

Studies in Material Thinking, <http://www.materialthinking.org>
 Vol. 6 (December 2011), ISSN 1177-6234, AUT University
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Alterplarity - "Alternative Disciplinarity" in Future Art and Design Research Pursuits

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Abstract

Contemporary design is typified by fluid, evolving patterns of practice that regularly traverse, transcend and transfigure historical disciplinary and conceptual boundaries. This mutability means that design research, education, and practice is constantly shifting, creating, contesting and negotiating new terrains of opportunities and re-shaping the boundaries of the discipline. This paper proposes that this is because globalisation and the proliferation of the digital has resulted in connections that are no longer "amid", cannot be measured "across", nor encompass a "whole" system, which has generated an "other" dimension (Bourriaud, 2009), an "alternative disciplinarity" - an "alterplarity". As the fragmentation of distinct disciplines has shifted creative practice from being "discipline-based" to "issue- or project-based" (Heppell, 2006), we present the argument that the researcher, who purposely blurs distinctions and has dumped methods from being "discipline-based" to "issue- or project-based", will be best placed to make connections that generate new ways to identify "other" dimensions of design research, activity and thought that is needed for the complex, interdependent issues we now face. We present the case that reliance on the historic disciplines of design as the boundaries of our understanding has been superseded by a boundless space/time that we call "alterplarity". The digital has modified the models of design thought and action, and as a result research and practice should transform from a convention domesticated by the academy to a reaction to globalisation that is yet to be disciplined.

Background/Introduction

Design as a behavioural phenomenon continues to increase both its level and remit. Since the 1950's design has been expanding continuously and now extends from the design of objects and spaces that we use on a daily basis to cities, landscapes, nations, cultures, bodies, genes, political systems, the way we produce food, to the way we travel, build cars and clone sheep (Latour, 2009). And a long time before the emergence of the biotech and financial services economies, Ernesto Rogers described very succinctly design's reach as "...dalla cucchiaino alla citta" (from the spoon to the city) (Sudjic, 2009). With accelerated design activity anticipated well into the 21st century, it is clear that an increasing number of design practitioners across a diverse range of creative disciplines routinely regard their methods as rooted in design practice or are using methods that could be considered designerly (Cross, 2007). It is equally clear that design is expanding its disciplinary, conceptual, theoretical, and methodological frameworks to encompass ever-wider disciplines, activities and practice.

The recent Design Council Report on the UK's Design Industry Insights 2010, for instance, reinforces this trend by highlighting the fact that over 55% of design businesses in the UK collaborate regularly with other disciplines and 51% of these say they work regularly with non-design businesses (Design Council, 2010). Moreover, it is important to note that nearly half of the designers practicing in the UK do not have a degree in design. This is evidenced by the likes of Hilary Cottam who was somewhat controversially awarded the Designer of the Year in 2005, by the Design Museum, London for her contribution to the regeneration of the Kingsdale Building, once a rundown school in South East London. Cottam, herself, admitted: "I am not a designer by trade...My background is in social science. But I've worked for 15

years in regeneration and social projects, and during that time I have taken an increasingly design-led approach” (Dunn, 2006).

This paper, based on the authors’ earlier work (Rodgers & Bremner, 2011), will take product design, sometimes referred to as industrial design, as the main perspective for its discussions on disciplinarity. Historically and traditionally, product design has been viewed as a discipline that brings together various forms of knowledge, expertise and skills from the arts and sciences with the overall goal of creating a product for production that will optimize the function, value and appearance of products for the mutual benefit of users, clients, manufacturers and other stakeholders (Figure 1).

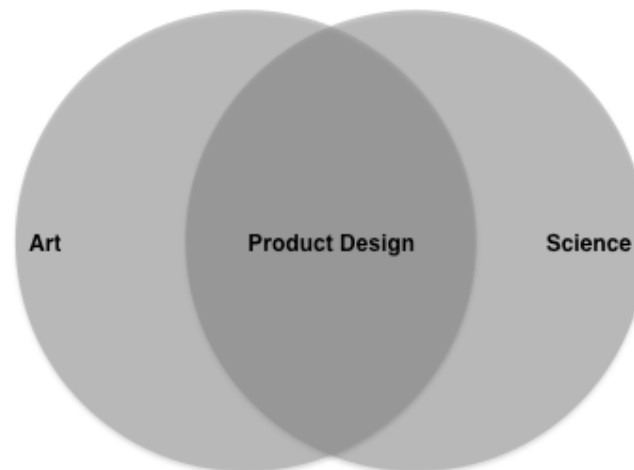


Figure 1. Product Design: The Conjunction of Art and Science

However, the boundaries of what were once recognised as discrete design disciplines such as product, graphic, textile, and fashion design have been and continue to dissolve (Rodgers, 2008). Key amongst these changes is the realisation that an indeterminacy of professional boundaries now exists and fluid patterns of employment within and between traditional design disciplines is commonplace (Figure 2). For example, the lines between product design, interior design, and service design simply do not exist in many contemporary projects such as the Rem Koolhaas and IDEO collaboration in the Prada Store in New York City (Manovich, 2006). Likewise, many contemporary design companies and designers including the likes of Hella Jongerius (Schouwenberg & Jongerius, 2003), the Bouroullec brothers (Bouroullec & Bouroullec, 2003), Martí Guixé (van Hinte, 2002) and IDEO (Myerson, 2004) now all routinely transcend historical disciplinary frameworks such as interior design, product design, and graphic design in their projects. The conventional, historical disciplinary lines are an irrelevance to these design practitioners.



Figure 2. The Indeterminacy of Design Boundaries

Moreover, many modern day design pursuits have a core of designerly activity backed by other subject specialist areas such as fine art, engineering, anthropology, computer science and business. The edges between product design and service design, for example, continue to be increasingly fuzzy. For instance, mobile phone companies now offer more than a mere physical artefact (i.e. phone), rather they now regularly offer users the opportunities to subscribe to their services of music and video downloads amongst many other things.

Thus, product design today is characterised by fluid, evolving patterns of practice that regularly traverse, transcend and transfigure disciplinary and conceptual boundaries. This uncertainty means that design research, education, and practice is continually evolving. Tony Dunne, Professor of Interaction Design at the Royal College of Art, London, states: "New hybrids of design are emerging. People don't fit in neat categories; they're a mixture of artists, engineers, designers, thinkers" (West, 2007).

