (Connolly and Prothero 2008, 131) is to recognise that individuals’ ethical practices are negotiated in the remit of their everyday life situations (Alaimo 2016, 2). It is also to move to face the strange, sometimes disturbing ways in which single ‘ordinary human objects’ of consumption, such as a plastic bottle cap, a seemingly ‘tiny bit of plastic’, can ‘wreak havoc on the ecologies of vast seas’ (ibid., 130). Though instructive of my theoretical positioning, this perspective is able to earn limited critical import with the methodological approach I employed. Despite the awareness of ecological and societal systems I strove to bring to my analysis, I cannot be certain how consumers would interpret the campaigns without asking them (Carrier 2010, 686; Igoe 2013, 390). I can venture guesses based especially on the comments left on social media pages and the user reviews of apps and games, but these guesses are limited by both the fractional proportion of a user’s entire engagement with campaigns such information reflects, and the lack of information about the situatedness of digital activity within users’ life contexts. Individuals may engage with, and be affected by, the sites in any number of ways and for reasons unaccounted for by a solitary reading of the campaigns. I would be interested to learn how digital consumption is contextualised in the everyday spaces and times of individuals’ lives, and the specific motivations for either using or turning away from sites and apps for digital care. As Fletcher notes, ‘caring can inspire commitment without necessarily leading to action’ (Fletcher 2017, 155). In a digitally mediated context, both how care as a disposition

emerges and as an action expresses, would be of value to understand. In turn, ‘the relationship between different forms of caring’ in digital and offline spaces ‘and the relative (in)action they [digital media] precipitate’ could be fruitfully explored (ibid., 161).

An inquiry centred on individuals would also be instructive for nuancing the theorisation of ecological care at a distance. Nel Noddings writes that ‘I can “care about” the starving children of Cambodia, send five dollars to hunger relief, and feel somewhat satisfied’ and ‘[go] on to other things’ (Noddings 1984, 112). Speaking to individuals about their practices of care and consumption would help discern whether distant caring is necessarily indicative of ‘a certain benign neglect’ that falls short in terms of expressing and acting on genuine commitment (ibid.), or, conversely, whether, like the father posting about his incorporation of the Forest app into his childcare routine (Chapter 5), the use of digital mediums communicates a deeper longing to care for what lies beyond one’s circle of familiarity and physical proximity.

It is also worth considering that other dimensions of digitally mediated involvement can provide information about how dispositional forms and practices of care can be cultivated beyond the virtual interface. Venturing into ‘the field’ beyond digital interactions offers a means to tune into the community formations that may be forming offline through tree planting networks, even if these are forged in part online. Treesisters, for example, a crowdfunding campaign which informed the discussion in Chapter 5, also offers the opportunity to form local groves or sisterhoods to strengthen individuals’ sense of identification as a ‘Treesister’ and build friendships (Treesisters Website). These participatory strands of the organisation’s work, not apparent through textual readings of the online campaign alone, would help explore the interstices of virtual and offline involvement. Another organisation that could provide fruitful inquiry in this respect is Greenpop (<https://greenpop.org>), a South African social enterprise, which invites overseas volunteers to pitch in with, and learn from, its local planting projects and festivals in southern Africa. In interfacing the virtual and offline spheres of involvement, such campaigns could open a window into the wider reach and multiple connections that digital planting campaigns may afford. They may thus help generate productive discussions and practical applications with respect to how people might ‘become motivated’ to care ‘by a sense of participation in a common cause’ with others at a distance (Attfield 2015, 14).

An understanding of how networks of care take shape and span geographically and socially in this way would also complexify the critique of what kinds of care digital platforms in fact facilitate. One of the limitations of my analysis is its focus on campaigns situated in western, English-speaking contexts. I wonder what a more diversified cultural cross-section of campaigns and social media could bring to the conversation of caring about trees across societies and environments. The construction of human attitudes toward trees could very well be culturally variant, or offer insight, instead, into how attitudes are shared across cultural registers (Hansen 2015, 278). Another issue is the use of digital media beyond western geographies of use, especially the emergence of online platforms in other countries, such as the microblogging platform Sina Weibo ('Weibo'), an exceedingly popular online and mobile chat messaging app among the mainland Chinese populace, which has moreover been used to initiate public conversation about government greening practices such as urban tree planting (Qian'er 2012). Elizabeth Stoycheff et al. (2017, 974) note, further, that academic inquiry, which so far has heavily invested in Facebook and increasingly, Twitter, does not account for 'the large diversity of social media brands used by individuals outside the United States and Western Europe'. In studying global and distant ecological care, turning to these other sites could offer research opportunities rich in collaborative sensibilities with researchers steeped in those geographical and social contexts, as well as insight into how initiatives to promote care are extending to the global south. Fresh ways to comprehend how the global north and global south are linked through cause-related marketing require moving beyond unidirectional framings (where giving occurs from north to south) that ignore 'the growth of middle-class populations in emerging economies' in non-western societies (R. Hawkins 2015, 172, 173; see also Ghosh and Jain 2017, 38).

By appreciating other geographical sites and digital avenues of promotion, future research may offer more nuanced and comparative interpretations of the promotion of care. In this direction, a final area that deserves mention is digital planting campaigns' framing of care and responsibility for others at a distance, with respect to the possibilities for developing greater sensitivity to these others and attuning to the connective dynamics.

Reading global responsibility and care with reference to distant livelihoods and environments

As ecocriticism registers growing concern for how relations among human beings and societies mediate human dealings with nature (Nixon 2011, 255–62), I would like to

consider here a few representational issues arising from the campaigns that I feel impair the attempt to care across geographical and social boundaries. One clear ethical problem with the digitally mediated forms of caring consumption and giving on offer, lays with ‘the essential role of exchangeability in the imagined solution to the problems posed and represented’ (Igoe 2010, 390). One of the ways that campaigns produce global framing of environmental responsibility and care is by depicting a shared environment in terms of carbon emissions and offsets, as discussed in Chapters 5 and 6. As I suggested in these chapters, by, for example, criticising the ‘average’ tree measurements used (Chapter 5) and the homogenising indifference shown to distinct habitats and local conditions in ignoring the location of offsets (Chapter 6), the campaigns curate a picture of unity that withholds the proper care to the others that it seeks to bring individuals in relation with through digital tree planting. This observation can be extended along a few different lines.

