Designing in an Era of Xenophobia

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Abstract

The Anthropocene acknowledges that the volume of designed things is now harming the sustainability of the ecosystems on which current ways of living depend. As a result, there is an urgent need for us to do things differently. But how differently? The history of the idea of ecology has involved putting limits on tolerable diversity. For this reason, ecological politics can be compatible with anti-immigration politics. This article argues instead for a critical diversity, one that can counter the current Proactionary Imperative, which extols high risk but potentially high return, radical technological responses to our societies' unsustainability. That critical diversity would embrace designing for migration between connected slow, local, communities.

Keywords

Sustainable Design, Anthropocene, Resilience, Proactionary, Precautionary, Cosmopolitanism

Note:

The following is an after-the-event write-up of the closing keynote address of Nordes 2015 at Konstfack in Stockholm, Sweden. The brief for the address was a critical review of the conference, the theme for which was Design Ecologies (in the Era of the Anthropocene). The address was not received well, as discussed in post-script, so the following is a substantial reformulation. Nevertheless, the presentational tone and speculative intent has been mostly preserved.

PLANETARY URGENCY

The Anthropocene names some very big problems — of planetary and epochal scale. The problems arise from the sheer volume of diverse design actions currently taking place — so many that not only can no biological system escape damaging impact, but now neither can geological ones. This volume and diversity is precisely what frustrates responses to these problems — what meta-design (which I mean less in John Wood's sense[1] but more in the sense informing the ambitions of Bruce Mau[2] or Richard Farson[3]) could possibly gather and steer all these myriad of design actions happening every day across the entire globe?

And, of course, this situation is urgent. Given the scale it names, the Anthropocene should be *the* urgency that makes any other seemingly pressing concern secondary. What is at issue is 'life on earth as we now know it.' There should be no other designing on any other problem; only designs redirecting the Anthropocene toward more sustainable futures. Every single conference should have the "Challenging Anthropocentrism in the Design of Sustainable Futures" (the sub-title of the NorDes 2015 *Design Ecologies* conference) as its sole theme.

All this is easy to say, too easy. You know that there is a whole article still to come, so evidently this urgency is not so great as to have overwhelmed my ability to find the time to write this. Perhaps the rest of this article is an extraordinarily effective communication of that urgency. Is it even possible to imagine reading something that causes you, from the moment you put it down, to completely reprioritize everything — your designing, your teaching, your research, your everyday ways of living? This near-impossible-to-contemplate urgency is what the Anthropocene should stand for. Consider Tony Fry's edict:[4]

> what is 'reasonable, expedient and ethical' is a dictatorship of the imperative of Sustainment… It is a dictatorship in which all difference other than the right to defuture is possible… For us humans, our very being is at stake and, in significant part, is in our own hands… the decisionism of enforced Sustainment (futuring)… demands [a] revealing [of] the crisis of structural unsustainability, breaking the silence of unknowing, and confronting all that defutures while, at the same time, advancing [the] means of Sustainment.

> For Sustainment to be sovereign, a new mode of authority is needed that commands embodied time and unlimited space — its making has to be futural and its authority global and thus overarching. The state as we currently understand it (as a relatively new political entity) has to be subsumed by the 'dictatorship of the imperative of Sustainment' for the rule of the Sustainment to be enacted as a 'commonality in differences.'

Yet, ironically, a dominant mantra in design education and research at this very Anthropocenic moment is: design must not be characterized as a problem-solving activity. Tony Dunne and Fiona Raby pejoratively list Problem-Solving second from the top of 'Column A,' as compared to the qualities listed under Speculative Design's more preferable 'column B.' Sometimes this distaste for design-as-problem-solving is a resistance to instrumentalist rationalizations of design, and sometimes it is an objection to commercial commodifications of design, but often it is just a disgruntledness with imperatives: design is at its best when it is free, open to inquire playfully; do not constrain design's capacity to speculate outside current problems.

DIVERSE FIRST RESPONDERS

This kind of 'don't fence me in' attitude by some designers, and design researchers, is probably a sample of a wider response to the problem that is the Anthropocene. Given its urgency, assuring sustainability for forms of life on earth feels like something demanding large-scale concerted programs: war-efforts, moon-shots, Manhattan-projects. Everyone should put their lives and businesses aside, and work on integrated aspects of a coherent response.

A second reaction might be to accept an overarching imperative but argue for a diversity of initiatives within that, rather than an integrated division of labor serving a singular response. Precisely because the objective concerns something of such urgency and scale, we cannot risk putting all our efforts into a single strategy. So instead, 'let a thousand flowers bloom.'

The first response is a decidedly designed approach, in the sense that design is acting with strong intention. It demands a modernist form of imposing design leadership. The second mixes-in something of an evolutionary or capitalist perspective: competing diversity is the better policy for finding the best way forward — you cannot know for sure beforehand how best to attain a preferable situation. The second is also perhaps more democratic, in the style of crowdsourcing platforms that name an objective for makers and hackers everywhere to contribute to. While the second looks like it deals with the risk of the first opting for the wrong pathway, it is an inherently wasteful process and risks not having enough capacity or time to scale what might finally emerge as better pathways (see John Michael Greer's writings about Catabolic Collapse[6]).