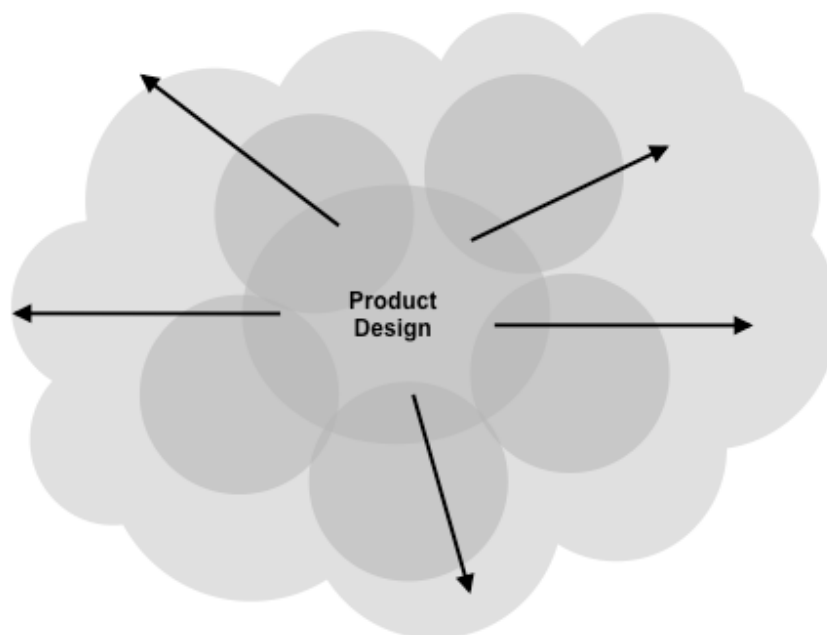


Figure 3. Product Design as an "Other-Disciplinarity"

This paper posits that the terrain of design research and its methods of inquiry continue to shift and extend well beyond the boundaries of the (single) discipline. That is, the discipline that was once recognised and acknowledged as product design, which was born of the split of idea from manufacture, has expanded beyond its disciplinary constraints to a situation where globalisation and the proliferation of the digital has generated an 'other' dimension so we might now need to consider design as "un-disciplined" or operating in an "other-disciplinarity" as the most effective approach to design research (Figure 3). Given the massive escalation in the power and availability of digital technology in enabling creative expression, designers are rapidly turning into polymaths (Seymour, 2006). It has further been suggested that we are entering "a new Renaissance" period where individuals' capacity to mix technical and creative knowledge like Leonardo da Vinci will become more commonplace (Gehry, 2008). Creative workspaces increasingly resemble scientific laboratories; contemporary creation increasingly makes use of new digital design and production technologies across fashion, performing arts, cinema, music, videogames, architecture, and design in a cut and paste mash up evidenced by the likes of Takashi Murakami, Ross Lovegrove, Atelier van Lieshout, Hella Jongerius Studio, Greyworld, Olafur Eliasson Studio, amongst many others. As such, this "other" dimension or "new Renaissance" way of working requires knowledge and skills from several areas including art, design, computer science, engineering and business.

Design Research

Over 10 years ago Susan Roth in her Design Issues paper entitled, "The State of Design Research", claimed: "Design research is an activity in search of a definition." Roth described design research as an activity that relied upon and exploited a range of research methods and applications in both design practice and education. She noted that the state of design research at that time was broad, ranging from the simple process of examining existing products in the marketplace to the more complex process of analyzing social, cultural and psychological factors associated with new product design, development and use (Roth, 1999).

Similarly, in the same issue of Design Issues, Nigel Cross highlighted the wide-ranging nature of design research by exclaiming: "Design research is alive and well, and living in an increasing number of places." Cross went on to list the evidence for this diversity in design research as the growth of research-based journals over a period of ten to fifteen years which included learned journals such as Design Studies (launched in 1979), Design Issues (1984), the Journal of Design History (1988), Research in Engineering Design (1989), Languages of Design (1992), and others in other languages, such as *Temes de Disseny* (1986) and *Form Diskurs* (1996). Cross also highlighted the publication of a lot of design-oriented research in a wide range of journals concerned with subjects such as artificial intelligence, human-computer interaction, and others. He claimed that: "Compared with the academic design scene in the 1970s, we now have a rich culture in which to grow our design research seedlings" (Cross, 1999).

Design research has also been the scene of robust disputes around research methods and design. These habitual territorial engagements appear to have missed the general understanding within disciplinary scholarship that any discipline having robust discussions about research methods is a discipline in crisis (Law & Urry, 2004). This point is also made by Cross (2001) when he reminds us of the concerns every 40 years or so in design research. He points out the issues in the 1920s where the search focussed on developing scientific design products and then again in the 1960s when the concern shifted to finding a scientific design process. Perhaps it is no coincidence that we are now in the 2000s experiencing another crisis about appropriate research methods in design.

The connection with science has appeared to concern many design researchers in recent years. For example, Cross (2001) states that much of modern design has had a fascination with producing objective and rational pieces of work and as such this has led to notions of "scientising" design. Similarly, Krippendorff (2007) and Kuutti (2007) take great effort in their respective work to stress the distinctions between science and design. From our argument it would appear that the crisis in design research may be precipitated by the prescriptive manner of the disciplines compounded by design's poor historiography (Dilnot, 2009).

The Learning/Research Discourse

A recent spate of books (Smith & Dean, 2009; Elkins, 2009; Buckley & Conomos, 2009; Barrett & Bolt, 2007; Madoff, 2009); and two recent conferences concerning art education *Transpedagogy: Contemporary Art and the Vehicles of Education*, MoMA, New York, in 2009; and *Deschooling Society*, Hayward Gallery, London, in 2010, highlight, as the writers and speakers remind us, that art education is undergoing another periodic revision. Similarly, the recent conference on the PhD, *Doctoral Education in Design Conference: Practice Knowledge Vision*, Hong Kong Polytechnic University, Hong Kong, May 22-25, 2011, could be seen to be an indicator of periodic concerns in design education. Especially since the first *Doctoral Education in Design Conference*, Ohio, October 8-11, 1998, was soon followed by *Foundations for the Future: Doctoral Education in Design*, La Clusaz, France, July 8-12, 2000, and then the *3rd Doctoral Education in Design Conference*, Tsukuba International Congress Center, Tsukuba, Japan, October 14-17, 2003. That nearly a decade has passed from the last of these conferences provides evidence that discussions around the artist, the designer, and the academy regularly address one crisis or another in the educational turn.

