

DELEUZE CONNECTIONS

Deleuze and Design

Edited by Betti Marenko and Jamie Brassett

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Jamie Brassett

EDINBURGH
University Press

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Edinburgh University Press Ltd
The Tun – Holyrood Road, 12(2f) Jackson’s Entry, Edinburgh EH8 8PJ

www.euppublishing.com

Typeset in 10.5/13 Adobe Sabon by
Servis Filmsetting Ltd, Stockport, Cheshire,
and printed and bound in Great Britain by
CPI Group (UK) Ltd, Croydon CR0 4YY

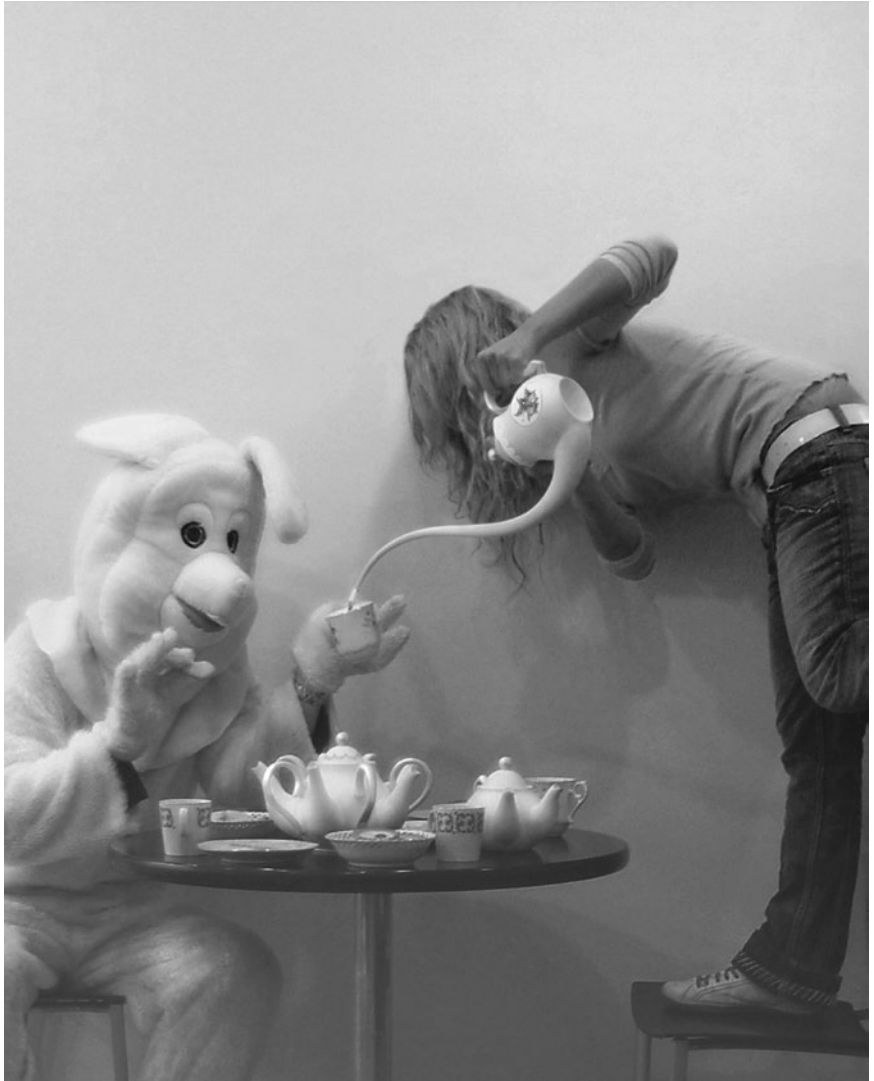
A CIP record for this book is available from the British Library

ISBN 978 0 7486 9153 1 (hardback)
ISBN 978 0 7486 9155 5 (webready PDF)
ISBN 978 0 7486 9154 8 (paperback)
ISBN 978 0 7486 9156 2 (epub)

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Schizo Tea Set © Khairul Islam 2006

Introduction

Jamie Brassett and Betti Marenko

Everything depends on Design.

Vilém Flusser, *The Shape of Things: A Philosophy of Design*

What matters to experimenters are the objections and the tests to which their propositions will be subjected, and the future it makes it possible to envisage.

Isabelle Stengers, *Thinking with Whitehead*

Assembling Deleuze and Design

The subtitle to this 'Introduction' might well be *How to catalyse an encounter between philosophy and design*, as one of the main drivers of this project has been how to bring to the fore possible connections between the two practices that this book interrogates: Gilles Deleuze's philosophy, as the practice of creating concepts, and design, as the practice of materialising possibilities. Deleuze's work offers a way of thinking about the encounter between philosophy and design, as they are both concerned with expressing the creation of the *not yet* in impactful ways. Furthermore, for Deleuze and Guattari in *What is Philosophy?*, a creative philosophy is pitched as dealing in *use, profit, interest, value* and *success*, and certainly not truth. 'We will not say of so many books of philosophy that they are false', they write, 'for that is to say nothing, but rather that they lack importance or interest, precisely because they do not create any concept' (1994: 82–3). This language brings us close to that used in design, especially when its creative influence is articulated in terms of innovation (Flynn and Chatman 2004; Cox 2005). An interesting, important, successful philosophy deals not in truth or falsity, but in engaging with different creative activities in many different registers having multiple layers of affect.

