Notes on the Ontology of Design

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Note to readers: This ‘paper’ ended up being actually the draft of a short book; the book is likely to have
one more chapter, dealing with globalization, development, and environment issues; it is also likely to
have examples, and to be written in a less academic manner, or so I hope. I’ve had several tentative titles
over the past few years, the most recent one being The Ecological Crisis and the Question of
Civilizational Transitions: Designs for the Pluriverse. I’ve been reading, and working with, most of this
material for a long time, but some of it is new (to me); this is particularly true for Part I on design. I
suspect the text is quite uneven as a result. Part IV is largely cut-and-paste from several texts in English
and Spanish, particularly the long preface to the 2nd ed. of Encountering Development. This part will
need additional re/writing besides editing and reorganizing. The references are somewhat incomplete;
there are a few key design references of which I have been made aware very recently that are not, or not
significantly, included (e.g., on participatory design, postcolonial computing, and human-computer
interaction).

You can circulate the text, of course; you may cite it as “draft” or work in progress. Comments are most
welcome.
Introduction

In 1971, as industrialism and US cultural, military and economic hegemony were coming to their peak, Victor Papanek opened *Design for the Real World* with the following caustic indictment of the field: “There are professions more harmful than industrial design, but only a very few of them. … Today, industrial design has put murder on a mass-production basis”; even more, “designers have become a dangerous breed” (1984: ix). Reflecting on the watered-down governmental agreements at the recent summit on Environment and Sustainable Development (Rio + 20, June 2012), one might think that not much has changed since; but this would be too quick a judgment; although the situation continues to be dire, and despite crucial continuities at deep cultural levels as we shall see, today’s social and design contexts are significantly different than they were then. In fact, informed by rich international experience in the context of third world development, where he witnessed failure after failure in design, Papanek’s main call was for taking the social context of design with utmost seriousness. Many contemporary designers today are heeding this call, which he also linked to the responsibility of the designer.

The global boom of design with postmodernism and globalization has certainly has its ups and downs, high and low moments. Reflections on design by its theorists and practitioners over the past decade, however, converge on some realizations and novel emphases: the ubiquity of design –design is literally everywhere, from the largest structures to the humblest aspects of everyday life; modern lives are thoroughly designed lives; the importance of social context for successful design (that is, beyond products’ functional or commercial applications), which means that the design process becomes also the design of appropriate context; this is related with another realization, particularly salient in the ecological design field, of the social role of the designer in creating a more livable world, design that makes a difference. The rapid spread of information and communications technologies (ICTs), and digital technologies in general, has pushed designers into embracing a new set of rules for design, based on interactivity and user participation; design comes to be seen as collaborative, plural, participatory, and distributed. Design, in short, “has become too important to be left to designers” (Brown). All of these require new methods, approaches, and ways of thinking—a “design thinking” (Brown 2010), a

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1 These pages have been evolving as a set of class notes and through several hand-written notebooks over the past four years at Chapel Hill, and lectures in several Latin American countries. I want to thank the students who went along with hunches, half-baked frameworks, and incomplete genealogies of what from the outset I intended to map as a “critical studies of design” field, deeply connected to ecological, cultural, and civilizational transitions. They were most inspiring and often critical. I would like to mention particularly the Chapel Hill undergraduates Amy Zhang, Rupert Campbell, Katie Fox, and Kari Dahlgren, and PhD students Pavithra Kathanadhi, Mike Dimpfl, and Mabel Gargan (Geography) and Cassandra Hartblay (Anthropology), who took some of these ideas into their own research, transforming them creatively. Everything I write these days is deeply colored by my theoretical and political conversations with Mario Blaser, Marisol de la Cadena, Eduardo Gudynas, and Michal Osterweil. My gratitude also to Harry Halpin and Kriti Sharma, difficulty-to-find partners for rich conversations on Maturana & Varela, cognition, and digital technology, and to Herman Green for ongoing dialogue on transitions. Thanks also to Larry Grossberg, Eunice Sahle, and Eduardo Restrepo for discussions on modernity, development, and social theory. I have also been fortunate to maintain sporadic but rich conversations on design with fellow anthropologists Debbora Battaglia, Eeva Berglund, Peter Redfield, and Ana Maria Ochoa. Lastly, thanks to my Colombian architect and designer friends Alvaro Pedrosa, Juan Obando, Ignacio Valero, Andres Burbano, Luisa Fernanda Pedrosa, and Astrid Ulloa for useful references and conversations on design, culture, and technology from Latin American perspectives over the years. The Argentinean designer Silvia Austerlic introduced me to some of key Latin American design literature in the mid 1990s.
manner of approaching not only the task but the world, more ethnographic perhaps. Designers also discuss the changing status of “the object,” and even the “nonobject” (Lukic and Katz 2010), much as anthropologists have been doing it. Finally, as exemplified recently by Anne Balsamo (2011) for the case of technological innovation, there is an important focus on the relation between design and culture: the fact that design is about the creation of cultural meanings and practices, about designing culture, experience, and particular ways of living (see also Laurel 2001; Suchman 2007 for important precedents on this relation with particular attention to human-machine interfaces). Whether all of this warrants claiming that a new design culture has emerged remains to be seen, although the acute sense of change in design studies is itself a factor to be considered.

Part I of the paper introduces some elements from the design literature at present. While it is still unclear whether these works can be considered to constitute a field of ‘critical design studies’, I will pay particularly attention to those that seem to imagine a new social role and modes of operation for design. There are great ideas about how design is being transformed in practice, and how to hasten the change, although as we shall see few of these works question the cultural-philosophical armature from which design practice itself emerges (broadly, the rationalistic tradition, or ‘modernity’). This part ends with the question of whether a ‘critical design studies’ field could be said to exist. The answer to it will depend on how we conceptualize the cultural background from which design practice emerges. Part II is intended to derive a mode of access to this background in such a way that a different answer becomes possible from that which might arise more readily from contemporary Western critical scholarship. Inspired by a lesser-known perspective within the biology of cognition, this part will develop a reading of the background in terms of the ‘rationalistic tradition’. It goes on to summarize some well-known arguments about the dualist ontology which, linked to such tradition, characterizes modernity. What is new here is that such a critique of dualism is arising from many different theoretical, intellectual, and activist domains, in other words, it is not just a set of academic critiques. My argument is that we are witnessing the convergence of these tendencies into an ontological-political field that seeks to question anew, and go beyond, these dualisms. Conversely, such a field is making increasingly visible —theoretically and politically—a particular set of alternatives, increasingly discussed at present around the notion of ‘relationality’— a different, and much needed, way of re/conceiving life and the world.

With these pieces and a renewed mode of access to the question of design in place, Part III moves on to outline a concept of ontological design. Initially proposed by Terry Winograd and Fernando Flores in the mid 1980s (1986), it has remained undeveloped so far. Ontological design is presented as one possibility for contributing to the transition from the hegemony of modernity’s One-World ontology to a pluriverse of socio-natural configurations; in this context, designs for the pluriverse become a tool for reimagining and reconstructing sustainable worlds. Part IV, finally, attempts to bring into the forefront the cultural-political context within which such a possibility might appear as more than just a figment of the intellectual imagination. It considers current debates and struggles around buen vivir, rights of nature, communal logics, and even civilizational transitions taking place in some Latin American countries as instances of the pluriverse re/emerging.2

2 To make the text manageable, the exposition will be of necessity selective and purposeful. Second, since my approach is idiosyncratic, I’d like to explain succinctly where I am coming from. I am not a design theorists or
Design is evolving from its position of relative insignificance within business (and the larger envelop of nature), to become the biggest project of all…. Massive Change is not about the world of design; it’s about the design of the world (Mau 2003: 16, 23, and back cover).

A purely technocratic view of innovation is less sustainable now than ever. … What we need is an approach to innovation that is powerful, effective, and broadly accessible ... that individuals and teams can use to generate breakthrough ideas that are implemented and that therefore have an impact. Design thinking, the subject of this book, offers just such an approach (Brown 2009: 3).

When one steps back from the marketplace, things can be seen in a different light. While time passes on the surface, we may dive down to a calmer, more fundamental place. There, the urgency of commerce is swept away by the rapture of the deep. Designers working at that depth choose to delve into the essence of design itself. Form, structure, ideas and materials become the object of study (Laurel 2003: 13).

Statements on the rapidly changing, and increasingly transformative, character of design abound in the literature of the last decade. To be sure, the majority of design treatises still
maintains a fundamental orientation that is technocratic and market-centered, and do not come close to questioning its capitalistic nature. But many navigate in between, alternative between celebration and venturesome ideas and critiques (such as the well known woks by Bruce Mau, 2000, 2003; see also MoMA 2008). Design has its caustic critics as well, although fewer and far between. A well-known text by Hal Foster, for instance, finds that the pervasive, almost total character taken on by design today not only “abets a near-perfect circuit of production and consumption” but instantiates a “pan-capitalist present” (2002a: 192). It is a certain perpetual profiling of the commodity that drives the contemporary inflation of design. Whatever transgressive character postmodernism might have had, it has become routinized by design, contributing to the exhaustion of any critique under the label of the ‘post’ or the ‘neo.’ This “wising up” of commercial culture has produced the designed subjects of pancapitalism (Foster 2002b). For Kwinter, the resulting “pop-libertarian aesthetic,” according to which every aspect of our daily lives is susceptible of becoming a design objective (in affluent societies), has come accompanied by the capitulation of criticism in the academy and the public sphere to such trends. Citing that “much more than our living rooms and silverware are at stake” (2007: 17), an acknowledging that while a highly developed form of rationality, he states that design is also a vehicle for the deepest human aspirations and for hope, and as such it should be a matter of widespread concern.

Any serious inquiry into design must be a journey into the trials and tribulations of capitalism and modernity, from the birth of industrialism to cutting-edge globalization and technological development. Design has doubtlessly been a central political technology of modernity. With the full development of the industrial revolution in the mid nineteenth century, industrial design came to the fore as a field. The famous Crystal Palace exhibition in London of 1851, and the subsequent world fairs, became showcases for designs embodying the technological and cultural accomplishments of the age (Stocking 1987; Bürdek 2005). After a period of uneasy relation with the arts and crafts movement that still tried to counteract ‘the world of machines’ during the second half of the nineteenth century, by the time modernism emerged in the twenty century design had become inextricably wedded to functionalism. Even then, often times the aim of the designers was to improve mass-produced goods though the use of new materials and techniques. During the first half of the 20th century, first with the Bauhaus and then with the Ulm Schools of design and design schools in other Western European cities, modern design attempted to articulate a new view of the intersection of art and technology as it instilled new ways of living in the masses through the design of lived environments and the functionality of objects. Functionalism, however, carried the day.3

3 As in all epochs of design, the development of new materials (metals, woods, plastics) was crucial at this stage. The aim was to create functional and affordable products for all, and many designers cared about the social conditions of designs. There was a transition from traditional craft schools to modern industrial design. Since the Bauhaus, architecture has been a prominent influence in design schools (more on this later). While theorists like Gropius emphasized a new unity between art and technology, function and form, design itself because increasingly rational and Cartesian, especially after World War II. The German company Braun best exemplified the new approach to “good design” (“Less design is more design”, cited in Bürdek 2005: 57). Not until the 1960s, with the Frankfurt School critique of alienation in post-industrial society, did functionalism see a roll back, and a new move to the art of design (also in architecture) ensued in various ways. For background in the history and theory of design (largely in Western Europe and the US but with some attention to other regions of the world), see the excellent treatise by Bürdek (the Spanish edition is one of the main textbooks in design schools in Latin America).
Whether due to the intensification of globalization of images and commodities fostered by markets and technological infrastructures or by the dynamics of capitalist modernity, the fact is that today’s design theorists emphasize new kinds of engagement between design and the world at all levels. This starts with everyday life, but moves on to infrastructures of all kinds, cities, space, medical technologies, food, institutions, and in the long run experience itself.\(^4\) The claims range from the significant to the earth-shattering. A key question becomes: how does one design for a complex world? (Thackara 2004). Rather than keeping on filling the world with stuff, what design strategies will allow us—people—to have more meaningful and environmentally responsible lives? Living within a “Design Cluster” means that design becomes “a category beyond categories” (Lunenfeld 2003: 10), one that opens up a new space for linking theory, practice, and purpose, and vision and reality. This brings forth the endless project of discovering new territories for design through research (Laurel, ed. 2003).

The process is led by normative questions from which the academy often shies away: “The question we humans must face” -- says the Chilean biologist Humbeto Maturana, on whom we’ll draw a lot in subsequent sections—“is that of what do we want to happen to us, not a question of knowledge or progress” (Maturana 1997: 1); where do we want to be? What world do we want to build? (Thackara 2004; Laurel 2001). If we start with the presupposition, striking perhaps but not totally far-fetched, that the contemporary world can be considered a great design failure, certainly the result of particular design decisions, can we design our way out? In a well-known phrase by Herbert Simon, design would precisely offer the means to “devise courses of action aimed at changing existing conditions, into preferred ones” (quoted in Thackara 2004: 1).\(^5\) The good news is, some of it it’s been done already, in so many spheres of technological innovation; the bad news is that it might not be happening fast enough, or with the degree of purposelessness required. Here, of course, ceases much of the agreement on the discourse on design.

There are many more areas of agreement to go on, nevertheless. Let me mention a few. As design moves out of the studio and the classic design processions (industrial design, engineering, and architecture and art) and into all domains of knowledge and application the distinction between expert and user/client breaks down. Not only does everyone come to be seen as a designer of sorts, but the argument for a shift to people-centered design becomes more readily acknowledged. Designing people back into situations also mean displacing the focus from stuff to humans, their experience and contexts. From mindless development to design

\(^4\) This wonderful quote from a text from 1973 by George Perec (which recalls Norbert Elias) may suffice to illustrate this point about the intimacy of design and everyday life: “What we need to question is bricks, concrete, glass, our table manners, our utensils, our tools, the way we spend our time, our rhythms. To question that which seems to have ceased forever to astonish us. We live, true, we breathe, true; we walk, we open doors, we go down staircases, we sit at a table in order to eat, we lie down on a bed in order to sleep. How? Where? Why?” (cited in Blauvelt, ed. 2003: 21). One can easily connect this statement to the salience of interface design (e.g., Laurel, ed. 1989), and to the problematization of ‘objects’ at the intersection of art and design (including, indeed, anything from silverware to shoes; see, e.g., Lukic and Katz 2011).

\(^5\) As Thackara (2004) reports, 80% of the environmental impact of products and services is determined at the design stage. The US produces a million pound of waste per year. This “million-pound backpack” is industrial society’s ecological rucksack.
mindfulness, from less technology to more design, from object-centered to human-centered design, and from ‘dumb design’ to ‘just design’—all become new guiding ideas (e.g., Laurel, ed. 2003; Brown 2009; Thackara 2004; McCollough 2004; Chapman 2005; Simmons 2011). These new principles summon to the discussion unprecedented methodological and epistemological issues, opening up a welcoming space for disciplines such as anthropology and geography. New methods highlight front-end research, with the designer as facilitator and mediator more than plain expert; conceive of design as eminently user-centered, participatory, collaborative, and radically contextual; seek to make the processes and structures that surround us intelligible and knowable so as to induce ecological and systems literacy among users; and so forth. Above all, going back to the normative question, there is an attempt to construct alternative cultural visions as drivers of social transformation through design. Whereas many of these principles are wedded to one version of sustainability or another, many are not, or rather remain at the level of contributing to create an unspecified better world.6

The increasingly pervasive character of computing in everyday life has fostered concrete questions and design challenges—from “are ‘smart devices’ really smart, or are they rather making people more stupid,” to questions about interactivity, networks, space and place, and embodiment. The mood is to go beyond the early fascination with information and communication technologies (ICTs) of the 1980s and 1990s (and allied concepts such as virtual reality and cyberspace; see Escobar 1994) and a narrow focus on human-computer interfaces towards a more expansive field, variously referred to as “information technologies and creative practices” (ITCP, Mitchel et al. 2003) or “interaction design practices” (IDP; McCollough 2004; see, e.g., p. 163 for a “manifesto for interactive design”). In this architects’ view, IDP articulate interface design, interaction design, and experience design. Imbued in some tenets of phenomenology, he sees this articulation in terms of situated technologies that, rather and decontextualized and value neutral, are seen as the opposite: as embodied, place-based, convivial, and potentially the domain for care. This conception displaces somewhat the digital from technology per se towards human- and place-centered design that counteracts modernity’s bend to speed, efficiency, mobility, and automation. In architecture and other domains, this means designing inhabitable systems that are easy to operate—a situated design practice that is grounded in place and community but that through embedded systems nevertheless address how people move around through their mobile devices. Design thus becomes a critical localized practice, but one which joins the open-source dimension of technology to the cultural practice of design.7

6 The Hannover Principles, drawn at the 2000 Hannover world fair, is one of the best-known vision articulations for a transition to a dematerializing society. See, e.g., Edwards( 2005)

7 I will not deal here with the critique of technology, of which Paul Virilio is the most caustic (and in my view, enlightening) pen. Virilio is most well known as a philosopher of speed, or more precisely of the relation between speed, power, and technology. This feature has to do with the profound transformation produced in the world by ICTs. Operating in real-time (at the speed of light), ICTs alter dramatically our long-standing experience of place, body, time, and space. The loss of the “here and now” of existence, in his view—the generalized delocalization caused by ICTs and taken to its ultimate applications by military technology—reveals for Virilio the fact that what is at stake are contrasting conceptions of the world (diverging ontologies). See, e.g., Virilio (1997, 2012).
There is no doubt that a relatively new brand of design theorist is emerging, and from a variety of domains beyond design schools, including social services, environmental arenas, of course for-profit consulting firms staffed by interdisciplinary research teams, and even community-based NGOs and design outfits. 8 “Design thinking” has become a key trope in this context. As the Editorial to a recent issue of Design Studies devoted to the concept put it, the great popularity gained by design thinking outside the design professions stems precisely from the perception of design’s real or potential contribution to address ‘wicked’ problems and of design as an agent of change. This brings about a shift from the functional and semiotic emphasis of design to questions of experience and meaning.9 While some designers manifest unease with this trend, most seem to assess it in a positive light. As a key figure in the spread of design thinking from the well-known Bay Area design company IDEO put it, “design thinking begins with skills designers have learned over many decades in their quest to match human needs with available technical resources within the practical constraints of business. By integrating what is desirable from a human point of view with what is technologically feasible and economically viable, designers have been able to create the products we enjoy today. Design thinking takes the next step, which is put this tools into the hands of people who may have never thought of themselves as designers and apply it to a vastly greater set of problems. … [there is a] difference between being a designer and thinking like a designer” (2009: 4). 10 It could be argued that there isn’t much of a self-critical look here, yet the constructive and prospective character of the analysis –often with a degree of ethnographic detail—is interesting in itself.11


9 See the special issue on “Interpreting Design Thinking” organized by the Design Thinking Research Group at the University of Technology, Sydney, based on the group’s 8th Symposium, Design Studies 32(2011).

10 Brown’s book is worth reading as an introduction to design thinking, with illustrative examples from government, service, NGO, and corporate sectors. Some of the topics and concepts dealt with include: spaces of innovation; smart teams, including “a new breed of ethnographers”; the role of intuition, insight, and empathy; convergent and integrative thinking (another trope in much design literature); user-generated content and open-source innovation; storytelling; and prototyping. Prototyping far from referring to rigid blueprints or even working models, refers to the building of experimental ideas to learn about strengths and weakness, futures steps, etc. Many of these notions are found in one way or another in a number of design books at present.

11 A counter-intuitive example, for critics, is the field of fashion and sustainability; even in this field, it is possible to find designers taking seriously the social and ecological challenges of the industry in an attempt to transform it (from reducing the environmental impact of materials and processing to re-use strategies, place-based production, and biomimicry, also suggesting creative notions like co-design through active crafting, hacking, and tackling on difficult issues of alternative knowledges, politics, and transitions to other cultural and ecological models for society; see the fine book by Fletcher and Grose (2011).
There are three topics to be touched upon very briefly before ending this section with a reflection on whether a field of “critical design studies” could be said to be emerging. These are architecture, ecological design, and anthropology and design. To start with architecture: there is no doubt that this field has always been central to design, as richly exemplified by traditions in Italy, Finland, Catalunya, and some Latin American countries where architects have customarily included as part of their practice the design of furniture, fashion, music, materials, and even utopias. There is also a sense that architecture has ceased to be a poor relative of social theory to become an important space for discussions about globalization, urbanization and the city, the environment, modernity, and media and digital culture; as they face architectural problems in design work, architects are often attuned to theoretical and philosophical problems with which the social sciences and humanities deal (e.g., Mitrovic 2011; Sykes, ed. 2010). Also readily recognized by critics, however, is the fact that certain style of architecture has contributed to the inflation of design—a sort of “Bilbao effect,” after Gehry’s famous Guggenheim Museum in this city. Foster contrasts this “master builder” (Gehry) with Rem Koolhaas, whose design writings and architectural practice aim rather to rethink globalization from other architectural and urban principles. Koolhaas’ practice is contradictory, to be sure, as reflected for instance in his recent work of cultural-architectural criticism Contents (2004), a tour de force that mixes up deconstructive analyses, exposés, post-9/11 geopolitics, diatribes (e.g., on architecture and war), and of course a dazzling and ever proliferating and bifurcating graphic display of images, fonts, photographs, drawings and so forth. At the other end of the spectrum, one would be remiss to overlook pleas for the renewal of vernacular architectural practices, for mobilizing the elements of the earth along with those of place and culture to deal with the seemingly intractable problems of urban poverty, as in the case of the amazing architecture of dwelling in parts of West Africa beautifully illustrated, described and theorized by Jean-Paul Bourdier and Trinh T. Minh-ha (2011). ‘Vernacular,’ to be sure, no longer indexes a rigid traditionalism, but a space of possibility that could be articulated to creative projects integrating vernacular forms, concrete places and landscapes, and environmental and digital technologies in order to face serious problems of livelihood while re-invigorating communities.

This is just the tip of the iceberg of discussions at the intersection of architecture, art, and design. A recent exhibit at the 2012 Venice Architectural Biennale under the rubric of “Traces of the Past and Future Steps” showcased a range of tendencies at this intersection; many of the works on display demonstrated ecological sensibility as well as an acute awareness of

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12 On Koolhaas’ earlier projects, particularly with the Office for Metropolitan Architecture (OMA) in New York, including the famous mega-volume S, M, L, XL (1995), see Foster (2002b) and Kwinter (2010).

13 Two examples included in the 2012 Venice Biennale of Architecture involve a fog-harvesting device designed to emulate the traditional uses of the warka (fig) tree in Ethiopia, designed by computer but with a traditional basket-like shape and constructed locally from bamboo; besides providing water to local inhabitants, subsequent prototypes will include solar panels for illumination and community internet. A second example for the Biennale involves an integrated project in Kigutu, Burundi, a design that seeks to foster community self-reliance and off-the-grid sustainability through the integration of cultural forms (including built environments), landscape, aesthetics (local patterns, including drumming), energy, community gardens and so forth, all within the spirit of community conversations. See the entries for “Architecture and Vision” and “Louise Braverman” (Kigutu In Formation) in the exhibit’s catalogue (Biennale Architettura 2012).
philosophical and cultural issues such as space and place, temporalities, objects, materiality, locality, scale, agency, and so forth. Innovative designs and experimentation with materials, form, and pattern embodied reflections on topics such as the relation between the natural and the artificial (moving back, interestingly, from the excessive concern with the virtual in recent decades towards ecological sensibility), self-organization, popular knowledge of the built environment, the cultural dimension of architecture (e.g., issues of identity), aesthetic diversity (e.g., multiplicity of pattern making, including vernacular forms), and of course sustainability. While demonstrating awareness of the complex processes of cultural and social change that surround architectural practice, there was no overt discussion of standard social theory issues such as capitalism or neoliberal globalization. The lack of a deliberate discussion of these grand concepts, however, does not mean so much a lack of awareness of their importance than the fact that architectural discourse gets at them in other ways (through artistic expression, concern with individual behavior, or by hinting at the spiritual value of space-situations, the fate of traditional forms, the destruction and reconstruction of seemingly obsolete spaces or dilapidated neighborhoods, and so forth). In addition, some works explored new imaginaries for life by rethinking long-standing practices (e.g. courtyards in China) through innovative building designs (maintaining the courtyard principles but going beyond its bounded form to propose remarkable egg-shaped structures). Some of the works could be said to be deeply attuned to relational ways of being in the world, starting with the materials themselves (the “great wonder in the transfiguration of materials” at the microscale, whether wood, glass, or metal) and the role of objects and surfaces as dwelling topographies and opening towards a deep understanding of place and attention to communal logics and interrelations with the environment.\footnote{Perhaps Takasaki Masaharu put this concern most acutely by describing poetically his practice as trying “to instill spirit and soul into objects from the perspective of creating things and nurturing people. ... I hope to make the flowers inside people’s hearts blossom through objects which I have put all my mind and soul into to create. I also pursue lively, vibrant architecture by forming relationships with animals, planes, and nature as well as with spiritual things”; in his view, architecture participates in the making of “chains of existence” (see his entry in the exhibit catalogue, Biennale Architettura 2012: 116). The exhibit, held August 29-November 25, 2012 included 57 works from most regions of the world.}

We will touch on sustainability when discussing ontological design, but even cursory map of design trends must include a mention of ecological design. It took almost three decades after the publication of landscape architect Ian McHarg’s anticipatory Design with nature (1969) for a field of ecological design properly speaking to emerge.\footnote{The best treatise on the subject, in my view, remains van der Ryn and Cowan (2007; first ed. 1996). See also Edwards (2005), Hester (2006), Orr (2002); for more technical treatises, see Yeang (2006); and the large and well documented tome by Hawken, Lovins, and Lovins (1999). There are, of course, many more books on concrete aspects of green or ecological design by now.} Approaches range from the conceptual to the technocratic, with the latter predominating, particularly those from technological, architectural, and economic perspectives; the range among the latter category is itself wide, with proposals that could be said to “push the envelope” in envisioning a significant transformation of capitalism (as in the well-regarded proposal for a “natural capitalism” by Hawken, Lovins and Lovins, 1999) to the plethora of green washing proposals to come out of the official UN conferences and mainstream environmental think tanks in the Global North around
the concepts of climate change, sustainable development, and the so-called ‘green economy.’ On the conceptual side there have been some important strides, largely through collaborations between architects, planners, and ecologists with on-the-ground design experience. A readily accepted principle is that ecological design involves the successful integration of human and natural systems and processes; whether this integration is largely based on learning from several billion years of evolution and on learning from nature’s designs themselves, or needs to rely on, and hence re-invent, technology to satisfy the contemporary situation and needs the starting point is that the environmental crisis is a design crisis and that humans need to change their practices radically to avert it. There are a number of shared notions, such as the belief that ecological sustainability goes well beyond technological and economic sustainability, and will ultimately be the work of an entirely new sustainable culture; ecology as the basis of the development of design competence for conservation, regeneration, and stewardship; seeding all socionatural systems with diversity and creating resilience through intelligent webs; and building on the self-organizing potential of natural and social systems. Going also against the expert-driven dominance of design, these theorists argue for a deeply participatory process in which technical disciplinary languages and barriers are exchanged for a shared understanding of the design problem. Ecological design changes the old rules about what counts for knowledge and who counts as knower. It suggests that sustainability is a cultural process rather than an expert one, and that we should all acquire a basic competence in the shaping of our world. … For too long we have expected the design professions to bend an inert world into shape. The alternative is to try to gently catalyze the self-designing potentialities of nature (van der Ryn and Cowan 2007[1996]: 147, 130).