There is currently a third discourse in the face of the problem that is the Anthropocene that lies somewhere between these two. Both the first and the second proceed with different kinds of caution. The first has faith in the current knowledge of experts, to both determine a viable goal and how best to attain it, and so cautions against wasting time and resources dreaming of other options. The second also believes that the end-goal has been well formulated, but tries to caution against 'putting all of your eggs in one basket' by promoting a proliferation of rapid experiments about how to attain that ideal state.

The third response contrasts itself with these 'Precautionary' strategies by being 'Proactionary.' It asserts that there might be much more effective, large-scale responses to the unsustainable state of the Anthropocene in not-yet-viable technological systems. These are visionary long-shots; it will take considerable resources to develop these systems, and there are not only risks that they may never be viable, but the technologies themselves have known (ecological impact) risks. However, should they succeed, they will provide massive, rapid change possibilities.

The 'Proactionary' argument[7] uses the Precautionary Principle[8] against itself, cautioning that proceeding cautiously might itself be part of the problem. What if we expend resources on the cautious but viable project identified by current knowledge experts in the first response, or the safe diverse investment portfolio of the second response, but the outcomes still prove inadequate? We will have cost ourselves the only opportunity we had to do something more ambitious. If our situation is as large and urgent as the name 'Anthropocene' indicates then we must, argue supporters of Proactionary responses, invest in high risk but even higher payoff options. If life as we know it is as stake, are we not impelled to pursue radically different, hubristic options?

This is not merely an academic argument; it is the currently espoused positions of many with the very vast

capital pools to underwrite such gamble-with-the-planet's-future projects. I am thinking of the technolibertarian initiatives like XPRIZE, Google X, Space X.

DIFFERENCE IMPERATIVE

The point of this discussion is to raise the issue of imperatives and difference. An imperative demands change, ordering that things be different. It will have a positive side – the future brought into being by obeying that command; but it will necessarily also have a negative side, excluding if not eliminating certain existing things on the way to that different future. Imperatives by definition foreclose on some aspects of current diversity — but which?

Sustainability is an interesting imperative because it not only demands that things be done differently from now, but it makes this demand in the name of difference, that is, greater diversity. Take the brief for the theme of the Nordes 2015 Conference for instance:

> How can [the legacy of Scandinavian democratic and user-centered values] be extended to acknowledge and celebrate humans' cohabitation on a global scale to also include the myriad of all other existing species and systems at alternative scales in time and space?... How can design practices embrace pluralism by recognizing, in the manifestation of design itself, biological as well as cultural diversity?[9]

There is a means-end conundrum here: should the imperative for designing systems that valorize diversity be accomplished by diverse means? Or is there an Anthropocenic urgency that compels a more unified project of eliminating the unsustainable systems that are eroding diverse forms of life?

DIVERSIFIED RESILIENCE

A case in point is Resilience, the topic of the opening keynote at Nordes 2015 by Line Gordon. This is the capacity of ecosystems to recover from unexpected damage. Ecologies are not perfectly balanced, isolated systems; they comprise networked redundancies that can absorb a range of impacts from neighboring or large systems, and provide resources for repair. The lesson of ecological resilience is: diversity affords ecological sustainability.

Note that that diversity and redundancy is, from the point of view of the system's day-to-day functioning, inefficient. Resilience as a discourse is for this reason at odds with earlier approaches to sustainability that advocated eco-efficiency, sufficiency, *Existenzminimum*[10], etc. However, the surplus that resilience involves is not clearly wasteful, as it is in fact an investment in future sustainability, or more precisely, a kind of insurance mechanism.

On the one hand, developing more resilient societies would seem to involve encouraging local diversities. What could be called the Resilience Principle implores designers to lend their expertise to making as wide a range of consequently smaller-scale projects as possible. On the other hand, at the scale of the Anthropocene, Resilience impels infrastructural sized projects: dikes and storm surge buffers, water treatment plants and seed banks,

distributed power systems and passive survivability[11] metrofits.[12] These kinds of initiatives, which are wasteful until needed, require large resources that will compete with local diversities — whether designed or 'natural.' Between these two approaches to Resilience lie debates about 'bounce back to which current state with what levels of diversity,' and 'resilience to what kind of external impacts?'

That second debate has led to a third discourse, one that pushes the notion of Resilience to its limit. The point of networked redundancies in ecosystems is to provide capacities to cope with the unexpected. Versions of resilience that plan infrastructures for certain kinds of calamity limit their scope to the expected, even if rare. True 'black swans' cannot be anticipated. Consequently, this third perspective argues, we should be focusing instead on enhancing current flexibility; not the capacity to return to the existing state after damage, but instead the ability to change quickly into something different post-Black Swan.