This should declare our editorial intentions by providing the overall

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intellectual framework to which this book intends to abide: that *if* there is a way of designing that both affects and is affected by Deleuze's philosophy, it will be found at the intersection of said practices. Design and philosophy, and other creative practices, are massively entangled and it is time, therefore, to investigate some of the ways in which this occurs. This need is driven not only by Deleuze's intellectual proximity to issues that are relevant to design practice (including its own theoretical and historical contextualisation), but also by the changing nature of design, which as a process enacts a way of thinking and doing philosophy (Giaccardi 2005; Binder et al. 2011; Kimbell 2011, 2012; Tonkinwise 2014). Both design and philosophy are creative practices. The relationship between them is akin to the relation between theory and practice. Each is a way of doing the other, using particular materials, skills and experiences, as well as engaging with particular discourses. We are interested not only in doing philosophy – as a practical process with which the possibilities of new futures can be thought and materialised – but also in articulating concepts through creative, tangible, embodied, material, *designed* means.

Philosopher of science Isabelle Stengers has encountered similar concerns when thinking of how to write about Alfred North Whitehead. 'What is at stake' in writing about Whitehead, she says, 'is not to share a vision, nor to provide a definitive interpretation of Whiteheadian thought, but to experiment/experience in the present what it means to ask the question "What has happened to us?" in the way he suggests' (2011: 22). In this way Stengers expresses her adventure with Whitehead, engaging not with his thought in its place, but creating new milieus for his concepts. Her subtitle, 'a free and wild creation of concepts', quoting from Deleuze and Guattari's *What is Philosophy?*, shows how her thinking with Whitehead will progress: as a no-holds-barred experiment and experience. Even without Stengers's explicit reference to Deleuze and Guattari on the cover of her book (and the proximity of her philosophy to theirs), we are close not only to Deleuze's own work on philosophy's creativity but also to the approach we are taking in this book. In thinking design with Deleuze we might substitute Stengers's use of a Whiteheadian question 'What has happened to us?' for 'What might our possibilities be?' That Deleuze's philosophy and design express ontogenetic processes of becoming will be posited not only later in this introduction, but also at moments throughout this book.

Somehow, the potential of examining design in relation to Deleuze's work has not been explored in a sustained manner until now, notwithstanding the fact that other fields have benefited from encountering

Deleuze: most notably architecture (of which more below), and art (see especially Anne Sauvagnargues's recent work (2006)). For us the creative power of Deleuze's thought should be channelled by design: not as a theoretical fad soon to be outmoded, and neither as an instrument with which to guide applied thinking. Rather: to inform – to seep through all matter on its way to allowing forms to emerge; to strategise – simultaneously to map the topology of complex space and constitute that space with the material of its future actualisation; to make and to develop – that is, to *create* and let these creatures run wild and free. In so doing, we are certain that an encounter with design will be as creatively fruitful for Deleuze's work as vice versa. The challenge we have set for ourselves with this project, then, is to push Deleuze's work beyond the well-known and well-rehearsed notion of 'a toolbox' – where philosophical concepts are simply applied in other practices – towards a new assemblage whose parts are so intertwined that it is difficult to see what is affecting what. Where concepts, emotions, screams, whispers, profits and losses, insights, foresights and oversights, all broil in an endless morass where simple cause and effect are not only impossible to judge, but meaningless when imposed. We would like this machine to *redesign* Deleuze in the same way in which through Deleuze we *rethink* design. For if we take seriously Deleuze's assertion of a pragmatic philosophy creating concepts immanently intertwined with other creative practices, then we must find that 'his' concepts will be knocked into new directions by the encounter. It will be as insightful for us to see how connections with designing in all its forms effect swerves in Deleuze's thought as it is to watch his concepts steam into design's placid landscape disrupting its deeply held beliefs. We will see how to undo design's reliance upon form (Antonioli, Crawford, Marenko) and function (Beaubois) and the ways in which they can be used to dominate one another, as well as considering the machinic, socio-political and creative constructs determined in the design machine's relation to the art machine (Sauvagnargues) and craft-making machines (Crawford), to social activist machines (Hroch) or capitalist machines (Brassett). We will see encounters with Deleuze swerve speculative hardware design (Hales) and the milieu of illustration (O'Reilly). And in all these cases, whether Deleuze's, or Deleuze and Guattari's, creative thought is overt in driving these disruptions of design or is one set of concepts among many (including those launched from Georges Canguilhem, Stuart Kauffman, Gilbert Simondon, Isabelle Stengers, Lars Spuybroek, to name but a few), we will find that we must think differently about Deleuze. The Deleuze-design machine's affects have no privileged direction of impact.