While perhaps we shouldn't draw comfort from the knowledge that education revolves around a cycle of crises, the recent conferences are a response to the growing educational role being adopted by museums and galleries. The exhibition space has introduced new pressures on the significance of the learning and research outputs in art

and design from the academy, and it is worth noting that this shift in the location of production of knowledge correlates with Nicholas Bourriaud's thesis for the Altermodern exhibition he curated in 2009 "The times seem propitious for the recomposition of a modernity in the present, reconfigured according to the specific context within which we live – crucially in the age of globalisation – understood in its economic, political and cultural aspects: an altermodernity" (Bourriaud, 2009).

If the purpose of all dimensions of design education is to make us better designers, and generally better informed about the possibilities and limitations of the subject that is design, so this too must be the primary function of research. Moreover, if what we call design is now best described as a soluble instrument in the altermodern project, it is easy to see why the academy might be concerned about its research outputs in this contaminated territory. Instead of audited research we counter-propose undisciplined research requiring someone we call the irresponsible researcher, who is someone finding their own way through the slush of what were the design disciplines, and for whom not knowing is an invaluable aid to getting through it.

Furthermore, if we accept that the subject that is design education is framed by its three basic components namely:

1. History / Theory – that which asks why the world looks like it looks
2. Design – that which asks what kind of world do we want in the future

and

3. Technology – that which asks how we will represent this possible future.

Then not knowing part or all of these elements is acceptable, but omitting one makes no sense. Also, not knowing is important because the core framework can only be assembled as a temporary platform for each projection and should never become a platform that we say we know and can omit because it is known. As Dilnot (2009) describes, research referring to knowledge of a history of design is few and far between (in fact eschewed to clear a space called the future). Moreover, the absence of an understanding of why the trajectory of the here-and-now is the basis of what-might-become has tended to lead to a dependence on methodology to construct a platform for the projection of ideas. Again this dependence on method is symptomatic of a field in crisis (Law & Urry, 2004), which can only be confronted by the irresponsibility of not knowing.

Models of Discipline

Delivering his lesson from history, in an essay from 1994, "When Form Has Become Attitude—And Beyond" (resulting from another conference on the crisis in art education), Thierry de Duve described the shift from the Academic to the Modern to the Post-modern model of art education (and because his Modern model was developed at the time of the Bauhaus we take his critique to be equally applicable to both art and design). In this paper we update his framework by adding the Alter-modern model. And the Alter-modern model coincides with a condition brought about by the dissolve of disciplinarity into a blurred state we call Alterplinary. Both the model and the condition are caused by globalisation and the proliferation of the digital resulting in connections that are no longer "amid", cannot be measured "across", nor encompass a "whole" system, which has generated an "other" dimension (Bourriaud, 2009), an "alternative disciplinarity" – an "alterplinary".

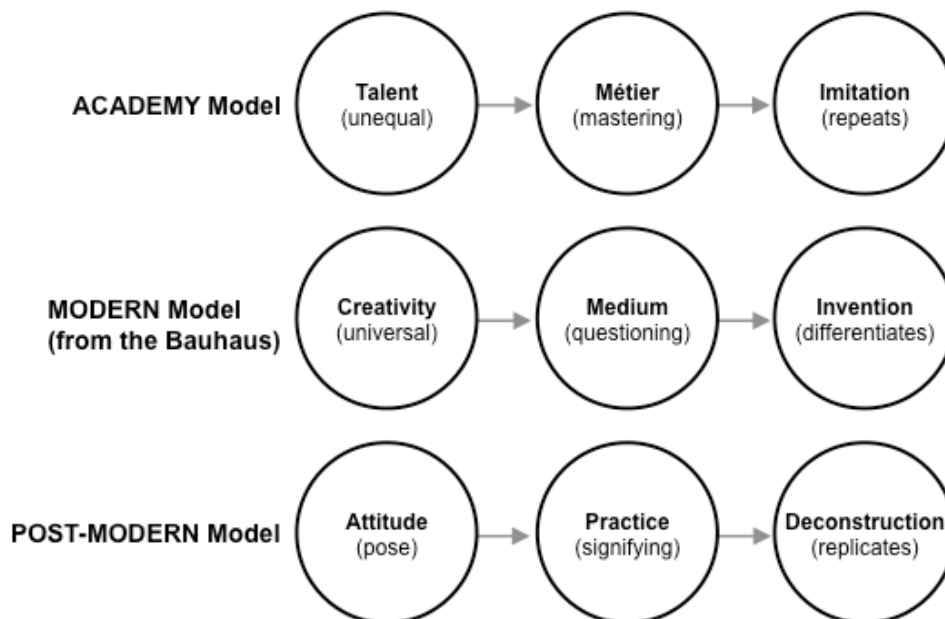


Figure 4. Transformation of Art Education in the 20th century (after Thierry de Duve, 1994)

De Duve elegantly outlines the transformation of art education in the twentieth century, in what may be an over-simplified caricature, but which are best explained diagrammatically (Figure 4). By way of explanation what de Duve (1994) says is that talent resided in the few and required skill, whereas creativity was universal and just required a medium for its expression – hence since the Bauhaus everyone could be an artist (Borer, 1997) or now a designer as Donald Norman amongst others suggests (Norman, 2004). In the academic model ‘métier’ dealt with the mastery of a medium that could allow a skill to be continuous, whereas invention was aimed at producing novelty. Superseding the modern was the post-modern where ‘critical attitude’ replaced creativity, but rapidly degenerated into artistic ‘pose’, and simply required a ‘signifying practice’ to convey its form in a soup of referentiality and replication.

Nearly twenty years on we propose another tripartite descriptor of art and design activity in what Bourriaud (2009) calls Alter-modernity – which derives from the global flow of capital and information, sped up by participation, and suspended in the ‘cloud’ by digitisation.

Alter-Modern Model

In the alter-modern condition we have reverted to imitation not as the result of talent, but at a time when it has become apparent that the relationship between production and the project of design has been changed by digital technology. Whereas once none of us were involved in the production of anything, it was nothing to imagine consuming everything. Now, courtesy of the digital, we are all involved in the project of producing nothing, but that ‘nothing’ is consuming every imagining. Instead of projecting ‘what-might-become’, the digital is producing the design of an ‘other’ world where the project is to archive ‘what-was’. And it is taking more and more of our time to produce and consume this project. Imitation is the means of contributing to, and taking guidance from, this project forming a reassuringly derivative loop. The derivative is also one of the dominant products of global capital and it functions as a financial medium of insurance against change (a dangerous development for the project of design which has always been predicated on change).