There are Nietzscheanly neoliberalist versions of this discourse: relish change, engage in creative destruction, take care of the self without attaching to possessions, engage with diversity to increase your chance of sensing impending change.[13] But there is a different version. To have the capacity of rapid change in the face of the unexpected, it is necessary to cultivate radical diversity, to sustain not just redundant components within an ecosystem, but truly useless components within a system, things that are irrelevant to the current set of relations, but for this very reason could prove useful in a changed set of relations. These resilience capacitors would be real outliers in pre-calamity ecosystems, perhaps even to the point of being disruptive of the current state. To explain further will require a detour back into the intellectual history of ecology.

THE GOLDILOCKS IMPERATIVE (NOT-TOO-DIVERSE)

Ernst von Haeckel coined the term 'ecology' in the late 1860s. This polymath was committed to promoting and advancing Darwin's ideas about evolution.[14] Von Haeckel believed the kernel of evolutionary theory lay in recognizing the fit between any creature and its environment. Any environmental niche, or home ('oikos'), had an order ('logos'). The apparent diversity of creatures in a particular locale had an underlying pattern. Each creature had its place and each place its creatures; the form of every plant or animal conformed to the nature of its environment, and vice versa.

An ecology, according to von Haeckel, is diverse, but there is a properness to all that it comprises. This is perhaps better explained by a later idea from ecological science that nonetheless maintains von Haeckel's worldview: climax community. If you managed to find a bare piece of earth, such as new land created by a volcano or strip mining, over time you would see a range of species begin to populate that area: the small plants of some wind-borne seeds, then some larger fruiting plants brought by feeding birds, later perhaps some smaller mammals living amongst the new trees, followed by larger predators, etc. Ecological science held at one point that the number of distinct species in such a place would increase steadily over time, until cresting and from then on remaining plateaued at a slightly lower level. That would be the climax community that indicated that that ecology was now mature and in balance. The theory held that, barring large-scale external impacts, such a mature ecology would persist in that climax state forever.

Ecological science no longer subscribes to this idea of stable ecologies, but it is important to recognize that our aesthetic perception of natural environments lags behind. Tracts of wilderness can inspire awe because of their spatial scale, but also because of their temporal scale; these landscapes seem prehistoric, primeval, as if unchanged for eons. It can be deflating to hear that an area of wilderness you are beholding is in fact relatively recent regrowth after a period of human exploitation or large-scale natural disaster.

Contemporary science insists that ecosystems are in fact in constant states of flux.[15] Populations of certain species boom and crash even without climatic variation. A particularly important aspect of this dynamism is migration. Ecosystems, especially ones that are not literally islands, but even those, are observational constructs; species constantly traverse borders, especially as their populations boom or crash, even if this entails some plants and animals attempting to survive in different conditions to which they are unsuited. Von Haeckel promoted the stable, 'fit' side of evolution with his notion of 'ecology,' underplaying the mobile, competitive struggle aspects.

Allow me to give an example of this migratory dynamic of ecologies, one that is perhaps acceptably long given the beauty of the writing by Robert Musil:[16]

> But little by little your recovery proceeds, and with it the evil spirit of the intellect returns. You start observing things. Directly opposite your balcony that green canopy of trees still hugs the side of a mountain, and you still hum that grateful song to it ['Who made you, oh forest fair, rise so tall above the ground?...'], a habit which all of sudden you can't seem to shake; but one day you realize that the forest des not consist only of a series of notes, but of trees, which before you couldn't tell for the forest. And if you look very closely, you can even recognize how these friendly giants struggle over light and ground with the envy of horses fighting over fodder. They stand quietly side by side, here perhaps a grove of spruce, there a grove of beech trees. It looks naturally dark and light as in a painting; and moralistically edifying as the touching togetherness of families. But, in fact, it is the even of a thousand-year long battle.

> Are there not seasoned naturalists from who we can learnt that stalwart oak, today a veritable epitome of solitude, once spread in hoards far and wide throughout Germany? That the spruce, which now supplants everything else, was a relatively recent interloper? That at some time in the past an era of the beech empire was established and , at another time, the imperialism of the alder dominated? There was a migration of the trees, just as there was a migration of the nations, and wherever you see a homogenous native forest, it is in fact an army that established a stronghold on the embattled promonotory; and where a variety of trees seem to conjure up an image of happy coexistence, they are really scattered combatants, the surviving remnants of enemy hoards crowded together, too tired and exhausted to continue battle!

THE ECOLOGICAL POLITICS OF ANTI-IMMIGRATION

From this perspective, we should perhaps worry about the notion of ecology, at least in von Haeckel's original formulation. It acknowledges natural diversity, but insists that there are natural limits to that diversity. In the name of harmonious order, the idea of ecology excludes maximal forms of diversity, especially those that derive from migration. What if ecological localism entails anti-immigration politics?[17]

This sounds at first like critical over-reach. But some things should be noted. The first is that von Haeckel's project was very broad. He was not merely a disseminator of Darwinian ideas, but took the relational holism of ecologies into a politics and even a religion — Monism. This sociobiological project was advanced in the twentieth century by Jan van Smuts who coined the term, Holism, in 1926. Smuts went on to be an important statesman in the formation of the Republic of South Africa. The line is not direct, but nevertheless it is not unrelated that one the world's most established institutional racisms, apartheid, holds that different human races should be located in different environments, in the name of social order.