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Let us be clear from the start: *no matter in which form it happens to be materialised, design is here not considered a thing, but a process.* A process of change, invention and speculation always possessing tangible implications that cannot but affect behaviours and lives. Designing describes a field concerned not only with the creation and materialisation of possible worlds, but also a way of thinking and critically responding to current issues and concerns. Whether we are dealing with products or scenarios, packaging or experiences, things or digital platforms, services or territories, organisations or strategies, designing traverses, creates, manipulates and affects all of these expressions of human inventiveness. As a process, designing mobilises the many materials, methodologies, semiotic regimes and imaginary worlds along ways that intersect with the already fluid but sometimes concrete or totally evaporated process of capital. Indeed, it is its proximity to the flows of capital constituted as such by the global Capitalist Machine that leads to its (design's) critics bemoaning its friendliness with capitalism, if not its collusion. In 1971, the designer and social activist Victor Papanek led such a critique of design in his *Design for the Real World*, famously stating in its Preface that:

There are professions more harmful than industrial design, but only a very few of them. And possibly only one profession is phonier. Advertising design, in persuading people to buy things they don't need, with money they don't have, in order to impress others who don't care, is probably the phoniest field in existence today. Industrial design, by concocting the tawdry idiocies hawked by advertisers, comes a close second. (Papanek 1985: xi)

Firmly in the pocket of advertising in materialising 'harmful' 'idiocies', the 'phony' industrial design Papanek rails against fuels the motor of surplus-value generation and capitalist growth through its delivery of a 'Kleenex Culture'. For many, the design professions are so deeply involved in the Capitalist Machine that it is difficult to see the difference between them. For others, there are ways in which designers whose social consciences have been pricked can articulate their practice either steeped in criticality (Dunne and Raby 2013), or direct activism (Julier 2013b, 2013c; Manzini 2014).

Design's critics may have Deleuze and Guattari on their side. In *What is Philosophy?* they write:

Finally the most shameful moment came when computer science, marketing, design, and advertising, all the disciplines of communication, seized hold of the word *concept* itself and said: 'This is our concern, we are the

creative ones, we are the *ideas men!* We are the friends of the concept, we put it in our computers' (1994: 10; original emphases)

To engage in the creation of concepts, and store them in computers for the purposes of communication, design (along with other capitalist cogs, marketing, advertising and computer science) engages in a similarly phony, indeed *shameful* activity. Some of our contributors will examine the relation of design to the Capitalist Machine in a little more detail (Brassett, Hroch), but it is worth mentioning now how we respond to Deleuze and Guattari's comment quoted above. As philosophers working in design contexts we might simply say 'sorry'. But we are not in a discussion with Deleuze and Guattari *about* design. Philosophy is not about debate after all (Deleuze and Guattari 1994: 28). We are *not* even *interested* in what they *say* about design: not simply because their attitude to the design profession is antipathetic, or even because what design might have been at the end of the 1980s and the beginning of the 1990s is quite different to what design is today, but because *they* are not the point. Their concepts and the creative opportunities they allow are. There seem to be two ways in which anyone with an interest in both Deleuze and design might approach the topic, steeled against their criticism: either by examining their antipathy, locating it in its critical context and evaluating the impact of their position on the practice – this does not appear to have happened yet, and may prove fruitful for further investigation. Or one could unpack and examine the moments where design seems to get a better press in their work: see O'Reilly in this volume, who does this in relation to Illustration, and Matthew Kearnes, who emphasises design's 'ontological incompleteness' (2006: 74) in relation to the question of nanotechnology and the works of Deleuze and Simondon. We shall return to the dynamic opportunities of design's 'ontological incompleteness' below, but it is also worth noting at this point that Deleuze and Guattari express designing in this way. In their book on Kafka they write: 'Two problems enthrall Kafka: *when can one say that a statement is new? . . . and when can one say that a new assemblage is coming into view?*' (1986: 83; original emphasis). This second clause is as follows in the French: '*quand peut-on dire qu'un nouvel agencement se dessine?*' (Deleuze and Guattari 1986: 149). '*Se dessine*', translated in the English publication as 'coming into view', is an interesting phrase for us. '*Dessiner*' is the French word that captures 'to draw' as well as 'to design', 'to make' and 'to form'; '*se dessiner*' gives us 'to stand out', 'to *emerge*'. The autopoietic emergence of form that happens when an assemblage self assembles is an important aspect of designing

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and one that we emphasise in this book, across all of the chapters in many different ways. It is also a key feature of the assemblage that forms itself as we bring Deleuze and designing together.