An important issue concerns the insinuation that distant others toil, and take care of planting, as highlighted in Chapter 4 with reference to hemp helps’ tweets of fair-skinned models wearing ‘look good, feel good’ T-shirts (Figure 9, p.125) and darker skinned smiling workers (Figure 13, p.136). This allocation of caring responsibilities risks condoning a sense of privilege built upon ‘irresponsibility’, ‘where [t]he most privileged do least and the most disadvantaged do most’ (Lawson 2007, 126). The hemp helps affluent shopper has time to shop for herself, look after herself in this way, and show she cares by going out of her way to purchase tees that do good; yet she does not have the time to do the hard physical labour of caring for trees or hemp plants. I am not suggesting that the responsibility of setting this disturbingly simplistic imagination of equivalence straight lays *with* the shopper, as would accord with a neoliberal vision of care (Puig de la Bellacasa 2012, 197). I am, however, pointing at the odd quality of caring relations that are being proposed by such representations of distant caring. I am also stressing care as ‘a social and political practice’ (Conley 2016, 342), insofar as the terms of these inter-human connections pull on strings that attach care to consumerist systems and logics of production and the appropriation of nature to serve these ends for a minority of economically privileged humans. It is entirely conceivable that the proposed terms of relation, as expressed, similarly, in the example of the Love Heals consumer fretting over a jewellery purchase while the tree planter looks forward to the reward of bananas (Chapter 4), may brand inequity and unsustainability further into acceptance through the appropriation of trees under the guise of caring. For, though the indicated paradigm of care is offered up as ‘being in the interests of, for the good of, and as promoting the

welfare of' (U. Narayan 1995, 133, emphasis removed) distant others, it is presented in a light that paints it more as 'paternalistic' and 'belittling' (Whyte and Cuomo 2017, 242), reasserting rather than 'undoing hierarchical relations between humans and humans' (Conley 2016, 342). The discourse of care functions, in effect, to justify relations of domination and entitlement, the effect being that the privilege to care at a distance is the privilege to fail to notice the terms of interrelation or assume these as correct, even just. Toward the end of Chapter 6, I commented on the incongruous marketing of Grow-Trees's e-certificates with white models, while the company's tree planters and planting projects are situated in local Indian villages, parks, and religious groves. The company's campaign seems, again, to be premised on a partitioning of ecological care across societies that delegates physical labour to one society and care through consumption to another.

It is clear that what I see as the first wave of digital tree planting campaigns have yet to develop representational practices that speak to the intricacies of the simultaneous and interdependent mediation of care by local and global contexts. Perhaps they have not considered these challenges as ethical and political matters of care. Yet such challenges must be regarded as more than impacting the promotional face of eco-ethical business schemes. As I have argued with respect to the instrumentalisation of trees and digital technologies, promotions too cannot be mistaken as simply, neutrally, in the service of conveying a self-evident good. Bruce Willems-Braun argues that 'it is precisely such representational practices', which reinvent the common good in terms of global environmental and economic interests, that have served to recolonise nature and local livelihoods through 'the abstraction and displacement of commodities ('natural' resources, visual 'scenery', 'ancient' trees, etc.) from one set of cultural relations and their relocation within others' that are globally administered and classified: 'the abstract spaces of the 'market', the 'nation', and, in recent ecological rhetorics, the 'biosphere' and 'the global community'' (Willems-Braun 1997, 7). Remapping the value of trees and habitats and appropriating them according to global demand, overlooks important ecological contingencies and social realities. Insights from ecological restoration show that predicting ecological changes is an incredibly complex and imperfect process. Great variation and dynamism is observed in how tree species may respond to changes (Gillson and Willis 2004, 992). Interactions between climate and the responses of various trees are additionally complicated by ecological thresholds, beyond which certain trees may fail to re-emerge, giving way to other kinds of tree and plant life (*ibid.*, 992-993). Forest

ecosystems are not computer simulation environments, wherein all variables can be foreseen and controlled, in contrary to what was suggested, in Chapter 5, by the switchboard representation of trees' conversion of carbon dioxide into oxygen (Figure 50, p.218). Whereas forests can be restored to the superficial sense of growing trees where once there were none, ecological integrity and the lives of inhabitants are changed, and sometimes lost, forever. Former tree planter Charlotte Gill writes: 'A forest is trees, but it is also everything that lives on and inside and underneath the trees. A clear-cut tears many of these relationships asunder, for a few centuries anyway. It creates biological confusion, a jumble of drastic suddenness . . .' (C. Gill 2011, 128–29). Attention to the intricacy and interdependence of these relations highlights, in turn, one of the issues with singling the tree out as the veritable celebrity, namely, 'los[ing] sight of the ecological webs that particular animals or species are enmeshed in, upon which they depend and co-construct' (M. Goodman and Littler 2013, 272).

Thus, it is possible that planting campaigns promising to make a global difference may not necessarily be aligned with, or cognisant of, local needs, so that in such cases, trees can become objects of conservation in ways that write out and endanger local livelihoods (Doornbos, Saith, and White 2000, 5). It could be useful to extend the current analysis through offline ethnographic research, to critique how well the 'large-scale reforestation projects' sponsored by the companies 'accord with local needs' (Radkau 2008, 282) or even accomplish the objectives they set out to achieve (Büscher 2017, 171–72).