In this framework, “solutions grow from place,” and cultivating design intelligence becomes a key aspect of democracy based on locality. This marriage of ecology and direct democracy manifests itself best in the re-design of cities in ways that foster new forms for human habitation through which people can re-connect and re-center in place, community, and the environment. In some visions, this would amount to a “design process where mutualism is extended from locality to locality across continents” (Hester 2006: 61). While all this might sound a bit utopian and lacking in self-critique, a valuable feature is that the frameworks are accompanied by concrete examples of re/design seen as embodying ecological design principles.

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16 This is not the place to even adumbrate a critique of mainstream approaches to global climate change and sustainability, such as carbon markets, geoengineering, or the ‘green economy’ (the new panacea launched with fanfare by governments at the Rio + 20 Summit in June 2012). However, these are momentous ecological design issues! The best recent critiques, in my view, are by Patrick Bond (e.g., 2012) and Larry Lohman (e.g., 2011). For a critique of geo-engineering, see the work of the ETC group. See also Shiva (2008), Bassey (2011).

17 One of the most eloquent and visionary examples I know of radical cultural, and social change based on the principles of natural design is by the recently deceased complexity theorist Brian Goodwin (2007). Goodwin’s however, remains a marginal view within biology.

18 There are many well-known examples by now; a common one is the design of sewage treatment plants that use constructed marshes to simultaneously purify water, reclaim nutrients, and provide habitats and landscape. There are lots on restoration cases, successful cases of urban renewal, and the design of landscapes, ecotones, etc.
How about anthropology? The rapprochement between anthropology and design has diverse manifestations. The most salient at present is ‘design anthropology,’ involving the use of anthropological concepts and methods in design; positions range from applied (market-driven) to activist (socially conscious) design. A second trend, conversely, looks at the actual or potential contributions of design to anthropology—how design thinking and research provide resources for ethnographic inquiry, particularly for an “anthropology of the contemporary.” A third—the anthropology of design—entails the analysis of ‘design’ as a domain of thought and practice, using various critical theories to this end. It looks critically at what goes on under the increasingly flexible banner of design. At the very least, as Finish anthropologist and planner Eeva Berglund has suggested in her analysis of Helsinki architecture and Finnish environmentalism and design (2011, 2012), the crossovers between design theory/practice and anthropology suggest room for intellectually stimulating engagement. This might lead to increasingly activist conceptions of design, which anthropologists and designers, inside and outside academia, are in a particularly strong position to assess and develop together. For Berglund, while the popularity of design and design thinking invites critique, it also calls for a cautious assessment of how the two fields might enrich each other and further projects in diverse areas of socio-natural life. This does not do away with the problems, such as the persistence of unquestioned binaries between ‘nature’ (e.g., forest) and ‘culture’ (e.g., city) in much environmentally-oriented design in Finland today, and a certain depoliticization of issues that come from reliance on design discourse.19

A recent volume on design anthropology focuses on various aspects of the engagement between design and anthropology (Clarke, ed. 2011). Echoing some of the trends reviewed above on the growing importance of interaction, meaning, and culture in design, which propel

19 A word about each of these three dimensions of the relation between anthropology and design (of course overlap). ‘Design Anthropology’ could be said the most active at present. Most of the literature advocates for the incorporation of anthropology into design practice based on an argument about relevance and professional opportunities. This is an interesting trend largely by anthropologists practicing in the design world (see, e.g., Tunstall 2011; Whitemyer 2011; and some of the chapters in Clarke, ed. 2011; Laurel, ed. 2003. The web-based literature on this trend is growing rapidly. In a more academic vein, there seem to be several interesting groups working at the anthropology/design intersection (for instance, a three-day workshop at Aberdeen in 2009 on Design Anthropology convened by James Leach and Caroline Gatt; and several meetings of an interdisciplinary group bringing together scholars from the Parsons School of Design and Cornell on “Ecology, Critical Thought, and Design”). The next few years will surely see a number of volumes at this intersection. There is a parallel trends in geography, which I cannot review here, that emphasizes ‘GeoDesign’ as a practice that brings geographic analysis (ecological, spatial, GIS, modeling) into design. The second trend, conversely, seeks to explore contributions of design to anthropology, and is spearheaded by George Marcus’ project on “Rethinking ethnography as a design process,” Center for Ethnography, University of California, Irvine (see http://www.ethnography.uci.edu/ethno_design and Rabinow and Marcus’ notion of an anthropology of the contemporary (2008). This salient trend could be said to have an important predecessor in the work of Schön and Rein since the 1970s (e.g., Schön 1987; Schon and Rein1994). Working in the field of urban studies from a Deweyian perspective, Schön in particular developed an entire framework for dealing with the limitations of technical rationality that he saw (somewhat ethnographically) as dominant in architectural and craft design studies towards a ‘reflection-in-action’ type of training for professionals. His conceptualization of the design process as reflection-in-action, and of the studio as a model for it, remains relevant. The third trend—a critical analysis of design practices from anthropological and critical theory perspectives—is most unevenly developed, although some of the authors reviewed here are engaging in such analysis, even as they theorize design anthropology.
social understanding to the forefront of the design agenda, it rearticulates the fundamental anthropological insight of the inevitable cultural embeddedness of all artifacts to suggest why design anthropology “is emerging as a methodology as much as a discourse” (Clarke ed. 2011:10). There is a critical bend to this position in that “contemporary critical designers, combining anthropological-style observation and speculation on emergent social practices” are developing new approaches, such as ‘prototyping the social’ and other ethnographic tropes in exploring ways to critically look at, and construct, our worlds, in more inclusive ways (p. 11). A recent anthropological group project looks precisely at the rise of a “prototyping paradigm” in a variety of fields such as design, art, science, software development, and engineering; “the experimental and open-ended qualities of prototyping,” as one of the group’s conveners hypothesizes, “have become a surrogate for new cultural experiences and processes of democratization” (Corsín forthcoming: 2). By examining prototyping as an emergent complex cultural practice, and by introducing a meta reflection on “prototyping prototyping,” this project focuses on approaches to knowledge and design that are becoming prominent based on a logic of experimentation, imagination, using-centeredness, and collaboration that, they argue, could fruitfully inform anthropological work practices themselves (ARC Studio 2010).

There is a growing literature, of course, on ethnography and design (e.g., Bichard and Gheerawo 2011; Plowman 2003; Laurel 1989 for an early statement on interface anthropology and research on “the vibrant new villages of computing”; Suchman 2007 on the ethnography of human-machine reconfigurations), again ranging from the purely applied to the critical, and on “social scientific research” for novel approaches to design that marry the technical (feasibility) and the cultural (desirability). Redfield begins to map a particularly critical area for design anthropology in this regard. Through his examination of a number of “humanitarian goods” where basic survival is at stake (non-profit drugs, therapeutic foods for severely undernourished children, water filtration, and personal sanitation devices), he concludes that even in cases in which these are corporate interventions, there is an emergent politics of life that cannot be reduced to neo-liberal market logics, developmentalism, or state-type governmentality. New forms of analysis are needed to ascertain the character of these ever more ubiquitous (and needed) forms of “modest design” (2012; see also the cases discussed in footnote 13).

Finally, after this (again) purposeful review, can a field of ‘critical design studies’ (CDS) be said to be emerging? The answer to this question will remain general and provisional for now. By ‘critical,’ following academic usage, I mean the application of a panoply of critical theories and approaches (from Marxist and post-Marxist political economy to feminist, queer, and critical race theory, poststructuralism, phenomenology, postcolonial and decolonial theory, among others) to the field in question. ‘Critical’ also indexes a certain kinship with the project of cultural studies as a whole. Adopting this criterion, one could say that such a CDS field is indeed emerging. Several caveats are in order. First, as it should be clear, the elements and contours of such a field are far from being restricted to the academy; many of the main contributions could be said to originate with design thinkers, even if of course some of them have relation to the academy. At this level there are plenty of new notions, even a new lexicon

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20 The 2010 pre-conference publication prototype was coordinated by Christopher Kelly, Alberto Corsin Jiménez, and George Marcus. On the history, concept, and uses of prototypes from design (rather than anthropological) perspectives see the contributions by Guggenheim, Wilkie, and Calvillo in this collection of short essays. See also the discussion in Brown (2009) already cited (footnote 10).
for design, such as some of the concepts reviewed here (interaction design, ITCP, situated design, prototyping and small multidisciplinary studios, unsettling the reductive dogma of the relation between form and function that has shaped most of design history so as to release the imagination into new possibilities, thinking afresh the relation between design and ecology, etc.); designers and architects are also tackling emerging themes in social theory (the status of the object, form, place, materiality, embeddness, and the like). Second, new approaches are been tried at the interface between design and activism, or where modern designs seem to break down or be inoperative. In seeking to undo ableism, for instance, activist-designers are revisioning ontological frames, fostering a non-dualist approach to the body, and proving an articulate critique of expert knowledges as a starting point for (and profit as an endpoint for) design (Harblay 2011). In another revealing study, an ecological concern with the wasteful practice of modern toilets leads the author to unconceal a veritable domestic culture of shit, steeped in modernist understandings of body, waste, cleanliness, and so forth, calling for significant ecological-ontological redesign (Dimpl 2011).

Digital technology designer and theorist Brenda Laurel, whose work constitutes a cultural studies of design, has provided a useful imaginary for this work: “New paradigms continue to be explored by people who poke at the edges; the public responds by reframing hopes and expectations; and the character of a new medium begins to emerge. The process of maturation in new media requires creativity, time, investment, optimism” (2001: 8). To reiterate the value of the intellectual-activist sphere, this call seems to be heeded with particular insight by community-oriented design organizations. For the Design Studio for Social Intervention group, let by Kenneth Bailey in Boston, “the designer’s stance is experimental and proactive. It helps propel us beyond merely addressing existing problems with existing forms into imagining entirely new terrains of possibility. Equally important, design invites widely disparate ways of knowing into a single co-creative practice.” This design studio for social justice is developing innovative methodologies at the interface of community, art, planning, and activism. Community-level autonomous design is also being used to connect environmental justice, memory, performance, materiality (e.g. toxins in the soil), and land and landscape in order to maintain alive, and renew, a community’s long-standing experience of protest and resistance while reimagining its future (Kathanadhi 2011).

However, and this is the second caveat, it is not farfetched to suggest that CDS is still nascent. Not only there is still a dearth of critical analyses of the relation between design practice and capitalism, gender, race, development, and modernity, but that the limits to the capacity of Western social theory as a whole to generate critical fields of research and action in the contemporary conjuncture are becoming patently clear (at least to this author). Making inroads into CDS might involve, if this is the case, moving at the frontiers of the western social theory episteme. This would take us beyond the rationalistic, logocentric, and dualist traditions of modern theory. The rests of the paper is devoted to substantiating these propositions. At some point we’ll get back to the questions with which we started the section: Which design? What ‘world’? What ‘real’? But this will come after a particular problematization of our ways of

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22 See the dissertation in progress on Warren County, North Carolina (the cradle of the environmental justice movement in the US) by Pavithra V. Kathanadhi, Dept. of Geography, UNC, Chapel Hill.
thinking about, and enacting, ‘world’ and ‘real.’ That will be the basis for an ontological approach to design.
Part II. In the background of our culture: The rationalistic tradition and the problem of ontological dualism

To pose the question of a redirection for design in a fundamental manner, it is necessary to venture into the cultural and philosophical tradition from which it arises and within which it functions at such ease. Contemporary philosophy and cultural theory abound in critical analyses of this tradition, usually under the guise of the critique of metaphysics (the illustrious tradition from Nietzsche and Hedeigger to Vatino and Foucault) or the critical analysis of modernity (Habermas, Beck, Giddens, Taylor, Haraway, Latour, to mention just a few in European and Anglo-American scholarship, to which we should add contributions from the fields of cultural studies and postcolonial and decolonial theories). In this section, I will draw however on a little-known set of authors precisely because they foreground the question of design. The preferred term utilized by these authors to refer to the pervasive cultural background within which much of our contemporary world unfolds is ‘the rationalistic tradition.’ I should make it clear, however, that what I am trying to make is not a philosophical argument per se, but about a broader cultural phenomena: the effects of a ‘tradition’ in giving orientation to people’s (including designers’) ways of thinking and being. My interest also lies in making the connections between this tradition, the ecological crisis, and the future of difference, particularly the cultural and political struggles around nature and difference in Latin America at present.23

The tradition we are talking about is variously referred to as ‘rationalistic,’ ‘Cartesian,’ ‘objectivist,’ and often associated with related terms such as ‘mechanistic’ (worldview), ‘reductionistic’ (science), ‘positivistic’ (epistemologically) and, more recently, computationalist. For Varela, the term that best captures the tradition is ‘abstract,’ by which he means ‘this tendency to find our way toward the rarified atmosphere of the general and the formal, the logical and the well defined, the represented and the foreseen, which characterizes our Western world’ (1999: 6). This is an apt definition of logocentrism, or the belief in logical truth as the only valid (or main) grounds for knowledge about an objective world made up of things that can be known (and hence ordered and manipulated at will; see also Vattimo 1991). For now, suffice it to say that at the basis of the tradition are assumptions about the correspondence between

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23 A word about the authors in question. The three main ones are Humberto Maturana, Francisco Varela, and Fernando Flores. Maturana and Varela are known as the originators, since the late 1960s, of the Chilean School of cognitivism. As it will become clear, their main intervention has been to propose a theory of cognition that contrasts sharply with established positions. Beyond cognition, they have proposed an entire conceptual framework for understanding the living, based on the notion of autopoiesis (self-creation). As they state in their landmark study (1980; originally published in Spanish in 1973), their work can be considered an original and complete system of thought, a theoretical biology. While Varela, in the 1980s, sought to refine his approach through a dialogue with Buddhism (see Varela, Thompson and Rosch 1991; Varela 1999), Maturana continued working on what he calls a biology of love –love as a biological and social process. The root of their work is their early neurobiological research, but they are deeply influenced by phenomenology. While their work is being increasingly recognized world-wide (it has always had adherent in Latin America), it remains relatively marginal outside some strands of cognitivism, systems and cybernetics, let alone in social and cultural studies (yet see Clarke and Hansen, eds., 2009, for a collection devoted to Varela’s work). The Chilean Fernando Flores and computer scientist Terry Winograd applied Maturana and Varela, along with Heidegger and Gadamer, to computers, proposing a new approach to design, which they called ontological design, which is a central concern of this paper (Flores and Winograd 1986; see next section). Flores has also collaborated with philosophers in his effort at developing non-Cartesian frameworks for social action (Spinosa, Flores, and Dreyfus 1997).
language and reality, or representation/thought and ‘the real.’ In organized science as much as in daily life, this tradition operates in pervasive ways (see Winograd and Flores 1986 Ch. 2; Nandy 1987). In science, it is connected to what biologist Lynn Margulis and collaborators have descriptively called the ‘Cartesian license’ (Sagan, Margulis and Guerrero 1997), which not only placed ‘man’ at the highest echelon in the ladder of being but led science to investigate reality by separating mind and matter, body and soul, and life from non-life --- a “kind of forgery” that imagined a dead cosmos of inanimate matter.

This is, of course, well-trodden terrain in Western philosophy. We shall see, however, why Varela sees this feature of our knowledge practices as limiting in some fundamental ways, including for the very philosophical traditions that call it into question. We shall also see how it also shapes some of the strongest structures of the dominant form of Euro-modernity (the belief in the individual, in the real, in science, and in the economy as self-constituted entities). Finally, we will see the extent to which the tradition is deeply connected to a determining feature of such modernity, namely, ontological dualisms. These dualisms are not only at the basis of our One-World image of the world (Law 2011) but underlie an entire structure of institutions and practices through which that One World is enacted, effecting at the same time a remoteness and separation from the worlds that we inevitably weave with others and from the natural world, a feature that we will locate not only at the basis of the ecological crisis (this section) but of attempts to redress it, whether through relational practices of design (next section) or through political action informed by the relational and communal logics of some social movements (last section of the paper). There is thus a concrete purpose in introducing here the rationalistic tradition before tackling these other issues.

Let us start with a peculiar reading drawn by Varela of the Cartesian/rationalistic tradition: “It is because reflection in our culture has been severed from its bodily life that the mind-body problem has become a topic for abstract reflection. Cartesian dualism is not so much one competing solution at it is the formulation of this problem” (Varela, Thompson and Rosch 1991: 30). As a formulation of the question of the relation between mind, body, and experience it is partial at best. A clear example of the shortcomings of this approach is the conceptualization of cognition as fundamentally the representation by a discrete ‘mind’ of a pre-existing, separate ‘world’ (cognition as the manipulation of symbols). For Varela and co-workers this is fundamentally mistaken; rather than “the representation of a pregiven world by a pregiven mind,” cognition is “the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs” (1991: 9). When you think about it, it makes perfect sense: ‘mind’ is not separate from ‘body’ and both are not separate from ‘world,’ that is, from the ceaseless and always changing flow of existence that constitutes life (or can you really separate them out?). By positing the notion of cognition as representation, we are all cut off from the stream of life in which we are ineluctably and immediately immersed as living beings.

They call this view cognition as enaction (embodied action). It is based on the assumption of the fundamental unity of being and world, of our inevitable thrownness (or “throwntogetherness” to use geographer Doreen Massey’s wonderful neologism; Massey 2004) in the world. 24 It also

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24 Readers acquainted with the work of philosopher Martin Heidegger will obviously recognize these notions (being-in-the-world, readiness-to-hand, thrownness, and background of understanding). Same with some of
assumes that the primary condition of existence is embodied presence, a dwelling in the world (see also Ingold 2000). By linking cognition to experience, our authors lead us into an altogether different tradition. In this tradition, we recognize in a profound way that “the world is not something that is given to us but something we engage in by moving, touching, breathing, eating” (Varela 1999: 8). A number of consequences follow. The first is that while there is indeed a distinction between self and world in this view, there is also radical continuity between them (emphatically expressed in the dictum that there is an “unbroken coincidence of our being, our doing, and our knowing,” Maturana and Varela 1987: 25); the rationalistic tradition remains at the level of the divide, thus missing much of what goes on in life. Second, while we live in a world accessible through reflection, this accessibility is limited; here lies one of the traps. To being with, as Maturana tellingly underscores, there is an emotional side to all form of rationality in that every rational domain is founded on emotional grounds, “and it is our emotions that determine the rational domain in which we operate as rational beings at any instant” (1997: 5); in other words, even the decision of ‘being rational’ is an emotional decision. The consequences are fare from negligible: “We are rarely aware that it is our emotions that guide our living even when we claim that we are being rational. … [a]nd in the long run we do not understand our cultural existence” (p. 6; emphasis added). In addition, all modes of knowledge based on reason only get at part of the human experience, the reflexive part, bracketing its immediate, lived aspects, that is, our essential historicity. This historicity is most cogently expressed by Maturana and Varela: “Thus we confront the problem of understanding how our experience –the praxis of our living—is coupled to a surrounding world which appears filled with regularities that are at every instant the result of our biological and social histories.” The implication is that we need to find “a via media: to understand the regularity of the world we are experiencing at every moment, but without any point of reference independent of ourselves” (Maturana and Varela 1987: 241; 1980).

This injunction has, of course, been anathema to the Western rationalistic tradition. For this tradition, the ‘world out there’ preexists our interactions. In the enactive approach, we are always immersed in a network of interactions which are at every instant the result of our biological and cultural histories. We necessarily co-create the world with others (humans and non-humans) with whom we live in co-existence. The ultimate conclusion drawn by Maturana and Varela is no less startling, and equally foreign to modern logocentrism: “We have only the world that we bring forth with others, and only love helps us bring it forth” (1987: 248, emphasis in the original). The Buddhist notion of “dependent co-arising,” the complexity theory concept of “emergence” and other related notions at present (below) agree with this view. These are principles of relationality. But before we go there, I’d like to briefly discuss some other consequences of the rationalistic tradition, starting with the ‘individual.’

The belief in the individual

One of the most damaging consequences of the rationalistic tradition is the belief in the individual. Throughout the centuries, colonialism, modernization, development and globalization have been the economic and political projects that carried with them into all world cultures the Trojan horse of the individual, destroying communal and place-based forms of

Gadamer’s and Merleau-Ponty’s notions. Again, let me underscore that while these are important sources for Maturana and Varela, so is their biological understanding, and in Varela’s case, Buddhist philosophy of mind.
The Buddhist realization of the empty self finds a correlate in Varela’s notion of the virtual self derived from the biology of cognition and theories of emergence and self-organization. This virtual self is “a coherent pattern that emerges from the activity of simple local components, which seems to be centrally located, but is nowhere to be found, and yet is essential as a level of interaction for the behavior of the whole” (1999: 53; Varela, Thompson and Rosch 1991, Ch. 5 and 6). The mind/self is an emergent property of a distributed network, or rather a patchwork of sub-networks, from neurons to language and symbols, assembled by a complex process of tinkering, which is neither uniformly structured nor the result of a unified design (e.g., 1991: 105). In the end, one can say that “the cognitive self is its own implementation: its history and its action are of one piece” (1999: 54, original emphasis). The idea of the non-existence of the self is simpler than it sounds. Sometimes I ask my students, somewhat jokingly, whether they have seen “the self”; hard to pinpoint, isn’t it? This absence of a self, however, does not entail that we doubt the stability of the world, nor that the world has regularities and coherences, as we already saw (more on this later). What it means is that we

25 The Buddhist literature on the mind (and the secondary literature) is so vast that it is almost ludicrous to mention any particular sources. However, for useful introductions to the question of mind by an esteemed Buddhist teacher, that also engages seriously with Varela’s work, see Mingyur Rinpoche (2007); for the notion of mindfulness and inter-being, see Nhat Hanh (1975, 2008). A key foundational Buddhist text from the 12th century is found, with contemporaneous commentary, in Thrangu Rinpoche (2003, see especially Ch. 17 on the Perfection of Wisdom). A classical guide in Tibetan Buddhism for dealing with the non-existence of the self and freedom from ego-clinging (a guide to the practice for cultivating compassion, known as Lojong) is found in Kongtrul (2005).
also have to give up, along with that of a personal self, the idea of a world that has a fixed and ultimate ground. This takes us into the second strong structure of modernity, the belief in “the real.”

The belief in the real

What can be more real than the world on which we plant our feet, or the surrounding world into which our minds seemingly awake? True enough. The issue, however, is how the rationalistic tradition translates this basic datum of experience into the belief in an ‘objective reality’ or an ‘outside world,’ prior to, and independent from, the multiplicity of interactions that produce it. We shall see now this objectivist stance is at the basis of much design practice and needs to be tempered in a non-dualist ontological design conception. For one thing, this belief in the real leads to an ethos of human mastery over nature. It disempowers us for partnering with nature and other humans in a truly collaborative, earth-wise, and stream-of-life manner (e.g., Ehrenfeld 2008; Bird-Rose 2008; Goodwin 2007). To underscore the complexity of the epistemological and ontological argument about the production of this kind of ‘real’ is beyond the scope of the paper, so we’ll refer to just a few notions of salience for our purposes. The first is that such a notion of the real buttresses the idea of a single world that calls for one truth about it. Social movements such as the Zapatista have pointed at this assumption of One World or universe with One Truth as located at the basis of neo-liberal globalization (e.g., Esteva 2005), so it has become a target of movements, to which they counter-pose a view of a world where many worlds can fit –a pluriverse. Science and technology studies (STS) have discussed at length the process by which the “unfolding but generative flux of forces and relations that work to produce particular realities” that makes up the world as multiple (Law 2004: 7) gets to be reduced to a “single out thereness” which then becomes the stuff of our experience. By enacting a One-World world, this Euro-American metaphysics, as John Law (2004) appropriately calls it, effaces multiple realities through complex processes that have to do with power. By ethnographically showing how different realities are patched together into single ‘out therenesses,’ one could hope to counteract the ontological politics of Western metaphysics with another one that operates on the basis of radical ontological difference (Law 2011; Mol 1999; Blaser 2010; de la Cadena 2010). This politics is crucial for ontological design.