Secondly, Haeckel was an illustrator. His *Art Forms in Nature* (1904)[18] is still an assigned Foundation text in many Art and Design Colleges. Visualization was not just another promotional tool for von Haeckel; it was more like an epistemology. The visible order evident within individual specimens was validation that there is also a less visible order between appropriate sets of species within an ecology. Von Haeckel is infamous for having incorrectly claimed that ontogeny reproduces phylogeny (the pre-natal development of a higher order individual, such as yourself, is like a sped-up version of evolution — from amoeba through reptile to mammal) on the basis of his inaccurate illustrations of fetuses. If fitness for a particular environment, including fitness for the maturity of that environment — i.e., developmental hierarchy — is visible, then it is possible to identify misfits by look alone. Foreign or less developed species that might dilute or slow a particular evolutionary advancement can be seen and so screened out. Again, the line is not entirely direct, but certainly German Nazism appropriated von Haeckel to justify eugenics in the name of their visions for more orderly evolutionary advancement.[19]

Thirdly, the environmental historian Donald Worster[20] has noted that North American scientists (primarily the Odum brothers, Eugene and Howard) led the advocacy of the term 'ecosystem' (coined by the British ecologist, Arthur Tansley in 1935) after the second world war precisely to escape the way in which the term 'ecology' had been politicized by fascism into a justification for valorizing the whole over the individual, especially non-conforming individuals. 'Ecosystem' not only suggested something more mechanistic (and so reprogrammable) but also something that is merely an analytic construct, explaining the collective outcome of diverse individual actions rather than a substantive thing. Worster's general historicist argument is that seemingly neutral scientific discourses in environmentalism should be understood as reflecting wider political commitments. For instance, Worster notes that talk of dynamic ecosystems fits dominant post-war capitalism's commitment to competitive individualism.

Peder Anker[21] has extended this historicization of ecology with respect to design, documenting the links between ecosystems science and the design of life support systems during the space race. When we start thinking of our 'Blue Marble'[22] — to use the title of the famous NASA photograph of our whole planet from the moon — as 'spaceship earth,'[23] this also necessitates consideration of 'lifeboat ethics,'[24] i.e., decisions about who is to be rescued and who is to be sacrificed.

In this vein, we should ask, why then resuscitate the notion of ecology now? In what wider historical context was Nordes 2015 for instance adopting the notion of 'Design Ecologies'? What does the notable plural — ecologies — suggest or reflect?

INHUMANE POSTHUMANISM?

At the moment, what seems to be dominant politically is xenophobia and anti-immigration. Throughout Europe and even Scandinavia, as well as Russia and now the USA, nationalist, anti-diversity political discourses are prevalent and attracting strong support. Australia, my home country, is a world leader in institutionalized anti-humanitarianism toward refugees. These developed economy xenophobias are prompted by those fleeing continued ethnic conflicts in the Global South — especially Africa, the Middle East and South Asia. International cultural politics do not seem to be heading toward the peaceful cosmopolitanism that Kant's Enlightenment predicted.

The brief for Nordes 2015 clearly advocated on behalf of diversity. But which diversity? A diversity within the limits of what is tolerable by the ecology of this or that place? Or a migratory diversity with the capacity to fundamentally challenge and even change ecologies? If the latter, with respect to which species? Are we talking only about historical diversity, such as is involved in the projects of de-extinction and re-wilding — currently promoted[25] despite their earlier association with Nazism[26]? If we are also, or instead, talking about geographic diversity, are the tolerable invasive species pets and livestock, weeds and bugs? What if they are people, immigrants, documented or undocumented?

Consider, for instance, the political criticism of current turns in academic discourses toward non-humans, whether animal, mineral or vegetable: is consideration of wider forms of alterity coming at the cost of attention toward very present human others drowning in the oceans they try to cross to escape beheading in their homes? Which form of otherness is it more urgent for us to consider? Will, or even can, a critique of anthropocentrism enable us to be more humane toward each other? Are 'ecologies' appropriate ways of designing more cosmopolitanly sustainable societies?

Resilience to Anthropocenic scale Black Swan events does seem to endorse diversification of all kinds of populations through migration, even to disruptive levels. It just could be that something or someone transplanted from its own ecosystem to an entirely foreign one brings capacities that would be essential to its new homeland transitioning through an unexpected natural, or anthropogenic, disaster. But in that case, should that exotic species be encouraged to maintain its misfit post-migration? Would not assimilation reduce its capacity to afford transition pathways for its adopted ecology? Clearly the argument could not be extended to endorsing that this migrant should be so non-assimilated as to harbor destructive intent toward its new community?

To some extent, these abstract questions are merely the result of an extremist dialectic. The answer is never this or that — i.e., natural vs artificial, sustainability of the same vs transformative resilience, homeland vs foreign, assimilated or antagonistic — but always an inmixing that is neither one or the other. More importantly, there is no implacable logic here. Our topic is 'design ecologies,' that is, ecologies whose version of diversity is open to design, and redesign.

THE COSMOPOLITANISM INHERENT TO DESIGNS

What of design then? While I began by way of the Anthropocene, the era that finally acknowledges the centrality of pervasive designing, discussions about the ecological politics of migration seem a long way from the practice of designing. I do not believe this the case, and would like to spend some time indicating how.