Whereas the internet offers 'a new connection to the world' whereby one's appreciation of local and global ecological relations can be developed (Cameron 2003, 178), learning to care about the terms of this connection to others and distant environments poses a formidable challenge, one that needs reckoning with as the internet 'grows in importance' as a medium for both environmental advocacy and awareness (Weeks 1999, 28). The portrayal of extending care to essentially fungible human lives in the global south breaches any promise of unity and shared ecological responsibility. Problematically, this portrayal coincides with, and is reinforced by, presentations of digital care that promise clean, uncomplicated exchange and benefit. Such presentations work through a representational 'aesthetic' that functions as 'a kind of lens and a kind of lubricant' (Igoe 2013, 23): it 'brings selected elements' of relationships between production and consumption, and the supporting ones between companies, tree planting organisations, and consumers, 'into focus, and also allows those relationships to function

smoothly, without friction, or at least appear to do so' (ibid.). The campaigns' discourses of care 'stress that we are all essentially interdependent and in relationship', but, as Uma Narayan writes, 'while important', this recognition of relation is not enough for care: it 'do[es] not go far enough if they [discourses of care] fail to worry about the accounts that are given of these interdependencies and relationships' (U. Narayan 1995, 136).

A more compelling statement of ecocultural solidarity could be made by rethinking how digital activities themselves are designed and promoted in view of differences among cultural and social understandings and ecological conditions. Given that digital planting campaigns stake and claim solidarity on the basis of how trees are valued, I would suggest homing in on how the good of trees in particular is discursively rendered. For, by its circulation across societal contexts, this goodness comes to globalise certain perceptions of tree others and norms of relation. I would like to use the example of games here, as they help interface the cultural and social situatedness of target participants and the digital text (the game) on the one hand and the cross-cultural and more-than-local promotion and effects of the campaign and its cause on the other.

When Tilt World launched in 2010, it was the top-ranked iPhone game in China, with a top-five ranking in the US (Tilt World, iTunes), and much of its gameplay continues to occur both in North America and Asia (Facebook message, 26/Mar/2016). Tree Story Game, while sold in the US iTunes shop, was conceived through a partnership with Tree Planet, based in the South Korean market. While active, Tree Story Game funded planting projects inside and outside the US (e.g. Brazil) (Tree Story Game Website), while Tree Planet has focused on southeast Asia and western Africa (Tree Planet Website, *Forest Map*).

I want to suggest that paying critical attention to how players are invited to know trees, tugs at the issue of game design and directly confronts how and which ecocultural understandings might meet and converse. In another context, Anna Tsing has introduced the notion of 'the arts of inclusion' (A. Tsing 2011). Tsing contrasts fungi scholars' passionate immersion within wild forests, where mushrooms grow freely and plentifully, frequently through a mutually beneficial exchange with their tree hosts, with the forcible cultivation of mushrooms on plantations aiming to yield a tradeable commodity (ibid., 5, 19). She asks: 'How do lovers of fungi practice *arts of inclusion* that call to others?' (ibid., 6, author's emphasis). Analogously to how various species of fungi, in Tsing's work, attract particular human adorers of mushrooms (e.g. 'gourmets, herbalists' and 'wild mushroom forages', ibid., 6), tree planting games 'call' to particular players, calling

them, namely, into certain kinds of appreciation for trees.¹⁰⁶ Orienting gameplay toward the practice of sharing and building new cultural knowledges and ecological understandings, which ruptures the fabric of western commercial conventions, offers an intriguing opportunity to forge lines of inter-societal and inter-ecological connection that imbue digital care with rich, multivocal narratives of tree others and the human others they bring into connection.

Learning to think about care for tree and human others in digital cultures

Learning to think with care about how digital media figure in laying imaginative, social, and material tracks of ecological care involves appreciating the many relational interfaces between humans and nonhumans that they afford as well as disrupt. The purpose of this final section is to leave the reader with a summative reflection on how I see this thesis as contributing to the reimagination of ecological care, as both a theoretical and practical endeavour, within digital societies. For this task, I will emphasise how my contribution is situated in relation to the writings of María Puig de la Bellacasa, Anna Tsing, and Donna Haraway, as the work of these three scholars helped me construct foundational avenues of inquiry into what it might mean to think with and through non-anthropocentrically minded care about the digital and distant mediation of human relations with trees within a more-than-human world.

A defining contribution of recent theory on care ethics has been its confrontation with the weaving of care around human-centred perspectives (Puig de la Bellacasa 2017, 122). Central to this force of critique has been Puig de la Bellacasa's writings on soil as a nonhuman partner in more-than-human webs of care labour, and her theorisation of care as a relational achievement. Following Puig de la Bellacasa, I theorised care based on an understanding of trees as other-than-human subjects, and argued for seeing the promotion and practice of care as emerging around multiple lines of affective and aesthetic relation between human and nonhuman articulated via the digital interface. Whereas Puig de la Bellacasa's work enabled me to assert a more-than-human basis for caring relations, as I outlined, for instance, with view to exchange and money values, I opened this argument further to respond to the digital mediation of caring practices and commercial representations of nonhuman others. Without this quality of attention to the digital and the

¹⁰⁶ The preceding ideas on games as cultural and trans-societal eco-ethical texts are shared in modified form in Desai and Smith (2018, 51). I owe much to that collaboration for inspiring my thinking in this direction.

proliferating popular commercial applications through which it manifests, a notion of relational care cannot fully succeed in its effort to recalibrate the humanist lens toward greater attentiveness to the all those relations that determine ‘the caring’ that the more-than-human world ‘manages to realize’ (Puig de la Bellacasa 2017, 70). The thesis thus sought to establish that in contemporary digital cultures, virtual representations of and interfacing with trees and distant ecologies centrally figure in shaping how these come to matter and be taken account of in practices of care. It underscored in particular the temporal, commercial, and material linkages between human and nonhuman enacted through digital engagement and operations. In doing so, I introduced a new vein of critical observation to the argument that caring involvement must now extend to the distinct and new ways of being affected and ‘touched’ by digital content and devices (Puig de la Bellacasa 2017, 102–4), as I foregrounded how relations of care are cut across by new promotional visibilities and consumer imaginations that belie the myriad digital processes of bringing human and nonhuman into relation. If care inherently entails creating relation (Puig de la Bellacasa 2012, 198), then the relational interfaces and aesthetic surfaces hatched with digital cultures deserve a more primary place in theorising and practising ecological care.