The belief in science

We shall return to the ways in which STS scholars are seeking to undermine science practices based on this objectivist notion of the real in our discussion of ontological politics. For now, I would like to underscore the fact that the belief in the real is largely validated by an equally naturalized belief in the concept of science as the foundation of any valid knowledge claims in modern societies. Besides the well-known discussions in modern social theory about the status of science, say, from philosophical (critique of epistemological realism), feminist (phallogocentrism), and other poststructuralist perspectives (politics of science-based truth claims), there are lesser-known currents which figure infrequently, or too tangentially, in the former set of analyses --e.g., debates about indigenous, local, and traditional ecological knowledge; geopolitics of knowledge and epistemic decolonization in Latin American critical

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26 Varela, Thomson and Rosch refer to the varieties of realist and foundationalist cognitivism as trapped within “the Cartesian anxiety” (they are analyzed in Ch. 7 of The Embodied Mind).
thought; concerns with cognitive justice in spaces like the World Social Forum; and so forth. Besides showing how the hegemony of modern knowledge works to make invisible other knowledges and ways of being, or to render them into non-credible alternatives to what exist (Santos 2007), some of these trends highlight the links between hegemonic science practices and violence and oppression in non-Western contexts.

Such is the case with what in my mind is one of the most enlightening set of critiques of modern science, namely, the one produced somewhat collectively by radical exponents of the South Asian dissenting imagination. Placing the effects of science in third world contexts provides for a very different reading of science, one that, while acknowledging that metropolitan science might have been associated historically with dissent, not only has this ceased to be the case but science has become the most central political technology of authoritarianism, irrationality, and oppression against peoples and nature. As reason of State, science operates as the most effective idiom of violent development, and even standardizes the formats of dissent. In the face of this rises the semi-articulate protests of the subaltern, which at times becomes creative assessments of western knowledge that get integrated with elements of diverse knowledge systems, lessening science’s hegemony and keeping alive a plurality of consciousness. Of particular interest for our concern with relationality and design is the argument that, by splitting cognition and affect and ideas from feelings in the interest of objectivity, science practice contributes to heighten modernity’s tendency towards pathologies of isolation, enabling to scientists to get credit for constructive discoveries while avoiding responsibility for the destructive ones, to the point of separating out State/science violence and murder from the feelings and scrutiny they should arouse. The same forms of isolation deny the continuity between oppression and forms of understanding it, effacing non-modern interpretations of modern oppression born out of suffering. Organized science becomes ineffective as an ally against authoritarianism and increasingly dependent on market-based vested interests. This motivates the powerful indictment that “of all the utopias which threaten to totalize the human consciousness, the most seductive in our times has been the one produced by modern science and technology” (Nandy 1987: 10). Science thus loses sight of its potential role in the search for non-oppressive forms of culture and society. It cannot even enter into dialogue with other forms of knowledge given its de facto claim to having the monopoly of knowledge, compassion and ethics.  

The belief in the economy

It is not surprising to find a most acerbic assessment of economics from the same pen: “Our future is being conceptualized and shaped by the modern witchcraft called the science of economics” (Nandy 1987: 107). The problem is deeper in the sense that the rise of economics

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27 I am drawing here largely on Nandy (1987) and Nandy, ed. (1988). The group includes, among others, Shiv Visvanathan, Claude Alvares, some of the critics of development such as Rajni Kothari, D. L. Shet, and Smitu Kothari, and the iconoclastic chemical engineer C. V. Sheshadry (“a classicist scientist, a crank who ... saw the autobiography, the laboratory, and the constitution as thought experiments, a visionary who felt India could transform the idiocies of globalisation into something life giving,” according to Visvanathan, 2002). Visvanathan wrote one of the first ethnographies of laboratory science (1985). Vandana Shiva and Veena Das have been associated on and off with this group. We will return to it on subsequent discussions. See Nandy (2012) for a short recent statement on this research program.
since the late 18\textsuperscript{th} century hides an even more pervasive civilizational development, namely, the invention of something called ‘the economy’ as a separate domain of thought and action, linked to another powerful fiction, the self-regulating market – with the science of economics purportedly capable of telling us the truth about. \textsuperscript{28} It might well be the case that neoliberal economics has been shaken to the core by the financial crisis, but the economic imaginary in terms of individuals transacting in markets, production, unlimited growth, capital, progress, scarcity, and consumption goes on unhindered. This most naturalized discourse undermines most of the current proposals for sustainability and for moving to a post-carbon age, and will need to be tackled as such in critical design frameworks. The de-naturalization of the economy is an area of active critical work, for instance in the imagination of diverse economies (Gibson-Graham 2006) and social and solidarity economies (largely in Latin America) beyond the capitalistic one or proposals for decroissance (de-growth) in Europe and for alternatives to development in South America. More tellingly, it can be discerned at the grassroots level; as Esteva provocatively put it, “those marginalized by the economic society in the development era are increasingly dedicated to marginalizing the economy” (2009: 20).

With the consolidation of ‘the economy’ from the late 18\textsuperscript{th} century on, we have in place a tightly interconnected set of crucial developments in the cultural history of the West, namely, the individual, objective reality, truthful science (rationality), and self-regulating markets. The individual–real–science–economy (market) ensemble constitutes the default setting of much of socio-natural life in late modernity; they are historical constructs, to be sure, but also beliefs to which we are deeply attached in our every day existence because of the pervasive social processes and practices which hold them in place, and without which we cannot function. They reveal our commitment to individualism, objectivism, and economism. It would take a relatively profound ontological transformation on our part to alter this default setting at the individual, let alone, collective, levels. This is also the ensemble of constructs that has been spreading worldwide through colonialism, capitalism, development, and neo-liberal globalization. We cannot place this entire historical process at the doorstep of the rationalistic tradition, of course, but as it can perhaps be intuited already, the processes is deeply intertwined with that rationality and its associated ontology. To this topic we dedicate the next segment of this section.

\textit{Issues and problems with ontological dualisms}

Questions of ontology were sidestepped in much of contemporary theory after the “linguistic turn,” debates on epistemology, and subsequent poststructuralist developments. However, the relation between understanding and ontology has been central to philosophical traditions such as phenomenology, and perhaps it is no surprise that the concern with ontology (beyond epistemology) is coming back in some areas of social theory and in fields such as geography and STS. Part of this return is due to intra-academic trends, but a good deal of it finds its sources in social and ecological concerns and movements beyond the academy, and it is important to have both sources in mind.

\textsuperscript{28} The landmarks of the invention of the ‘economy’ and its relation to the rise of markets have been eloquently traced by Karl Polanyi, Louis Dumont, Fernand Braudel, and Michel Foucault as well as historians of capitalism such as Maurice Dobb. This is, of course, a central aspect of what Polanyi so aptly called “the great Transformation” (1957).
Winograd and Flores define ontology simply as concerned with “our understanding of what it means for something or someone to exist” (1986: 30). This understanding, however, is historical and culture- (and species-) specific; “even the most hard-nosed biologist … would have to admit that there are many ways the world is –indeed even different worlds of experience—depending on the structure of the being involved and the kinds of distinctions it is able to make” (Varela, Thompson and Rosch 1991: 9; emphasis added). So ontology has to do with the assumptions different social groups make about the kinds of entities taken to exist “in the real world.” Notice that this definition does not entail a strong realist position (a common or universal underlying reality) but this does not mean at all the “the mind” constructs the world (a kind of subjectivism); the definition tries to get at the existence of multiple worlds without negating the real. Our ontological stances about what the world is, what we are, and how we come to know the world define our being, our doing, and our knowing –our historicity. To draw out these dimensions, it is useful to provide a more complex definition of ontology suggested by Blaser (2010). This definition will also allows us to refine our epistemic-political critique of rationalism and dualism while making visible the existence and resurgence of relational worlds. Here it is important to keep in mind the distinction between epistemology (referring to the rules of procedures that apply to knowledge production, including what counts as knowledge and the character of that knowledge), episteme (the broad, and largely implicit, configuration of knowledge that characterizes a particular society and historical period, and which significantly determines the knowledge produced without the awareness of those producing it), and ontology.

Blaser proposes a three-layered definition, where the first layer is the one already hinted at: the assumptions about the kinds of beings that exist and their conditions of existence –a sort of inventory of beings and their relations. The second layer refers to ways in which these ontologies give rise to particular socio-natural configurations: how they “perform themselves,” so to speak, into worlds; in other worlds, ontologies do not precede or exist independently of our everyday practices. Finally ontologies often manifest themselves as stories, and these make the underlying assumptions easier to identify. This layer is amply corroborated by the ethnographic literature on myths and rituals (of creation, for instance). It also exists in the narratives that we, moderns, tell ourselves about ourselves, and which are repeated over and over by politicians in their speeches, or invariably in the 6:00 o’clock news’ rendition of about “what happens in the world.” This “what happens” refers back ineluctably to the fundamental ontological ensemble of individual–real–science–market, that is, to the fact that we see ourselves as self-sufficient subjects confronting a world made up of self-standing objects which we can manipulate at will. In short, what CNN or the BBC report on, from an ontological perspective, is on the status of this ensemble, and from this prospective (including threats to it, though these are invariably translated into the same categories, never allowed to drift too far out into other cultural worlds). It would take more time to demonstrate that this argument holds for all areas of

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29 Foucault (1973) describes the episteme as “a positive unconscious of knowledge”; he differentiates among three epistemes in post-Renaissance Europe, the last one being the modern episteme that crystallizes in the late 18th century with the figure of “Man” as its center: Man as the foundation, subject, and object of all knowledge. In this modern episteme, the analysis of life, labor and language took on the forms of modern biology, economics, and linguistics, respectively. This is different from epistemology; the natural, social and human sciences have seen three contending epistemologies: positivist (dominant in the physical and natural sciences), dialectical (Marxist approaches), and constructivist.
social life; for instance, the divide moderns make between nature and culture, and the fact of seeing nature as inert, informs the agro-industrial model of agriculture which, from the time of slave plantations (and, say, ‘scientific forestry’ in Germany in the 18th century) to today’s transgenic seeds pushed by agribusiness corporations have become dominant in many parts of the world. From a relational ontology, something like a “plantation” of a single crop produced for profit and the market does not make much sense. Such another ontology is performed into cultivation practices more akin to what peasants have traditionally done (multi-cropping, with production for subsistence as well as the market, a diverse landscape, etc.), or to the kinds of localized, organic, resilient, and democratic agricultural systems that today’s agroecologists propose as the way out of the food crisis. But this is already getting ahead of the story of relationality, and it is time to say something more general about dualism before moving on to the next section.

A number of authors emphasize three fundamental dualisms in what here I have referred to as the dominant form of Euro-modernity: the divide between nature and culture, between “us” and “them” (or the West and the Rest, the moderns and the non-moderns, the civilized and the savages, etc.), and between subject and object (or mind/body dualism) Latour’s characterization of the first two divides as central to the constitution of modernity is well known (1993). Blaser adds that the second divide is in turn essential to the making and functioning of the first one, and refers it as ‘the colonial divide.’ This is not the place to trace the genealogy of these divides; suffice it to mention that ecologists and feminists, for instance, place emphasis on the mind/body and nature/culture divides as foundational to patriarchal cultures, reductionist forms of science, disembodied ways of being, and today’s ecological crisis. The Indian dissenting scholars mentioned above emphasize the violent model of development that comes from the mind/body binary peculiar to the rationalistic tradition; some biologists argue that the pervasive binarisms have led to a reduction of complexity in our accounts of the world, with important consequences for our understanding of, and interactions with, such world; and so forth. The literature is huge, but here again I purposefully want to identify three points which are seldom emphasized or even flagged in Euro-American academic scholarship.

The first point is that the problem is not that dualisms exist, after all many societies have been structured around dualities, although in most cases these are treated in terms of complementarity and according to non-hierarchical pairs. The problem is with the ways in which such divides are treated culturally, particularly the hierarchies established between the pairs of each binary, and the social, ecological, and political consequences of such hierarchies. In the argot of a current Latin American perspective, this feature is referred to as “coloniality,” and is seen as a central feature of the modern/colonial world system that came into existence with the Conquest of America, the same that allegedly placed the European world at the summit of civilization. A central feature of this coloniality of power is the hierarchical classification of differences, leading to the suppression, devaluing, subordination or even destruction of forms of knowledge and being that do not conform to the dictates of the dominant form of European-derived modernity; these systems of classification became the crux of the projects for bringing about ‘civilization,’ ‘modernity,’ and, later on, ‘development’ to much of Asia, Africa, and Latin America. In short, there is no modernity anywhere without this coloniality; coloniality also implies a profound and pervasive eurocentrism—a hegemonic representation and mode of knowing that claims universality for itself, derived from Europe’s perceived position as center.
A corollary of this conceptualization of modernity/coloniality as inextricably entangled is that the very process of enacting it always creates types of ‘colonial difference’—encounters, border zones, processes of resistance, hybridization, assertion of cultural difference, or what have you—where modern dominant forms fail to fulfill themselves as such, revealing simultaneously the arbitrariness (and often brutality) of many aspects of the modern project, and the multiple assertions of pluriversality—what the argot of the decolonial ‘perspective is called ‘world and knowledges otherwise.’ We will discuss later on the implications of the colonial difference for ontological design and designs for the pluriverse.30

Australian feminist and environmental philosopher Val Plumwood has drawn out the implications of the pervasive dualisms in terms of what she calls the ecological crisis of reason. For her, the ecological crisis is a crisis “of what the dominant culture has made of reason” (2002: 5). This form of rationality, that claims mastery over nature, relies on multiple ‘centrisms’ (anthropocentric, self-centric, eurocentric, androcentric), and has produced, in the age of global markets, ‘ratiogenic monsters.’ Blind to our ecological embeddedness, this reason-centered culture supports elite forms of power, strengthens the illusion of the autonomous individual and, and idolizes an economic rationalism that entrenches masculinity and invisibilizes the agency of non-humans and subordinated groups. Rather than relying on “the same elite culture and developmentalist rationality that led us into the mess” (16) in the first place—in other words, rather than from an intensification of the same reason-centered culture, as solutions such as the ‘green economy’ purport—her advocacy is for an other form of (non-dualist, non-colonialist) rationality which situates human practice within ecology and non-humans within an ethics of respect and responsibility (see also Leff 1998/2002 for a similar argument and proposal).

The second observation is that these three salient dualisms work themselves out into a whole series of other divides, including (not an exhaustive list) the following: human and non-human; live (life/organic) and inert (matter/inorganic); reason and emotion; ideas and feelings; the real and its representations; the secular and the sacred; secular and spiritual; what is alive and what is dead; the individual and the collective; science (rationality, universality) and non-science (belief, faith, irrationality, culturally-specific knowledge); facts and values; developed and underdeveloped. [Note: I will eventually arrange these dualisms into a table and note their respective implications]. A related feature is that in both academic and social/activist worlds we seem to be witnessing a renewed interest in the subordinated side of the dualisms across an entire spectrum of their manifestations, a sort of ‘returned of the repressed’ sides of the pairs as important dimensions of what constitutes life itself—e.g., growing attention to emotions, feelings, the spiritual, matter, non-scientific knowledges, body and place, non-humans, non-organic life, death, and so forth. Moreover, this re-emergence of the repressed is seen by many as necessary to deal effectively with the inter-related crises of climate, food, energy, and poverty. Taken together, the recent emphases can be seen as mapping an emerging ontological-political field with the potential to reorient cultural and social practice in ways that clearly foster the intersecting goals of ecological sustainability, cultural pluralism, and social justice.

30 For a presentation of the decolonial perspective and set of references, see Escobar 2008, Ch. 4. The main names associate with it are Enrique Dussel, Aníbal Quijano, and Walter Mignolo, but it includes a network of scholars, intellectuals, and activists particularly in the Andean countries and the US. It should be emphasized that this perspective is not the same as postcolonial theory.
We hypothesize that this process amounts to a political activation of relationality (Blaser, de la Cadena, and Escobar 2009). This activation can be gleaned from developments in fields such as local food and environmental activism, higher and vocational education, entrepreneurship and alternative economies, digital technologies, some varieties of urban environmentalism and green technology, as well as from emerging frameworks for ‘degrowth’ in the Global North and for ‘alternatives to development’ and Buen Vivir in the Global South; actors operating within these various fields are crafting a lexicon for a significant cultural and ecological transition, driven in part by an emphasis on non-dualist, post-capitalist, and non-liberal ways of being and doing (more on this in Part IV).

The academic critical perspectives that could be said to fall within this overall project of unsettling dualisms have been growing over the past decade, largely under the headings of post-constructivist, post-dualist, neo-realist, and post-human approaches; one could say they are also post-poststructuralist; poststructuralism provided powerful tools to ethnography the vast terrains of distributed production of the real; in so doing, however, it could be said perhaps that it dissolved too much (structures, identity, foundations, essences, universals, naturalized histories) but it has not being as effective in reconstructing our understanding of the key issues it corroded. More explicitly concerned with both epistemology and ontology, the more recent perspectives seek to transcend the limits of deconstructive and discursive analyses by venturing into the positive project of how can the world be ---and be understood—otherwise; in so doing, they afford new concepts, questions, and resources. Some of these works aim to theorize the productivity of life in all of its dimensions—its “vibrant” and “massive” materiality (Bennet 2010; Coole and Frost, eds. 2010), that went on previously untheorized if not unnoticed, and the ineluctable immanence and intensity of life (e.g., Luisetti 2011); others underscore the vast range of agency associated with non-humans and the manifold ways in which the world gets to be assembled (ANT; e.g., Law 2004; Latour 2007); still others return to issues of embodiment and corporeality through which subjects make themselves and their worlds (e.g., Grosz 2010); explore social life from the angles of temporality, openness and becoming (Connolly 2011); or develop novel conceptualizations of inter-species relations and communities (e.g., Haraway 2008). Some related trends focus on rethinking cognition in order to underscore the radical contingency of all reality (Sharma 2011); explore the ways in which cognition can extended through bio-technical couplings supported by digital technologies (Halpin, Clark, and Wheeler 2010); 32 discuss ontological emergence from the perspective of neo-cybernetics (Clarke and Hansen 2009); and draw implications from the affirmation of the sentience of all living beings not only for how we understand consciousness as a profusely distributed property of all beings but how the world (from the Earth to our bodies and ourselves) is ceaselessly co-created by flows of energy and

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31 The ‘we’ here refers to ongoing work on relational ontologies with Mario Blaser and Marisol de la Cadena on relational ontologies; see, e.g., Blaser (2010); de la Cadena (2010); Blaser, de la Cadena and Escobar (2009).

32 Kriti Sharma coins the concept of ‘radical contingentism’ to point at the fact that all things/beings are interconnected, interacting, and interdependent—there is nothing that intrinsically exists by itself; she does so by drawing on the biology of cognition and also inspired by Buddhism; Halpin (2010?) draws on Maturana and Varela and others to reformulate the so-called “4Es” in the artificial intelligence field—cognition as embodied, embedded, enactive, and extended.
materials (Sagan 2011), that sometimes are also seen in terms of a spirit force that pervades even what moderns consider to be the inanimate world (TallBear 2011).  

This brings me to the third aspect of the growing concern with dualisms. This is the extent to which the tendencies so hastily described above can be seen as questioning the modern social theory episteme. If one takes this episteme to be structured by a few major central practices, the question becomes whether the emergent tendencies are capable of unsettling this epistemic space in more significant ways than has been the case with critical theories so far, or whether they rather continue to function within it. Generally speaking, the recent approaches aim to go beyond and ontology and epistemology of subjects and objects and point at the shortcomings of a politics derived from such dualist understanding. There is then much to learn from them. By focusing on the repressed side of the dualisms, they aim towards the edge of the Western social theory table (in the Foucauldian sense); yet, one may wonder if, by continuing to appeal to a logocentric understanding, they remain trapped within the table. To explore this question, and to start to conclude this section, I return briefly to Varela’s argument about the shortcomings of rationalistic styles of thought.

Varela’s move: on the limits of modern social theory.

For Dorion Sagan, modern approaches in the social and natural sciences have “block[ed] out most of the world” (2011: 1); hence, what are witnessing in the turn to animal, non-human, and post-human studies is the return of all those repressed aspects of living and non-living systems that make life possible. In responding to Sagan from a perspective of Vin Deloria’s ‘American Indian metaphysics,’ Kimberly TallBear argues that some of these trends and categories still endow non-humans with human-like biographical and political lives that assume somewhat independent standpoints and, above all, that they are still inadequate to describe all relations among beings. She also pushes us to think about the ways in which some of the cutting-edge trends reproduce some of the modern binaries, including that of life and not life, resulting in the exclusion of, say, stones, trees, or thunder from being effective forces in the

33 This is of course a partial list of perspectives, largely from cultural theory (to these we would need to add lesser known works in geography and anthropology, for instance; see Escobar 2010a for a review of this literature). Along with these trends has come a renewed attention to certain authors (a new list of influences), including Spinoza, Bergson, Nietzsche, Whitehead, the pragmatists (William James) and romantic writes (Emerson, Whitman, Thoreau), Deleuze and Guattari, and Merleau-Ponty; a few of these authors also appeal to complexity, evolutionary, and other biological theories (e.g., those by Vernadsky, Teilhard de Chardin, Lynn Margulis, Susan Oyama) and cognitivism, including Varela.

34 I think the following practices are most central in the modern episteme within which mainstream and critical social theories alike function: the parceling out of the uninterrupted complexity of the flow of socio-natural life into allegedly separate and autonomous domains, such as ‘the economy,’ ‘society,’ ‘nature,’ ‘culture,’ ‘the polity,’ ‘the individual,’ and so forth; the attachment of a “discipline” to each of these domains, entrusting them with revealing the truths about each -- economics, sociology, psychology, political science, anthropology, etc; and the existence of three main approaches and epistemologies: liberal, Marxist, and poststructuralist. This space, of course, is always being challenged from without by artistic and social movements (e.g., romanticism, anti-colonialism, surrealism) and from within by critical currents. However, my argument is that taken as a whole the academy, including critical cultural and social theory, systematical reproduces this epistemic space.
world, and even perhaps having sentience (see also Bird-Rose; Godwin 2007 on pansentience). Despite their efforts, do the recent tendencies continue to uphold in some fashion an *intra-modern* (largely Euro-American) understanding of the world (as decolonial theorists might argue)? Do they continue to function within a much renewed, but still primarily Western/modern, episteme? 35

As a provisional hypothesis, I argue that the reliance on long-standing forms of rationality and logocentric analysis remain most central to critical academic production (this paper included!), and that despite its remarkable productivity, it has consequences for how we think our way out or beyond dualist ontologies. To develop this hypothesis, albeit in a rudimentary fashion, I start by recalling Varela and co-authors’ argument about the limits of abstract rationality and their insistence on joining reflection and experience. This is precisely what phenomenology attempted to do; yet—Varela, Thomson and Rosch’s argue—it failed to fully answer the radical questions it raised. Why? Their answer is relatively simple yet the implications are far reaching. Phenomenology breaks down precisely because its analysis of experience remained “quite within the mainstream of Western philosophy … it stressed the pragmatic, embodied context of human experience, but in a purely theoretical way” (1991: 19). Could this assessment—that phenomenology was still “philosophy as theoretical reflection” (20) and that, more generally, “even though it has recently become quite fashionable to criticize or ‘deconstruct’ th[e] standpoint of the cogito, philosophers still do not depart from the basic *practice* responsible for it” (p. 28; original emphasis)—apply to social theory as a whole, perhaps even to those trends that problematize its structuring dualisms? 36

While this question will remain open in this paper, we might find clues for further discussion of the issue in Varela, Thomson, and Rosch’s proposed ‘move’: “What we are suggesting is a change in the nature of reflection from an abstract, disembodied activity to an embodied (mindful), open-ended reflection. … What this formulation intends to convey is that reflection is not just *on* experience, but reflection *is* a form of experience itself. … When reflection is done in that way, it can cut the chain of habitual thought patterns and perceptions such that it can be an open-ended reflection, open to possibilities other than those contained in one’s current representation of the life space” (26). They refer to this form of reflection as mindful, open-ended, and (counter-intuitively from the perspective of the mind/body dualism),

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35 A strictly Foucauldian perspective would ask whether the figure of ‘Man’ that is at the center of the modern episteme has been displaced significantly from its centrality. I can only say for now that most tendencies still show lingering forms of anthropocentrism, androcentrism, and eurocentrism. My argument here, however, concerns their reliance on forms of logocentrism.

36 In *Decolonizing Methodologies*, Linda Tuhiwai thoughtfully ponders about the risks incurred when indigenous peoples use academic writing to discuss their history and situation of oppression; in doing so, she asks, do they not run the risk of writing about indigenous peoples “as if we really were ‘out there,’ the ‘Other,’ with all the baggage that this entails”? (Smith 1999: 36). In other words, does this kind of dualist and logocentric thinking not inevitably find their way into our representations? As she adds, “academic writing is a form of selecting, arranging and presenting knowledge. … [it] reinforces and maintains a style of discourse that is never innocent” (36). I believe this concern with logocentric writing is close to Varela’s. The condition of possibility of academic writing is still a certain *Western ratio*, a feature that characterizes the entire system of the human and social sciences within the modern episteme (Foucault 1973: pp).
embodied reflection. In other words, for these authors, theoretical reflection does not need to be—or not only—mindless and disembodied. The second element in their formulation about the breakdown of phenomenology, and the actual bold step, is to suggest that “we need to enlarge our horizon to encompass non-Western traditions of reflection upon experience” (p. 21; see also Varela 1999), including philosophy in cultures other that our own. They find a compelling path in one such tradition, the sophisticated and centuries-old Buddhist philosophy of mind, particularly its method for examining experience called mindfulness meditation, precisely intended to lead the mind back from the abstract attitude to the situation of one’s experience. This leads them to the enlargement of the domain of cognitive science to include direct experience and to the enactive view of cognition, already mentioned.37

It is important to emphasize that none of the authors we are reviewing are calling for a wholesale rejection of Cartesian rationality nor of the subject-centered reason so much discussed by the intra-modern philosophers of modernity (e.g., Habermas 1987); rather, their advocacy is for a weakening of its dominance and a displacement of its centrality in the design of the world and our lives. This is done whether in the name of re-orienting the rationalistic tradition (Winograd and Flores), fostering embodied, situated forms of reflection (e.g., Varela), or imagining non-dualist forms of rationality that enable us to re-situate humans within an ecological understanding of life (e.g., Plumwood, Leff). In doing so, these authors are moved by two aims; the first is to point at the consequences of the dualisms, especially how disconnected we normally are from many aspects of everyday existence; the second, and perhaps most crucial for this paper, is to argue that the practice of transformation—that is, changing radically the ways we encounter things and people (e.g., Spinosa, Dreyfys and Flores 1997: 165)—is what it is all about, and to give clues to this path, whether the practice is Buddhist, ecological, political, or a re-imagined design approach. Let us listen to two final statements on the first aspect before concluding with a brief discussion of relationality.