There is yet another way of dealing with this bringing together of Deleuze and designing, clearly expressed by Deleuze and Guattari when they write: ‘What is the best way to follow the great philosophers? Is it to repeat what they said or *to do what they did*, that is, create concepts for problems that necessarily change?’ (1994: 28). This collection of essays attempts to follow Deleuze and Guattari by ‘doing what they do’ and to create concepts in a philosophical plane that cuts through the plane of designing. As these planes ‘interfere’ (1994: 216–8), we strive to allow for a new becoming for Deleuze-designing, which emerges autopoietically as its own assemblage. This book is therefore the outcome of the exploratory effort to create such a construct, and offers a glimpse of the possible networks elicited by the emerging assemblages of Deleuze and designing. It is neither the first nor last word on the topic, but inserts itself in the middle, in an experimental fashion that allows both designing and Deleuze to become on multifarious trajectories.

We might, therefore, also be following the thought: ‘Never interpret; experience, experiment’ (Deleuze 1995: 87). For us, and the authors participating in this book, this is not a difficult or strained task, since designing – defined (provisionally here) as the momentary coalescence of future possibilities materialised today, whether this might take the form of things, images, experiences, services or strategies – operates as a profoundly disruptive force in contexts increasingly marked by complexity and contingency. Already, designing operates in a milieu of experience and experiment, connected to futures, presents and histories, in the middle of the psycho, social and ecological materialities that it constructs and that it is constructed by. In the multiform entanglement of commercial practices, theoretical discourses, industrial agendas, consumer lifestyles and behaviours, at the intersection of material cultures, object theories, marketing requirements, craftsmanship models, creativity and innovation paradigms, entailing a set of skills enabling designers to recognise, address and negotiate complex and often conflicting demands. Designing is optimally positioned to delineate, reflect and question the ways in which the relationships between human and non-human agencies elicit affects, tell stories and ultimately make us think by doing. Designing experiments and experiences in ways that Deleuze and Guattari create for philosophy. Sometimes both come close to the Capitalist Machine¹ and at others they clash in opposition. Neither serves as a point at which other creative practices should be rigidified

and condemned. Indeed, the complex milieu in which any creative practice exists (as mentioned above) currently appears to demand a similarly complex approach to its interrogation, experimentation and experience. This volume offers one such approach.

This complex nest of intertwining concepts delineated by the coming together of Deleuze and designing does not produce easily defined affective relationships. While it has been important to highlight the impacts upon ways of thinking about Deleuze that his work's encounter with designing offers (along with the more simple mapping of the use value of Deleuze's concepts to designing), the relationship Deleuze–designing does not allow of simple biunivocity. As soon as we allow for the double disruption that this new assemblage produces, we will notice that the ripples of creative affect radiate across a wider landscape than that delimited by Deleuze and designing alone. To understand this it might be necessary to unpack this notion of 'disruption' a little more.

In innovation studies (which spans business, technology and economics, organisational psychology and sociology, as well as creativity and design studies), the concept of disruption has a very specific use. Coined by Clayton Christensen (1997), the term describes the way that smaller technology companies innovate radically through the creative use of old technology. While disruption is not often the *aim* of any innovative act, it can be the *affect*. A business can feel the affects of disruption without being its target, and can realise the disruptive power of its activities without them being the aim. Deleuze and Guattari have shown throughout their work together that the Capitalist Machine's tendency to schizophrenise at the edges and imperialise at the centre, and for pockets of schizophrenising resistance to develop throughout, with drives to control at the edges, does not allow for easy dichotomisations where one is good and another bad. The same holds for disruption/radical/revolutionary innovation and its 'opposite' incremental/sustaining/evolutionary. These concepts operate in a much more complex (and interesting) space.² Organisation theorists Michael Tushman and Charles O'Reilly, in an article called 'The Ambidextrous Organisation: Managing Evolutionary and Revolutionary Change' (2004), recognise this complexity in mapping a way for organisations to be 'ambidextrous' and to be open to engaging with both types of innovation activities. Félix Guattari in *Les Trois écologies* (1989) writes similarly, albeit not quite so biunivocally. For him it is necessary sometimes for activists in their struggle against Integrated World Capitalism to adopt identity positions, rigidifying themselves at moments of active opposition, coalescing under familiar, and historically problematic, subject positions. For both

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the Capitalist Machine and those positioned oppositionally to it, taking conceptual sides is not so simple (as Brassett discusses in this volume). For us, then, in approaching Deleuze and design, taking sides is also not an option. Deleuze's work – 'Deleuze' – must be as open to disruption out of its well-wrought identity position as the 'design' he and Guattari malign so much, even at those moments when their very identities are being reified.