Pursuing this novel emphasis on the digital as the site and medium of more-than-human care led me to foreground the absence of trees and their nonhuman peers as ethical subjects in much digital theory. By orienting digital ecocriticism toward a sense of who or what is and is not cared about and for, I highlighted theoretical opportunities to mobilise the notion of *care* to connect the ecological sensibility of an increasing number of media scholars, with the non-anthropocentric sensibility of a swelling corpus of eco-ethical critique. In putting care in the service of digital ecocriticism, I was at the same time aspiring to cast understandings of contemporary digital cultures and their environmental implications in the critical relief of care. Through doing so, I demonstrated how ecocritical discourses of the digital have yet to sufficiently account for nonhuman participation in digital processes, and are thus constrained in their capacity to imagine a contemporary ethic of ecological care. One of the unique contributions of this thesis is this sustained being with the nonhuman, in particular trees, as a discursive and material participant in digital culture. By noticing how trees offer the means of enacting relations across humans, digital interfaces, and environments, I was able to conceptualise relational care as a web of more-than-human care that not only decentres the human, as Puig de la Bellacasa stresses (Puig de la Bellacasa 2017, 161–62), but one, furthermore, that

becomes possible, if conceivable, only because of the presence and labours of the nonhuman.

The purpose of conceiving digitally mediated ecological care as a non-anthropocentric, more-than-human endeavour is not simply to highlight human dependence on nonhuman others. This theoretical orientation demands an accounting of how nonhumans, in turn, are caught within the confines of human inventions and structures. This account depends on recognising trees as *nonhuman* others, with other-than-human capacities, which are then re-represented in digital form and re-valued in accordance with digital affordances. Thus, my methodological and theoretical orientation to trees as subjects of digital care sought to help illuminate how trees become set into chains of care through digital tree planting campaigns. The prevailing commodifying orientation of digital exchange and consumption can be linked to a failure to make the tree visible as its own being, which furthermore commands an agential presence in caring for and changing the environment, even as the tree may at times be the subject of others' care, both human and nonhuman (A. L. Tsing 2015, 168–72). Tsing's writing on human-fungi-tree webs of coexistence is particularly facilitative in this respect, casting light on the complex partnerships involved in ecological care, which is as much more-than-tree as it is more-than-human. Transposing Tsing's ideas on partnerships and alliances to the digital realm has helped this thesis push beyond a linear account of the mediation of human-tree relations, to seek instead an understanding of how moments of encounter through digital devices produce particular kinds and possibilities of cooperation between humans and trees. Tsing's work suggests that care, as an act of cooperation, can be understood as a constellation of intersecting inclusivities, arboreal and human. But stretching Tsing's ideas to contend with digital interfacings has meant introducing cuts into her methodology of tracing human-tree relations, to illustrate how care through the digital medium 'moves relational webs' (Puig de la Bellacasa 2017, 83, emphasis removed) into new manifestations and directions that urge a still thicker narration of care as inclusion. In particular, this thesis demonstrated how care as inclusion is a practice that depends on foregrounding the perceptual aspects and affective qualities of coming into relation, both of which bear on which lives and interests are intercepted by certain practices of care, and which are excluded. In taking forth Tsing's persistent questioning of how human-tree relations can be remade to work for and include nonhuman interests (A. L. Tsing 2015, 223), I have emphasised not so much the irreplaceable role of trees in human living and relationships (which Tsing's work narrates in detail), but rather, the

kinds of dispositional orientations toward tree others that must be encouraged to reimagine ethical inclusiveness to support living as well as possible with others.

At the end of the previous section, I posed a provocation concerning the arts of inclusion which calls for reconsidering the parameters of inclusion that underwrite the premises of encounter with human and tree others through digital tree planting games. Folding this reconsideration into a theorisation of care suggests inclusion as, following Tsing, a storying of not only human-tree partnerships and alliances, but further, of how humans can be moved to relate to trees through uncommon, if unfamiliar, knowledges and perceptions. On this note, my conception of caring relations in this thesis has rested on a respect for the tree as other, with capabilities beyond human representation (Alaimo 2016, 76–77) and replication. Affirming the possibility of living, caring, and planting within more-than-human environments means acknowledging the limits of what humans can do, comprehend, and perceive (A. Tsing 2013, 30, 34). Through doing so, a more viable way of being with tree others stands a chance to surface. As digital media enable new kinds of experience to emerge which surpass the traditional bounds of human sensing (Hayles 1999, 16, 291), the critical concern should become one of how to design, use, and live through these media in ways that foster responsiveness to others through becoming involved in their lives in new ways (D. Haraway 2016, 71). Learning to ‘cultivate the capacity to respond’, or ‘response-ability’ (ibid., 78), through these media concerns, in part, what Haraway calls ‘sympoiesis’, the creative multispecies making and remaking of the conditions for living together alongside and with nonhuman and human kinds (ibid., 58-71). For Haraway, a truly sympoietic collaboration is one that mediates ecological and ethical intimacy with others without colonising the other or the other’s conditions of life, whether through the knowledges formed in relation to the other or the ways of sharing environments with the other (ibid., 79).

In the sense of weaving ethical, ecological, and material threads of relation through digital projects of caring about and for trees and distant humans, this thesis affirms the value of thinking about care in terms of sympoietic knottings of multispecies labours. The analysis I presented over the three empirical chapters reiterated the need to treat the digital interface less a mechanism of commodity exchange, brute valuation, and decontextualised representation, and more as a medium for learning to care, whereby variegated ethical, ecological, and social proximities are enabled, and, as a result, different human and tree kinds come to be cared about and able to practise care in different ways. Inhabiting response-ability thus emerges out of a relational ontology (D.