The New Zealand environmentalist Deborah Bird Rose has powerfully stated the case against dualisms; Western dualisms, she says, sustain “a feedback loop of increasing disconnection. Our connections with the world outside of self are less and less evident to us, and more and more difficult to sustain and to experience as real” (Rose 2008: 162).38 A certain de-realization parallels the de-sacralization that follows from dualist relationality. “If life is always in connection, and if those connections are being destroyed, as they are these days at an enormous rate, what becomes of the remaining of life?” (166). Ashis Nandy underscores the effect of organized science in fueling “the human capacity to isolate” and to foster affectless forms of “sanitized cognition” at both individual and collective levels. All cultures, in his view, however, find means to respond to the pathologies of isolation, to de-isolate themselves in various ways, so to speak, including through religion (1987: 102-109). In thinking about the construction of non-oppressive societies (in ways that do not render them, themselves, into newly oppressive orders), it is thus crucial, for Nandy, to take into account the “visions of the

37 The conversations established by these authors between Western and with Buddhist scholarship on the mind, including the Dalai Lama, have been very fruitful and chronicled in various projects and books. We shall return to some other aspects of the proposal in our discussion of ontological design.

38 Marx’s concepts of commodity fetishism and alienation were already an argument about disconnection—in his case, the invisibility of the social labor embedded in the commodity and how this is central to profit making.
weak,” their notions of a good society and a desirable world, and their statements against the uniformity created by dualist rationality; however, this has to be done by bearing in mind that “their apparent inability to withstand analytical thought, and their defensiveness and diffidence in the face of Cartesian categories—all contribute to their undervaluation” (p. 18). Here Nandy spells out one of the most intractable, and damaging, expectations of institutionalized dualist thinking:

There is a pecking order of cultures in our times which involves every dialogue of cultures, visions and faiths and which tries to force the dialogue to serve the needs of the modern West and its extensions within the non-West. Under every dialogue of visions lies a hidden dialogue of unequals …. A culture with a developed, assertive language of dialogue often dominates the process of dialogue and uses the dialogue to cannibalize the culture with a low-key, muted, softer language of dialogue. The encounter then predictably yields a discourse which reduces the second culture to a special case—an earlier stage or simplified vision—of the culture with the assertive language of dialogue (1987: 14, 15).

Nandy’s warning could help explain the resurgence of fundamentalisms (as a response, sometimes violent, against the skewed distribution of cultural resources in the global political economy of dialogue), or the reenactment of cultural subordination by today’s Latin American governments when they utilize domineering modernist languages in their “negotiations” with indigenous, peasant, and black communities and movements that, historically, could be said to have had less assertive languages of dialogue. This notion also serves as a critique of so-called “conflict resolution” methodologies developed at places such as Harvard University and exported all over the world, or approaches to “build democracy” in “post-conflict” regions. In all of these cases, the assertive (Western, allegedly rational) apparatuses of dialogue operate as political technologies to subdue other visions of peace, dialogue, and life. This is one of the most important axes on which to discuss the renewed interest in cultural visions, civilizations, and inter-cultural dialogue as complex ontological and political projects, as we will have the chance to discuss further in Part IV.

Relationality

If not dualism, if life is always in connection, then what? The immediate, obvious answer to disconnection, isolation, and so forth is, of course, to reconnect—with each other, out bodies, the non-human world, the stream of life (e.g., Macy 2007). One rising answer to the problematic of dis/reconnection is relationality. There are many ways to understand relationality. Dualism itself is a form of relationality but one that, as we have seen, assumes the pre-existence of distinct entities whose respective essences are not seen as fundamentally dependent on their relation to other entities—they exist in and of themselves. Network theories imply a more serious effort at taking into account the role of inter-relations in making up things and beings. Many network approaches, nevertheless, still take for granted the existence of independent objects or actors prior to the networking, and despite their thrust towards topological thinking they fall back into Euclidean geometries of objects, nodes, and flows. Is it possible to develop a deeper notion of relationality, one in which ‘the relation’ (e.g., Strathern 1991) radically pervades the entire order of things?
This is indeed what the recent debates purport to do. Besides mentioning some of the main sources for this thinking, it is useful to have a sense of what this more radical understanding of relationality might entail. One general principle I find useful is that a relational ontology is that within which nothing pre-exists the relations that constitute it. In these ontologies, life is inter-relation and inter-dependency through and through, always and from the beginning. Buddhism has one of the most succinct and powerful notions in this regard: nothing exists by itself, everything inter-exists, we inter-are with everything on the planet. This principle of interbeing has been amply developed in Buddhist thought. A different way to look at it, from the perspective of phenomenological biology, is the notion that there is an “unbroken coincidence of our being, our doing, and our knowing” (Maturana and Varela 1987: 35); in other words, there is a deep connection between action and experience, which in turn instills a certain circularity on all knowledge, which Maturana and Varela summarize with the formula, “All doing is knowing, and all knowing is doing” (p. 26), or by saying that “every act of knowing brings forth a world” (26). This coincidence of being~doing~knowing implies that we are deeply immersed in the world along with other sentient beings, who are similarly and ineluctably knower-doers as much as ourselves.

More academically, and this has been one of the most fascinating strands of anthropological research since the 1960s if not before, ecological anthropologists have shown through ethnographic fieldwork that many groups throughout the world do not base their social life on the distinction between ‘nature’ and ‘culture’ (or humans and non-humans), or at least not in the ways in which moderns do. In many cultures, on the contrary, rather than separation, there could be said to be continuity between the biophysical, human, and supernatural domains. The same holds for the (lack of) separation between ‘individual’ and ‘community’ as they exist in the modern West. Many groups do not predicate their social being on the idea of a discrete, autonomous individual; in these cases, one might more properly speak of regimes of relational personhood, in which persons exist in relation to each other as much as to, say, ancestors, spiritual beings, natural beings, and so forth (e.g. Battaglia, ed. 1995). Anthropologists working with indigenous groups in the Amazon or North America, aboriginal groups in Australia, or with various groups in Melanesia—including key figures such as Tim Ingold, Marilyn Strathern, Philippe Descola, and Eduardo Viveiros de Castro but many others in many countries as well—have richly described the local models of nature that underlie ontologically vibrant relational worlds. Restrepo (1996) and Ulloa (Ulloa, Rubio, and Campos, 1996; Ulloa 2006), for instance, have provided compelling accounts of the local models of nature of black and indigenous groups in the Colombian Pacific rainforest region and their relational worlds; despite the fact that all of these groups are of course also permeated by modern imaginaries, they could be said to be worlds in movement for the defense of their territories and difference (Escobar 2008). In other words, these groups are involved in the political activation of relationality.

Well known is the example of the ‘flower’ given by the Buddhist teacher Thich Nhat Hanh, which inter-exists with the plant, the soil, the water, the pollinating insects, even the sun that are all essential to its existence (e.g., Nhat Hanh 1975, 2008). It should be added that in Buddhism meditation on inter-relation goes along with equally important reflections on inter-dependency, impermanence, and compassion; only then can the insight of interbeing be fully realized. The ultimate aim is to be able to practice interdependence, not to get caught up in the philosophical reflection on it.
There are, of course, many other sources that would need to be acknowledged as inspirations of relational thought. The sources for relational thinking are not restricted to the non-West. There are important sources in what could be called ‘alternative Wests’ or ‘non-dominant modernities,’ some of which have already been mentioned (and not to go into the relational worlds that are being or will be created even in most urban areas in the Global North as a result of ecological and cultural activist commitments). Biologist Brian Goodwin (2007), for instance, speaks of a ‘Goetheian’ science of qualities that acknowledges the importance of feelings and emotions as important sources of knowledge creation, and as essential to ‘healing our fragmented culture’ (see also Kaufman 2008 on the need to go beyond the dualism of reason and faith). Earlier philosophical or aesthetic traditions in the West are being summoned back by scholars and, to a lesser extent, by activists in their search for non-dualist perspectives, as witnessed by renewed interest in the works of Spinoza, Bergson, Whitehead, pragmatists such as James and Dewey, and the writings on nature by the American romantics.40

The landscape of explorations on non-dualism is thus becoming rich and vast, no doubt a sign of the times, of the very fact that “All our stories are now being deflated thanks to Earth” (Rose 2008: 166). It is also a reflection of the fact that nobody really performs as a pure wound-up Cartesian toy; phenomenologically speaking, we simply can’t; we refuse to partition life according to fixed divides. The impetus to re/connect (socially, ecologically, spiritually) is always there, and we activate it daily in many ways, even in our otherwise objectifying relations with the ‘natural world’ (e.g., in planting a garden) or by disrupting the constant boundary-making we perform as ‘individuals’ in most contemporary settings (reaching out to others). The question remains, however: What would it mean to develop a personal and collective practice of interbeing? How to we innovate with post-dualist ways of inhabiting the planet that are more amicable to the continued existence of all sentient beings, ones in which, to rely on Thomas Berry’s inspiring statement, humans become present to the planet in a manner that is mutually enhancing (1999: 11)? How do we engage in the ‘geographies of responsibility’ (Massey 2004) that our constitutive interrelatedness with all sentient beings necessarily implies? Can these be fostered in the most modern-driven contemporary settings? Can we find ‘sources of the non-self’ (to paraphrase Taylor), and do so not only among those who live ‘in the shadow of the liberal diaspora’ (Povinelli’s cogent concept, 2001) in distant lands, but among those of us inhabiting the densest liberal worlds?

It will likely be objected that in order to speak about relationality I am introducing a new binarism (dualist and non-dualist ontologies). Deleuze and Guattari’s partial way out, I believe, applies here (1987: 20-21): “We employ a dualism of models only in order to arrive at a process that challenges all models. Each time, mental correctives are necessary to undo the dualisms we had no wish to construct but through which we pass. … [dualisms are] an entirely necessary enemy, the furniture we are forever rearranging.” Sometimes the ‘mental correctives’ do not need to be as complicated as post-poststructuralist theory might want them to be; uncommon reversals with simple caveats might suffice. Later in the paper, for instance, I will wonder why we (critical theorists) are so prone to speak about ‘alternative modernities’ but cannot imagine thinking seriously about ‘alternative traditions.’ I will end this part with an insightful reversal by Ashis Nandy which should make us pause and think about the creative uses of seemingly

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40 To these could be added non-dualist thinkers from other parts of the world who have had some resonance in the West, such as the spiritual teachers from India Kirshnamurti and Sri Aurobindo.
simplistic dualisms (Nandy’s caveat here is to avoid narrow-minded traditionalisms that de-mystify modernity while re-mystifying ‘tradition,’ and to allow for critical dialogue, interaction, and mutual transformation among cultures within a genuine intercultural communion): “The pathology of relatedness has already become less dangerous than the pathology of unrelatedness” (Nandy 1987). To paraphrase, the pathologies of modernity have already proven to be more lethal than the pathologies of traditions—ecologically at least, this seem an incontrovertible statement.

It could be said that with the progressive expansion of the dominant forms of modernity ‘humanity’ started its cultural, existential and political journey into ontological dualism. Starting from a local history in some corners of Europe, the journey evolved into a ‘global design’ (Mignolo 2000). Is it possible, then, to reorient such tradition, and to redirect the journey into an altogether different direction (as it is indeed already happening in so many ways)? Is this what the planetary ecological and social crisis is all about, or at least one of its important dimensions? Can design play a role in such reorientation of both the cultural background and the journey itself?
Part III. Outline of ontological and autonomous design

Reorienting a tradition that has become so culturally ubiquitous is a tall order indeed, but that is precisely what the authors we discussed in the past section, and to some extent the scholars writing about relationality, are suggesting we do. It is a main dimension of contemporary ontological politics. Transition advocates are even more clearly advocating for this path (Part IV). Besides its geopolitical diffusion, the fact that it is a tall order stems from the pervasiveness of the tradition in everyday life. Modern societies are already very theoretically-driven. By this I mean that expert knowledges largely associated with the rationalistic tradition have a profound influence on how we live our lives. In so many domains of life, from eating our food (mediated by nutritional knowledge, including our desires and fears about it) and child rearing practices (mediated by the ensemble of child “psych” and health knowledges) to thinking about the economy we make daily choices based on rational judgment and expert discourses. Our reality is textually mediated by all kinds of categories, today largely deployed and effected by the media. Each social group, of course, has different cultural resources for dealing with this tradition. In this section, following Winograd and Flores and co-authors (1986; Spinosa, Flores, and Dreyfus 1997), we will assume a mainstream modern subject as we explore the question of the reorientation of the tradition. We will see in Part IV how indigenous peoples or afrodescendants in Latin America have very different cultural and practical resources for dealing with the same question.

The first section summarizes the notion of ontological design as originally outlined by Winograd and Flores, including the main theoretical sources on which their proposal is based. The second section is a first attempt at extending ontological design to the notion of ‘autonomy,’ building on both Maturana and Varela’s notion of autopoiesis and social movements notions of autonomy (e.g., Zapatismo). This leads to the concept of autonomous design. Autonomy, in the sense given to the term here, also provides a link to thinking about ontological design from the perspectives of the colonial difference and from Nandy’s critical traditionalism. Thirdly, we explore some issues in ontological design by discussing a recent approach to sustainability derived from the same set of sources (Ehrenfeld 2010). Finally, we broach Varela’s question in the third lecture of his short book, Ethical Know-how (1999), of whether non-dualist attitudes can be fostered in ‘Western’ cultures. This will open up the way for articulating the idea of designs for the pluriverse beyond the One-World world, leading to Part IV.

The concept of ontological design

Why should design could be considered ‘ontological’? The initial answer to this question is straightforward: “We encounter the deep question of design when we recognize that in designing tools we are designing ways of being” (Winograd and Flores 1986: xi). Understood as “the interaction between understanding and creation” (4), design is ontological in that it is a conversation about possibilities; as we will say below, eliciting more directly the politics of design, it is about the making of “worlds and knowledges otherwise,” that is, worlds and knowledges constructed on the basis of different ontological commitments, likely to yield collective ways of living less marked by modernist forms of domination. One more way to get at

41 The best treatment, in my view, of the textual/expert mediation of reality remains that of Canadian feminist sociologist Dorothy Smith (1987).
the ontological dimension of design is by addressing “the broader question of how a society engenders inventions whose existence in turn alters that society” (4-5). Computer technologies (as printing, the automobile, or television before) are of course dramatic cases of radical innovations that opened up unprecedented domains of possibilities. But every tool and technology is ontological in the sense that, however humbly or minutely, it inaugurates a set of rituals, ways of doing, and modes of being (Escobar 1994); technologies are what Haraway calls ‘material-semiotic actors’ (1991). They contribute to shape what it is to be human.

It is Winograd and Flores’ contention that the pervasive way in which we think about technology, coming from the rationalistic tradition, not only constitutes the implicit understanding of design but makes it difficult, if not impossible, to come up with new questions and approaches to the design and use of machines that are better suited to human purposes and that create open domains of possibilities for the computer-mediated networks of human interaction. On the contrary, it traps our imagination in constraining metaphors such as that of computers as brains or as mere information processing devices, and of language as a medium for the transmission of information (see also Dreyfus 1979 for a critique of artificial intelligence from this perspective). It is thus necessary to ‘unconceal’ that tradition by making explicit its assumptions, as we did in the previous part of the paper. In doing so, these authors’ aim is a redirection rather than a debunking of the tradition, but the redirection is significant: “to develop a new ground for rationality –one that is as rigorous as the rationalistic tradition but that does not share the presuppositions behind it” (Winograd and Flores 1986: 8).42

To this end they weave together theories of biological existence (Maturana and Varela), phenomenological frameworks about knowledge and human action (Heidegger and Gadamer), and philosophy of language (theory of speech acts). From these fields come the conceptual pillars of their framework: cognition is not based on the manipulation of knowledge about an objective world; the ‘observer’ is not separate from the world s/he observes, but rather creates the phenomenal domains within which s/he acts; and the world is created through language (again, language is not a mere translation or representation of reality ‘out there’ but is constitutive of such reality). Similar to the Indian critics of science discussed earlier, they find a deep connection between the rationalistic tradition and organized science, a fact that mars understanding in a host of domains, from cognitive science to policy making and even citizenship, entrepreneurship, and activism (these later are discussed in Spinosa, Flores and Dreyfus 1997). The mind-body dualism that posits the existence of two separate domains—the objective world of physical reality and the individual’s subjective mental world—is of course one of their targets. Against such a dualism, they uphold the fundamental unity of being-in-the-world, the primacy of practical understanding, and the idea of cognition as enaction.

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42 This aspect of the book draws heavily on Heidegger and Gadamer. A tradition is a pervasive background or pre-understanding within which we act and interpret in the world; it is concealed by its obviousness; it is historically produced and impossible to describe it its entirety. As Maturana and Varela put it referring to how they came up with the novel concept of ‘autopoiesis,’ “we could not escape being immersed in a tradition, but with an adequate language we could orient ourselves differently and, perhaps, from the new perspective generate a new tradition” (1980: xvii). The novelty of their work lies precisely in having inventing a new lexicon for talking about biological existence, particularly cognition.
The background is thus the space of possibilities within which humans act and express their ‘care’ for the world. “This world is always organized around fundamental human projects, and depends upon these projects for its being and organization” (Winograd and Flores 1986: 58). The Cartesian notion of modern subjects in control of an objective world, as much as the ‘flexible’ postmodern subject surfing through the net, however, do not provide good bases for the ontological skill of disclosing new ways of being. This ontological skill for ‘history-making’ – for engaging in conversations and interventions that change the ways in which we deal with ourselves and things, especially the background of understanding them—can be enlivened, as Flores and co-authors study in detail in a subsequent work (Spinosa, Flores, and Dreyfus 1997). The skillful disclosing of new worlds, nevertheless, demands intense involvement with a collectivity, rather than the proverbial detached deliberation or desituated understanding characteristic of the public sphere. It requires a different sort of attitude that comes from dwelling in a place and from a commitment to a community with which we engage in pragmatic activity around a shared concern, or around a ‘disharmony.’ In these notions we can already sense the idea that the designer might be a discloser in this sense; moreover, the designer shows awareness that s/he is a discloser. It is also these authors’ contention that while this kind of history-making has declined in the West, it is by no means completely lost – again, it is a capacity that needs to be retrieved, and I contend that design is a means to this retrieval.

It should be stressed that, as for Varela, for these authors the entire process is deeply practice-oriented. Sensing and holding on to a disharmony in one’s disclosive space, even against the common sense, is not effectively achieved by following the Cartesian habit of stepping back from the problem in order to analyze it; on the contrary, when meaningful change is needed “then disharmonies will be of the non-standard situational kind that is usually passed over by both common sense and [abstract] theory,” and in these cases what is required are intense engagement and involved experimentation (Spinosa, Flores, and Dreyfus 1997: 23, 24).43 To return to Winograd and Flores, a similar idea is talking about ‘breakdowns’ rather than ‘problems,’ at least in the way the latter are discussed in the rationalistic tradition. Breakdowns are moments in which the habitual mode of being-in-the-world is interrupted; when this happens, our customary practices and the role of tools in maintaining them are exposed, and new design solutions appear and are created; we can intuitively feel the appropriateness of this notion for the myriad cases of ecological breakdown in contemporary situations. It should also be emphasized, at the risk of being repetitive, that these authors insist that both the disclosing activity and dealing with breakdowns imply going beyond thinking in terms of the individual having mental representation of a ‘problem’ towards a social perspective of patterned, embedded interaction, that is, in terms of our active participation in domains of discourse of mutual concern. Moreover, all of this takes place through language: “To put it in a more radical form, we design ourselves (and the social and technological networks in which our lives have meaning) in language” (1986: 78); or, to return to Maturana once more, ‘languaging’ is the fundamental manner of existence f human beings; not only that, language is intimately connected with the flow of emotions as together languaging and ‘emotioning’ provide the basis for the recursive

43 Throughout the book, Spinosa, Flores, and Dreyfus discuss exemplary figures of this type of skill, such as Martin Luther King, Jr. or the group Mothers Against Drunk Driving, MADD. I have applied these concepts to the case of the activists of the movement of black communities of the Colombian Pacific, whose work can genuinely be seen as a practice of skillful disclosing and history-making in the midst of a sustained attack on their territories and culture by developmentalist actions (Escobar 2008: 229-236).
coordination of behavior through the creation of consensual domains. Maturana calls “the consensual braiding of language and emotions, conversation” (1997: 9).

It should also be made clear that these authors are not saying we need to get rid of dualist modes of knowledge in toto, nor that representations are not important. As they put it, “[h]uman cognition includes the use of representations, but it is not based on representation” (Winograd and Flores 1986: 99). Similarly, in stressing the importance of ‘know-how’ (which he says has predominated in the ‘wisdom traditions’ such as Buddhism, Taoism and Confucianism), as opposed to Cartesian ‘know-what,’ Varela is not minimizing the importance of rational analysis but highlighting the salience of concrete, localized forms of ethical expertise based on nondual action for ordinary life, which moderns usually disregard. It follows that these notions, and ontological design more broadly, reveal the implicit understanding we have of thought, language and the real, which takes us back to the questions with which we started Part I: Which world, What design, Which real? The answers, as it should be clear by now, point well beyond the objectivist, dualist, and detached understanding of design, world, and real. How can we rethink design on the basis of the reformed understanding of these notions?

For Winograd and Flores, the answer to this question necessitates a rethinking of organizations and their management. True, while a great deal of what managers do conform to well-known rational decision-making routines as described in systems analysis, there are significant risks in remaining at this level, plus it narrows down the field of possibilities. To start with, a great deal of what managers do daily is respond actively and concernfully to daily situations in order to secure effective cooperative action. In doing so, managers can be seen as activating networks of commitments; from this perspective, more generally, organizations constitute conversations for action; there is a certain degree of recurrence and formalization in these conversations, which Winograd and Flores characterize in terms of distinct linguistic acts. Organizations are networks of commitments that operate through linguistic acts such as promises and requests. Communication to breakdowns and possibilities are essential to this task. In the end, organizations and their design are about developing communicative competence within an open-ended domain for interpretation in ways that make commitments transparent (1986: 162):

Communicative competence means the capacity to express one’s intuitions and take responsibilities in the networks of commitments that utterances and their interpretations bring to the world. In their day-to-day being, people are generally not aware of what they are doing. They are simply working, speaking, etc., more or less blind to the pervasiveness of the essential dimension of commitment. Consequently, there exists a domain for education in communicative competence: the fundamental relationships between language and successful action. People’s conscious knowledge of their participation in the network of commitment can be reinforced and developed, improving their capacity to act in the domain of language.

An important part of Winograd and Flores’ framework is the development of a linguistic approach for the work of organizations based on ‘directives’ (orders, requests, consultations, and offers) and ‘commissives’ (promises, acceptances, and rejections). In the 1980s, Flores developed a software for organizations, called The Coordinator, based on the idea that organizations are networks of commitments operating in language. See Winograd and Flores 1986, Ch 5, 11. Its objective was “to make the interactions transparent—to provide a ready-to-hand that operates in the domain of conversations for action” (p. 159).
It could be argued that this approach leans back on a rationalistic understanding of reflection, and perhaps to some extent this is the case. However, it is also a departure based on the implication of cognition as enactment as spelled out by Maturana and Varela: “Since all cognition brings forth a world, our starting point will necessarily be the operational effectiveness of living beings in their domain of existence. … [effective action] enables a living being to continue its existence in a definite environment as it brings forth its world. Nothing more, nothing less” (1987: 29, 30; emphasis added).

Operational effectiveness is of course a key issue for the design of tools, including computers, usually conveyed by the concept of transparency of interaction; interfaces are crucial in this regard. Here again Winograd and Flores warn that interfaces are not best achieved by mimicking human faculties, but that tools’ ‘readiness-to-hand’ requires thinking more complexly about the right coupling between user and tool within the space of relevant domains. A sort of interface anthropology is at issue here (Laurel, ed. 1989; Suchman 2007). Building on the work of Mexican designer Tomás Maldonado, the Argentinean designer Silvia Austerlic (1997) speaks about the “ontological structure” of design as made up of the interrelations among tool, user, and task or purpose, all of which are brought together through the interface. The German-Chilean design theorist Guy Bonsiepe (2000) has coined the term “audiovisualistics” as a way to point at the cognitive complexity involved in usability from the perspective of operational effectiveness.

Breakdowns are central to Winograd and Flores’ notion of design. As a situation of “non-obviousness,” where the normal links that keep a certain sense of reality are somewhat interrupted, a breakdown is not something negative, but provides the space of possibility for action – for creating domains where new conversations and connections can take place. Breakdowns can be anticipated to a certain extent, but they mostly arise in practice, calling for a back and forth between design and experience; the building of prototypes can facilitate this task by helping to generate the relevant domains for anticipation of breakdowns and for dealing with them when they emerge (p. 171). This also means that a key aspect of design is the creation through language of the domains in which people’s actions are generated and interpreted.