We are not, therefore, prescribing a new breed of 'Deleuzian design'. Indeed, *is there a Deleuzian way of designing?* is a question that is worth investigating. While some of the chapters found here (Crawford's in particular) address this question head-on, we invite readers to draw their own conclusions. As stated earlier, this book is about thinking design *with* Deleuze, by exploring the possible alignments, discordances and crosspollinations between the two creative practices: to assemble a Deleuze-designing machine. To think design with Deleuze does not mean extracting ideas from an established philosophical corpus and then applying them to design. The point is not a philosophy 'applied' to design; or worse, a philosophy wanting to stand in normative authority over design to monitor its activities. Rather, this is about a processual, becoming way of proceeding (albeit not a method), a way of *redesigning* the relationship between thinking and making through a nonlinear, emergent, open perspective; as comes through strongly regarding Deleuze, and Guattari's, discussions of pragmatics and practical philosophy (Deleuze and Guattari 1987; Deleuze 1988). Deleuze's empiricism is the opposite of an applied philosophy: 'Empiricism starts with an entirely different assessment: analyzing states of things so as to bring out previously nonexistent concepts from them' (Deleuze 2006: 304). In a radical disruption of canonical philosophy what now comes to the fore is an existent state of things out of which new concepts – and new practices – are to be extracted. This is the nature of Deleuze's empiricism. States of things are multiplicities, and in multiplicities what goes on between points is more important than the points in themselves (Deleuze 1995: 147). For Deleuze it is not the beginning or the end that counts but the middle, the multiple middles, and the milieus they describe: intersections, crossings, inflections, where a multilinear complex folds back on itself and where philosophy can interconnect with what is outside itself. 'I tend to think of things as sets of lines to be unravelled but also to be made to intersect. I don't like points; I think it's stupid summing things up' (Deleuze 1995: 160). Thus, one of our motivations for promoting the encounter between philosophy and design comes from considering the ways that philosophy might insert itself in the middle of what is

already happening in designing. In many ways, we have noted, design as a cluster of practices and disciplines is having a stronger role in shaping the world. Design's current concern for co-creation, openness, nonlinearity and experimentation suggests that there exist already points of connection to Deleuze's thought. Indeed, we believe that a philosophy as an open empirical system is particularly suited to articulate some of the phenomena and concerns currently informing and transforming the theory and practice of design.³ Designers, practitioners, critics and theorists are increasingly coming together to reflect on, and to respond to, the changes traversing established modes of practice within design, either by rethinking the economic models upon which design is predicated (inbuilt obsolescence, anyone?), pushing the technological boundaries within which it operates, or questioning the traditional top-down attitude of designers and manufacturers towards end-users. The practice of design is shifting to collaborative, multi-authorial platforms. New networks for sharing knowledge are creating communities that work in collaboration, and this open source movement is questioning the boundaries between user and producer (for example, *FabLabs*, a global network of small-scale workshops offering cutting-edge digital fabrication technologies to communities in dozens of cities and countries). The DIY culture of the make and repair movement, enabled by 3D printing and low-cost, miniaturised electronics, is redefining the relationship between making and thinking, theory and practice; new business models emerge with crowdfunding platforms like *kickstarter*; a surge of upstream and interdisciplinary design means that the traditional distinctions between different disciplines seem increasingly obsolete; finally, design is becoming more and more concerned with social innovation (Manzini 2014), social change and activism (Lees-Maffei 2012; Julier 2013b, 2013c; Steenhuisen 2013), and used as an investigative tool in the field of speculative design and design fictions (Hales 2013) and critical design (Dunne and Raby 2013; Malpass 2013) and as a way of catalysing strategies of innovation. All of these cases show design (traditionally thought) shifting its loci of impact on the world, and at the same time undergoing (or exacerbating already contained tendencies to) ontological disruption.

What is remarkable is that we are witnessing a profound shift, no longer based on what design *is*, but on what design is becoming because of what it can do: a shift from design as problem solving to design as problem finding. The former – where design is thought as the act of finding solutions to problems – is the rational and linear interpretation that evaluates design's activities in terms of efficiency and performance, and has dominated the world of design since the advent of modernity.

In this sense, design is a task-oriented, performance-measured, linear exercise that ultimately reduces uncertainty by promoting functional competence. This is the conventional view of design as enforcing and reproducing market ideologies and working as a technology of affective capture.

On the other hand, design as *problem finding* has to do with increasing complexity, problematising the existent, developing a critical and conceptual perspective, first of all on design itself. For example, design for debate and critical design use their materials, whether objects or concepts, to raise discussion on specific issues and to frame new problems. We will return to the matter of ‘problems’ in relation to design in more detail below, but would like next to turn to the issue of defining design, or rather to consider what design has been and what its becoming might offer.

A Thousand Tiny Definitions of Design

We have stated that for us designing is a process by which future possibilities tend to coalesce in/as the present, no matter the singular form this coalescence might take. While everyday usage might position design as a thing – ‘this is a terrible design!’ – there is a history of discussion of it both as an evolving practice, a multiplicity of (evolving) practices, and as a process. For design theorist Richard Buchanan, ‘No single definition of design, or branches of professionalised practice such as industrial or graphic design, adequately covers the diversity of ideas and methods gathered together under the label’ (1992: 5). IDEO’s head of Human Factors, Jane Fulton-Suri (2003) and practitioners/theorists Alain Findelli and Rabah Bousbaci (2005) have highlighted the changing nature of designing. Furthermore, design and any research associated to design has no single definition but must be taken instead as an ‘interdisciplinary form of inquiry’ (Almquist and Lupton 2010: 3). This makes for a complex space of what Matthew Kearnes calls design’s ‘ontological incompleteness’ (2006: 74).