Having replaced creativity with pose, de Duve (1994) suggests that art (and especially design) could simply be willed into existence. Now in the derivative marketplace of alter-modernity it can be argued that everything is imitated. That is, it can be easily understood to be simply ‘willed into existence’. It is then so easily produced that we now need to seriously examine the relationship between ‘what’ we produce and ‘why’ we bother to produce anything at all in the age of limits, especially in contrast to the ‘unlimited’ digital realm of the ‘prosumer’. And it is important to note we are no longer bothered with ‘how’ we produce anything. This is because ‘how’ was the preoccupation

of the efficient deployment of capital, and capital has been superseded by 'debt', which like the digital has no limits.

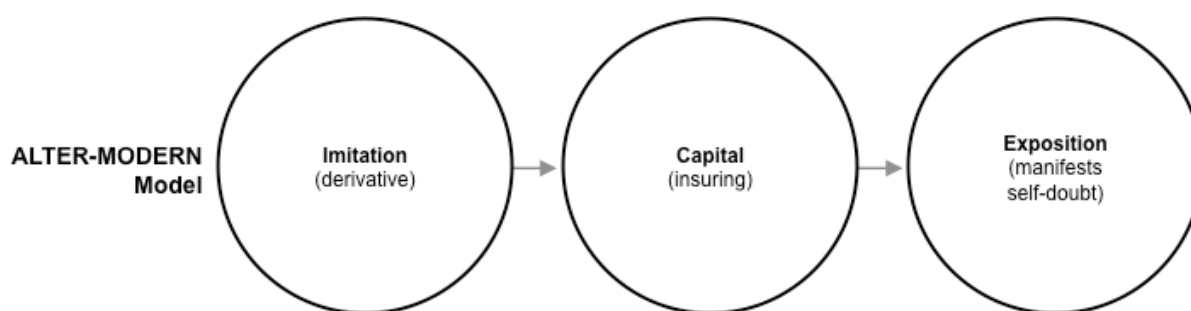


Figure 5. Alter-Modern Model

Regardless of the conditions in which art and design research and education lurch from crisis to crisis, we remind the reader that the activity of design remains a serious practice. Ettore Sottsass warned long ago that design has deep and durable ethical and political dimensions, and requires knowledge and consideration of our relationship with each other and the world we are changing (our anthropological condition), because while the affect of design can be short-lived it can also last a very long time (Sottsass, 2002). And after the post-modern loss of nerve, this historic axiom of design needs once again to be resurrected in research, thought and action. In the alter-modern condition of design, research might best be considered as 'getting things out' in the very different ways we describe below. Making research manifest fills another casualty of the digital flow of information – the manifesto. No longer able to project a critical ideology (ideology itself a victim of imitation), the design research makes manifest the scepticism of the disciplines as a healthy form of self-doubt about the design activity emerging from a blurred disciplinarity – an alterplinary (Figure 5).

The Blurring of the Disciplines (after de Duve, 1994)

Here, we propose to take the reader through the deconstruction of a model of the 'conventional/historical' disciplines to the state we currently find ourselves – the alterplinary state where 'conventional/historical' distinctions are irrelevant and unimportant – where new forms of knowledge and processes are emerging for design pursuits; a state where historical and traditional ways of doing things hinder progress (Feyerabend, 2010).

Following the model established above we propose that the gradual dissolve of disciplinarity follows the track of disciplinarity to inter-disciplinarity to trans-disciplinarity and on to alter-disciplinarity. As can be seen in Figure 6, each of these has their own internal characteristics as illustrated.

The function and character of disciplinarity is highly relevant in contemporary art and design research, practice and education. In the field of design National Government reports, such as the Cox Review of Creativity in Business within the UK, advocate greater disciplinary mixes in the design and development of new products and services within both an industrial and academic context. These reports demand future designers that possess a breadth of knowledge in many areas such as design, engineering, technology and business as a means of facilitating the fusion of skills that are necessary in creating new ways of design thinking and doing (Cox, 2005). Many authors have investigated a variety of disciplinary perspectives across a wide range of design activities including interaction design (Blevis & Stolterman, 2009), architectural design (Rendell, 2004), and engineering design (Tomiya et al., 2007). In one of the author's earlier papers (Dykes et al., 2009), a new disciplinary framework for emerging forms of design practice was developed. One aim of this new disciplinary framework was to facilitate better the location and delineation of activities and outputs within emerging types of design practice, research, and education. Whilst we understand the general thrust of these reports and the limits of the research model (still an industrial production model), we question the possibility of mixing disciplines to achieve breadth of knowledge. As we will show in the alter-plinary state knowing isn't as important as not-knowing!

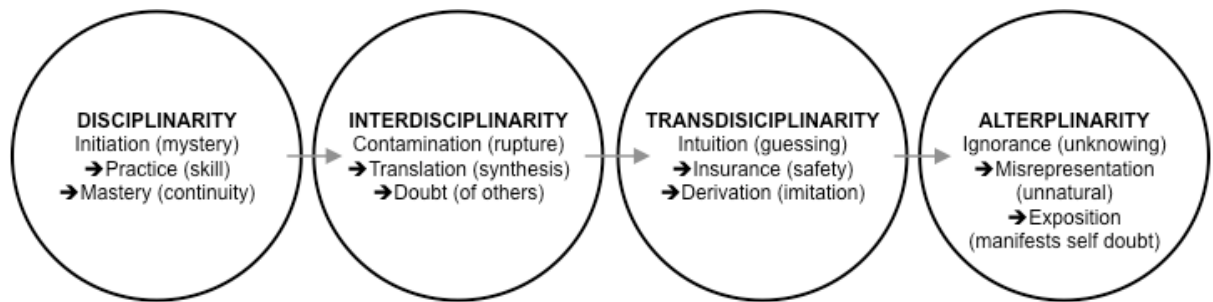


Figure 6. Disciplinarity, Inter-disciplinarity, Trans-disciplinarity, Alter-disciplinarity Dissolve