Today, we would call this principle user-centered design, and it would include the design of context, as we discussed in Part I. But the emphases on language is crucial here; if we think about the ecological crisis as characterized by a recurrent pattern of breakdown, what is at stake is the creation of systematic domains where definitions and rules can be re/defined in ways that make visible inter-dependencies and commitments. This is different from the concept of expert systems as the design of professionally-oriented domains, which may or may not foster the kinds of conversation for action that are needed to face the crisis. In designing changes in people’s space of interactions, the goal of the ecological designer is to trigger changes in individual and collective orientations, that is (in phenomenological terms), changes in the horizon that shapes understanding, as we will explain shortly in our discussion of sustainability.

45 In the next segment we will see how the idea of operational effectiveness is related to autopoiesis. Communicative competence is also related with Varela’s notion of ethical expertise, which depends on one’s belonging to “a fully textured tradition,” that is, on full participation in a community, whether this tradition refers to a particular social group, an organization, or what have you (1999: 24). Finally, communicative competence could also be seen as a dimension of the geographies of responsibility that ensue from a relational understanding of socio-natural life.
Towards the end of their book, Winograd and Varela summarize these principles (1996: 163):

The most important design is ontological. It constitutes an intervention in the background of our heritage, growing out of our already-existent ways of being in the world, and deeply affecting the kinds of beings that we are. In creating new artifacts, equipment, buildings, and organizational structures, it attempts to specify in advance how and where breakdowns will show up in our everyday practices and in the tools we use, opening up new spaces in which we can work and play. Ontologically oriented design is therefore necessarily both reflective and political, looking back to the tradition that have formed us but also forwards to as-yet-uncreated transformations of our lives together. Through the emergence of new tools, we come to a changing awareness of human nature and human action, which in turn leads to new technological development. The designing process is part of this ‘dance’ in which our structure of possibilities is generated.

It was important to present the concept of ontological design as originally developed by Winograd and Flores at some length given that it is, as far as I know, the only framework explicitly linking ontology and design. “In ontological designing,” to quote one final time, “we are doing more than asking what can be built. We are engaging in a philosophical discourse about the self—about what we can do and what can be. Tools are fundamental to action, and through our actions we generate the world. The transformation we are concerned with is not a technical one, but a continuing evolution of how we understand our surroundings and ourselves – of how we continue becoming the beings we are” (179). In subsequent sections, we will prod this perspective into a nondualist path, say, by asking questions about sources of the non-self, focusing more explicitly on the communal, and pondering about transitions beyond, or building on, the transformation of the tradition whose pervasiveness as background for design Winograd and Flores do so much to unconceal.

*Autopoiesis, biological autonomy, and autonomous design*

There are many dimensions of Maturana and Varela’s work that confer originality to it. Beyond a theory of cognition, it is a theory of the living and of the biological roots of human understanding; it is thus both biology and philosophy, a system of thought in the best sense of the term, as the legendary systems theorist Stafford Beer, who worked with Flores in Project Cybersyn during the Allende presidency in Chile, stated in his Preface to *Autopoiesis and Cognition* (1980). 46 Their approach to the living is all embracing, from the cellular level to evolution and society. If it were not so easily misunderstood, I would be tempted to say that it is

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46 Project Cybersyn was a pioneering attempt at applying cybernetics and the tools of computing to the Chilean economy during the Allende socialist period (1970-1973); there is a recent fascinating account of the project (Medina 2011). The point of departure of Maturana and Varela’s work is Maturana’s neurophysiological studies of vision of the late 1950s, which led to several important publications in the 1960s; these formed the basis of *Autopoiesis and Cognition* (1980), originally published in Spanish in 1973. There followed a radical reinterpretation of key biological concepts, including ontology, phylogeny, reproduction and heredity, evolution and, of course, cognition and the nervous system.
an explanation of life ‘from the inside,’ so to speak, that is, without relying primarily on observer-generated concepts of what life is or does, whether in terms of ‘functions’ (like the functions performed by a cell or an organ), ‘inputs’ or ‘outputs,’ or the organism’s relation to its environment. Their attempt is a departure from well known biological approaches, seeking to explain living systems instead as self-producing and self-contained units whose only reference is to themselves, with no room for teleology or teleonomy. The approach stems from the insight that cognition is a fundamental operation of all living beings and that it has to do not with representations of the world but with the effective action of a living being in the domains in which exists (its environment). From here follows that the essential character of the living is to have an autonomous organization that enables such operational effectiveness, for which they coin the term autopoiesis: “Our proposition is that living beings are characterized in that, literally, they are continually self-producing. We indicate this process when we call the organization that defines them an autopoietic organization” (Maturana and Varela 1987: 43). It is worth quoting the original, more technical definition. An autopoietic system is that unit which is organized

as a network of processes of production (transformation and destruction) that produces the components which: (i) through their interactions and transformations continuously regenerate and realize the network of processes (relations) that produced them; and (ii) constitute it (the machine) as a concrete unity in the space in which they (the components) exist by specifying the topological domain of its realization as such a network (1980: 79; original italics).

It is useful to think about the organization as a system of relations among components (e.g., biophysical, cellular, biochemical, nervous, etc., just to think in biological terms) whose continued interaction produces the composite unity itself. All living systems have to maintain that basic organization in order to continue being the living systems they are; losing that organization leads to their disintegration. It follows that all relations among living units have to respect the criteria of conservation of autopoiesis. This takes place through what Maturana and Varela call structural coupling; all living systems interact with its environment trough structural coupling; the key issue here is that the environment does not dictate such a relation, it is the organization of the unity (its basic system of relations) that determines its interaction with the environment. Another way of saying it is that living systems have “operational closure in their organization: their identity is specified by a network of dynamic processes whose effects do not leave the network” (1987: 89); yet another way to refer to this feature is that living systems are structurally determined (“machines,” as in the above definition) in that their changes are determined by their organization (in order to conserve autopoiesis, e.g., 1987: 95-100; 1980). But again it is not the perturbations of the environment that determine what happens to the living being but the latter’s organization; the former only triggers the changes (this is a key feature of both biological and social or cultural autonomy, as will be discussed shortly regarding social movements; they can undergo structural changes and adopt various structures in response to interactions with the environment, but they have to maintain a basic organization in order to remain as the units they are). Historical interaction among autopoietic units often takes on a recurrent character, establishing a pattern of mutual congruent structural changes that allows the respective units to maintain organization. This eventually leads to the coordination of behavior, communication, and social phenomena through co-
ontogenies, resulting in all kinds of complex units; in humans, all of this process takes place through language.\footnote{It should be clear that this perspective depends on making a distinction between two units or structures, the living being and its environment. Maturana and Varela’s epistemological discussion of this very distinction is complex, and I have opted to bracket it here. Suffice it to say that the distinction takes place in a metadomain of discourse constructed by the observer; as they put it (1980: xxiii, 14), “[t]he knowledge that an observer claims of the units that he distinguishes consists in his handling of them in a metadomain of descriptions with respect to the domain in which he characterizes them. Or, in other words, an observer characterizes a unity by stating the conditions in which it exists as a distinguishable entity, but he cognizes it only to the extent that he defines a metadomain in which he can operate with the entity that he characterized … We become observers through recursively generating representations of our interactions, and by interacting with several representations simultaneously we generate relations with the representations of which we can then interact and repeat this process recursively, thus remaining in a domain of interactions always larger than that of representations. … we become self-conscious through self-observation; by making descriptions of ourselves (representations) and by interacting with our descriptions we can describe ourselves describing ourselves, in an endless recursive process” (emphasis in the original). Much of Autopoiesis and Cognition is devoted to working out this proposition; the original text by Maturana was written in 1968, well before postmodern anthropology’s concern with reflexivity and the problematic of the observer. For further discussion, see Escobar (2008: 293-95). Maturana and Varela’s work was influenced by the wave of fascinating work on systems, cybernetics, information, and self-organization in the 1950s and 1960s (see Escobar 2008, Ch. 6, for this background).}

To sum up, living beings are thus autonomous entities in that they are self-creating, that is, autopoietic; they generate themselves through the recursive interaction among its components. Autopoietic systems are wholes which relate to their environment through structural coupling. This is as much, hopefully, as needs to be explained to convey the notion of biological autonomy. Before moving on to link it to social movements and design, however, it is prudent to address the question of why talk about ‘systems.’ Poststructuralists might find odd, if not questionable, the use of this concept which, like structure or essence, has been heavily criticized and deconstructed for its connections to organicity, totality, and law-like behavior, without even mentioning its applications within the military-industrial complex enabled by systems analysis. This criticism is important, yet here again we might find an example of poststructuralism deconstructing too much and not reconstructing enough; networks and assemblages have, of course, been important interventions along these lines (e.g., Latour 2007; de Landa 2006), but I think it is fair to say that the question of wholes, form and coherence remains unsolved in post-deconstructivist social theory, and one for which some notion of ‘system’ could be helpful. Complexity theory offers useful clues in this regard. As Mark Taylor puts it in discussing precisely this issue, “[a]fter considering the logic of networking, it should be clear that systems and structures—be they biological, social, or cultural—are more diverse and complex than deconstructive critics realize. Emergent self-organizing systems do act as a whole, yet do not totalize. … Far from repressing differences [as deconstructivists fear], global [systemic] activity increases the diversity upon which creativity and productive life depends” (2001: 155).\footnote{Taylor’s is one of the very few works that systematically attempts to link critical social theory and theories of emergence and self-organization; his argument is that complexity theories can help in re-articulating and working out through some of the unsolved questions posed by poststructuralism. He charges deconstructivists with paradoxically reproducing in their critique the totalizing gesture they impute to systems theorists (that systems totalize and this repress differences), leaving differences irremediably fragmented and without any hope of}
Neo-materialist, neo-realists, and process- and practice-oriented scholars might find some unsuspected allies in this biology-inspired thinking, and in the lessons of complexity more broadly, and some are doing just that. This includes the question of how certain socio-natural configurations (including say, capitalism, patriarchy, and modernity in the social domain) gain the apparent structure and stability they seem to have, despite their changing character. Is it possible to think about non-totalizing configurations that nevertheless act as wholes and do not behave like conventional structures or dialectical systems? Crudely speaking (and without even broaching the question whether systems are ‘ontological realities’), systems thinking is predicated on the idea that the whole emerges from the interplay of the parts. The more recent thought on emergence and self-organization underscores the fact that these processes result in complex systems that are in no sense fixed and static but open and adaptive, exist within conditions of instability and even far from equilibrium (‘poised between order and chaos’), and so forth. When biologists pose the question of ‘why order occurs?’ and discover certain basic dynamics underlying the organization of all living beings (from the cellular to the organismic to the social levels), they are rearticulating the question of the coherence and wholeness of the perceived order of the world (see, e.g., Kauffman 1995; Solé and Goodwin 2000; Goodwin 1994, 2007); they do so as they read coherence in the unexpected creativity of natural processes, including emergence and complexity, fractal patterns and self-similar formations. In the last instance, these are questions of intensive differences and morphogenesis, of the relationship between the form of life and the life of form as Goodwin puts it (2007). These are useful concerns and concepts for designers as much as for neo-materialist and post-dualist theorists. 49

For those worried about the importation of idioms of the natural sciences into our social theoretical understanding of things perhaps I would say that one may think of social and biological life in terms of assemblages, coherence and wholes from a continuum of experience and matter that is both self-organized and other-organized; in this way, there would not be separate biological and social worlds, nature and culture. One could then read the insights of complexity as lessons from one kind of theory to another and not from some pre-given biological realm per se whose truths biologists are finally getting right.

Autonomy in the social domain and autonomous design

Gustavo Esteva has provided the following useful distinction in thinking about the long-standing and tenacious indigenous and peasant resistance to development, modernity and globalization in Mexico— the same resistance that is today under even more vicious attack with the so-called war on narcotraffick, which is also and perhaps primarily a war against the people. He distinguishes among three situations in terms of the norms that regulate the social life of a collectivity:

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49 NB: The book version of this paper will have a more adequate account of complexity, emergence and self-organization and their relevance to the social sciences and the humanities and to social movements.
• **Heteronomy**, when the norms are established by others (via expert knowledge); they are considered universal, impersonal, and standardized; they are changed through rational debate and political negotiation.

• **Ontonomy**, when the norms are established by traditional cultural practices; they are endogenous and place-specific and are modified historically through embedded collective processes.

• **Autonomy**: it refers to the creation of the conditions that enable changing norms from within, or the ability to change traditions traditionally. It might involve the defense of some practices, the transformation of others, and the veritable invention of new practices.

‘Changing traditions traditionally’ could be an apt description for autopoiesis; it tends to occur in communities that continue to have a place-based (not place-bound), relational basis to their existence; indigenous and peasant communities are among the clearest cases, but it could apply to many communities worldwide. This principle means not only that communities are always changing and open to change but that they do so in ways that preserve the fundamental relations among components that define the community’s organization, that is, those components that might happen to be crucial for a relational mode of existence in the particular community, such as types of relations among persons, relations to the natural and supernatural worlds, forms of production, healing practices, etc. In the context of long historical resistance of indigenous peoples and afrodescendants, autonómia is both a cultural and political process. It involves autonomous forms of existence and autonomous political organizing and decision making. Its political dimension is eloquently articulated by the indigenous movement of southwest Colombia known as La Minga Social y Comunitaria: “When we fail to have our own proposals we end up negotiating those of others. When this happens we are no longer ourselves: we are them; we become part of the system of global organized crime.”

Autonomía involves an ontological condition of being communal (we will find this notion again in Part IV). As the Zapatista well put it in 2005 in their remarkable Sixth Declaration from the Lacandon Jungle which preceded The Other Campaign a few months later, “[our] method of autonomous government was not simply invented by the EZLN; it comes from several centuries of indigenous resistance and from the Zapatistas’ own experience. It is the self-governance of the communities” (Subcomandante Marcos and the Zapatista: 2006: 77-78). In describing the autonomous movements in Oaxaca of the same period, Esteva similarly writes: “It is a social movement that comes from afar, from very Oaxacan traditions of social struggle, but it is strictly contemporary in its nature and perspectives and view of the world. It owes its radical character to its natural condition: it is at the level of the earth, close to the roots. .. It composes its own music. It invents its own paths when there are none. .. It brings to the world a fresh and joyful wind of radical change” (Esteva 2006: 36, 38). Autonomía thus has a long-standing historical background, which has lead some researchers to argue that, particularly in cases of indigenous-popular insurrection such as those which have taken place in southern Mexico, Bolivia, and Ecuador over the past two decades, it would be more proper to speak of societies in movement rather than social movements (Zibechi 2006). These societies in movement would be moments in the exercise of cultural and political autonomy. Generally speaking, social movements can be considered autopoietic units; this possibility is ignored by most theories of social movements, within which movements are typically seen as allopoietic,
that is, produced by and referring to an other logic, whether capital, the state, nationalism, or what have you (Escobar 1992).

The following are among the features of autonomía, as currently visualized by Latin American social movements; this is, of course, a characterization that responds to the *current conjuncture of destruction of communal worlds by neoliberal globalization* and the nation-state, and of responses such as the insurrections just noted. In terms of the goals, the aim of autonomous movements is not to change the world but to create a new one. To change the way of changing, so as to change autonomously, and to construct a new reality (community, region, nation) *desde abajo y por abajo*, from below and to the left (e.g., Subcomandante Marcos and the Zapatista 2006: 140). Autonomía is not intended to ‘take the state,’ but to take back from the State key areas of social life it has colonized. It creates spheres of action that are autonomous from the state and opposed to it, and new institutional arrangements to this end (such as the well known *Juntas de buen gobierno* in Zapatista territories). At its best, autonomía purports the establishment of new foundations for social life.

Second, regarding capitalism and the state, in lieu of state-driven development based on imputed ‘needs’ and market-based solutions, a utonomía builds holistically on ways of learning, healing, dwelling, producing and so forth that are freer from heteronomous commands and regulation. To this extent, autonomía means living beyond the logic of the state and capital by relying on, and creating, non-liberal, non-state, non-capitalist forms of being, doing, knowing (more on this in Part IV). Yet it also requires organization, which tends to be horizontal in that power is not delegated nor does it operate on the basis of (liberal) representation; it rather fosters alternative forms of power through forms of autonomous organization such as communal assemblies and the rotation of obligations (Mamani 2005, Gutiérrez 2008, Zibechi 2006). Autonomia is anti-capitalist but not necessarily socialist. It can rather be described in terms of radical democracy or people’s power, cultural self-determination, and self-governance. This does not mean autarky or isolation; on the contrary, autonomía seeks inter-cultural dialogue with other peoples under conditions of equality. Moreover, it requires alliances with other sectors or groups in struggle --strategies of localization and interweaving not intended to insert ‘the local’ into ‘the global,’ as conventional views mercilessly mandate, but to enact place-based forms of globalism (Osterweil 2005; Harcourt and Escobar, eds. 2005) and to connect autonomous movements with each other. These alliances are seen in terms of ‘walking the word’ (*caminar la palabra*), a concept developed by the Colombian Minga to point at the need to come into visibility, denounce, and collectively weave knowledges, resistances and strategies with other movements. More theoretically perhaps, the alliances require the creation of inter-knowledge and inter-cultural translation across movements to enable intelligibility and a measure of coordination among them (Santos 2007).

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50 These features emerge from discussions by and about movements particularly in Southern Mexico (Chiapas, Oaxaca), Southwest Colombia (black and indigenous movements), and parts of South America, especially Bolivia and Ecuador. There are of course resonances with themes in contemporary theory (e.g. Deleuze and Guattari) and with anarchist thought. See Escobar (2010b) for references, and Part IV.

51 In linking design and democracy, Bonsiepe (2005) actually defines democracy as the reduction of heteronomy, i.e., of domination by external forces, and the process by which dominated citizens transform themselves into subjects, opening spaces for self-determination and autonomous projects.
Third, in many cases autonomía has a decided territorial and place-based dimension. It entails non-liberal territorialities and different ‘geometries of power,’ although struggles around conventional territorialities (e.g., municipalities) might also be involved. Autonomía stems from, and re/constructs, territories of resistance and difference, as the case of black and indigenous movements in many parts of the Americas show (see, e.g., Escobar 2008 for the case of the afrodescendant movements for the defense of the Colombian Pacific); however, this applies to rural, urban, forest and all kinds of territories in diverse ways. The place-based dimension of autonomía often entails the primacy of decision making by women, who are historically more apt than men to resist heteronomous pressures on the territories and resources and to defend collective ways of being (e.g., collective territories; e.g., Harcourt and Escobar, eds. 2005). There is often, in autonomía-oriented movements, the drive to re/generate people’s spaces, their cultures and communities and to reclaim the commons. This process necessarily involves epistemic disobedience and fosters cognitive justice; this is an important criterion for designs for the pluriverse (below). Finally, some say that autonomía is another name for people’s dignity and for conviviality (Esteva 2005, 2006); at its best, autonomía is a theory and practice of inter-existence and inter-being, a design for the pluriverse.

*Autonomous design*

Readers might rightly wonder what these ideas about autonomy have to do with design, ontological or otherwise. Is autonomous design not an oxymoron? The connection I am trying to make is simple in principle: whether ontological design could be design for, and from, autonomy. Here again we confront one of the key questions of this paper: can design be extricated from its modernist embeddedness and redirected towards other constellations of ontological premises, practices, narratives, and performances? Moreover, and to anticipate Part IV, can autonomous design—as design of worlds and knowledges otherwise—become part of the toolkit for transitions towards the pluriverse? What would that have to do with the design of tools, interactions, contexts, and languages in ways that change the ways in which we deal with ourselves and things, as ontological design suggest we do? The remaining of this part broaches these questions by outlining a notion of autonomous design and by addressing, albeit in too brief a manner, the notion of sustainability. I call it ‘outline’ because it only presents the rudiments of an approach, based partly on academic knowledge, partly in a particular experience in Colombia.

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52 This outline is based in part on a workshop on “ecological river basin design” that I designed and ran in 1998 in Buenaventura, Colombia, with activists of the Process of Black Communities. The workshop was implemented throughout a five-day period, based on workbooks, some printed sources, and lots of time and materials for group exercises and discussions. The workbooks is available, although it was never published (see PCN and Escobar 1998). The workshop followed my version of a systems approach, largely influenced by West Churchman and Leonard Joy (see footnote 2). This approach is based on the notions that a) whole is always more than the sum of the parts; b) more than by its components, a system is defined by the relations that are established among them (autopoiesis); c) every system is immersed in a larger one. When applied to social systems, this latter aspect means that ‘problems’ are interconnected and superimposed on each other. In other words, the solutions to one problem have a lot to do with the might happen to another (e.g. the solution to the ‘nutrition problem’ has to do with solution to problems of land distribution, income, territory and political power). Churchman (1971) characterizes systems in terms of the following elements: 1. The objectives of the system; 2. the components or elements of which it is made, including the resources at its disposal; 3. the frontier of the system, what it encompasses; 4. the environment of the system, that is, that which is beyond the system’s frontier but which
Let’s recall that in conventional planning, the expert is by definition assumed to have the correct definition of reality or diagnosis of the situation, or at least one that is more accurate than that of those for whom s/he is planning; the planner designs the interventions on the basis of this expertise. In ontological design, as we have seen, on the contrary, the interaction among groups is intended to create consensual domains and to generate commitments generated in such domains; none of this is grounded in an ‘external reality’ but in the domains shared by various observers (recall that there is no ‘objectivity’ ever in observations, or, as Maturana and Varela put it, everything said is said by an observer). Based on these notions, autonomous design can be said to stem from the following presuppositions:

1. *Every community practices the design of itself:* its environment, its organizations, its social relations, its daily practices, its forms of knowledge, etc. If for most of history communities have practiced a sort of ‘natural design’ independent from expert knowledge, contemporary situations involve both modernist and embedded forms of reflection, to use Varela’s distinction. (Development projects are typical in this sense, although they customarily ignore local knowledge.)

2. Hence, every design activity must start with how people themselves understand their reality. In philosophical terms, this means fully accepting the view that *people are practitioners of their own knowledge* (conventional planning is intended to get people to practice somebody else’s knowledge, namely, the experts!). This injunction is an ethical and political principle; the autonomy of a people can be seen as the result of autonomous design as just defined.

3. The fundamental element of design is the production or knowledge about reality. As designers (say, with a community or group of people), we may become ‘co-researchers’ with ‘the people,’ but it is the community that investigates its own reality. What the community designs, in the first instance, is *an inquiring or learning system about itself.* To restate, this may involve both objectivist and embodied/embedded tools for reflection.

4. Every planning and design process starts with a *statement of problems and opportunities* that enables the designer and the group to generate agreements about objectives and to decide among *alternatives* to pursue such objectives (concerning, e.g., the contamination of the river, the impact of large-scale mining, the pursuit of a particular food production project, landlessness, the struggle to defend place and culture, the discrimination of women, water scarcity, etc.). The result should be a series of possible paths for the transformation of practices and behaviors or the creation of new ones.
5. This exercise may take the form of a ‘model’ of the problem at hand. Given this model, the question that every designer must face is: What can we do about it? The answer will depend on how complex the model of reality is. The concrete result is a series of tasks, organizational designs, and criteria by which to assess the performance of the system.

The farther away one departs from established Cartesian methodologies, the more discussions leading to what above I called a ‘model’ (surely not the best term given its reliance on the rationalistic tradition) become engaging. By ‘engaging’ I mean an intense, open-ended conversation that brings forth, and at its best challenges, the cultural background of the collectivity. This is a well-known situation in community assemblies or movement political meetings that often go on for hours seemingly without a concrete agenda. Planners miss this dynamic altogether, or consider it inefficient or even a waste of time.

In building ‘the model’ about the particular situation or problem at hand, it is important to recognize that problem statements always imply solution statements; problems are always constructed in particular ways; they never stand as neutral statements about reality; the entire process is political since any construction entails choices that affect people in particular ways and is thus linked to power. Problem statements are by the same token necessarily partial. The group’s perception of ‘the problem’ is continuously changing as the conceptualization of it becomes more complex in light of new thinking, new information, greater involved experimentation, and the like. The more complex the conceptualization of the system that produces the problem, the sharper the sense of purpose or of ‘what needs to be done.’ Problem statements thus need to address the question of “Why do we/I see this as a problem” and to follow each “because....” with another “why” until participants’ values are made explicit. There is then a relationship between problem statement, conceptualization of the system that generates the problem, and sense of purpose that needs to be invoked continuously in this type of design exercise. The design process also needs to broach the question: What/Who needs to change? Why does this change not happen now? What consequences would follow if such changes were to happen? And to repeat these inquiries at various scales, including household, community, regional (e.g., river basin), and national levels.

In general, a problem statement is the expression of a concern that the designer and the group have about people’s conditions. In the last instance, what the design task wants to accomplish is to make society more ethical, that is, more sensitive and responsive to the newly-articulated concerns of the collectivity. This can be seen in terms of generating, out of the breakdowns that the systems exercise unveils, a range of possibilities for disclosing new spaces for the exercise of community autonomy as the group deals with the problems at hand. It should be apparent by now that according to this perspective, the ideal situation for autonomous design to happen is when the client, the designer, the decision maker, and the guarantor are the same entity (Churchman 1971), namely, ‘the community’ and its organizations. This situation obtains de facto in communities with ample experience of resistance and self-organization. In the more common situation in which the planner/designer is external to the group, it should be made clear that the designer’s client should be the group, not the designer’s organization, the state, or the NGO as it happens in most development situations. This means that the values of client and
designer must be compatible. In the long run, what the group or community does is the design of its collective life. When/Where does this design begins and ends?