Before beginning to embark into this complex space and seeing what forms a Deleuze-designing assemblage might take, it is worth charting some of design’s definitions. We start with what design is conventionally taken to be, namely, the intentional planning, the ideal blueprint, even the cunning deceit. For philosopher Vilém Flusser the very word ‘design’ contains in itself the roots of cunning action, deception and trickery, and a designer is ‘a cunning plotter laying his traps’ (1999: 17). It is worth quoting Flusser at length here, not simply for his insight on the

etymology of the word (an etymology picked up by Anne Sauvagnargues in this volume, but with different affect), but for the questions he raises about the proliferation of the word ‘design’ in contemporary culture:⁴

In English, the word *design* is both a noun and a verb (which tells one a lot about the nature of the English language). As a noun, it means – among other things ‘intention’, ‘plan’, ‘intent’, ‘aim’, ‘scheme’, ‘plot’, ‘motif’, ‘basic structure’, all these (and other meanings) being connected with ‘cunning’ and ‘deception’. As a verb (‘to design’), meanings include ‘to concoct something’, ‘to simulate’, ‘to draft’, ‘to sketch’, ‘to fashion’, ‘to have designs on something’. The word is derived from the Latin *signum*, meaning ‘sign’, and shares the same ancient root. Thus, etymologically, *design* means ‘de-sign’. This raises the question: How has the word *design* come to achieve its present-day significance throughout the world? This question is not a historical one, in the sense of sending one off to examine texts for evidence of when and where the word came to be established in its present-day meaning. It is a semantic question, in the sense of causing one to consider precisely why this word has such significance attached to it in contemporary discourse about culture. (Flusser 1999: 17)

Design theory offers a wealth of definitions, from Herbert Simon’s *The Sciences of the Artificial* (1969), to Richard Buchanan’s notion of ‘wicked problems’, to design consultancy IDEO’s ‘design thinking’. In *The Sciences of the Artificial* Simon identifies design as ultimately a problem-solving activity ‘concerned with how things ought to be, with devising artefacts to attain goals’ (1969: 59). His notion – to this day one of the most quoted definitions of design – states: ‘Everyone designs who devises courses of action aimed at changing existing situations into preferred ones’ (1969: 55). Compare this with another equally influential notion of design as form-giving activity (Alexander 1971), where design is seen eminently as the activity of making things. These two positions embody well the tension historically traversing design, as design theorist Lucy Kimbell points out:

On the one hand, following Alexander’s thesis, designers give form to things; they are privileged makers whose work is centrally concerned with materiality. This is the tradition of craft and professional design fields that create specific kinds of objects, from furniture, to buildings, to clothing. Simon, on the other hand, suggests that designers’ work is abstract; their job is to create a desired state of affairs. This way of thinking about design is the core of all professions, not just the work of engineers and designers of artifacts. (Kimbell 2011: 291)

For Simon design is an activity that seeks to change existing situations

into preferred ones. However, while Simon is concerned with design's prescriptive outcome, design theorist Richard Buchanan's influential paper 'Wicked Problems in Design Thinking' (1992) borrowed the notion of wicked problems (Rittel and Webber 1973) in order to shift design discourses from the tangible (artefacts) to the intangible (systems, organisations, experiences), in so doing opening the way for further developments of the practice, notably towards 'design thinking'.⁵ Buchanan argues that 'designers are concerned with conceiving and planning a particular that does not yet exist' (1992: 17), thus insisting on the open-ended future implications of design. For both Simon and Buchanan the implications are clear: design is always future oriented, as it is constantly engaged with turning what is into what *could*, *might* or *ought* be.⁶

Along with the future-orientation of design, or maybe because of it, these definitions also have in common their postulation of a connection between design and change. If this seems rather obvious, it also throws into the open, and openly questions, the models, paradigms and tacit knowledge that often underpin ideas of 'change': the methods deployed to achieve it, the practices that can enable it, and those that might prevent it. In short, the multiple entanglements associated with materialising the 'not yet' now.

This book wishes to suggest other ways of thinking about design. If design has the potential to reveal the richness of the world, this richness gets diluted when design is taken to be a thing, linearly designed, representing an equally linear path. If, as we state repeatedly, design is not a thing but a process, the question will therefore be not what design *is*, but rather *how* its process can be thought, articulated, embodied and practised. We contend that such a thinking about design will offer myriad more ways of expressing the opportunities in which future, present (and past) are created through designing than do simple, deterministic or static notions. While it may be that such thinking will demand a departure from current definitions, it may be that we engage with or cut through them; our having quoted them already has shown this. As we work designing through Deleuze, we might at times favour an oblique and less representational approach, a *minoritarian* line that eschews the normativity of given definitions, that is able to account for the mutations that the field of design is – and has always been – dramatically undergoing. By advocating an open-ended enquiry that reflects the participation with the practices of 'making worlds' and 'creating futures' found in designing, we will highlight those aspects of the Designing Machine that are both ontologically dynamic and create dynamic ontologies. For us,

the more design is expanding its remit and scope, the more it becomes significant to offer *not* a normalising or normative definition of design, but rather a working, flexible, negotiable, situated framework within which any practice might be considered to be that of *designing*. The gerund form here is chosen to indicate the inherent processual nature of design and the continuity it connotes projected into the future. Nevertheless, as mentioned, and like Guattari's 'little soldiers' (1989), it may sometimes suit us to retrench upon well-understood forms of design, if only to see where they might be unravelled and opened up to new creative possibilities, or as activist forms intent on disrupting other areas.