When we get to the fragmentation/dissolve/blurring of disciplinarity, there is considerable debate, not about the efficacy of collaboration, but about the autonomy and co-operation of the disciplines. The first international conference for interdisciplinary studies was held over 40 years ago in 1970 at which Erich Jantsch (Jantsch, 1972) presented a set of hierarchical terms to describe forms of collaboration that involve alternative disciplines (Thompson Klein, 2000). This framework is cited several times in key texts concerning knowledge production across disciplines and Jantsch is most commonly associated with the currently popular term transdisciplinary, which emerged during the conference (Thompson Klein, 1998). Jantsch's framework (1972) was intent on providing specific characteristics that discern the terms, thus making explicit the form of co-operation in question. This hierarchy begins with multidisciplinary, the simplest form of work proceeding the single discipline, and then proceeds with pluridisciplinary, crossdisciplinary, interdisciplinary and transdisciplinary. Each term relates to the structure and complexity of group work across disciplines in a hierarchical fashion (Stein, 2007). These terms are commonly used outside this framework. For example, interdisciplinary is often used in an unspecific manner and has become a common term for general collaboration across disciplines, and crossdisciplinary is often used in adjectival form to describe movement between disciplines (Kötter & Balsiger, 1999). Consequently, the terms are often confused and not solidly defined within literature. Since this original disciplinary hierarchy there have been many attempts to distinguish between the terms (Gibbons et al., 1994) and therefore a variety of different interpretations have developed across different disciplines. Leinss (2007) brings the framework into design practice through case studies describing a variety of design teams and Nicolescu (2005) offers clear examples of the terms in a generic disciplinary sense. Here we find that pluridisciplinary is rarely used. For example, Gibbons et al. (1994) place multidisciplinary and pluridisciplinarity at the same level and neither Stein (2007), Nicolescu (2005) or Leinss (2007) makes use of the terms. Zachary Stein (2007) argues that a major problem with the framework of Jantsch (1972) is not considering the individual's ability to work across disciplines and instead Stein proposes a disciplinary framework that is based on the competencies of the individual.

What is overlooked in this fragmenting evolution is that disciplinarity and its many variations is all about the individual observer. Historically, the practitioner was initiated into the discipline and only with mastery could collaborate with other disciplines, but that collaboration was not aimed at practicing a new discipline; it was aimed at strengthening the foundation of the discipline. Interdisciplinarity meant the individual learnt more about their discipline by observation. So we should consider further structural alterations in looking at what has happened to the integrity of the disciplines. The first of these is that the critique of interdisciplinarity and its other fragmentary forms is impossible to conduct from a disciplinary perspective. This is because whatever doubts we might have about what has become of the discipline of design we have to be aware of the fact that disciplines are designed to perpetuate and domesticate doubt as healthy scepticism (Brown, 2009), producing a sense of belonging and submission to a set of regularised practices (Chandler, 2009), where expertise is internally unstable (Post, 2009). What that means is that from inside design we should be aware that we have to employ discrete tactics to first see and then analyse its blurring disciplinarity.

Stanley Fish, in an essay of the same title, argued that "...being interdisciplinary is so very hard to do..." (Fish, 1989) on the basis that despite having an historical core that cannot be ignored, disciplines are not natural, and their identity is conferred by relation to other disciplines making it impossible for an authentic critique. However, twenty years later in

the ongoing debate around the disciplines W. J. T. Mitchell responded claiming interdisciplinarity "...is in fact all too easy..." (Mitchell, 2009), and he based his negation on a taxonomy of three different kinds of interdisciplinarity – "...top-down (conceptually synthesised), bottom-up (socially motivated), and indisciplinarity (anarchist) or what he calls lateral interdisciplinarity..." (Mitchell, 2009). The first looks to frame an overarching system in which all disciplines relate, the second responds to emergencies and upheavals in disciplines, and the last is a rupture in the continuity of the regularising practices of disciplines (the disciplines disciplining the disciplines, or self-discipline). By now we can all be classified in one or more of Mitchell's interdisciplinary taxonomies. Wherever we might position ourselves, we argue that the blurred disciplines cannot exist with the disciplines, so when design finds itself without discipline (un-disciplined) we need to find what exists.

The historic frame of entering a creative field meant that you were initiated into its mysteries, which you had to practice repeatedly leading to mastery. When collaborating with another discipline or disciplines the practitioner is contaminated by this contact (a culturally enriching necessity – Appiah, 2006) and learns to translate ideas leading to a healthy skepticism, or doubt, about disciplinarity. In the other setting of transdisciplinarity, where disciplines are no longer primary, the initiation gives way to intuition, guessing your way into the conversation, where the resulting derivation from the other disciplines is the insurance against changes to the disciplinary platforms. When disciplines break free of self-disciplining constraints, as in the case of alterplarity the overwhelming derivation brought about by the ubiquity of the digital is transfigured. The guesswork required for transdisciplinary collaboration is replaced by ignorance – the state of not-knowing from which learning takes place. And not-knowing is important because the core framework can only be assembled as a temporary platform for each projection and should never become a platform that we say we know and can omit because it is known.

The safety or insurance produced by derivation as the current cornerstone of design action (a state that has allowed the word design to be attached to everything on the planet), has to be seen to be un-natural and instead of continuing to render imitations, misrepresentation becomes the means to illustrate research in the alterplinary condition. This means that the disciplinary borders of design (the discipline of the disciplines) have become very porous so the 'idea' of design has almost eroded. And in that state, the research project may well be the medium of manifestation for the ignorant designer attempting to apply design without discipline in the altermodern circumstance.

The preceding section has illustrated briefly the disciplinary dissolve of design and the relational response of the disciplines. Given that the global problems of the 21st century are increasingly complex and interdependent, and they are not isolated to particular sectors or disciplines it is possible that design might need to be "undisciplined" in its nature (Mitchell's indisciplinarity). Moreover, there might even be a need for the designer to be "irresponsible" because we need more playful and habitable worlds that the old forms of production are ill equipped to produce (Marshall & Bleecker, 2010). Moving towards an "undisciplined" design in an age of "alterplarity" (Rodgers & Bremner, 2011) requires an epistemological shift, but this will in turn offer us new ways of fixing the problems the old disciplinary and extra-disciplinary practices created in the first place.

The Discourse of Alterplarity

In an earlier paper, the authors argued for an alternative disciplinarity (Rodgers & Bremner, 2011). That is, an alterplarity (a portmanteau of alternative and disciplinarity), where the creative practitioner is viewed as a prototype of a contemporary traveller whose passage through signs and formats refers to a contemporary experience of mobility, travel and transpassing where the aim is on materialising trajectories rather than destinations, and where the form of the work expresses a course, a wandering, rather than a fixed space-time (Rodgers & Bremner, 2011). The alterplarity model presented here is based on Nicholas Bourriaud's notion of the "Altermodern" (Bourriaud, 2009). The fragmentation of distinct disciplines, including those located in traditional art and design contexts, has shifted creative practice from being 'discipline-based' to 'issue- or project-based' (Heppell, 2006). This shift has emphasised and perhaps encouraged positively irresponsible practitioners, who purposely blur distinctions and borrow and utilise methods from many different fields. Design research, therefore, has shifted from one being 'discipline-based' to 'issue or project-based', and

undisciplined and unknowing practitioners will be best placed to make connections that generate new methods and to identify 'other' dimensions of creative research, practice and thought that is needed for the contemporary complex and interdependent issues we now face.