Some of these questions were broached during a week-long workshop on ecological river basin design which I conducted with Afro-Colombian activists in 1998 in the southern part of the Colombian Pacific, a large rainforest region inhabited primarily by black and indigenous groups who traditionally lived in dispersed settlements along the dozens of rivers that flow from the westernmost Andean mountain range to the Pacific ocean. Since the early 1980s, this ‘forgotten’ region has been increasingly subjected to development projects seeking to ‘integrate’ it into national economic life. While State interventions have given some attention to conservation and to working with local communities, by and large the bulk of development activities have taken the form of macro development projects for the extraction of natural resources (timber and minerals, including gold), conventional economic projects such as the expansion of oil palm for agrofuels, and so forth. This has constituted a veritable onslaught on local cultures and territories, with massive land grabbing and displacement caused both by development and by the spillover of the armed conflict and coca cultivation from the interior of the country into the Pacific, particularly after 2000. In this context, black and indigenous communities have maintained a courageous struggle for the defense of their territories and cultures.

The workshop was conducted under the rubric of autonomous design. The background to the exercise was the need for each river community to develop its own plan de ordenamiento territorial (territorial action plan), mandated by the government. The participants were grassroots leaders of river organizations and activists of the social movement of black communities (Process of Black Communities, PCN). In a first iteration, when discussing ‘the system that generates loss of territory and biodiversity,’ participants came up with the following system representation:
Many of the concepts involved, including ‘biodiversity,’ were of course already circulating in the rivers as part of the same development and conservation projects the communities aimed to appropriate or resist; they were part of the new lexicon adopted by activists and grassroots leaders. The process of organizing (from workshops, cartographic exercises, and conservation and development projects involving planners and locals to the more political organizing led by social movements) was very intense, particularly between 1991 and 1998. Some concepts emerged during those years as a result of this process, including those of the entire Pacific as a ‘region-territory of ethnic groups’; the conceptualization of the territory as the space for the ‘life projects of the communities’; a framework for the conservation of biodiversity based on the defense territory and culture (very different from the established frameworks designed by biologists and economists); an insistence by the movements on their own notion of development and perspective of the future; and a notion of autonomía as central to the entire process. As I have argued elsewhere in detail, these concepts provided the basis for a sophisticated political ecology by the movement (Escobar 2008). The following diagram was one of the most comprehensive representations of this entire process, which the 1998 workshop contributed to sharpen.

Autonomía, in this conception, is the articulation of the life project of the communities, centered on el Vivir Bien or “wellbeing” of all, humans and nature (very similar to the Buen Vivir that has become well-known over the past few years in South America, see Part IV) with
the political project of the social movement, centered on the defense of the region-territory. While the life project is seen as grounded in the long-standing relational ontology of the river communities (referred to as cosmovisión during those years, and defended as a form of cultural difference), the political project is seen as based on the work of ethno-territorial organizations, to operate through the effective appropriation of the territories, and to be guided by the river groups’ own vision of the future. Would it be farfetched to suggest that this particular social movement (and no doubt not only this one or the more well-known ones in Oaxaca and the Chiapas) was pursuing a strategy of autonomous ontological design?

Sustainability

For PCN, sustainability involves the defense on an entire way of life, a mode of being-knowing-doing. This is a far cry from most frameworks of sustainability, where the cultural (let alone ontological) dimension never enters into the picture. PCN’s framing of sustainability as deeply cultural and ontological is echoed in proposals by a number of ecological, ethnic and peasant movements and organizations. It is also echoed in some recent trends in the sustainability debates that propose to make culture into a “fourth pillar” of sustainable development. More that attempting to review the main trends in the sustainability debate, which would require a chapter of its own, these brief remarks are meant to indicate the crucial importance of this area of work for ecological and ontological design and for moving beyond the One-World World ontology. Generally speaking, we can see frameworks such as PCN’s as interventions in the network of recurrent conversations that make up the ecological crisis and attempts to redress it.

Since the inception of the sustainability movement in 1987 with the publication of the Bruntland Report, Our Common Future, where the term sustainable development was first defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission 1987), critics have pointed at the fact that such a definition is oxymoronic in that the interests of development and the needs of nature cannot ever be harmonized within any current model of the economy (e.g. Redclift 1987; Norgaard 1995). Despite the moment of hope and actual realizations achieved at the Earth Summit held in Rio de Janeiro in 1992, the contradictions and criticisms have only multiplied throughout the years, peaking around the disappointing 20th year anniversary conference of the Earth Summit (known as Rio + 20), held in Rio in June 2012, where the notion of the ‘green economy’ was presented by governments from the North and by international organizations as the panacea towards the ever elusive goal of sustainable development. The notion of a green economy corroborated critics’ view that what is to be sustained with sustainable development, more than ‘the environment’ or nature, is a particular capitalistic model of the economy; as we already know, this means sustaining an entire ontology, the dualist ontology of the individual, economy/market, science, and the real, that is, the One-World world as we know it (see footnote 16 for some of the critiques).

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53 This would be in addition to the three pillars identified since the Bruntland Report and Rio 92, namely, economic growth, social inclusion and environmental balance. The effort is being spearheaded by UNESCO and by other organizations working on the Agenda 21 for Culture, such as the United Cities and Local Governments network (UCLG).
Imbued in the major tenets of Heideggerian phenomenology and Maturana’s biology, a recent approach to sustainability develops an ontological framework for design that resonates with this paper’s, as well as with Leff’s decades-long effort at developing a philosophical and political framework for sustainability, mentioned in passing in Part II (Ehrenfeld 2008). Ehrenfeld starts by arguing that current proposals will at best amount to ‘reducing unsustainability’ rather than creating ‘true sustainability.’ For the latter to happen, a veritable reinvention of the collective structures that shape our lives and that define our humanness is required. Building on his decades-long technological experience in the environmental field, this author goes on to develop a hopeful vision of sustainability that explicitly re-imagines the role of technology design in ushering such transformation. Briefly, in Ehrenfeld’s diagnosis, unsustainability springs from the cultural structure of modernity itself. Moreover, approaches intended to deal with environmental problems are based on a mistaken and reductionist problem definition that in turn stems from the narrow understanding of reality, rationality, and technology inherited from the Cartesian tradition. This is causing tremendous breakdowns not only in ecological but in social life, which the author interprets in terms of addiction to consumption. From here, he goes on to propose a new framework for the redesign of tools, physical infrastructure, and social institutions as a means to foster changes in consciousness and practices based on an ontology of care and to counteract the damaging cultural behavior that has settled in the US. This framework relies on revisioning the intersection between three domains --the human, the natural and the ethical—as a space for laying down the foundation for a novel approach to sustainability.

From these initial steps follows the definition of sustainability as “the possibility that humans and other life will flourish in the planet forever” (2009: 53; emphasis in the original). In this vision, flourishing, which the author derives from various philosophical and spiritual sources, “is the most basic foundation of human striving and, if properly articulated, can be the strongest possible driver towards sustainability” (53). Flourishing, he goes on to propose, can only be brought about by shifting to a design mode effective for dealing with the culture of unsustainability --in other words, the way out can be no other than sustainability by design (76-77). This is one of Ehrenfeld’s stronger contentions, the second being that what needs to be transformed first and foremost, given their overwhelming power, are the economic and technological domains that sustain the modern ontology. This does not mean that the key to sustainability is to be found in theoretical knowledge of merely in technological breakthroughs (as with the proverbial, and ubiquitous, technology fixes), but rather that “the key to sustainability is the practical truths that each of us discovers in our daily life and that contribute to the collective activities of our culture” (95).

54 Besides Heidegger and Maturana, Ehrenfeld draws on the critique of industrial society by early Frankfurt School writers (Erich Fromm), the Chilean critic of development Manfred Max-Neef, and Anthony Gidden’s theory of structuration, among others. Tellingly, he acknowledges Fernando Flores for introducing him to Heidegger and Maturana “through an intensive program in ontological design” in the Bay Area in the late 1980s (p. xxii). Those versed in contemporary critical social theory might find the combination of theoretical sources peculiar or problematic (say, going back to Fromm, who was indeed an enlightened critic of modernity, or the focus on addictive behavior, which might be seen as harkening back to much criticized psychological approaches), but here again I will encourage the more theoretically-minded readers to consider Ehrenfeld’s effort as a salient instance of knowledge production by designers.
How can then one design a world that brings forth flourishing into everyday activities? Can cultural practices be changed by design? Echoing pragmatists’ understanding (Dewey and Pierce), Ehrenfeld makes the bold claim that this can indeed be the case – ‘devices’ can be designed to transform gradually our primary mode of understanding and being. This conclusion comes close to Spinosa, Flores and Dreyfus’ notion of history-making, and relies on a particular articulation of the notion of care (for self, other, and the world), arguing that care can be structured into the design of tools and equipment through ‘presencing.’ Key to presencing (a concept similar to the hoped-for ‘ready-to-hand’ character of technological interfaces already mentioned) is to induce ecological modes of action through the explicit design of tools so as to transform these actions into routine ways of behaving; this is to be achieved by embedding ‘scripts’ into product design. Designers, in this way, would need to go well beyond the goal of satisfying users’ needs, to articulate in novel ways the concerns of a collectivity. New embodied routines slowly become collective, eventually transforming social consciousness and institutional structures.  

Although the approach remains largely theoretical, and does not deal openly with politics, it brings into the debate questions that remain largely absent from both the sustainability and design debates, chiefly those dealing with culture and ontology. These aspects have been the subject of Mexican ecologist Enrique Leff’s decades-long effort at developing an ontological and political framework for sustainability, mentioned in passing in Part II (see Escobar 2008: 103-106, 129-132 for a discussion of this author’s work). It is fitting to end this section with the following recent statement: “Political ecology constructs its theoretical and political identity in a world of mutation, driven by an environmental crisis: a crisis of being-in-the-living-world. … Something new is emerging in this world of uncertainly, chaos and unsustainability. Through the interstices opened up in the cracks of monolithic rationality and totalitarian thinking, environmental complexity sheds new light on the future to come. This ‘something’ emerges as a need for emancipation or a will to live” (In press: 32). For this something to be cultivated, there is the need for a new ecological episteme, one in which sustainability becomes a horizon for a purposive living based on a dialogue of knowledges and cultures.

Non-dualism in (modern) everyday life? Varela’s question

Ehrenfeld’s question about the means to bring about a type of cultural transformation in a manner that fosters sustainability as flourishing is dealt with by Varela in the third lecture of Ethical Know-How (1999). This lecture, as already mentioned, deals with the absence of a self as we know it in the West, proposing the notion of a selfless or virtual self as an emergent property of distributed processes mediated by social interactions (52-63). His view of the virtual

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55 Ehrenfeld cites new toilets that instruct users about flushing decisions and the local food movement, which he sees as inducing eventually a more profound change of consciousness. As Dimplf (2011) makes clear, however, modern toileting practices also have an implicit—dominant—script, which makes the toilet into a political artifact. The approach, however, remains largely theoretical at this point. Among the remaining open questions is that of the identity and role of the designers—who designs the designers? Can these designers function within a framework of autonomous design? Or will they continue to operate as somehow enlightened experts, no matter how participatory and practice-oriented the design process becomes?
self is based on both trends in cognitive science and on the traditions of Taoism, Confucianism, and Buddhism, the two strands supporting each other. For Varela, a key question arising from both conceptualizations is whether we can learn to embody the empty self, that is, to really develop a practical way to go beyond the assumption of the self-interested autonomous individual and the business-like and ego-clinging features it commands. This is what the mindfulness tradition is all about, that is, providing a means to nonduality as well as principles for groundlessness as compassion (for a similar argument about moving beyond the autonomous individual by drawing on historical and contemporary Western sources, see Dreyfus and Kelly 2010). Without getting into the details of Varela’s Buddhist-based part of the argument, he concludes that the acceptance of the nonsolidity of the self brings about an authentic type of care; indeed, “here one is positing that authentic care resides at the very ground of Being, and can be made fully manifest in a sustained, successful ethical training. A thoroughly alien thought for our nihilistic Western mood, indeed, but one worthy of being entertained” (73).56

The corollary is stated as a genuine question: “How can such an attitude of all-encompassing, responsive, compassionate concerns be fostered and embodied in our culture?” To be sure, the answer starts by restating that “[i]t obviously cannot be created through norms and rationalistic injunctions,” or just through new concepts or self-improvement schemes; on the contrary, “[i]t must be developed and embodied through disciplines that facilitate the letting-go of ego-centered habits and enable compassion to become spontaneous and self-sustaining” (73), with each individual growing into their sense of nonduality, virtual self, authentic caring, and non-intentional action. This will surely sound too esoteric or spiritual to many modern readers. However, one might ask, could this be related to what designer-theorists such as Ehrenfeld or intellectual-activists such as those from PCN or those from indigenous movements have in mind? Is Varela’s question an interesting one for design? One sustained answer to this question is the framework on “the work that reconnects” developed by Joana Macy from the perspective of systems thinking, ecology, feminism, and Buddhism (e.g., Macy and Brown 1998; Macy 2007, 2012). Macy’s goal is to provide an intellectual and practical path from moving from a self-destructive ‘industrial growth society’ to a ‘life-sustaining’ one. This epochal shift, a Great Turning, demands a profound change in our perception of reality, including surrendering our belief in a separate self and the adoption of an ecological self; abandoning anthropocentrism to the favor of a life-centered paradigm; acknowledging the dependent co-arising of all things, including that of the knower and the known, body and mind; fostering structural changes at the level of economic systems and technology; and propending for shifts in consciousness through various means, such as nondualist spiritualities. Only then can one hope to be “in league with the beings of the future,” a concept that speaks to the concerns of sustainability (2007: 191).

Macy addresses the question head on of why we keep on failing to make these insights into effective forces in the real world, or how can we? Coincidentally, her most recent book is dedicated “to the flourishing of life on this rare and wondrous planet” (2012) – another reference to flourishing. We will encounter Macy’s vision shortly in our discussion on transition narratives. For now, one may raise a few broad questions for anthropology and design. Can anthropology, and ethnography, contribute to making nonduality into effective forces in the

56 See the work by Brazilian liberation theologian Leonardo Boff (2002), for a similar argument about ‘care’ as a fundamental ontological structure, based on Heidegger, religious thought, and everyday actions of common people. There is a recent English version of this book.
world? According to many authors involved in the transition movement, the changes are already happening, and we will derive a similar reading from Latin American movements. Can ethnography be more attuned to these realizations? To inhabiting spaces of non-duality, non-liberalism, non-capitalism? To finding sources of the non-self in the most contemporary struggles and situations? These are questions for an anthropology of design that take an ontological approach seriously.

I like to touch upon two issues very briefly before ending this part. The first is technology. If in many ways modern technologies have been part of the problem (entrenching objectivist behavior and structures that contribute to the ecological crisis and to the erosion of nondualist modes of being), there is no doubt that it has to be part of the solution, whatever that means. The widespread and complex ecological crisis the planet faces at present cannot be solved without relying significantly on technology; however, as it should be evident by now, this requires a reorientation of technology. Ecological designers are attuned to this possibility, but as a whole there has to be a more explicit awareness of how technology contributes to create particular kinds of worlds. Contrary to widespread opinion, social movements in the Global South (e.g., those by indigenous, black, and ecology movements) are not anti-technology; what they oppose is the indelible association of technology with a capitalist, developmentalist rationality. In Latin America, a key criterion at this level is that technology has to be subordinated to the pursuit of the Buen Vivir (Part IV), not to the dictates of economic growth, development, modernist views of progress, or what have you.

The second aspect is the issue of modernity. I have skewed on purpose a substantial discussion of perspectives on modernity. It is important, however, to put modernity in its place, so to speak. Earlier on I mused about why there is so much debate in the academy about the character of modernity, but very little, if anything, about ‘traditions’—nobody offers to discuss ‘alternative traditions,’ for instance, whereas talk of alternative modernities (including by this author) is plentiful. Somehow we seemed to have accepted the idea that some version of ‘modernity’ is here to stay, globally, until the end of times. It is worth quoting Nandy one final time to ponder about this assumption (1987: XVII):

[T]he time has come for us to restore some of the categories used by the victims themselves to understand the violence, injustice and indignity to which they have been subjected in our times. … these neglected categories provide a vital clue to the repressed intellectual self of our world, particularly to that part which is trying to keep alive the visions of a more democratic and less expropriatory mode of living. To that other self of the world of knowledge, modernity is neither the end-state of all cultures nor the final word in institutional creativity. Howsoever formidable and permanent the edifice of the modern world may appear today, that other self recognizes, one day there will have to be postmodern societies and a post-modern consciousness, and those societies and that consciousness may choose to build not so much upon modernity as on the traditions of the non-modern or pre-modern world.

It is important to restate that this does not imply an intransigent defense of tradition; Nandy’s reworking of the concepts of tradition and modernity is much sophisticated for that; besides, he is interested first and foremost in the dialogue among cultures; most movements in the South are
not interested in such a defense either, even if advocates of modernity on all sides of the political spectrum continue to corner them into such a slot in the name of one or another universalism. Nandy, for instance, acknowledges the importance of excavating and fighting for a lost or repressed West (as I have spoken of alternative Wests that might constitute sources of nondualist ontologies). Perhaps the time has come to stop regarding any reference to tradition as pathological, romantic, or nostalgic. Care should be taken of course about not falling into any defense of tradition that shelters one form of power or another (e.g., patriarchy). But, one can legitimately ask, can some types of tradition not be used today as tools for criticism? Do not subaltern groups themselves engage in this type of social critique of the globalized world of capitalist modernity, as the Latin American decolonial thinking proposes with the concept of epistemic decolonization? “The choice of traditions I am speaking of involves the identification, within a tradition, of the capacity for self-renewal through heterodoxy, plurality, and dissent. It involves the capacity in a culture to be open-ended, self-analytic and self-aware without being overly self-conscious. … Fortunately, cultures are usually more open and self-critical than their interpreters…” (1987: 120). In the best of cases, social groups move in several directions at once: adding to, and strengthening, long-standing practices, and mastering the ‘modern world’, its practices and technologies.

Perhaps some genres in contemporary popular music are an apt model to describe what many groups and movements today seek to accomplish through their cultural and political practice. Usually described as ‘fusion’ (and as ‘worldbeat’ in the 1980s), these globalized genres involve features that seem utterly contradictory: a commitment to a place-based musical tradition but at the same time opening up those traditions more than ever to conversations with other world musics and to using a panoply of digital and production technologies to achieve the best possible rhythms and sounds. The results are often times unique and original, very powerful in the ways in which engage people’s bodies and consciousness, perhaps confirming Attali’s contention (1985) that music, more than theory, heralds the new cultural and political orders to come. Do this ‘prophetic’ function of music suggest at the very least that popular practice is attuned to relational being? Can contemporary fusions be considered in any way to be inter-epistemic?57

This question is broached by Ana Maria Ochoa (forthcoming) in her historical research on the relation between aurality and being. What she finds is that acoustics has been an intensive

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57 While these fusions bring together musics from most of the world regions, there are some places that constitute particularly rich musical sources at present, such as West Africa (Mali and Senegal); Cuba, Colombia, and Brazil in Latin America; and some folk traditions in Europe and North America. Despite it hype and commercial orientation, the London-based magazine Songlines is attuned to this music developments, sometimes paying attention to their political and cultural backdrop. These collaborations are found in all kinds of music, even within classical, popular, and folk musics (witness, for instance, the fascinating collaboration Uniko (2004/2011) between the San Francisco-based contemporary music group, Kronos Quartet, and the Finnish musicians Kimmo Pohjonen (accordion and voice) and Samuli Hosminen (voice samples, live loops, digital interfaces). Interestingly, musicians often describe collaborations as doing “what is best for the music” (as in jamming sessions, but more importantly in inter-genre productions). Two explicit conversations in this regard I happen to know are between the electronic music composer Luigi Nono, the director Claudio Abbado, and the pianist Murizio Pollini (see the documentary A Trail on the Water, directed by Bettina Ehrhardt, 2001), and, in a very different vein, between Argentinean folk musicians Peteco Carabajal, duo Coplanacu, and Raly Barrionuevo (see the DVD of the collaboration, La Juntada, 2004).
area of innovation in design in the West since at least the nineteenth century. The acoustic
collapses form and event, calling forth a rethinking of the relation between process, design and
materiality. Building upon Stephen Feld’s notion of acoustemology, Ochoa goes on to discuss
how sound confounds the boundaries between epistemology and ontology, pointing at relational
regimes of aurality where the physics of sound, musical form, (im)materiality, sound technology,
and sound perception all play a part. In her examination of 19th century European accounts of
native musics in the Americas, she unveils an entire political ontology of music surrounding
these accounts. One of the lessons of this examination of the constitution of acoustic ontologies
is that ‘local sounds’ are not static traits meant to represent a particular place; there has always
being a kind of ‘sonic transculturation’ (Ochoa 2006) which is precisely what the new fusions
bring to new levels of sophistication. By bringing sound and aurality to the forefront, she hopes
to redress the overwhelming focus of critical design studies on the visual. Another interesting
attempt at linking design and music is the suggestion that design might be a more accurate
descriptor than earlier models to describe the relation between music and society, at least those
types of music that attempt to design new sounds, experiences, and forms of critical and
reflexive listening.\textsuperscript{58}

\textsuperscript{58} The idea that design might be emerging as a fifth principle for the music-society relation has been suggested by
Amy Zhang for the case of some contemporary musics (personal communication). She bases this suggestion on
Attali ‘s identification of ritual, representation, repetition, and composition as four main historical modes of music
production from the perspective of the relation between society and power that obtain during particular historical
periods (1985: 20)
Part IV. The politics of relationality.
Designs for the pluriverse

[Note: This part is largely based on the Preface to the 2nd edition of Encountering Development and will need to be further revised and perhaps even restructured, and the references will have to be updated.]

It should come as no surprise that from an epistemic and ontological perspective ‘globalization,’ whatever it means, has taken place at the expense of relational worlds. Whatever concept we use to refer to the system of domination that has been in place and in continued expansion for the past few hundred years—modern/colonial world system, capitalist world economy, Integrated World Capitalism, neo-liberal capitalist globalization, or what have you—that much is clear. Epistemic and ontological analyses thus emerge as a necessary dimension of analysis for understanding the current conjuncture of crises, domination, and attempts at transformation. In terms of crises, besides the three-fold crisis Marxist theory of capitalism (accumulation, fiscal, and legitimation crises), one needs to add the ‘ecological crisis of reason’ (e.g., Plumwood, Leff, Shiva), the crisis of meaning (e.g., Dreyfus and Kelly), and the epistemic crisis of knowledge, cogently stated by Santos’ diagnosis that what most characterizes our present moment is that we are facing modern problems for which they are no longer sufficient modern solutions (2002). If one thinks about domination, second, one can say that to the accumulation by dispossession happening today with the brutal expansion of the corporate mining and agrofuels production frontier one has to add the fact that these processes constitute a clear attack on relational worlds; it is no coincidence and land grabbing and massive displacement hit particularly hard territories customarily inhabited by ethnic and peasant groups worldwide. Today, in other words, we are witnessing a renewed attack on anything collective (well beyond the collective demands and organizing of peasants and the working classes) and the destruction of nondualist worlds, including ourselves. As the indignados mobilizations in southern Europe evidence, even the middle classes are not immune to these pressures; their subjectivities, too, are territories to be conquered by the ‘ratiogenic monster’ (Plumwood again) that is market-driven accumulation; and these middle classes have even less cultural and social resources at their disposal to resist the attack and to even consider seriously other ways of being, hence the wave of desperation, suicides, confusion, and of course protests witnessed over the past few years in many parts of the world, particularly led by youth and the unemployed.

This is the merciless world of the infamous 1%, foisted upon the 99% (and the natural world) with a seemingly ever increasing degree of virulence, cynicism, and illegality, since more than ever ‘legal’ only signals what conforms to a self-serving set of rules, whether these rules legitimize who the powerful countries can invade, or how the economy needs to be run (WTO, so-called free-trade agreements); under these rules, paradoxically, the more the powerful intervene, the more their intervention is legitimated, all in the name of freedom, democracy, reason, progress, development, rights, or what you. This is why, and finally, in terms of attempts at transformation, it is necessary to come up with ways of thinking about change that go beyond, or complement, those from the recent past (individual or collective action within a liberal framework, or resistance, revolution, even social movements within a Marxist framework). ‘Transition’ is emerging as one such attempt to point at a type of transformation that embraces more than the economic, social, and cultural aspects of change as commonly understood, indeed,
one that tries to weave these aspects, plus the ecological, together into a proposal for the planet as a whole. This takes us beyond globalization understood as the universalization of modernity into an understanding of planetarization as the creation of better conditions for the pluriverse.

This last part of the paper is devoted to this proposition. The first section reviews succinctly the main discourses of transition emerging from both the Global North and the Global South. A main argument here is that the conversations among these two sets of transition narratives needs to be taken up in earnest as a strategy towards a more effective politics of transition. The second part looks at some of the social and political transformations taking place in Latin America since the late 1990s; it purports to complement the usual discussion of these trends in terms of a “turn to the Left” with an ontological reading of the social movements that in many ways are behind the State-level transformations as an important example of what earlier was called the political activation of relationality. To anticipate the argument, Latin America today is likely the clearest case of a struggle between neoliberal globalization (the project of the right), alternative modernizations (the Left project at the level of the State), and the creation of post/non-capitalist and post/non-liberal worlds; this latter project relies primarily on the political mobilization of relational worlds by communities and social movements. The last segment suggests a further reinterpretation of these trends in terms of the re/emergence of the pluriverse, and argues for the constitution of a field of pluriversal studies, in which design could find an auspicious home.