Haraway 2016, 64) in which the most important choice is to how to live in light of changing, heterogeneous, at times attractive, sometimes distressing proximity to human and nonhuman others. In my view, the social asymmetries and technical constraints that manipulate this ontology need to be acknowledged and wrestled with to a greater extent in order to attempt a robust elaboration of sympoiesis as an ethical and ecological project. Whereas Haraway's work carries an emphasis on conceptualising material entanglements and collaborative sensibilities that support non-anthropocentric caring, my own work, I feel, is much more engaged with the uncomfortable problem of tracing ordinary practices through which human and nonhuman others *become* connected and acquainted, and how such ties, or one could say, entanglements, beckon particular possibilities for caring. In this sense, I would suggest Haraway's critical project is far more theoretical and ambitious than mine, and in its enthusiasm, tends to leap over mundane cultural practices that increasingly and in no trivial measure inform possibilities for entanglement.

As Haraway's work amply and evocatively grasps, learning to care for and live with others is a deeply imaginative project. I echoed this fact in discussing non-anthropocentrically minded practices of care as critical animist endeavours, such as in Chapter 5, during my discussion of the aesthetic strategies leveraged to draw animated tree and nonhuman others in caring proximity to digital users. Situated in the context of contemporary digital practices, my work demonstrates that learning to upend conceptually and conventionally imposed barriers to eco-ethical entanglement is powerless to evoke sympoietic practices of care without a corresponding grounding in the kinds of technological media across which these practices normally traverse, and which thus affect the efficacy of any sympoietic intervention, no matter how brilliantly imagined. Technological collaborations, such as indigenous based digital games (D. Haraway 2016, 86–89), are not simply technically enabled collaborations—a point that should trouble Haraway but does not catch her focus. Rather, these collaborations are enabled by multispecies labours and particular understandings of human being in the world that cannot be disentangled from the ecological repercussions of using these media to enact sympoietic alliances. This oversight highlights a prime example of the kind of 'trouble' that caring practices and ethics need increasingly, today, to engage with as they aspire toward sympoietic imaginations. In this respect, this thesis challenges Haraway's notion of care beyond configurations of entanglement toward a reckoning with the 'trouble' that their medium of conveyance poses to learning to care. The problem is not simply how to flourish together (D. Haraway 2016, 2), but to learn to do so through the

very machinery whereby lives are lived. In facing this understanding, this thesis urges conceptions of relational, more-than-human oriented care along a fresh track, which is troubled by, and troubles, the pervasive digital roadways that are involved in drawing lines of caring connection to others, and the social, cultural, economic, and ecological frictions that lubricate the terms of those connections.



I undertook this project in the spirit of constructively critiquing the promotion of ecological care through digital consumption, in the hope of opening up space for alternative interpretations of, and approaches to, caring to take up residence in the eco-ethical imagination. In this concluding chapter, I have indicated directions of further theoretical development and empirical inquiry based upon my initial research experience. I wish to conclude by emphasising that the turn to such campaigns to provoke thinking on care as an ecological ethic should be understood as a choice that is response-able to the ways in which lives are growing entangled with digital media. As a reflection of the times, these campaigns capture how digital media technologies are gaining cultural as well as commercial currency by becoming sites of eco-ethical engagement. As such, these sites, and the promotional practices in their service, should be designed and used with great and unrelenting care for the wider webs of relation they affect and make (in)visible.

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Appendix of Campaigns by Case (Chapter)

Case 1 (Chapter 4): Online shopping

BLINQ

Sells customer returns, overstock, open box, and refurbished items

1 tree/order

380, 270 trees planted

Planting partner: Trees for the Future

Website: <https://www.blinq.com>

Facebook: <https://www.facebook.com/blinq/>

Twitter: <https://twitter.com/blinq>

GOBE

Lens filters and memory cards

5 trees/order

696, 826 trees planted

Planting partner: Eden Reforestation Projects

Website: <https://www.mygobe.com>

Facebook: <https://www.facebook.com/gobeyou/>

Instagram: <https://www.instagram.com/mygobe/>

Kickstarter: <https://www.kickstarter.com/projects/1200489095/pacifico-independent-film-help-us-plant-100000-tre>

YouTube: <https://www.youtube.com/user/gobevideo/>

hemp helps

hemp clothing and accessories

Variable number of trees/order

14,017 trees planted

Planting partner: Trees for the Future

Website: <http://www.hemphelps.org/>

Blog: <http://www.hemphelps.org/blogs/hemp-news>

Facebook: <https://www.facebook.com/ourhemphelps/?fref=ts>

Instagram: <http://www.instagram.com/hemphelps>

Twitter: <https://twitter.com/hemphelps>

Jade Yoga

Yoga accessories

1 tree/mat

1,519,959 trees planted

Planting partner: Trees for the Future

Website: <http://jadeyoga.com/>

Blog: <http://jadeyoga.com/blogs/news>

Facebook: <https://facebook.com/JadeYoga>

Instagram: <https://instagram.com/jadeyogamats/>

Twitter: <https://twitter.com/jadeyoga>

Little Sapling Toys

Handmade wooden toys

1 tree/toy

101,615 trees planted

Planting partner: Trees for the Future

Website: <https://www.littlesaplingtoys.com>

Blog: <https://www.littlesaplingtoys.com/blogs/little-sapling-toys-blog>

Facebook: <https://www.facebook.com/littlesaplingtoys>

Instagram: <https://www.instagram.com/littlesaplingtoys/>

YouTube:

https://www.youtube.com/user/littlesaplingtoys/videos?shelf_id=0&view=0&sort=dd

Love Heals

Bohemian jewellery shop

10 trees/design

1,520,670 trees planted

Planting partner: Greener Ethiopia, subsidiary of Trees for the Future

Website: <http://loveheals.com/>

Blog: <http://loveheals.com/journal>

Facebook: <https://www.facebook.com/lovehealsjewelry>

Instagram: <http://instagram.com/lovehealsjewelry>

Twitter: <https://twitter.com/LoveHeals>

LUMBR

Handcrafted wooden sunglasses

20 trees/frame

10,000 trees planted

Planting partner: Eden Reforestation Projects

Website: <https://www.lumbr.co>

Facebook: <http://facebook.com/wearlumbr>

Instagram: <http://instagram.com/wearlumbr>

Twitter: <http://twitter.com/wearlumbr>

Nimbus Eco

Bamboo toilet paper

1 tree/toilet roll

4,500 trees planted

Planting partner: Trees for the Future

Website: <http://nimbuseco.com/>

Blog: <http://nimbuseco.com/2012/11/>

Facebook: <https://www.facebook.com/NimbusEco>

Instagram: <http://instagram.com/nimbuseco>

Twitter: <https://twitter.com/nimbuseco>

Original Grain

Men's stainless steel and wood watches

10 trees/watch

409,010 trees planted

Planting partner: Trees for the Future

Website: <https://www.originalgrain.com>

Facebook: <https://www.facebook.com/originalgrain>

Instagram: <https://www.instagram.com/originalgrain/>

Twitter: <https://twitter.com/originalgrain>

YouTube: <https://www.youtube.com/c/Originalgrain>

Paper Culture

Paper stationery and bamboo wall art

1 tree/order

Planting goal: 1 million trees

550,000 trees planted

Planting partner: Trees for the Future

Website: <https://www.paperculture.com>

Blog: <https://www.paperculture.com/blog/>

Facebook: <https://www.facebook.com/paperculture>

Instagram: <https://instagram.com/paperculture/>

Twitter: <https://twitter.com/paperculture>

Raintees

T-shirts and tanks

1 tree/tee

40,000 trees planted

Planting partner: Undisclosed

Website: <http://www.raintees.com/>

Blog: <http://www.raintees.com/blogs/blog>

Facebook: <http://www.facebook.com/raintees>

Instagram: <http://www.instagram.com/raintees>

Twitter: <http://www.twitter.com/raintees>

Reveal

Plant-based accessories for mobile devices

1 tree/product

101,496 trees planted

Planting partner: American Forests

Website: <https://revealshop.com>

Blog: <http://revealshop.com/mobile-travel-blog>

Facebook: <http://www.facebook.com/revealshop>

Instagram: <http://instagram.com/revealshop>

Twitter: <https://twitter.com/REVEALshop>

Shoplet

Office supplies

1 tree/order

973,258 trees planted

Planting partner: Trees for the Future

Website: <http://www.shoplet.com>

Blog: <http://blog.shoplet.com>

Facebook: <https://www.facebook.com/Shoplet>

Instagram: <https://www.instagram.com/shoplet/>

Twitter: <https://twitter.com/shoplet>

YouTube: <http://www.youtube.com/user/Shoplet>

tentree

Casual apparel

10 tree/item

21,088,290 trees planted

Planting partners: American Forests, City of Sudbury, Eden Reforestation Projects, Luc Forsyth, Plant with Purpose, Trees for the Future

Website: <http://www.tentree.com/>

Blog: <http://www.tentree.com/blog/>

Facebook: <https://www.facebook.com/tentree>

Instagram: <http://instagram.com/tentree>

Twitter: <https://twitter.com/tentree>

YouTube: <http://www.youtube.com/user/TenTreeApparel>

Tinlid Hat Company

Hats

15 trees/hat

95,636 trees planted

Planting partner: Trees for the Future

Website: <https://www.tinlidco.com>

Facebook: <https://www.facebook.com/tinlidhatco/>

Instagram: <https://www.instagram.com/tinlidhatco/>

Twitter: <https://twitter.com/tinlidhatco>

Tiny Footprint Coffee

Coffee

1 tree/pound coffee

85,000 trees planted; over 127,500 trees grown as a result of planting

Planting partner: Mindo Cloudforest Foundation

Website: <http://tinyfootprintcoffee.com/>

Facebook: <https://www.facebook.com/pages/Tiny-Footprint-Coffee/186134782763>

Instagram: <http://instagram.com/tinyfootprintcoffee>

Twitter: https://twitter.com/Tiny_FP_Coffee

TreeRing

Yearbooks

1 tree/yearbook

2,365,525 trees planted

Planting partner: Trees for the Future

Website: <https://www.treering.com>

Twitter: <https://twitter.com/TreeRing>

WeWOOD

Luxury wood watches

1 tree/watch

604,475 trees planted

Planting partners: American Forests, Trees for the Future, USDA Forest Service

Website: <http://www.we-wood.com/>

Blog (US): <http://articles.we-wood.us/>

Blog (UK): <https://www.we-wood.co.uk/blog/>

Facebook: <http://www.facebook.com/wewoodwatch>

Instagram: <http://instagram.com/wewoodwatch>

Twitter: <http://www.twitter.com/wewoodwatch>

Woodzee

Wooden prescription and fashion eyewear

1 tree/frame

Undisclosed number of trees planted

Planting partners: Undisclosed

Website: <http://www.woodzee.com/>

Facebook: <https://www.facebook.com/woodzeeinc>

Instagram: <https://instagram.com/woodzeeinc>

Tumblr: <http://woodzeeinc.tumblr.com/>

Twitter: <https://twitter.com/woodzeeinc>

Case 2 (Chapter 5): Apps, games, and crowdfunding sites

1 Heart 1 Tree

Citizen crowdfunding app

Number of trees varies depending on donation amount

55,000 trees planted

Planting partners: ACOPAGRO, Apiwtxa Association, GAYA, Green Cross Ivory Coast, Greening Australia, Jadav Payeng, Oceanium Association, Pur Projet

Website: <https://www.1heart1tree.org>

Facebook: <https://www.facebook.com/1heart1tree>

Instagram: <https://instagram.com/1heart1tree>

Twitter: <https://twitter.com/1heart1tree>

Google Play:

<https://play.google.com/store/apps/details?id=com.nazihamestaoui.oneheartonetree>

Ecosia

Search engine

Donation to tree planting fund per click on sponsored ad result

32,845,000 trees planted

Planting partners: WWF (former), WeForest (current)

Website: <https://www.ecosia.org/>

Knowledge Base: <https://ecosia.zendesk.com/hc/en-us>

Blog: <http://blog.ecosia.org/>

Facebook: <https://www.facebook.com/ecosia>

Twitter: <https://twitter.com/Ecosia>

YouTube: <https://www.youtube.com/user/EcosiaORG>

Firefox Add-On: <https://addons.mozilla.org/en-US/firefox/addon/ecosia-the-green-search/?src=search>