This paper advocates that there is a responsibility on creative practitioners to be "irresponsible" in their work. This is because we need more playful and habitable worlds that the old forms of knowledge production are ill equipped to produce (Marshall & Bleecker, 2010). Brewer (2010) goes even further in his criticism of existing forms of knowledge production and claims that contemporary "specialized forms of knowledge have become debased instruments of social control and discipline." Moving towards "undisciplined" creative practice and states of "unknowing" in an age of alterplarity therefore requires an epistemological shift. However, this will in turn offer us new ways of fixing the problems the old disciplinary and extra-disciplinary practices created in the first place.

Examples of Alterplarity

The shift from "discipline-based" to "issue- or project-based" work, in order to respond to the modern world's interconnected complexity and to address the broad issues of our time (Thompson Klein, 1990), is exemplified best in the following examples of alterplarity. The following two projects, from one of the author's previous books (Rodgers & Smyth, 2010), illustrate well this shift in emphasis from creative practice that is embedded in one or more specific disciplines (discipline-based) to holistic, issue-driven practice. In the next and concluding section of this paper, we propose ten recommendations towards achieving relevant, valuable, and responsive research in an age of alterplarity, and illustrate how the following two cases typify the blurred state of the disciplines we call alterplarity.

HeHe

HeHe, who comprise the duo Helen Evans and Heiko Hansen, usually do not work for a client. Rather, they have developed a way of working entitled "cultural reverse engineering", which seeks to raise and address serious political, economical and/or sociological questions. HeHe are interested in the increasingly challenging world we live in where most of us have no idea of the way everyday objects actually work nor how their cultural position has changed over time. The workshops that HeHe regularly organise teach basic DIY technologies, to students, artists and designers and these can be seen as a concrete application of that concept. HeHe's main aim, however, is to "use technology as a medium". However, for them, the technology is not really the interesting thing but more the ideas that they express. A recent HeHe project that focuses on the serious global problem of pollution is a recurring theme throughout their work. Their work is often about light in public space, transportation and also on the question of pollution. One such HeHe project, called Pollstream, concentrated on the idea of finding ways to materialise pollution (Figure 7). Pollution typically only exists for people as a kind of represented scientific model, measured using apparently objective monitoring techniques. HeHe wished to find new ways to create more subjective entry points into this information, and to materialise it and since they had already done a lot of projects that were reactive in some form and used electronics. So they were interested in the possibilities of how one might speed up the reaction that it takes between cause and effect, and how this might impact on the way we as consumers behave in our society.



Figure 7. HeHe "Pollstream" Photomontage

Troika

Troika, a multi-disciplinary art and design practice founded in 2003, have backgrounds in graphic design, product design and communications, which allow them to engage in work that is at the intersection of several disciplines, where they like to think of design as communication art. Troika tend to develop a mixture of self-initiated and commissioned projects ranging from printed solutions to product design and custom installations. Their approach focuses on the contamination between the arts and design disciplines and is born out of the same love for simplicity, playfulness, and an essential desire for provocation. Troika don't really care much about the distinction between art and design boundaries. In much of Troika's work is a keen exploration and examination of the ambiguity between fascination and concern and how this impinges on technology in an holistic sense. A key driver for Troika is how you can get access into contemporary culture by acting, recombining and making new open-ended objects. In this respect, the SMS Guerrilla Projector (Figure 8, left) is a good example of highlighting an exercise in creating a tool for mass response to contemporary serious issues relating to politics, voting, power, governance, and security.



Figure 8. Troika "SMS Guerrilla Projector" (left) and "Tool For Armchair Activists" (right)

The SMS Guerrilla Projector is a projector that integrates a conventional mobile phone and regular components such as a projector and photographic equipment. The SMS Guerrilla Projector can receive, project and send messages wherever you are located and it has been used to project messages inside people's houses posing questions about aspects of wealth and security. Because it is a relatively small, self-contained and battery-operated, you can hide it easily and you can project messages on to the backs of people, in cinemas and whilst people are talking. Troika also created the "Tool for Armchair Activists" (Figure 8, right) as a response to the ban that prohibits any demonstrations within a radius of three miles around the Houses of Parliament in the UK, in effect creating a dead zone for expressing one's opinion, which is a strange idea. If one studies the history of technology when human activity of some sort is banned, it tends to get replaced by a machine. So, Troika created a machine called the "Tool for Armchair Activists", which is an object that can be strapped on to any lamppost. It features a large megaphone, which will speak out – in a loud and computerized voice – any SMS messages that are sent to it. This means you don't have to stand in the rain to send your political messages. You can do it from the comfort of your own living room. The "Tool for Armchair Activists" has been a feature on many blogs especially on activist websites in the USA, which has led to fascinating discussions as people start to question the real purpose of demonstrating, which we have found extremely interesting.

Conclusions and Recommendations for Future Discourse

In this paper we have presented the case that contemporary design is typified by fluid, evolving patterns of practice that regularly traverse, transcend and transfigure historical disciplinary and conceptual boundaries. This mutability means that design research, education, and practice continues to evolve at a rapid rate. We have proposed that design research can now only manifest what we identify as undisciplined design and while it might be the manifestation of design without discipline, for research to be recognised, it might also require a new type of researcher, practitioner; someone finding their own way through the morass of what were once labelled the design disciplines, and for whom not knowing is an invaluable aid to getting through it – i.e. getting it out while getting through it. As the fragmentation of distinct disciplines has shifted creative practice from being “discipline-based” to “issue- or project-based” (Heppell, 2006), we maintain that the researcher, who purposely blurs distinctions and has dumped methods, from being disciplined to being irresponsible, will be best placed to make connections that generate new ways to identify “other” dimensions of design research, activity and thought that is needed for the complex, interdependent issues we now face. The digital has modified the models of design thought and action, and as a result research and practice should transform from a convention domesticated by the academy to a reaction to globalisation that is yet to be disciplined. Thus, in these conditions designers and artists should be encouraged to apply themselves irresponsibly and to do this we conclude with ten recommendations for research, based on Dieter Rams’ 10 principles of good design (Klemp & Ueki-Polet, 2010).