Discourses of Transition: Emerging Trends

Arguments about the need for a profound, epochal transition are a sign of the times; they reflect the depth of the contemporary crises. To be sure, talk of crisis and transitions have a long genealogy in the West, whether in the guise of ‘civilizational crisis,’ transitions to and from capitalism, apocalyptic visions of the end of the world, sudden religious or technological transformations, or science fiction narratives. This is not the place to analyze this genealogy; however, it seems to me that it is possible to argue that transition discourses (TDs) are emerging today with particular richness, diversity, and intensity to the point that a veritable field of ‘transition studies’ can be posited as an emergent scholarly-political domain. Transition studies and transition activism have come of age. Notably, as even a cursory mapping of TDs would suggest, those writing on the subject are not limited to the academy; in fact, the most visionary TD thinkers are located outside of it, even if in most cases they engage with critical currents in the academy. TDs are emerging from a multiplicity of sites, principally social movements world-wide, from some civil society NGOs, from some emerging scientific paradigms and academic theories in the social and human sciences, and from intellectuals with significant connections to environmental and cultural struggles. TDs are prominent in several fields, including those of culture, ecology, religion and spirituality, alternative science (e.g., complexity), political economy, and new digital and biological technologies. Only the first three will be touched upon in what follows.

As Mezzadra has pointed out recently, “the problem of transition reemerges in each historical moment when the conditions of translation have to be established anew” (2007: 4). What he means by translation is the process by which different, often contrasting, cultural-historical experiences are rendered mutually intelligible and commensurable; this has happened
in recent history through the imposition of the cultural codes of capitalist modernity on an increasingly global scale. This process, as he goes on to suggest, is no longer acceptable; rather, a new type of heterolingual translation, in which new commonalities are built precisely out of incommensurable differences, is needed. As I will argue here, there are some radical differences in the current wave of TDs when compared with those of the most recent past. Two of these differences, underscored by Boaventura de Sousa Santos (2007), are that the transition/translation process cannot be led by, nor lead to, a general theory; in fact, the only general theory possible, as he puts it to the dismay of much Left theorizing, is the impossibility of any general theory. The second, and related, aspect is that today more clearly than ever translation involves complex epistemological processes—inter-cultural and inter-epistemic—which require in turn a type of cognitive justice that has yet to be recognized. A third element, in keeping with this paper’s approach, is that transition/translation entails multiple ontologies; in other words, when radically envisioned, transition involves moving from the One-World Euro-American metaphysic (Law) to the world as pluriverse (without pre-existing universals, Blaser, de la Cadena and Escobar). Transition towards the pluriverse thus calls for an expanded concept of translation which involves ontological and epistemic dimensions.

There is one additional element that needs to be considered. This is the unevenness and differential character of TDs in the Global North and the Global South—the geoepistemopolitics of TDs. It is important to both consider the entire ensemble of TDs, and to establish conversations among northern and southern TDs, not only in order to gain perspective but to come up with a clear politics for the transition movement. Those engaged in transition activism and theorizing in the north rarely delve seriously into those being proposed in the south, and those in the south tend to dismiss too easily northern proposals, or to consider them inapplicable to the south. There is little concerted effort at bringing these two sets of discourses and strategies into dialogue; not only would this dialogue be mutually enriching but perhaps essential for an effective politics of transformation. The range of discourses can only be hinted at here; in the north, the most prominent include degrowth; a variety of transition initiatives (TIs); the end of the anthropocene; forecasting trends towards 2050 or 2052 (e.g. Club of Rome, see Randers 2012); some approaches involving inter-religious dialogues; and some recent developments in conjunction with UN process, particularly within the Stakeholders Forum. Among the explicit TIs are the Transition Town Initiative (UK), the Great Transition Initiative (Tellus Institute, US), the Great Turning (Joanna Macy), and the Great Work or transition to an Ecozoic era (Thomas Berry). In the Global South, TDs include postdevelopment and alternatives to development, communal logics (relational, feminist, autonomous), crisis of civilizational model, and transition to post-extractivism. While the features of the new age to come include post-growth, post-materialist, post-econonomic, and post-capitalist those for the south are expressed in terms of post-developement, post/non-liberal, post/non-capitalist, and post-extractivist (see Escobar 2012a, 2012b for further treatment, and Figure below).
A hallmark of most contemporary TDs is the fact that they posit a radical cultural and institutional transformation—indeed, *a transition to an altogether different world*. This is variously conceptualized in terms of a paradigm shift (e.g., GTI 2002), a change of civilizational model (e.g., Shiva, 2008; Latin American indigenous movements), the emergence of a new order, a quantum shift (Laszlo 2008), the rise of a new, holistic culture, or even the coming of an entirely new era beyond the modern dualist (e.g., Macy 2007; Goodwin 2007), reductionist (e.g., Kauffman 2008), and economic (e.g., Schafer 2008) age. This change is often seen as impending or as already happening, although most TDs warn that the results are by no means guaranteed. Let us listen to a few statements on the transition:

The global transition has begun—a planetary society will take shape over the coming decades. But its outcome is in question. …. Depending on how environmental and social conflicts are resolved, global development can branch into dramatically different pathways. On the dark side, it is all too easy to envision a dismal future of impoverished people, cultures and nature. Indeed, to many, this ominous possibility seems the most likely. But it is *not* inevitable. Humanity has the power to foresee, to choose and to act. While it may seem improbable, a transition to a future of enriched lives, human solidarity and a healthy planet is possible. (The Great Transition Initiative, GTI 2002: ix)

Life on our planet is in trouble. It is hard to go anywhere without being confronted by the wounding of our world, the tearing of the very fabric of life. … Our planet is sending us signals of distress that are so continual now they seem almost normal. … These are warning signals that we live in a world that can end,
at least as a home of conscious life. This is not to say that it will end, but it can end. That very possibility changes everything for us. … This is happening now in ways that converge to bring into question the very foundation and direction of our civilization. A global revolution is occurring… Many are calling it the Great Turning. (Macy 2007: 17, 140).

If we accept the death of our own human bodily form, we can perhaps begin to accept the eventual death of our own civilization. … Global warming is an early symptom of the death of our current civilization. … We can slow this process by stopping [overconsumption] and being mindful, but the only way to do this is to accept the eventual death of this civilization. (Hanh 2008: 57)

While what these authors mean by civilization is not necessarily the same, these statements broadly refer to the cultural model that has prevailed in the West over the past centuries: its “industrial growth” model (Macy), a way of life centered on consumption (Hanh), with its reigning ideologies of materialism, market capitalism and progress (GTI). And whereas it is striking to find a revered Buddhist teacher (Thich Nhat Hanh) calling on us to meditate on the death of the current civilization, even many of the most secular visions emphasize a deep transformation of values. Indeed, the most imaginative TDs link together aspects of reality that have remained separate in previous imaginings of social transformation: ontological, cultural, politico-economic, ecological, and spiritual. These are brought together by a profound concern with human suffering and with the fate of life itself; it could not be otherwise, given that they are triggered by, and respond to, the inter-related crises of energy, food, climate, and poverty.

Thomas Berry’s notion of The Great Work—a transition “from the period when humans were a disruptive force on the planet Earth to the period when humans become present to the planet in a manner that is mutually enhancing” (1999: 11)—has been influential in TDs. Berry calls the new era Ecozoic.59 For Berry, “the deepest cause of the present devastation is found in the mode of consciousness that has established a radical discontinuity between the humans and other modes of being and the bestowal of all rights on the humans” (p. 4). The divide between the human and the nonhuman domains is at the basis of many of the critiques, as already discussed, along with the idea of a separate self. Macy (2007, 2012; Macy and Brown 1998) speaks of a cognitive and spiritual revolution which involves the disappearance of the modern self and its replacement with an ecological, nondualist self that reconnects with all beings and recovers a sense of evolutionary time, effaced by the linear time of capitalist modernity.

Common to many transitions discourses, and perhaps best exemplified by the GTI, is that humanity is at a branching point and entering a planetary phase of civilization as a result of the accelerating expansion of the modern era of the past few decades; a global system is taking shape with fundamental differences from previous historical phases. The character of the transition will depend on which worldview prevails. The key is to anticipate unfolding crises, envision alternative futures, and make appropriate choices. The GTI distinguishes among three worldviews or mindsets—evolutionary, catastrophic, and transformational—with their corresponding global scenarios: conventional worlds, barbarization, and the Great Transition

59 See Greene (2003) and the work of the Center for Ecozoic Studies in Chapel Hill, directed by Herman Greene, http://www.ecozoicstudies.org/
Only the latter promises lasting solutions to the sustainability challenges, but it requires fundamental changes in values as well as novel socio-economic and institutional arrangements. As with some of the degrowth narratives, the GT paradigm redefines progress in terms of non-material human fulfillment. It highlights interconnectedness and envisions a dematerialized production, the decoupling of wellbeing from growth and consumption, and the cultivation of new values (e.g., solidarity, ethics, community, meaning). It seeks to bring about an era of renewable energy, and so forth. The GT involves, above all, a values-led shift toward and alternative global vision, one that replaces ‘industrial capitalism’ with a ‘civilizing globalization.’

Many TDs are keyed in to the need to move to post-carbon or post-fossil fuel economies. Vandana Shiva has brought this point home with special insight and force (see especially 2005, 2008). For Shiva, the key to the transition ‘from oil to soil’ --from a mechanical-industrial paradigm centered on globalized markets to a people- and planet-centered one, which she calls Earth democracy-- lies in strategies of re-localization, that is, the construction of decentralized, biodiversity-based organic food and energy systems that operate on the basis of grassroots democracy, place-based knowledge, local economies, and the preservation of soils and ecological integrity. TDs of this kind exhibit an acute consciousness of the rights of communities to their territories and resources, of the tremendously uneven patterns of global consumption, environmental impact, and structures of exploitation maintained by capitalism, and of the concomitant need for social and environmental justice. This is why their insistence on “the imperative that we change the way we live” if we want to “move beyond oil” is coupled with a view of the “need to reinvent society, technology, and economy” (Shiva 2008: 1). In other words, critiques of capitalism, cultural change (sometimes including spirituality), and ecology are systematically connected to each other in the various diagnosis of the problem and possible ways forward (see also, e.g., Sachs and Santarius 2007; Korten 2006; Santos 2007; Hathaway and Boff 2009; Mooney et al. 2006; Shafer 2008). The proposed ‘ecology of transformation’ (Hathaway and Boff 2009) is seen as the route to counteract the ravages of global capitalism and for constructing sustainable communities. In Boff and Hathaway’s vision, the main components of the strategy are ecological justice, biological and cultural diversity, bioregionalism, rootedness

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60 Briefly, the ‘conventional worlds’ scenario relies on either market forces (global markets driving global development) or policy reform (comprehensive government and international action for poverty reduction and environmental sustainability), or a combination of both. These scenarios might achieve some moderation of current trends, yet they cannot muster the political will to make their avowed goals feasible. Similarly, the second scenario, ‘barbarization,’ has two variants: ‘breakdown’ (institutional collapse) and ‘fortress world’ (global apartheid with the vast majority of the world outside). GTI writings include ideas about how to work toward the transition through concrete institutional and cultural changes. The GTI is based on the influential analysis of branch points and scenario building by Argentinean ecologist Gilberto Gallopín; it is currently housed at the Tellus Institute; see GTI (2002), and the project’s website, Great Transition Initiative: http://www.gtinitiative.org/. Some of the transition visions are based on a framework of interacting complex socio-natural systems from the community to the planetary level. While the more conventional scenarios imply a clear teleology, GTI-type scenarios actually built on non-linear dynamical principles as part of the transition concept. This includes the concepts of bifurcation and macro-shits (see, e.g., Goodwin 2007; Laszlo 2008). It should be said that despite their global character, most TDs still take the Western modern experience as point of reference and driver for change. While this makes sense given modern hegemonies, critical TDs need to incorporate more explicitly experiences and dynamics from socio-natures in the Global South.
in place, self-reliance and openness, participatory democracy, and cooperative self-organization. This ecology supposes a ‘cosmology of liberation’ that is attuned to a kind of spirituality appropriate to an Ecozoic era.

One of the most concrete proposals for a transition to a post-fossil fuel society that responds adequately to peak oil and climate change is the Transition Town Initiative (TTI) devised for towns and communities to engage in their own transition visions, scenarios and practices (see Hopkins 2008, 2011; Chamberlin 2009). This compelling vision, already a movement involving more than 100 towns in the North, includes both the outline of a long-term post-peak oil scenario and a primer for towns and communities to move along the transition timeline. The re-localization of food, energy, and decision-making are crucial elements of the TTI. The TTI also contemplates the reinvigoration of communities so that they become more localized and self-reliant, lower energy infrastructures (‘energy descent’ or ‘powerdown’), and, very importantly, tools and processes for rebuilding the resilience of ecosystems and communities eroded by centuries of delocalized, expert-driven economic and political systems. Resilience is actually the TTI’s approach’s response to conventional notions of sustainability; it requires seeding communities with diversity, increasing reliance on social and ecological self-organization, strengthening the capability to produce locally what can be produced locally, and so forth. As currently stated, however, the TTI, is closer to alternative development than to alternatives to development. There is thus an important bridge that needs to be built between the TTI vision and postdevelopment.61

Transition discourses thus posit a profound cultural, economic, scientific, and political transformation of dominant institutions and practices. In emphasizing re-localization and the rebuilding of local communities, it goes directly against most globalization discourses; it bets on the fact that ‘small’ is not only possible but perhaps inevitable (e.g., Hopkins 2008: 68-77; Estill 2008). By making visible the damaging effects of the cultural institutions of the individual and the market, they direct our attention to the need to reconstruct identity and economy, often times in tandem with those communities where the regimes of the individual and the market have not yet taken a complete hold on socio-natural life. They advocate for a diverse economy which has a strong basis on communities, even if of course not bound to the local (Gibson-Graham 2006). The focus of many TDs on spirituality is a reminder of the systemic exclusion of this important area from our secular academics. In emphasizing the continuity between nature and culture, finally, TDs bring to the fore one of the crucial imperatives of our time: the need to reconnect with each other and with the nonhuman world. This latter is also a call for the ascendancy of the pluriverse, as we shall see in the next section.62

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61 The transition approach is a remarkable concept and set of tools. Initiated in the town of Totnes, Devon, UK (also home to Schumacher College), it has spread rapidly. Over 100 communities world-wide are engaged in transition plans inspired by the Handbook. The primer for transition initiatives is detailed and feasible. See also the related website, [http://transitionculture.org/](http://transitionculture.org/).

62 I will not discuss here further the politics of these TDs, which is left implicit in most of them. This politics can be fruitfully theorized from Left and academic approaches (e.g., autonomist anti-capitalist imaginaries; Deleuzian/Guattarian postcapitalist politics; Foucauldian and feminist biopolitical and post-humanist analyses; anarchism; Latin American autonomia; critical geography; etc.), but these will need to meet the epistemic and ontological challenges of non-Eurocentric and biocentric transition discourses.
The question of development reconsidered: the Buen Vivir and the Rights of Nature

Some Latin American movement and intellectual debates adumbrate feasible steps for moving away from the ‘civilizational model’ of modernization and globalized development. In gathering after gathering of indigenous peoples, Afro-descendants, women, and peasants, the crisis of the Western modelo civilizatorio is invoked as the single most important cause of the current global/energy/climate and poverty crisis. A shift to a new cultural and economic paradigm is recognized both as needed and as actively under construction. While the emphasis on a transition at the level of the entire model of society is strongest among some indigenous movements, it is also found, for instance, in agroecological networks for which only a shift toward localized, agroecological food production systems can lead us out of the climate and food crises; the agroecological proposals resonates with Shiva’s, and are echoed partially by the global network Via Campesina, centered on food sovereignty based on peasant-based agriculture. The meaning of transition and postdevelopment can be ascertained clearly in the most recent debates on the definition of development and the rights of nature taking place in countries like Ecuador and Bolivia; a new wave of movements and struggles in these countries and elsewhere in the continent is taking place which can be interpreted in terms of two inter-related processes, namely, the activation of relational ontologies and a redefinition of political autonomy. While these trends are contradictory and deeply contested, they point toward the relevance of postdevelopment and make tangible the notion of post/non-liberal/capitalist socio-natural configurations.

The Ecuadorian and Bolivian constitutions, issued in 2008, have garnered well-deserved international attention because of their pioneering treatments of development and, in the Ecuadorian case, of the rights of nature. It should be emphasized that these constitutions are the result of complex social, cultural and political struggles which became acute over the past decade. The Constitutions introduced a novel notion of development centered on the concept of sumak kawsay (in Quechua), suma qamaña (in Aymara) or buen vivir (in Spanish), or ‘living well’. As Alberto Acosta, one of the foremost architects of the Ecuadorian constitution states, the sumak kawsay entails a conceptual rupture with the conceptions of development of the previous six decades. More than a constitutional declaration, “the Buen Vivir constitutes an opportunity to construct collectively a new development regime” (2009:6). Although a number of sources are cited as the basis for this conception -- including critical analyses of development and postdevelopment, as well as feminist, ecological, and human development frameworks-- the larger share of the credit goes to indigenous organizations. For Catherine Walsh, “the integral

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63 For a lengthy treatment of the Latin American transformations during the past decade, including the argument made here, and full set of references, see Escobar (2010a).

64 See the issue No. 453 of América Latina en Movimiento (March 2010) devoted to “Alternativas civilizatorias”, http://alainet.org/publica/453.phtml. A Forum on “perspectives on the ‘Crisis of Civilization’ as the Focus of Movements” was held at the World Social Forum in Dakar (February 6-11, 2011), coordinated by Roberto Espinoza, Janet Conway, Jai Sen, and Carlos Torres. It included participants from several continents.
vision and the basic condition of the Buen Vivir have been at the basis of the cosmovisions, life philosophies and practices of the peoples of Abya Yala and the descendants of the African diaspora for centuries; they are now re-apprehended as guides for the re-founding of the Bolivian and Ecuadorian state and society” (2009a: 5). It can indeed be said that sumak kawsay and suma qamaña stem “from the social periphery of the global periphery,” as Spanish development critic José María Tortosa put it (cited in Acosta 2010).

Very succinctly, and following Acosta and Gudynas, the Buen Vivir (BV) grew out of several decades of indigenous struggles as they articulated with social change agendas by peasants, Afro-descendants, environmentalists, students, women, and youth. Crystallized in 99 articles of the Constitution (out of 444), the BV “presents itself as an opportunity for the collective construction of a new form of living” (Acosta 2010: 7). Rather than as an isolated intervention, the BV should be seen in the context of a panoply of pioneering Constitutional innovations, including the rethinking of the State in terms of pluri-nationality, of society in terms of inter-culturality, an expanded and integral notion of rights, and a revisioned development model, the goal of which is precisely the realization of BV. All of these innovations, in addition, should be seen as multi-cultural, multi-epistemic, and in terms of deeply negotiated and often contradictory political construction processes. It is clear, however, that the BV constitutes a challenge to long-standing notions of development.

Indigenous ontologies or ‘cosmovisions’ do not entail a linear notion of development, nor a state of ‘underdevelopment’ to be overcome; neither are they based on ‘scarcity’ or the primacy of material goods. Echoing these tenets, the BV purports to introduce a different philosophy of life into the vision of society. This makes possible an ethics of development that subordinates economic objectives to ecological criteria, human dignity, and social justice. Development as Buen Vivir seeks to articulate economics, environment, society and culture in new ways, calling for mixed social and solidarity economies; it introduces issues of social and inter-generational justice as spaces for development principles; acknowledges cultural and gender differences, positioning inter-culturality as a guiding principle; and enables new political-economic emphases, such as food sovereignty, the control of natural resources, and a human right to water. It would be a mistake, however, to see the BV as a purely Andean cultural-political project, a point that Acosta (2010) adamantally argues. As already mentioned, the BV is also influenced by critical currents within Western thought; conversely, it aims to influence global debates. That said, there is ample recognition that indigenous and Afro knowledges have been subjected to long-standing processes of marginalization. The BV, in this way, seeks to reverse the coloniality of power, knowledge, and being that has characterized the modern/colonial world system since the Conquest (Quijano 2010). For Peruvian sociologist Aníbal Quijano (2010), the Buen Vivir constitutes a new horizon of historical meaning, emerging from the long history of indigenous resistance against the eurocentric modern/colonial world system. In some debates in the Andean countries, this is referred to as ‘epistemic decolonization.’

The literature on Buen Vivir and the rights of Nature is already vast, although almost exclusively in Spanish. This is perhaps the most interesting intellectual and political debate in South America at present. See the useful short volumes by Acosta and Martínez, eds. (2009a, 2009b, 2009c), Acosta (2010), and Gudynas (2009a, 2009b; Gudynas 2011 for an English summary of his thought on Buen Vivir).
Many of the arguments about the BV can also be made regarding another prominent idea heatedly discussed in South America, that of the rights of Nature; the two aspects are closely interrelated. For Uruguayan social ecologist Eduardo Gudynas (2009a, 2009b), the rights of Nature, or the *Pachamama*, recognized in the Ecuadorian constitution, represent an unprecedented ‘biocentric turn,’ away from the anthropocentrism of modernity. For Gudynas, this move resonates as much with the cosmovisions of ethnic groups as with the principles of ecology. To endow Nature with rights means to shift from a conception of nature as object to be exploited to one in which Nature is seen as subject; indeed, in this conception the idea of rights of Nature is intimately linked with the humans’ right to exist. This notion implies an expanded ecological notion of the self which, unlike the liberal notion, sees the self as deeply interconnected with all other living beings and, ultimately, with the planet as a whole. For Gudynas, this amounts to a sort of ‘meta-ecological citizenship,’ a plural kind of citizenship involving cultural and ecological dimensions, and which requires of both environmental justice and ecological justice for the protection of people and nature, respectively.66 This biocentric turn represents a concrete example of the civilizational transformation imagined by the transition discourses discussed earlier.

Social movements as ontological struggles: towards post/non-capitalist and post/non-liberal worlds?

The recognition of the rights of Nature is closely related to the last aspect of the Latin American transformations I want to discuss, albeit all too briefly; this is the notion and practice of relationality. As already suggested, there is an interesting convergence between certain philosophical, biological, and indigenous peoples’ narratives in asserting that life entails the creation of form (difference, morphogenesis) out of the dynamics of matter and energy.67 In these views, the world is a pluriverse, ceaselessly in movement, an ever-changing web of interrelations involving humans and non-humans. It is important to point out, however, that the pluriverse gives rise to coherences and crystallizes in practices and structures through processes that have a lot do with meanings and power—perhaps what John Law has called “coherence without consistency” (2004: 139), or provisionally stable realities; in this way it can be seen in terms of a multiplicity of worlds. Notwithstanding, the worlds and knowledges constructed on the basis of modernists ontological commitments became a One World, ‘a universe.’ This universe has acquired certain coherence in socio-natural forms such as capitalism, the State, the individual, industrial agriculture, macro-development projects, and so forth.68

66 In both Gudynas and Macy, this transformed notion of the self is based on Arne Naess’ deep ecology framework and its pioneering view of the ecological self.

67 In some indigenous narratives, the creation of form is seen as the passage from ‘indistinction’ to ‘distinction’ (see, e.g., Blaser 2010 for the case of the Yshiro of Paraguay).

68 This is a very incomplete statement on what is a complex debate involving four positions on modernity: a) modernity as a universal process of European origin (intra-Euro/American discourses); b) alternative modernities (locally-specific variations of the same universal modernity); c) multiple modernities, that is, modernity as multiplicity without a single origin or cultural home (Grossberg 2010); d) modernity/coloniality, which points out the inextricable entanglement of modernity with the colonial classification of peoples into hierarchies, and the possibility of ‘alternatives to modernity’ or transmodernity. See Escobar 2008a, Ch 4 for a fuller treatment.
It is precisely this set of assumptions that discussions about BV and rights of Nature unsettle. Although I cannot discuss this point here at length, the unsettling of modern constructs points to the existence of non-liberal or post-liberal social orders; these are worlds that go beyond the foundational liberal notions of the individual, private property, and representative democracy. Stated in anthropological and philosophical terms, these non-liberal worlds are place-based and can be characterized as instances of relational worldviews or ontologies. As already stated, relational ontologies are those which eschew the divisions between nature and culture, between individual and community, and between us and them that are central to the modern ontology. This is to say that some of the struggles in Ecuador and Bolivia (and in other parts of the continent, including struggles for autonomy in Chiapas and Oaxaca, as well as indigenous and Afro struggles and some peasant struggles in Colombia, Peru, Guatemala, and other countries) can be read as ontological struggles; they have the potential to de-naturalize the hegemonic dualisms on which the liberal order is founded (Blaser 2010; de la Cadena 2010; Escobar 2010a; Povinelli 2001). The universal and homolingual thrust of modernity dictates that it should attempt to tame those different worlds, that is, to efface the pluriverse. Bringing the pluriverse into visibility by focusing on ontological conflicts –that is, conflicts that arise from the unequal encounter between worlds, as in so many conflicts involving resource exploitation today— can be said to constitute a particular field of study, which Blaser refers to as political ontology (Blaser 2010).

The emergence of relational ontologies challenges the epistemic foundation of modern politics. That identification of Nature with the *Pachamama*, and the fact that it is endowed with ‘rights,’ goes beyond environmental political correctness given that the Pachamama cannot be easily fitted into the philosophical structure of a modern constitution, within which nature is seen as an inert object for humans to appropriate. Its inclusion in the Ecuadorian Constitution thus contributes to disrupt the modern political and epistemic space because it occurs outside such space (de la Cadena 2010). Something similar can be said of the notion of Buen Vivir. Both notions are based on ontological assumptions in which all beings exist always in relation and never as ‘objects’ or individuals. At stake in many cultural-political mobilizations in Latin America at present, in this way, is the political activation of relational ontologies; these mobilizations thus refer to a different way of imagining life, to an other mode of existence (Quijano 2010). They point toward the pluriverse; in the successful formula of the Zapatista, the pluriverse can be described as ‘a world where many worlds fit.’ More abstractly perhaps, the pluriverse signals struggles for bringing about ‘worlds and knowledges otherwise’ –that is, worlds and knowledges constructed on the basis of different ontological commitments, epistemic configurations, and practices of being– knowing–doing.