Google Play: <https://play.google.com/store/apps/details?id=com.ecosia.android>

iTunes: <https://itunes.apple.com/gb/app/ecosia/id670881887?mt=8>

Ecotopia

Facebook game about sustainable living

25,000 trees planted

Planting partner: Trees for the Future

Facebook: <https://www.facebook.com/ecotopia.beta>

Twitter: <https://twitter.com/ecotopia>

Forest

Productivity app

Variable number of trees based on user activity

287,135 trees planted

Planting partners: WeForest (former), Trees for the Future (current)

Website: <http://www.forestapp.cc/>

Facebook: <https://www.facebook.com/forestapp.cc>

Twitter: https://twitter.com/forestapp_cc

Other Reviews: <https://www.producthunt.com/tech/forest>

Chrome: <https://chrome.google.com/webstore/detail/forest-stay-focused-be-pr/kjacjdnoddpbbcjlcajfhbdhkgk>

Firefox: <https://addons.mozilla.org/en-US/firefox/addon/forest-stay-focused-be-present/>

Google Play: <https://play.google.com/store/apps/details?id=cc.forestapp>

iTunes: <https://itunes.apple.com/us/app/forest-stay-focused-stop-phubbing/id866450515>

Windows Phone: <https://www.microsoft.com/en-us/store/apps/forest-stay-focused-be-present/9wzdncrdnljk>

ForestNation

Crowdfunding website encouraging individuals to pledge to plant a tree

Over 4,000,000 trees planted

Planting partner: Undisclosed

Website: <https://forestnation.com>

Blog: <https://forestnation.com/blog/>

Facebook: <https://www.facebook.com/imagineforestnation/>

Instagram: <https://instagram.com/imagineforestnation>

Twitter: <https://www.twitter.com/forestnation>

YouTube: <https://www.youtube.com/user/ForestNation>

Goodeed

Watch ads in web browser

1 tree/20-second ad viewed

3,197,279 trees planted

Planting partners: Cœur de Forêt association, WeForest

Website: <http://www.goodeed.com/>

Facebook: <https://www.facebook.com/Goodeed>

Google+: <https://www.facebook.com/Goodeed>

Twitter: <https://plus.google.com/116393029521209119779>

Greenapp

General interest games

In-app points converted by the organisation to variable number of trees

1,000 trees planted

Planting partners: Small French NGO (undisclosed), Association Planète Urgence

Website: <http://greenapp.org/>

Facebook: <https://www.facebook.com/Greenapp-220262541497865/>

JohnnyAppl

Trivia game

5,930 trees planted

Planting partner: Eden Reforestation Projects

Website: <http://www.edenprojects.org/johnnyappl>

Facebook: <https://www.facebook.com/johnnyappl.play.trivia.plant.trees>

Twitter: <https://twitter.com/johnnyappl>

Indiegogo: <https://www.indiegogo.com/projects/johnnyappl-terraforming-earth-with-trivia#/>

Panda Hero

Panda rescue and care game

3 trees/download

21,700 trees planted

Planting partner: Trees for the Future

Facebook: <https://www.facebook.com/PandaHero>

Twitter: <https://twitter.com/pandaherogame>

Plant for Earth

Donation app

1, 7, or 70 trees, depending on donation

1,849 trees planted

Planting partner: Trees for the Future

Website: <https://www.plantforearth.co.uk>

Facebook: <https://www.facebook.com/PlantforEarthCo/>

Google Play: <https://play.google.com/store/apps/details?id=com.plantforearth.donate>

Stand for Trees

Grassroots crowdfunding initiative

Variable number of trees per CO₂ tonnes donated

Unable to provide an overall estimate of number of trees planted/protected

Planting partner: REDD+

Website: <https://standfortrees.org/en/>

Blog: <https://standfortrees.org/en/news>

Facebook: <https://www.facebook.com/standfortrees>

Twitter: <http://twitter.com/StandForTrees>

Tilt World

Educational game linking deforestation and climate change

Coins in-game are converted to a donation

Planting goal: 1 million trees

Over 16,000 trees planted

Planting partner: WeForest

Website: <http://www.tiltworld.com/>

Blog: <https://tiltworld.wordpress.com/>

Facebook: <https://www.facebook.com/TiltWorld>

Twitter: <https://twitter.com/TiltWorld>

iTunes: <https://itunes.apple.com/us/app/tilt-world/id432854196?ls=1&mt=8>

Tree-Nation

Fundraising and networking platform for tree planting

Number of trees planted varies by project and donation amount

4,686,352 trees planted

Planting partner: Varies by project

Website: <https://info.tree-nation.com>

Facebook: <https://www.facebook.com/treenation>

Flickr: <http://www.flickr.com/photos/tree-nation>

Twitter: <https://www.twitter.com/treenation>

Treesisters

Global network for funding tropical reforestation through monthly and one-off donations

Number of trees varies by donation

193,314 trees funded/month, 2,319, 772 trees funded per year

Planting partners: Eden Reforestation Projects, International Tree Foundation, Project Greenhands, WeForest

Website: <https://www.treesisters.org>

Blog: <https://www.treesisters.org/2017-10-04-18-28-09/blog>

Facebook: <https://www.facebook.com/treesisters/>

Twitter: <https://twitter.com/treesisters?lang=en>

Tree Planet

Game involving rescuing and caring for baby trees

1 tree/completion of game

504,403 trees planted

Planting partner: Undisclosed

Website: <http://treepla.net/eng/main.html>

Facebook: <https://www.facebook.com/treeplanet>

Instagram: <https://www.instagram.com/treestorygame/>

Twitter: https://twitter.com/TREE_PLANET

TP2 Google Play:

<https://play.google.com/store/apps/details?id=treeplanet.dev.treeplanet2>

TP2 iTunes: <https://itunes.apple.com/kr/app/tree-planet-2/id632168495?mt=8>

TP3 Google Play:

<https://play.google.com/store/apps/details?id=com.treeplanet.treeplanet3>

TP3 iTunes: <https://itunes.apple.com/kr/app/treeplanet3/id896545501?mt=8>

Tree Story Game

Care for a virtual pet tree

1 tree/completion of game, additional \$0.25 US cents donation per \$1 spent in-game

Undisclosed number of trees planted

Completed projects: Plant to Save the Warblers (Ausable State Forest, Michigan); Shade in the Hot City (Houston, Texas); Wildlife Reforestation (Malheur Forest, Oregon); Fruit Tree Adoption (Los Angeles, California); Yu Ying School Planting (Washington D.C.)