We will engage more fully in the following section with Deleuze's idea that philosophy is a creative and revolutionary practice precisely *because* it is always creating new concepts. We see this resonate with our positioning of *designing* as the material expression now of future opportunities: where *designing* as a creative act has the possibility to disrupt the present. Briefly now, we would like to highlight that this type of *designing* is already partaking of an approach to pragmatics outlined by Deleuze, where *immanence* and *becoming* are important moments in its practice. This liberates us from the normative imposition of a fixed definition and allows us to consider *designing* as a way of investigating the possible via material means. In this sense it becomes an articulation of myriad creative responses to any (proposed) opportunity space: in other words, the tangible embodying of speculative operations upon possible futures. Thought in this way, *designing* as creative process comes close to philosophy as creative process. Which is not to say that they become equivalents, but that the different planes upon which they operate have a momentary connection. In 'On Philosophy' Deleuze says: 'That's what it's like on the plane of immanence: multiplicities fill it, singularities connect with one another, processes or becomings unfold, intensities rise and fall' (1995: 146–7). Design's unfolding into so many different arenas of activity, its multiplicitous guises and disguises leading to its ontological incompleteness, show the points at which it interacts with the plane of immanence as constructed and expressed by philosophy. Later in the same conversation Deleuze, after citing poets, painters, novelists, composers, and philosophers of course, says: 'The whole thing is a crossroads, a multiple connectedness' (1995: 155). We will add *designing*, designers and other related thinkers and do-ers to this, as you will see in the book that follows. Furthermore, within this broiling mass of 'multiple connectedness' *designing* becomes a form of theoretical-practical research process to investigate and interrogate core issues and questions of contemporary culture, be they digital technologies and new

media, politics and social conflict, the intersection between science and art, social responsibility and citizen participation. As we highlight the creative, immanent and, above all, practical philosophical assemblage that Deleuze and designing becomes, we will see designing assert itself as a questioning and investigative tool. Designing offers not only the interface between the material and the immaterial, the motor for innovation, the expression of the tangible form of possible futures, but also the critical embodying of all these concerns in their practical resonance.

Mapping the Themes of the Book

If we were to map where the lines of creative opportunity might emerge from navigating the entanglements of Deleuze and Guattari with designing, we would do well to acknowledge where such connections have already been highlighted. First, with only a few shining examples,⁷ there is the philosophical engagement with designing. Second, the ways in which the field of design articulates itself as a critical and theoretical – often highly conceptual⁸ – practice, which indicates both the tensions and questions already pervading the world of design, and the further conceptual articulation sought. Finally, we cannot ignore the malleability that Deleuze's thought has shown to possess in relation to what is perhaps the closest field to design to have been exposed to a dialogue with Deleuze's thought: architecture (Eisenman 1992a, 1992b, 1992c; Cache 1995; Rajchman 1998; Williams 2000; Ballantyne and Smith 2001; Grosz 2001; Lynn 2004; Ballantyne 2007; Brott 2011; Carpo 2011; Frichot and Loo 2013). While some of the authors collected in this volume do engage with some thinkers about architecture (Crawford, Hales, Marenko) we have been eager to keep our focus on designing.

This broad landscape of intellectual and practical discourses (philosophy of design, critical design, Deleuze and architecture) offers a milieu within which *Deleuze and Design* can emerge. In other words, we would imagine this project in a space in the philosophy of design where Deleuze can be foregrounded, as well as in a practice of critical design driven by Deleuze's thought and practice of creative philosophy, and a highlighting of the spaces relating to design that have been forgotten when architecture has constructed its own assemblage with Deleuze. *Deleuze and Design*, then, aims to interrogate the rapidly evolving world of design as an aggregate of material practices that demands new and flexible bodies of theorisations capable of articulating its mutating nature and propensity to capture the future. Emerging discourses within design that are of particular relevance here concern practices of co-design, open design,

design thinking, speculative and critical design. We will do this by encountering philosophy, critical design practice and speculative spaces but in ways not offered in other related milieus. We propose these as interventions within these discourses, not necessarily oppositional, but sometimes singular and partial.