To move towards achieving relevant, valuable, and responsive research in an age of alterplurality, research needs to be:

- Political — Design now starts from a globalised state of culture, so the research should examine history. The digital offers new territories and research has to be stable enough to offset the threat of uniformity and mass culture/consumption.
- Useful — Research is practiced in order to be useful. It must serve a defined purpose, in both primary and additional functions. However, the most important task of research is to optimise the utility of its own usefulness.
- Anti-aesthetic — The aesthetic quality of design was integral to its usefulness. Research explores the contours that text and image, time and space, weave between themselves. But only ignorant research can now be beautiful.
- Understandable — It clarifies design’s shape. Better still, it can make design talk. At best, it is self-explanatory. However, research must respond to a new globalised perception.
- Universal — It does not make design more innovative, powerful or valuable than it really is, and contributes to the alterplinary condition. Research now navigates a new universalism based on translations, subtitling and generalised dubbing.
- Obtrusive — the purpose of research is to affect the way we live. It is neither decorative nor a work of art. Research should therefore be both biased and unrestrained, illustrating its wanderings.
- Transitional — While it does not follow trends that become out-dated after a short time, well-structured research reflects a profound evolution in our vision of the world and our way of inhabiting it. Alter-disciplinarity is the prototype of the contemporary traveller whose passage through signs and formats refers to a contemporary experience of mobility, travel and transpassing
- Inconsistent in every detail — everything must be arbitrary. Thoroughness and accuracy shows respect towards the modernist language of the colonial west. Research translates and transcodes information from one format to another, and wanders in geography as well as in history.

- Environmentally friendly — Our universe has become a territory all dimensions of which may be travelled both in time and space. Research must make contributions towards a stable environment and address limits.
- As much design as possible — more or less – because it is derived from journeying in a chaotic alterplinary. Research needs as much design as possible to explore the bonds that text and image weave between themselves.

Following from these recommendations it is fair to say of HeHe's Pollstream project that it exhibits a number of clear alterplinary phenomena and as such can be considered as a good example of alterplinary research. HeHe's Pollstream meets a number of these recommendations including being Political – as it raises serious political and sociological questions relating to uniformity, mass culture/consumption, and global pollution. HeHe's research is also obviously inherently Useful in that it serves a defined purpose. The Pollstream project is Understandable. It made the design talk in its response to the global problem of pollution. Pollstream is also Obtrusive. The purpose of the project being to affect the way we live. It is also fair to say that it is neither decorative nor should it be considered a work of art. The Pollstream project is Transitional inasmuch as it does not follow trends that tend to become out-dated after a short time. Finally, the Pollstream project deals with environmental issues head-on and is in itself Environmentally friendly. Similarly Troika's SMS Guerrilla Projector and Tool for Armchair Activists project can be considered both relevant and valuable research. Moreover, this project possesses a number of clear alterplinary characteristics and can thus be deemed a good example of alterplinary research. These projects exhibit sound Political sensibilities in that they respond to serious contemporary issues relating to politics, voting, power, governance, and security. The projects can also be considered both Useful and Anti-aesthetic. The simplicity of the idea behind the SMS Guerrilla Projector and Tool for Armchair Activists is clear, self-explanatory, and Understandable. Both products are Obtrusive. The point of the projects of HeHe and Troika is to affect the way we live. They are neither decorative nor works of art. And while these objectives might have always been on the licence of design they have rarely been practiced until exploring alternatives to disciplinary demonstrates how to make use of the condition we call alterplinary.

References

- Appiah, K. A. (2006, January 1). The case for contamination. *The New York Times Sunday Magazine*. 30-52. Retrieved from <http://www.nytimes.com/2006/01/01/magazine/01cosmopolitan.html?e...eb5e1741c&ex=1293771600&partner=rssnyt&emc=rss&pagewanted=print>
- Barrett, E., & Bolt, B. (Eds.). (2007). *Practice as research: Approaches to creative arts enquiry*. London, England: I.B. Tauris.
- Blevis, E., & Stolterman, E. (2009). The confluence of interaction design and design: From disciplinary to transdisciplinary perspectives. *Undisciplined! Proceedings of the Design Research Society Conference, Sheffield Hallam University, Sheffield, UK, July 16-19, 2008*. Retrieved from <http://shura.shu.ac.uk/529/>
- Bouroullec, R., & Bouroullec, E. (2003). *Ronan and Erwan Bouroullec*. London, England: Phaidon Press.
- Bourriaud, N. (2009). *Altermodern*. London, England: Tate Publishing.
- Brewer, J. (2010). Microhistory and the histories of everyday life. *Cultural and Social History*, 7(1), 87-109. doi:10.2752/147800410X477359
- Brown, B. (2009). Counting (art and discipline). *Critical Inquiry*, 35(4), 1032-1053. doi:10.1086/599589
- Buckley, B., & Conomos, J. (Eds.). (2009). *Rethinking the contemporary art school: The artist, the PhD and the academy*. Halifax, Canada: Nova Scotia College of Art & Design University Press.

- Chandler, J. (2009). Introduction: Doctrines, disciplines, discourses, departments. *Critical Inquiry*, 35(4), 729-746. doi:10.1086/599585
- Cox, G. (2005). *The Cox review of creativity in business: Building on the UK's strengths*. London, England: HM Treasury.
- Cross, N. (1999). Design research: A disciplined conversation. *Design Issues*, 15(2), 5-10. doi:10.2307/1511837
- Cross, N. (2001). Designerly ways of knowing: Design discipline versus design science. *Design Issues*, 17(3), 49-55. doi:10.1162/074793601750357196
- Cross, N. (2007). *Designerly ways of knowing*. London, England: Springer.
- Design Council. (2010). *Design industry insights: Comments and conversations on the business of design in the UK*.
- De Duve, T. (1994). When form has become attitude – and beyond. In S. Foster & N. De Ville (Eds.), *The artist and the academy: Issues in fine art education and the wider cultural context* (pp 19-31). Southampton, England: John Hansard Gallery.
- Dilnot, C. (2009). Some futures for design history?" *Journal of Design History*, 22(4), 377-394. doi:10.1093/jdh/epp048
- Dunn, S. (2006). We've got designs on you. *Openmind*, 137(January/February), 6-8.
- Dykes, T., Rodgers, P. A., & Smyth, M. (2009). Towards a new disciplinary framework for contemporary creative design practice. *CoDesign*, 5(2), 99-116. doi:10.1080/15710880902910417
- Elkins, J. (Ed.). (2009). *Artists with PhDs: On the new doctoral degree in studio art*. Washington, DC: New Academia Publishing.
- Feyerabend, P. (2010). *Against Method* (4th ed.). London, England: Verso.
- Fish, S. (1989). Being interdisciplinary is so very hard to do. *Profession*, 89, 15-22. Retrieved from <http://www.jstor.org/stable/25595433>
- Gehry, F. (2008, November 22). *Financial Times*.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzmann, S., Scott, P., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. London, England: Sage.
- Heppell, S. (2006, June 30). *RSA lectures: Stephen Heppell – learning 2016* [Video file]. Available from <http://archive.teachfind.com/ttv/www.teachers.tv/videos/stephen-heppell-learning-2016.html>
- Jantsch, E. (1972). Towards interdisciplinarity and transdisciplinarity in education and innovation. In G. Berger, A. Briggs & G. Michaud (Eds.), *Interdisciplinarity: Problems of teaching and research: Proceedings of seminar on interdisciplinarity in universities* (pp. 97-121). Paris, France: Organization for Economic Co-operation and Development.
- Klemp, K., & Ueki-Polet, K. (2010). *Less and more: The design ethos of dieter rams*. Berlin, Germany: Die Gestalten Verlag.
- Kötter, R., & Balsiger, P. W. (1999). Interdisciplinarity and transdisciplinarity: A constant challenge to the sciences. *Issues in Integrative Studies*, 17, 87-120.
- Krippendorff, K. (2007). Design research, an oxymoron? In R. Michel (Ed.), *Design research now: Essays and selected projects* (pp. 67-80). Zürich, Switzerland:

Birkhäuser Verlag.

- Kuutti, K. (2007). Design research, disciplines, and new production of knowledge. Proceedings of the IASDR07 Conference, The Hong Kong Polytechnic University, 2007, November 12-15. Retrieved from <http://www.sd.polyu.edu.hk/iasdr/proceeding/papers/Design%20Research%20Disciplines%20and%20New%20Production%20of%20Knowledge.pdf>
- Latour, B. (2009). A cautious prometheus? A few steps toward a philosophy of design (with special attention to Peter Sloterdijk). In F. Hackne, J. Glynne & V. Minto (Eds.), *Networks of design: Proceedings of the 2008 annual international conference of the design history society (UK): University College Falmouth: 3-6 September* (pp. 2-10). Boca Raton, FL: Universal Publishers.
- Law, J., & Urry, J. (2004). Enacting the social. *Economy and Society*, 33(3), 390-410. doi:10.1080/0308514042000225716
- Leinss, M. (2007). The role of designers in multidisciplinary teams. In E. Salmi (Ed.), *Cumulus working papers: Schwäbisch gmünd* (pp. 84-88). Helsinki, Finland: University of Art and Design Helsinki.
- Madoff, S. H. (Ed.). (2009). *Art school (propositions for the 21st century)*. Cambridge, MA: MIT Press.
- Manovich, L. (2006). The poetics of augmented space: Learning from prada. *Visual Communication*, 5(2), 219-240. doi:10.1177/1470357206065527
- Marshall, J., & Bleecker, J. (2010). Undisciplinarity. In P. Rodgers & M. Smyth (Eds.), *Digital blur: Creative practice at the boundaries of architecture, design and art* (pp. 216-223). Oxon, England: Libri Publishing.
- Myerson, J. (2004). *IDEO: Masters of innovation*. London, England: Laurence King Publishing.
- Mitchell, W. J. T. (2009). Art, fate, and the disciplines: Some indicators. *Critical Inquiry*, 35(4), 1023-1031. doi:10.1086/599581
- Nicolescu, B. (2005). Towards transdisciplinary education. *The Journal for Transdisciplinary Research in Southern Africa*, 1(1), 5-15.
- Post, R. (2009). Debating disciplinarity. *Critical Inquiry*, 35(4), 749-770. doi:10.1086/599580
- Rendell, J. (2004). Architectural research and disciplinarity. *Architectural Research Quarterly*, 8(2), 141-147. doi:10.1017/S135913550400017X
- Rodgers, P. A. (2008). Design now. In J. Marshall (Ed.), *Perimeters, boundaries and borders* (pp. 8-11). Manchester, England: Fast-uk.
- Rodgers, P. A., & Smyth, M. (2010). *Digital blur: Creative practice at the boundaries of architecture, design and art*. Oxon, England: Libri Publishing.
- Rodgers, P. A., & Bremner, C. (2011). Alterplarity: The undisciplined doctorate and the irresponsible candidate. Pre-Conference Proceedings of the Doctoral Education in Design Conference (pp. 27-34), The Hong Kong Polytechnic University, Hong Kong, 2011, May 22-25. Accessible from <http://www.sd.polyu.edu.hk/DocEduDesign2011/doc/papers/257.pdf>
- Roth, S. (1999). The state of design research. *Design Issues*, 15(2), 18-26. doi:10.2307/1511839
- Schouwenberg, L., & Jongerius, H. (2003). *Hella Jongerius*. London, England: Phaidon Press.

- Seymour, R. (2006). Heads or tails. *Design Week*, 21(36), 19.
- Smith, H., & Dean, R. T. (Eds.). (2009). *Practice-led research, research-led practice in the creative arts*. Edinburgh, Scotland: Edinburgh University Press.
- Sottsass, E. (2002). Conferenza al Metropolitan Museum 1987. In M. Carboni & B. Radice (Eds.), *Ettore Sottsass: Scritti 1946-2001* (pp. 327-345). Vicenza, Italy: Neri Pozzi Editore.
- Stein, Z. (2007). Modeling the demands of interdisciplinarity: Toward a framework for evaluating interdisciplinary endeavors. *Integral Review*, 4. Accessible from <https://www.devtestservice.org/PDF/Stein2007.pdf>
- Sudjic, D. (2009). *The language of things: Understanding the world of desirable object*. New York, NY: WW Norton, p. 34.
- Thompson Klein, J. (1990). *Interdisciplinarity: History, theory and practice*. Detroit, MI: Wayne State University Press.
- Thompson Klein, J. (1998, February). Notes toward a social epistemology of transdisciplinarity. *Interactive Bulletin of the International Center for Research and Studies Transdisciplinary*, 12. Retrieved from <http://basarab.nicolescu.perso.sfr.fr/ciret/bulletin/b12/b12c2.htm>
- Thompson Klein, J. (2000). Integration, evaluation, and disciplinarity. In M. A. Sommerville & D. J. Rapport (Eds.), *Transdisciplinarity: Recreating integrated knowledge* (pp. 49-59). Oxford, England: EOLSS Publishers Co. Ltd.
- Tomiyama, T., D'Amelio, V., Urbanic, J., & ElMaraghy, W. (2007). Complexity of multi-disciplinary design. *CIRP Annals – Manufacturing Technology*, 56(1), 185-188. doi:10.1016/j.cirp.2007.05.044
- Van Hinte, E. (Ed.). (2002). *1:1 Martí Guixé*. Rotterdam, Netherlands: 010 Publishers.
- West, D. (2007). A new generation. *Icon*, 43 (January), 56-64.