Projects listed as in progress: Jimi Hendrix Park (Seattle, Washington); Students Taking Charge! (Loveland, Colorado); Treeline Trails (Denver, Colorado); Rainforest

Reforestation (Brazil); iHasCupquake Garden (North Hollywood, California)

Planting partners: US Forest Service, The Nature Conservancy, Alliance of Community Trees, Project Learning Tree, Arbor Day Foundation

Website: <http://www.treestorygame.com/>

Facebook: <https://www.facebook.com/treestorygame?fref=ts>

Twitter: <https://twitter.com/treestorygame>

Google Play: <https://play.google.com/store/apps/details?id=com.ZigZagZoom.TreeStory>

iTunes: <https://itunes.apple.com/US/app/id975741387?mt=8>

Case 3 (Chapter 6): Digital monies and spending

BitSeeds

Cryptocurrency

Planting goal: 1 billion trees pledged

Undisclosed number of trees planted

Planting partner: Rainforest Foundation

Website: <http://bitseeds.org>

Reddit forum: <https://www.reddit.com/r/BitSeeds/>

Twitter: <https://twitter.com/bitseeds>

YouTube:

<https://www.youtube.com/playlist?list=PLQavRdgrRCkXlsBrAm32jafiu8Ihu7dp>

Carboncoin

Cryptocurrency

Undisclosed number of trees planted

Planting partner: Undisclosed

Website: <http://carboncoin.cc>

Blog: <https://medium.com/@Carboncoin>

Community forum: <http://www.carboncointalk.org>

Facebook: <https://www.facebook.com/CarbonCoin>

Twitter: <https://twitter.com/truecarboncoin?lang=en>

YouTube: <https://www.youtube.com/channel/UCCsZNL39vM7UlxwGAshXm3Q>

CHHASE (a GlobalGiving campaign)

Donations

140,000 trees planted

Planting partner: Plants with local volunteers and residents

Website: <https://www.globalgiving.org/projects/plant-a-tree-save-earth-and-lives/updates/?subid=23094>

EcoCoin

Cryptocurrency

Undisclosed number of trees planted/backing the currency

Planting partner: Undisclosed

Website: <http://ecocoin.com>

Blog: <https://www.nextnature.net/welcome/>

Facebook: https://www.facebook.com/ECO-Coin-125717840799708/?ref=page_internal

Twitter: <https://twitter.com/TheECOcoin>

Grow-Trees

E-certificates

Number of trees varies by donation amount

3,046,511 trees planted

Planting partners: Plant-for-the-Planet, WWF, Various Indian charities and organisations depending on project

Website: <https://www.grow-trees.com>

Blog: <https://www.grow-trees.com/wordpress/>

Facebook: <https://www.fb.com/growtrees>

Twitter: https://twitter.com/grow_trees

Leafcoin

Cryptocurrency

Undisclosed number of trees planted

Planting partner: WWF

Website: <http://www.leafcoin.nl>

Bitcoin forum: <https://bitcointalk.org/index.php?topic=514032.new#new>

Reddit forum: <https://www.reddit.com/r/LeafCoin/>

Facebook: <https://www.facebook.com/leafcoin/>

Twitter: <https://www.facebook.com/leafcoin/>

Litecoin

Cryptocurrency

100,000 trees planted

Planting partner: Eden Reforestation Projects

Website: <https://litecoin.org>

Community forum: <https://litecointalk.io>

Reddit forum: <https://www.reddit.com/r/litecoin/>

Twitter: <https://litecointalk.io>

Mokugift

Donations

Planting goal: 5 million trees

190,000 trees planted

Planting partner: Plant-for-the-Planet

Website: <https://www.thegrommet.com/138-mokugift-com-plant-a-tree-charity>

Twitter: <https://twitter.com/mokugift>

One Tree Planted

Donations

Planting goal: 1 million trees

Undisclosed number of trees planted

Planting partners: Cal Fire, The New Roots Foundation, World Resources Institute, and several small organisations across North America

Website: <https://onetreepanted.org>

Blog: <https://onetreepanted.org/blogs/news>

Facebook: <https://facebook.com/onetreepanted>

Instagram: <https://instagram.com/onetreepanted>

Twitter: <https://twitter.com/onetreepanted>

Sustain:Green

Credit card

Undisclosed number of trees planted

Planting partner: Mata no Peito

Website: <http://sustaingreen.com>

Blog: <http://sustaingreen.com/blog>

Facebook: <https://www.facebook.com/SustainGreen>

Instagram: <http://instagram.com/sustaingreen>

Twitter: https://twitter.com/sustain_green

TreeGreetings/Your True Nature

E-cards

TreeGreetings is the branch of Your True Nature that formerly governed e-cards and planting operations.

115,000 trees planted

Planting partners: Trees, Water, & People and Plant-It 2020

Website: <http://www.treegreetings.com>

Blog: <http://www.speakingoftrees.com>

Website: <https://www.yourtruenature.com>

Facebook: <https://www.facebook.com/YourTrueNature>

Instagram: <https://instagram.com/yourtruenatureinc/>

Twitter: <https://twitter.com/yourtruenature>

YouTube: <https://www.youtube.com/user/ilanshamir>

Treeshare

Cryptocurrency

0 trees planted

Planting partners: None decided

Website: <http://www.treeshare.be/en>

Facebook: <https://www.facebook.com/treeshare/>

Twitter: <https://twitter.com/treeshare>