The notions of non-liberal and non-capitalist practices are actively being developed in Latin America, particularly in relation to both rural and urban forms of popular mobilization in

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69 The ontological conflicts involved in neo-extractivist economies in Latin America and other world regions are the subject of an ongoing collaborative research project by Mario Blaser, Marisol de la Cadena, and myself. The project’s general goal is that of theorizing the pluriverse as a space of ontological-political practices. See, e.g., Blaser, de la Cadena, and Escobar (2010), and the 2012-13 Sawyer Seminar on the subject, held at the University of California, Davis, under the direction of de la Cadena and Blaser (de la Cadena 2012).
Oaxaca, Chiapas, Ecuador, Bolivia, and Southwest Colombia. These are not just theoretical notions but the outcome of grounded political analyses, particularly in terms of the development of forms of autonomia that involve non-state forms of power stemming from communal cultural, economic, and political practices. In some cases, such as the Zapatista communities of Chiapas or the indigenous communities in Oaxaca, as already discussed, contemporary autonomous forms of communal government are seen as rooted in several centuries of indigenous resistance. In other cases, such as the Aymara urban communities of El Alto, Bolivia, what takes place is a creative re-constitution of communal logics on the basis of novel forms of territorality. Yet most cases of autonomous organization involve certain key practices, such as communal assemblies, the rotation of obligations, and horizontal, dispersed forms of power. Emerging from this interpretation is a fundamental question, that of “being able to stabilize in time a mode of regulation outside of, against and beyond the social order imposed by capitalist production and the liberal state” (Gutiérrez 2008: 46; original emphasis).

This proposal implies three basic points: the steady decentering and displacement of the capitalist economy with the concomitant expansion of diverse forms of economy, including communal and non-capitalist forms; the decentering of representative democracy and the setting into place of direct, autonomous, and communal forms of democracy; and the establishment of mechanisms of epistemic and cultural pluralism (interculturality) among various ontologies and cultural worlds. From a poststructuralist perspective, it is thus possible to speak of the emergence of post-liberal and postcapitalist forms of social organization. It is important to make clear once again what the ‘post’ means. Postdevelopment signaled the possibility of visualizing an era where development ceased to be a central organizing principle of social life; even more, it visualized such a displacement as happening in the present. The same is true for post-liberalism, as a space/time under construction when social life is no longer so thoroughly determined by the constructs of economy, individual, instrumental rationality, private property, and so forth. ‘Postcapitalist’ similarly means looking at the economy as made up of a diversity of capitalist, alternative capitalist, and non-capitalist practices (Gibson-Graham 2006). The post, succinctly, means a decentering of capitalism in the definition of the economy, of liberalism in the definition of society, and of state forms of power as the defining matrix of social organization. This does not mean that capitalism, liberalism, and state forms cease to exist; it means that their discursive and social centrality have been displaced somewhat, so that the range of existing social experiences that are considered valid and credible alternatives to what exist is significantly enlarged (Santos 2007).

As proponents of the BV and the rights of Nature emphasize, these notions should be seen as processes under construction rather than as finished concepts. This is more so the case when considering that the bulk of the policies of the progressive governments at present undermine the very conditions for their realization. Despite their break with many of the main tenets of neoliberal economic models, most of these governments maintain development strategies based on the export of natural resources, such as agricultural and mineral commodities, including oil and gas, but also new rubrics such as soy in Argentina and Brazil. The main difference in these government policies lies in that revenues are appropriated somewhat differently, with particular emphasis on poverty reduction through redistributive policies. But the

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neo-extractivist orientation of the model poses a tremendous challenge and is the main source of tension between states and civil society sectors (Gudynas 2010a). This model affects greatly the possibilities for the implementation of the rights to Nature, as the neo-extractivism of the progressive governments not only tolerates but co-exists easily with environmental destruction (Gudynas 2010b). It is also clear, however, that the concepts of Buen Vivir and rights of Nature have succeeded in placing the question of development on the agenda again with particular acuity; this has in turn implied broaching the issue of a transition to a post-extractivist society head on. In Ecuador and Bolivia in particular, post-extractivism and postdevelopment thus bring together the State, NGOs, social movements, and intellectuals into a crucial and intense debate (Gudynas 2011). There is the sense of an impasse created by the tense coexistence of progressive yet economistic and developmentalist policies at the level of the State, on the one hand, and the ability of movements to problematize such polices from below—a sort of ‘promiscuous mixture’ of capitalist hegemony and movement counter-powers, of radical demands for change and the reconstitution of ruling (Colectivo Situaciones, ed. 2009). How this dynamics plays out in each country cannot be decided in advance, and will be of significance beyond the region given the worldwide intensification of extractivism by global colonial capitalism.

Emerging trends in the Latin American debates

The current moment in South America is thus characterized by a significant renovation of the debates on development (Gudynas and Acosta 2011). While State social and economic policies continue to be developmentalist, the critical perspectives have been gaining some ground and resonance at all levels. Critical positions “agglutinate a diversity of tendencies with decolonizing ambitions, pointing through a series of categories and limit-concepts at the dismantling of the apparatuses of power, the imaginaries, and the myths at the basis of the current developmentalist model” (Svampa 2011: 51). Taken as a whole, it is possible to identity five major areas of work in this regard; these can only be identified here without much elaboration (see Escobar 2012c for a discussion of each area):

1. Epistemic decolonization. This area stems from the limited but perhaps growing influence in academic and activist circles of the research program on decolonial thought. The value of this perspective lies in going beyond critical intra-European perspectives on modernity in its re-interpretation of modernity as modernity/coloniality and in identifying the epistemic dimension as key to the transformation of the world. Over the past few years, a group of students and activists have appropriated this framework and taken it in new directions (e.g., gender, nature, interculturality, urban situations), thus partially redressing some of the critiques directed against the first wave of decolonial thought of the late 1990s and early 2000s.

2. Alternatives to development. The BV and the rights of nature have doubtlessly been the trigger in the rearticulation of the critiques of the fundamental ideas underlying ‘development’ (e.g., growth, progress, market reforms, extractivism, material consumption, etc.). This has brought about “a return to the problematic of alternatives to development” (Gudynas and Acosta 2011: 75), in other words, a more profound sense of alternatives than simply ‘development alternatives.’ In Ecuador and Bolivia in particular, alternatives to development finds its sources in past and current academic critiques but especially in the proposals and struggles of indigenous
movements. What is emerging, no matter how precariously, is a political platform for the construction of alternatives to development, in both theory and practice.

3. Transitions to post-extractivism. Of recent origin in the current decade, the framework of transitions to post-extractivism is a significant conceptual development with important methodological advances in political and policy debates particularly in Peru but increasingly in other Andean countries. The point of departure is the extractivist nature of the development model of both the neo-liberal and progressive regimes, what in South America is called “The Commodity Consensus.” The framework includes a conceptualization of different types of extractivism (predatory, sensible, and indispensable); a workshop methodology with diverse groups about the options for post-extractivism; and concrete actions and campaigns to create the conviction that “there is life after extractivism” (Gudynas 2012). This line of work has a decided ecological orientation, and has been largely proposed and developed by the Centro Latinoamericano de Ecología Social, CLAES (see, e.g., Alayza and Gudynas in press, Gudynas 2011, 2012).

4. Discourses on the crisis of civilizational model. This discourse is prominent among some indigenous, black, and peasant movements and intellectuals. The basic argument is that the contemporary ecological and food crisis is a crisis of the Western civilizational model, and that a shift towards a new ecological, cultural and economic paradigm is needed. The new models have to be anti- or post-capitalist but not only that; they have to reaffirm the value of life in all of its dimensions, which involves plural conceptions of nation, nature, economy, time, citizenship, and so forth. This is an area that will likely experience more compelling articulations, although it is not without precedent, for instance, in Mexican Anthropologist Bonfil Battalla’s interesting work on Mexico profundo as a ‘negated civilization’ (1991,’ or in Ashis Nandy’s work of the 1980s on the dialog of civilizations. Contrary to what many in the academy might fear, the thrust of the discourses on civilizational transition in recent years have been decidedly anti-essentialist, historical, and pluralistic.

5. Communal logics and relationality. This last area actually constitutes several lines of work. As with the concepts of system and civilization, the concept of ‘community’ has been considered problematic in constructivist social theory for similar reasons, yet it is having a resurgence within various epistemic-political spaces. A main conceptual intervention is the distinction between ‘State’ and ‘communal’ logics; as two observers of the indigenous-popular insurrections in Bolivia in 2000-2005 --which led to the election of Evo Morales as the first indigenous president of the country-- put it, the concept of communal logics attempts to make visible forms of “self-regulation of social co-existence beyond the modern state and capital,” a type of society set into movement during the insurrection “characterized by non-capitalist and non-liberal social relations, labor forms, and forms of organization” (Gutiérrez 2008: 18; Zibechi 2006: 52). For aymara sociologist Felix Patzi (2004, 2012), the communal form of politics obtains precisely because of the existence of an entire cultural background organized in terms of communal systems; these systems embrace all aspects of life; what he proposes is that the communal system is an alternative to the liberal one, based on private property and representative democracy. “By communal or communitarian concept we mean the collective property of resources combined with their private management and utilization. …. In contradistinction to modern societies, indigenous societies have not reproduced the patterns of differentiation nor the separation among
domains (political, economic, cultural, etc.) … The communal system thus presents itself as opposed to the liberal system” (2004: 171, 172).

‘The communal’ has been the subject of re-theorization by a loosely interconnected group of intellectual-activists focusing on key political mobilizations in Bolivia and Southern Mexico. The Mexican sociologist Raquel Gutierrez Aguilar (2008, 2012) has coined the term entramados comunitarios (communitarian entanglements), in contradistinction with ‘transnational corporate coalitions.’ By the first term she means “the multiplicity of human worlds that inhabit and generate the world under guidelines of respect, collaboration, dignity, affect, and reciprocity and which are not completely subjected to logic of capital accumulation even if affected and sometimes overwhelmed by such a logic” (2012: 3). These logics are found among many kinds of social groups, rural and urban. This view echoes Esteva’s, already mentioned, who sees the autonomous movements of Chiapas and Oaxaca as fostering a reorganization of society but from the “communal condition” that constitutes the autonomous ‘weave’ (tejido) of society and which he sees as having being at play in rural and urban popular neighborhoods since time immemorial (2012). The final important elaboration of this concept is the framework of feminismo comunitario proposed by the feminist group from La Paz Comunidad Mujeres Creando Comunidad; this framework starts by constructing the community “as an inclusive principle for the caring of life” (Paredes 2010: 27). A second important component of the framework is the notion of entronque patriarcal, which refers to the intersection of various forms of pre-colonial, colonial, and contemporary patriarchy. The framework constitutes a radical critique of neoliberal capitalism, patriarchalism, and liberal feminisms as it develops a reinterpretation of gender (including gender complementarity) along relational, communal lines. This proposal is not directed solely at indigenous people, women, or even Bolivians but, as Paredes explains, it is intended for all living beings—women, men, inter-sexuals, and nature. This is a compelling and cogent proposal that deserves much attention.

It is important to mention that the thought of ‘community’ is heterogeneous, with important differences among the various authors.71 They are characterized, however, but a serious attempt at de-alterizicing the concept (that is, not restricting it to indigenous, ethnic, or gender minorities) and by being careful not to idealize or homogenize the communal. There is rather an emphasis on the creation of new spheres of the communal (Esteva 2012) and on broaching the entire gamut of forms the communal takes, old and new. More than a preconstituted entity, the community is “the name given to a specific organizational and political code, to a singular political technology. … Contrary to common sense, the community produces dispersion” (Colectivo Situaciones 1996: 212), and hence becomes essential for the invention of non-state, non-capitalist forms of coexistence. The concept implies a non-dualist ontology.

Underlying many of the mobilizations of indigenous, afrodescendant, women, land-based and popular groups are relational worldviews that are coming to the forefront as viable

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71 Not only that, there are disagreements among some of these authors about the usefulness of the term. Since the early 1980s, for instance, the Taller de Historia Oral Andina in Bolivia (TOHA) has emphasized the reconstitution of the ayllu which is not conceived in terms of community. The Bolivian discussions on these issues is amazingly rich and diverse, involving well-known aymara intellectuals such as Simon Yampara, Pablo Mamani, Felix Patzi, Julieta Paredes, and Marcelo Fernández Osco; and academics and intellectuals such as Silvia Rivera Cusicanqui, Javier Tapia, and Gustavo Soto, among many others. See Escobar (2012c) for additional discussion and references.
alternatives to modern social and political arrangements. These mobilizations might thus be seen as ontological-political projects. They push for non-representational politics and non-dualist understandings of socio-natural worlds. Their politics of difference often entail a political ontology (Blaser 2010, de la Cadena 2010). In many of these mobilizations, for instance, against mining, the activation of relational ontologies politicize modern binaries by mobilizing non-humans (e.g., mountains, water), as sentient entities and as actors in the political arena. Struggles against the destruction of life are thus conjuring up the entire range of the living.

Given what has been said, the argument about the ongoing transformations in Latin American can be summarized as follows. These transformations suggest two potentially complementary but also competing projects: Alternative modernizations, based on anti-neoliberal development models, possibly leading to post-capitalist economies and alternative forms of modernity (una modernidad satisfactoria); this is the project of the progressive regimes; and transition projects, based on non-dominant sets of practices (e.g., communal, indigenous, ecological, relational), and forms of autonomous politics, potentially leading to a multiplicity of post/non-liberal and post/non-capitalist socio-natural configurations (a pluriverse). The question becomes: is it possible to go beyond capital (as the dominant form of economy), Euro-modernity (as dominant cultural construction of socio-natural life), and the State (as central form of institutionalization of the social?)? Three scenarios: post-capitalist, post-liberal, and post-statist.

The notion of postdevelopment continues to be useful in the articulation of critiques of existing tendencies (e.g., neo-extractivism), to orient inquiry toward non-economic possibilities, and to maintaining alive the imaginaries of beyond development and of alternatives to development (e.g., post-extractivism and cultural and ecological transitions). Postdevelopment remains an apt concept to rekindle, and contribute to articulate, many of the crucial questions of the day. As Acosta put it, more than a development alternative, the Buen Vivir constitutes an alternative to development, and to this extent it can be seen as moving along “the road to postdevelopment” (Acosta 2010). The challenges to moving along this road are manifold, including heightened productivism; dependent insertion into global capitalism via export of primary commodities (neo-extractivism); las nuevas derechas; and old and new imperialisms. The main challenges for social movements include how to keep spaces for autonomous thought and politics open while engaging with the State and global forces; how to promote new forms of cooperation and social organization; and how to develop forms of power at a broader scale based on communal/non-liberal logics that might contribute to the collective appropriation of the production of socio-natural life. A key question suggests itself: Can the emergent cultural-political subjects in Latin America reach a dynamic condition of alterity capable of re-constituting socio-natural structures, along the lines of relationality, pluralism and pluriversality?

Designs for the pluriverse?

Discourses of globalization, whether mainstream or Left, most often than not see ‘the global’ as a space that is naturally and fully occupied by forms of socio-natural life that are in fact an extension of Western-style modernity. No matter how qualified, globalization in these discourses always amounts to a deepening and universalization of capitalist modernity. There is something terribly wrong with this imaginary if we are to take seriously the transition discourses and notions of Buen Vivir and rights of Nature, let alone if we are to confront the ever worsening
ecological and social crisis. To paraphrase, scratch a globalization discourse and you will find *homo oeconomicus* at large, alleged ‘individuals’ stressing to become miniature capitalist clones (e.g., micro-finance, modernizing rural development); assumptions of linear rationality as the default mode of thinking of those wanting ‘to make it’ in a ‘competitive world’; a view of nature as resource to be extracted at any cost; or groups and movements struggling to recapture the modernist project for alleged liberatory purposes (Left versions). These discourses reflect a view of the world as seen by those who rule it—a world from above. They deploy pervasive apparatuses of power that organize people’s perceptions and experiences.

It bears repeating that this view of globalization as universal, fully economized, de-localized, multi-cultural (yet with dominant Euro-American cultures as the preeminent model), where (affluent) ‘individuals’ are endowed with ‘rights’ and nations have to accept the dictates of the same global rationality or risk becoming ‘failed states,’ is increasingly made possible by the immense power of corporations and maintained within manageable levels of dis/order by military might. The underside of globalization, in this way, is none other than global coloniality. From its very global conditions are emerging, however, responses and forms of creativity and resistance that make increasingly visible the poverty, perniciousness and destructiveness of this imaginary.

As Blaser (2010) put it, the present moment can be seen as one of intense struggle between two visions of globality: globality defined as modernity writ large (the One-World World); or globality as a pluriverse. Rather than in terms of globalization, the latter possibility might be more appropriately described as a process of planetarization articulated around a vision of the Earth as a living whole that is always emerging out of the manifold biophysical, human, and spiritual elements and relations that make up the pluriverse, from the biosphere to the noosphere. Many of the features envisioned in the transition discourses—from strategies of re-localization to the rise of an ecological civilization—will find a more auspicious home in this notion. We need to stop burdening the Earth with the dualisms of the past centuries and acknowledge the radical interrelatedness, openness and plurality that inhabit it. To accomplish this goal, it might be useful need to start thinking about human practice in terms of ontological design (Winograd and Flores), or the design of worlds and knowledges otherwise (decolonial thought). As in the case of ecological design, ontological design would seed designs with diversity or build on already existing diversity; this is a principle for the pluriverse. Design would no longer involve the taming the world for (some) human purposes, but, to summon again Berry’s words, building worlds in which humans and the Earth can co-exist in mutually enhancing manners (1999: 11). More politically perhaps, “in this way the defense of human life, and conditions for life on the planet, may become the new horizon of meaning of the struggles of resistance by the majority of the world’s people” (Quijano 2010: 7).

It should be stressed that different ontologies do not mean separate worlds; worlds are multiple and different but not disconnected (Law 2004); they overlap and interact with one another, hence the importance of looking at the articulations that divergent worlds might be capable of among themselves while maintaining their autonomy (via structural coupling). If the pluriverse is made up of multiple worlds and partial connections (Strathern), a key question becomes, how do they relate to each other? At this level, question of incommensuration and translation (Povinelli, Boa Santos), of zones of contact and partial common grounds become
important. It is important to keep in mind that struggles related to post-liberalism are susceptible of being both overlooked and re-inscribed as fully comprehensible through modern categories. As Povinelli (2001) well put it, there is always an unwillingness of the liberals/moderns to let themselves “be undone,” and this unwillingness finds its way even into the critical academies of the Global North. What is called for is a new wave of dialogical engagements with non/post-liberal forms and relational ways of knowing, in all of their cultural and political richness, troubling aspects, and unevenness; how would these dialogues recast the analysis of the conjuncture and our very frameworks? What conceptual tools do the social and human sciences have for engaging with relational ways of knowing? How might academic theories be refurbished to meet this challenge?

Going well beyond critique, a nascent field of pluriversal studies would –and already does, as I tried to show in this part– discover the forms adopted by the multiple worlds that make up the pluriverse, without trying to reduce them to manifestations of known principles. Pluriversal studies will focus on those processes that can no longer be easily accommodated in the epistemic table of the modern social sciences. This is why pluriversal studies cannot be defined in opposition to globalization studies, nor as its complement, but need to be outlined as an altogether different intellectual and political project. No single notion of the world, the human, civilization, the future, or even the natural can fully occupy the space of pluriversal studies. Even if partly building on the critical traditions of the modern natural, human and social sciences, pluriversal studies will travel its own paths as it discovers worlds and knowledges that the sciences have effaced or only gleaned obliquely.

Some provisional concluding remarks

If it is true that talk of transitions is a sign of the times, perhaps it is also true that the possibility of a transition is a moment in the luchas de los pueblos worldwide at the present moment. This conjunctural reading, however, demands recognizing the ontological dimension of much contemporary politics (relationality), and adapting our frameworks accordingly. How about design? If the hypothesis that what is taking place in various sub-domains of social life can be described in terms of the political activation of relationality and non-dualist ontologies is sensible, this means that relationality and non-dualism could become important principles for design. It is in this sense that we speak of ontological design. Ontological design is eminently practical, stemming from the belief that every individual and community practices the design of itself. This task can also be seen in terms of designs for the pluriverse, aimed at enabling the ecological and cultural conditions where multiple worlds and knowledges, involving humans and non-humans, can flourish in mutually enhancing ways.

Another way to ask this question is: Is this scenario purely hypothetical, or can it feasibly be read from current practices? Most transition advocates at least insist that the changes they envision are already happening; in this sense, the transitions are real utopias, even if the odds against them are seemingly insurmountable given the ever growing power of the apparatuses of death, their cynicism, and the chronic realism of many that asserts that there is no way out. Activists of most social movements, of course, live by necessity with the hope that these changes are possible and, to a limited extent, always taking place; in this way, engagement with social
movements renews, and grounds, one’s hope. More often than not, activists maintain hope alive and the sense that the struggle is worth fighting, as in the spirit of the famous dictum in African liberation struggles against Portuguese colonialism, *A luta continua*.

The present might be a good moment to deepen the inquiry into the relation between design and social activism. The current fashion in design, as we saw, goes hand in hand with interesting developments and proposals that confer upon design thinking an activist orientation of sorts. To this extent, one can properly say that what occurs “under the flexible banner of design” (Berglund) is quite mixed. On the side of interesting trends, to being with, one can note that in seeking effects and transformations and in making new things (and relations), design is almost always a collaborative enterprise. As a result designers tend to constitute design challenges as shared problems. This is reflected in relatively new trends, such as interactive design practices, people-centered design, the design of context and experience, and of course participatory and collaborative design (Suchman 2011). The political dimension of design can also be found in trends on prototyping the social, and of course on design for social justice.

Second, ecological designers in particular and some architects are placing emphasis on design as critical situated practice, stemming from the principle the fact that ‘solutions grow from place’ and from approaches to community-based design. Third, there is an incipient but promising theoretical and political discussion on design ontologies. Does design continue to be a central political technology of modernity, and if so, inextricably connected to the ecological and social crises that modernity has allegedly created (even where it seeks to question modern practices so as to help redress such crises)? Conversely, could design be an apt medium to tackle the issue of ontological difference that, say, indigenous peoples and others in many parts of the world are bringing to the fore through their politics and alternative designs (including in fields such as alternatives to development, music, social movements)? Can we imagine design ontologies that are deeply relational, or is design irremediably modernist?

One of the main challenges faced by ontologically-oriented design is how to think about and advance its own practice. “Changing the way we deal with ourselves and with things” and being concerned with “the operational effectiveness in our domains of existence” –that is, with living ethically as fully immersed in a relational world-- have emerged from these reflections as key principles of designs for autonomy and for worlds and knowledges otherwise. There is an additional emphasis in this framework on the need for a practice of transformation if indeed the transformation are to take place. One may think of areas of work where these principles could be fruitfully, and explicitly, explored, such as those of environment, food, energy, and development (and surely many others, from urban planning to new technologies). But the general question of how to render the insights of relationality into effective transformative forces is perhaps the key question of the moment for critical design studies. This question is bound to have, of course, many answers, hopefully fostering a rich dialogue around it. Part of answer will have to involve the creation of new languages and lexicons for transitions, new media and communicative strategies through which ‘the relational’ can resonate in wider circles.72

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72 The concept of ‘the relational’ itself is not very user-friendly beyond academic and intellectual circles. Joana Macy’s concepts of “the work that reconnects” and “active hope” remain among the most useful lexicons for organizing, at least in the Global North. As we saw, the “transition towns” panoply of concepts is also finding
Could, or should, ontological design become a project for the academy? Could it become a fruitful mode of knowledge and practice for the pluriverse? To the extent that the answer to these questions is positive, it would be important to keep in mind that ontological design supposes ontological and epistemological pluralism and epistemic decolonization; it entails the exercise of cultural, political, and economic autonomy. But if one of the academy’s main foci is life itself, and I think it is, it should articulate well with ontological design and sustainability design in the sense that their goal is the production of life—or, to borrow Ehrenfeld’s designator one last time, a flourishing of life. Defined in this way, design would contribute to counteract the accelerating ‘wearing down’ of the Commons (Nonini 2010), a commons that is at once material, cultural, and communal, i.e., the entire fabric of relational worlds.

A few concluding remarks about pluriversal studies (PVS). Could ontological design be seen as the practice-oriented knowledge branch of pluriversal studies? It should be stressed, first, that it is not enough to point at inter-connections and inter-dependencies for relationality to take place, as in many ecological and network theories; Buddhist notions of interbeing and dependent co-arising actually involve at least four principles: inter-dependency, inter-relations, impermanence, and compassion. Are all of these elements necessary for PVS to seriously pursue a practical understanding of the inter-existence of multiple worlds? Second, PVS may be said to take place at the edges of Western Social Theory (WST); it may draw on non-dominant modernities and alternative Wests (non-dualist approaches, complexity), but also from non-liberal/non-modern knowledge formations or formations of being-knowing-doing. These knowledge-doing-being formations are found world-wide but most clearly in those places where they have been most historically cultivated and politically activated, as in many subaltern worlds.

Finally, and to sum up, PVS shift the ground of the conversation beyond the WST table and the One-World; this means that they change the form and content of the conversations about the politics of the possible. This is why PVS cannot be ‘studies’ in a conventional sense. They also redefine ‘design’ as a special kind of knowledge-practice, a novel critical praxis. Together, PVS and ontological design map an ontological, practical, and political field with the potential to contribute unique elements for the various paths toward the ecological and cultural transitions that are seen by many as necessary in the face of the interconnected crises of climate, food, energy, poverty, and meaning.
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