I have long been convinced that one of the best accounts – though there are surprisingly few — of making, of why humans make things, is the one offered by Elaine Scarry in the closing chapter of her extraordinary book, *The Body in Pain*.[27] For Scarry, making is not only inspired by a fundamental empathy for someone who is suffering, but is structured by that empathy — the form of what is made materializes the specifics of the wish that 'pain be gone' in someone. Only this account explains the animism of designs, their capacities to be actively sensitive to someone's capabilities and needs.

> A chair, as though it knew from the inside the problem of body weight, will only then accommodate and eliminate the problem. A woven blanket or solid wall internalize within their design the recognition of the instability of body temperature and the precariousness of nakedness, and only by absorbing the knowledge of these conditions into themselves (by, as it were, being themselves subject to these forms of distress), absorb them out of the human body.[28]

Though initiated by concern for a specific individual, making results in a product that offers its empathy to anyone for as long as the product exists. A chair might be crafted by someone to afford bodyweight relief to his or her loved one, but once materialized, that chair will service anybody who comes upon it (within the limits of its ergonomics and their product semantics). 'Materialization' should be understood generally here – a piece of software bespoke for one organization can prove valuable to anyone who can deploy a copy of that software.

In this respect, useful things are essentially cosmopolitan[29] — they are made to satisfy the requirements of one particular community, but are always prepared to host outsides, others from wider and even other communities. This is what makes Scarry's philosophy of making especially important to design, as the art and/or science of mass production. Design materializes that cosmopolitanism by making one (model of a) thing — in consideration of one person(a), for example — that can then be reproduced many times for many people in diverse communities.

> The second advantage of chair over sympathetic expression is that once it is in existence, the diminution of the woman's problem no longer depends on the goodwill of whatever other human being co-inhabits her world… The general distribution of material objects to a population means that a certain *minimum* level of objectified human compassion is built into the revised structure of the external world, and does not depend on the day-by-day generosity of other inhabitants which itself cannot be legislated… anonymous, mass-produced objects contain a collective and equally extraordinary message: Whoever you are, and whether or not I personally like or even know you, in at least this small way, be well. Thus, within the realm of objects, objects-made-for-anyone bear the same relation to objects-made-for-someone that, within the human realm caritas bears to eros.[30]

Here is a first connection between design and the ecological politics of diversity and migration. The mass produced outcomes of designing afford modern lifestyles to anyone and, in their modernist ambitions, everyone. Mediating between efficient manufacturing and effective human factors, designers create 'civilized' built environments that

become second nature to those who dwell amongst them. Those designed artifacts also display the ways of living they afford. They appear to offer their quality of life to whoever beholds them.

This is what attracts the migrant. Many are fleeing violence, but most in addition are seeking access to the good life that designed products and environments visibly promise. In this sense, design not only creates wholly new artificial ecologies in which people can live differently — more conveniently, more productively, more delightfully, etc — but artificial ecologies which promise to accommodate many different kinds of people. To some extent, every significantly innovative design (or 'device landscape,'[31] since no design is an island, each is connected to a myriad of other products and infrastructures in dedicated environments) is a call to migrate: 'move your lifestyle over to this one; disburden yourself of your current possessions and habits and adopt these new ones.' Because every 'disruptive' design entails this act of migration, such designs to some extent treat everyone equally, offering new habitats to anyone, not matter what their previous homeland. Designs are cosmopolitan, servicing designated locals, but also, once materialized, offer their hospitality to foreigners.

TRYING TO CONTROL WHAT IS UNSETTLING

These claims are somewhat validated in the work of Vilem Flusser. His collection of essays, *The Freedom of the Migrant*,[32] explains that his insightful philosophies of design,[33] of the ways in which humans are designed by designs with which they dwell, are the result of the various forced and voluntary migrations he himself lived through:

> Humans are contingent [*bedingt*] beings… One can then say that humans are contingent on the nature and culture in which they find themselves. To be contingent means being surrounded by things that steer the movement of the contingent being along certain pathways. Humans are contingent beings because their movements are directed along certain pathways by natural and cultural things in their surroundings…

> But humans are not completely contingent… When we take an ironic stance, we are afforded a clearer view of our contingence… The movement into irony is an act of outrage. And with this motion a person rises above contingence. Movement away from irony is a form of engagement. With this motion the person returns to his state of contingence to change it. These two movements taken together are called freedom. Human beings are free because with this inexplicable and unpredictable movement they are able to become outraged about their contingence and to change it…

> I could also call this outrage in irony 'emigration' and the reverse movement out of irony (engagement) 'immigration.'… in my outrage I emigrate out of one contingence to immigrate into another, but my emigration is not only a matter of outrage; it is also a form of flight.[34]

This clearly idealistic account of "nomadism," as a way of opening existing habits and habitats up to innovation, is somewhat tempered by Flusser's recognition that the migrant unsettles not only him or herself, but also those amongst whom he or she relocates:

> For the native who is settled, the immigrant is even more alien and strange than the migrant outside his door because he exposes as banal what the native considers sacred. He is worthy of hatred and he

is detestable because he reveals the *heimat's* beauty as prettified kitsch. A polemical dialogue develops between the beautiful native and the detestable immigrant, which can end either in pogrom, a change in the *heimat* or the native's liberation from his own attachments…[35]

Flusser is explaining not only the relation between design and migratory diversity, but also the relation between designed environments and anti-immigration sentiments. To be at home in artificial ecologies, to settle into them as natural habitats and so conceal their constructedness, a community must exclude the alienating force of migratory aliens. The inherent cosmopolitanism afforded, and even advertised, by designed products and environments is concealed by deeming those things to be possessions, property proper only to those who have earned them. 'How dare these migrants feel entitled to get access to what is ours or even mine?' Xenophobia manifests as an attempt to limit the inherent shareable quality of designed artifacts. The insistence 'each to his own' extends racism from associations amongst people to human-thing interactions.

THE PLUARLIST SAMENESS OF GLOBALIZATION

The cosmopolitanism of designed things does not necessarily entail modernist uniformity — universal design for all humans. The promise of cosmopolitanism is not sameness but compatible difference, what Flusser calls "living together."[36]

Francois Jullien, whose philosophies compare Ancient Greece and Ancient China, clarifies what is at stake here when he proposes recently the tripartite distinction of the Universal, the Uniform, the Common.[37] Where the Universal is an abstract imperative, articulated most clearly in Kantian conceptions of human rights, the Uniform is more of an empirical force evident in globalization:

> While the universal is 'turned' towards the One (*uni-versus*) and expresses an aspiration towards it, the uniform is only a sterile repetition of this One… Instead of ideally (and vertically) bringing about a convergence towards the absolute of principle, it is no more than the indefinite return of the same and, unlike the universal, spreads out all the more easily (and prolifically) because it is not concerned about its foundation… the uniform is a concept of production (such as the standard or the stereotype), not of reason. It arises not from a necessity but from convenience: it is less costly because it is produced on an assembly line. Its only merit is to increase the yield and make everything easier. Even in the most favorable case — that of standardization of measures, codes and jurisdictions — it is the principle of functionality alone that prevails in it.[38]

Jullien is arguing that when the Universal was an imperative, it provoked and so preserved its opposite — concrete singularities. The Uniform in contrast has a more "pandemic quality"[39] that generates only a *faux* opposition in the form of the variation, the kitsch differences that decorate standardized forms (of products, buildings, services) in order to culturally localize them.[40] These are tolerable differences within what is in the end all the same. Things vary rather than diverge; they are different but all in the same way. This pluralism is reminiscent of von Haeckel's version of ecological biodiversity. And as Jullien's language makes clear, the descent from the universal to the uniform should be blamed on (modernist) design.

Jullien is worried about the 'uniformatting' of design's focus on standardized efficiency and convenience. But to some extent, design's monoculture is even worse. Jan Michl for instance has published a number of polemics about the generic modernist style that pervades global design.[41] Michl is critical of how dominant a minimalist aesthetic — what tends to be considered 'clean and elegant,' 'bold but open,' 'classic yet modern' — is in almost all design schools, in the North Atlantic but also emulated around the world. The fact that this aesthetic is historically and culturally specific is occluded by the ideology of user-centered functionalism, with claims like 'cognitive science determines that this styling is the most universally usable.' The fact that design has always been a taste setter, that design research is as much an exercise in teaching people about good design as it is in learning what would be designed well, is denied. The result is a failure to see just how uniform designed outcomes are. Whether or not the one Human-Centered Design Toolkit has been applied to a myriad of different contexts in the Global South, the designed services, platforms and products for each culturally specific 'social design' context, for instance, remain surprisingly indistinguishable. Divergence in process and result appear impossible, let alone singular particularity. Must designed ecologies, even in the plural, manifest this kind of modernist uniformity?

It seems necessary, for design schools at least, to declare an enemy. The design style guides that are now being issued by tech firms like Apple, Google, IBM, not only establish design ecologies that would be better termed, following Michl, modernist apartheids, but do so in order to standardize diverse social practices into an undifferentiated series of notifications on the one platform. Different organizational cultures, let alone socio-cultural differences, are being undermined as all interactions are channeled through ubiquitous, wearable devices. These are the currently dominant design ecologies, the single species forests that are colonizing everywhere.

DIFFERENT BELIEFS IN COMMON

Jullien counters both the universal and the uniform with the notion of the common. If the universal is imposed and the uniform produced, the common is enacted, or more accurately, partaken. For some things to be in common there must be others that are not. In fact, what is in common is never itself identical; I have one version and you have another; what phenomena we share in common we cannot literally share; it is communicable through creative translation, but cannot be conveyed directly.

This is the kind of difference that might be beyond anti-immigration versions of ecology and therefore afford real cases of resilience through diversity.

I would like to test this idea of commonality with an extreme case, namely extremism. As noted previously, our current political environment is quite xenophobic. Central to this attempt to establish limits on tolerable difference in certain places is religion. What seems to be incompatible with being in common with North Atlantic cultural ecologies are certain kinds of beliefs. It is not that these Northern ecologies are entirely secular, but rather that the kinds of beliefs that Northerners have, if religious, are kept to the private sphere. To act on your religious beliefs in public, in ways that seek to convert others, is a fundamentalism no longer grounded in the nature of North Atlantic social systems. Islam, it is claimed for instance, is too divergent from the pluralist ecologies of the North; it has nothing in common with those built environments.

And yet. One of the things that is shocking today is that many of those who join violent extremists are second generation immigrants. They have lived amongst the things of late capitalism; they have taken part in the designed ecologies of free-market democracies. All our civilized products should have modernized them, it is believed. Creatures are supposed to adapt to their environments. These modern designs attracted these people because the lifestyles they afford represent development, progress toward cosmopolitan civility. Yet these extremist recruits turn against this seemingly implacable progress. They re-emigrate from things that should have possessed them. Further, not only is theirs a return to pre-design belief systems, but it also entails a certain anti-design component — challenging liberal media and the consumerist conveniences it purveys. Is not this Northern disbelief at how such fundamentalists could have possibly renounced such things, such standards of living, is this not itself evidence that we do in fact have something in common with them, a comparable fundamental belief? The religion of those who live in free market democracies is a faith in progressive ecological modernization, is it not?[42]

This argument seems to over-extend an analogy at best and depend on a too-clever reflexivity at worst. However, there are two things to take note of.

The first is the normativity implied by having recourse to ecology. If an ecosystem is a descriptive account of the relations between creatures in a locale, why should this have prescriptive force? This is especially a problem when translating between the natural earth and our artificial worlds — displacing for now the fact that the Anthropocene signals the annihilation of the former as a force. The extent to which design ecologies are designed, and so are open to redesign, undermines the necessity for them to function as ecologies in 'natural places' do (which is in fact by random mutation). We can design different kinds of dependencies and flows — not least of which could be increasing the diversity that any 'ecology' could (dynamically) tolerate. Designed ecologies can be designed to exceed the ordered and unchanging climax communities that von Haeckel celebrated. They can and should enhance the cosmopolitanism (we believe is) inherent to material designs.

The second is that 'publicly enacted belief' is another way of saying an imperative, something urgently requiring action. The inhumane violence of terrorism is unforgivable. But it seems that what is also intolerable about the people attracted to such extremes is their fundamentalism, the fact that they are prepared to actively believe things that fundamentally. Must the Anthropocene therefore never amount to an equivalent quality and quantity of belief? There have been eco-terrorists, so what are the tolerable levels of belief in the urgency of our situation, with respect to climate change for example? How publicly convinced, and so proselytizing, are we allowed to be about risks to our resilience? Is it tolerable even if foreign to insist that action toward enhancing societal sustainability must take precedence of other freedoms — like holding pleasant but only ever mildly productive research-paper-presentation-based conferences? Does the pluralism of the designed ecologies of the North Atlantic have room in their diversity of life forms for overriding imperatives like climate change?

As I indicated toward the beginning of this article, pursuing ends so diverse that they seem impossible, with exclusive and resource consuming fervor, is precisely what certain proactionary technolibertarians are doing. There is much that is fundamentalist about Singularitarians, for instance.

Given this, I believe that the only appropriate way through the Anthropocene toward more sustainable futures will be one that does not entail 'progress.' The appropriate response to the urgency of the Anthropocene is going to have to involve a step-back from econo-technical development. We must undertake de-growth, not merely for practical reasons of limiting our ecological footprint or the risks associated with operating at ever increasing scales,

but because such a move is fundamental challenge to the global consumer class's fundamentalist beliefs. To put this another way: retraction, saying no to certain technological futures, downshifting, working less, slowing; these should be things we do not because we are forced to by the situation we are in; they should rather be instead things we decide to do intentionally, because we believe in those values.[43] Voluntary simplicity, by those who can choose (in the global consumer class), as opposed to enforced austerity, is divergent. It is the sort of diversification that will make a difference to the resilience of our societies, and the kind of action that will open our societies to others, non-humans and migrating peoples.

And because such publicly enacted beliefs are divergent, they need design; they need to be designed to withstand the normalizing forces of pluralist economies.

ANTI-PROGRESSIVE LOCALISM

Let me give a final example: one of the most obvious actions toward enhanced sustainability you can undertake is 'living local.' The environmental value of local is smallness (less carbon intensity associated with transport and infrastructure) and bioregional appropriateness. Both involve sacrifices such as accepting the seasonality of local produce for instance. The resilience value of local should also come from smallness (depending on systems small enough to be relatively quick and not-too-expert to repair). But resilience requires a competing factor — connectedness: to be local is to be more or less bioregionally self-sufficient, but also to be able to rely on neighboring systems if calamities disrupt the local ones — and obviously not only major calamities, but also the temporary hardships associated with seasons (locales in warmer climes shipping food to those in colder climes during their non-growing seasons for example). To maintain localization, those connections should be intermittent and as-needed, otherwise they may become channels for re-colonization by unsustainable globalization. There is connectivity, but only occasionally at-will.

In some ways, what is then most politically radical about localism is that it entails removing a place from the meta-narrative of global progress. In the twentieth century, small towns participated in the overall project of modernization by housing certain types of manufacturing (including of storable, transportable food), literally making the components for an ever-expanding uniform civilization. Localism, in addition to its ecological sustainability, involves a withdrawal from that greater project, a return to more subsistence-based economies. The reason for a town to exist becomes merely to sustain the population who live there — a truly ecological polis. To advocate for local is therefore to preach an importantly anti-progress worldview.

In terms of all that I have been arguing however, there is an inherent danger to the local: xenophobia. For instance, local currencies are important components of sustainable communities, but they counter precisely the freedoms enabled by socially disembedded economic interacitons — the fact that my money is good anywhere. Non-money based systems depend on trust whereas commoditized monetary systems allow cooperation without trust.[44] If I am migrant, I have neither your local money nor the cultural history to make me seem trustworthy.

This is why Ezio Manzini for instance insists that small, local and connected communities must also be, by design, open.[45] They must be structured around commitments to cosmopolitan localism. They must be designed to

be hospitable to foreigners and not just to those fit for the local ecologies. While withdrawing the meta-narrative of global progress, they nevertheless must each in their own way, perpetuate the project of diversification.

Commitment to divergent diversity, to migratory difference, is an ongoing task, a material politics requiring continual renewal. There are no principles that can be legislated for it once and for all. There is just the unceasing task of preaching and practicing being open to difference. It is an imperative that is never satiated and that takes precedence.

CRITICALITY POSTSCRIPT ('AFTER WRITING')

When I gave a presentation on these ideas at Nordes, I was considered inconsiderate. The intolerance I displayed with my critical review of the conference did happen in intolerable ways, so the reaction was justified, and I tried to apologize.

A different criticism of the keynote was that if the point was urgency, why was it an argument about the language being used to determine what to do and not just a demonstration of things that should be done, or preferably of things already being done? Why was the basis of the presentation such a close reading of the conference's thematic brief?

The pragmatic answer is that the verbal version of the presentation complained about the pluralism of conferences. Organizers go to some trouble to specify briefs for conferences, to curate particular kinds of research and conversations, in order to ensure that there is productive conferring, on the basis of commonality, at the gathering. But there is a way in which everybody recognizes that this is more or less just a ritual, that it will be fine to submit a paper that is only loosely engaging with the conference theme, if at all. Nearly all academic conferences in particular fields, like design research, will in the end accept any reports that advance the discipline in any area, even if there is not even an explicitly non-thematic stream to house such papers.

This pluralism is partly a requirement of neoliberal higher education. Academics are required to undertake research in areas of priority determined by funding sources; and they can only receive funding to attend conferences if they have the opportunity to increase their measurable research quanta by giving a paper at those conferences; so conferences will only be successful investments of time and money with respect to attendance if they open themselves to such papers. This ecosystem clearly limits the diversity of conferences, the capacity of conferences to adopt different (non-paper-presenting) forms — unconferences, workshops, [insert missing innovations in conference formats here] — but also the capacity of conferences to even focus on topics outside of the priority areas of current research funding.

Yet this is precisely what conferences must do. The sharing of current research does not require the resource- and carbon-intensity of in-one-place gatherings. Universities are privileged ecosystems within, because they have not yet been completely contaminated by, productivist capitalism. Research is an even more privileged ecosystem within universities, and being able to travel to research conferences more rarefied still. In situations of Anthropocenic urgency, it is utterly intolerable to waste those opportunities, to allow those opportunities to be dissipated by lack of

focus, especially when those 'different' foci are being dictated by the unsustainable status quo.

So I opened the keynote with a vociferous attack on the way conference goers are complicit with the way conference themes get ignored, undermining the privileged capacity of conferences to pursue imperatives. The critique unfortunately was read as an attack on this particular Nordes conference rather than research conferences in general.

But there is another issue here. Imperatives, like redirecting the Anthropocene toward sustainability, are urgent. But the urgency of our situation results from incautious activism, a multitude of actions ignorant of each other, let alone the future. This situation is only worsening as commercial post-industrial design adopts the rapid field experimentation processes like Agile and Lean. Taking the time to evaluate prototypes in a studio settings is being by-passed by live field-tests of Minimum Viable Products.

We are consequently in a quandary: we must act, in a fast and focused manner; but we must not replicate the status quo of un-thought-through actions. To act, but to act differently, we must not just act, but think. Crises demand critical decisions but critical decisions require criticality.

If the Proactionary Principle justifies its hyper-activism toward the divergently techno-impossible with the argument that we might risk missing an innovation opportunity, the Precautionary Imperative counters that we must risk delaying action in order to ensure that, at an Anthropocenic scale, we do not make the wrong move.

To put it in terms of Resilience, we must forever be irritably and even intolerably criticizing our current design ecologies, even down to the fineries of the language used to describe them, exploring ways in which those design ecologies could be otherwise, so that we can deploy those otherwise ways of being, just in case a collapse demands that we transition, or just in case we collective merely decide to design a transition ourselves.

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