One of the ways into this construction is from the thought that design needs to be alert to what is circulating outside its familiar domain. Not a surprisingly original thought, but one that it is often necessary to rethink as some notions have quickly become canonised: form and function, the role of the user, the ethics of designing, designing as problem solving, and so on. To open up onto thought and practice from outside might either bring in completely new issues with which to contend, or rework these tired old authoritative positions. For example, the existing design-mediated, but also somatic and cognitive, relationship between users and increasingly sentient digital devices demands a theoretical shift that can reflect what is already taking place within design-mediated practices and entanglements between the human and non-human, something that the notion of ‘user’ as a clearly separate and distinct entity from the object used is no longer able to capture (see Marenko in this volume). The centrality of the user in design has been questioned as too reductive of the richness of the interaction between humans and things, and as a tool of instrumentalisation by design (Almqvist and Lupton 2010). It has also been critiqued as the product of an over-deterministic object-centric perspective that leaves little space for *people* (rather than users) to act and improvise in their fluid interaction with designed artefacts (Redström 2006). Another example would be the way in which not only Deleuze and Guattari’s work but also other creative philosophies affirm the distribution of the agency of material things and the symmetry between human and non-human actors, pointing to the kind of reflection that should concern directly – and in doing so redefine – the theory and practice of design.⁹ And so, as the chapters of this book collectively chart, we urge design to look eagerly to those concepts and practices that can assist its theorising, given that the entanglements of matter and meaning we are part of are no longer resolved by well-trodden formulas such as ‘form follows function’, or by straightforward paradigms based on usability and the modernist assumption of the centrality of the user.

Deleuze and Design stems, in one part, from the fundamental consideration that design would do well to mongrelise its diktats. The more design changes, expands and broadens its scope and field of action, the more it needs to be conversant with what philosophers, critical thinkers, theorists, and designers of concepts are developing. Furthermore, as

design theorist Victor Margolin writes, designers ‘need early warning systems to alert them to social trends that might have a bearing on what they design, and they require the intellectual tools to reflect on the meaning of these trends and their ethical implications’ (2007: 14). Design is exquisitely located to embody in a creative, experimental and innovative way the questions and tensions circulating in these ideas and the way they are reformatting the paradigms of the world we inhabit. It has done so for many years (Flusser 1999), incorporating many other forms of practice and thinking into its remit (Kimbell 2011, 2012) as well as offering for other disciplines ways of thinking and doing that open up creative opportunities (Tonkinwise 2014). Our urge for the need for designing to look beyond its boundaries and engage with Deleuze’s thinking comes not because being open is anathema to it (though it can, at times, coalesce strongly around certain dogmas), but because a Deleuze-designing assemblage might itself provide singular materialities worth noticing. By engaging, for example, with the creative and transformative practice of giving shape to concepts, the critical thinking emerging from this process is in turn taken further to explore processes of designing, challenging the meaning and values of existing creative practices, all the while expressing the seductive power of philosophy to affect existence, provoke responses and destabilise the known. Even when that creative practice is Deleuze’s own work. As mentioned above, we are as eager for his work to be as open to creative impact from design as the other way around.

In pursuit of this, the book’s contributions as a whole address a number of Deleuze’s concepts, especially those that might prompt design to rethink some of the notions it tends to assume as immutable. For example, the ways in which the creation of the new and ideas on the future are thought and materialised are central to any design discourse. Deleuze’s actualisation of the virtual provides a counterpoint to the conventional design dictum ‘form follows function’ to explain and conceptualise how objects come into being. The concept of becoming resonates strongly with designing seen as a process of ontogenetic dynamism, and reinforces design’s own inbuilt relationality; that is, it emphasises the way in which design keeps on proliferating through the agential power of each and every designed object, either tangible or intangible, to be not only a meaning-making machine but a receptacle of further actions, behaviours and events. Indeed, design keeps on designing. Connected to the above is another key point that design needs to take on board, which concerns ways in which Deleuze provides a springboard to overcome the narrow impositions of the hylomorphic model. If in general Deleuze’s

brand of vitalist nonorganic materialism ought to affect the way design (as a complex nexus of theories, practices, cultures, discourses and industries, each with its own material entanglements) theorises its own presence in the world, and formalises its own agenda of speculative and tangible interventions, it is imperative that the limitations of hylomorphism are grasped and reflected upon with the means that Deleuze offers (among others, especially Simondon, as Crawford, Hales and Sauvagnargues show in this volume). The expression of matter as generating its own form, and how this capacity for self-organisation allows different models that describe the creation of the new and the emergence of objects from matter, provides the opportunity for a critical reformulation of design's theoretical and practical positioning.

Some thoughts about actualisation are relevant here. Deleuze affirms that only the transition from the virtual to the actual is based on genuine innovation (Deleuze 1991). While a process of realisation allows only a limited number of possibilities to be reproduced and there is no space for novelty to manifest itself (an apt description of the hylomorphic model), actualisation on the other hand engenders the emergence of new forms, of the 'not yet' through the unfolding of matter and the interaction of forces at play (see Beaubois, Hales, Marenko and Sauvagnargues in this volume). In what can be read as a warning to overplanning by design, Deleuze writes:

We give ourselves a real that is ready-made, preformed, pre-existent to itself, and that will pass into existence according to an order of successive limitations. Everything is already completely given: all of the real in the image, in the pseudo-actuality of the possible. Then the sleight of hand becomes obvious: if the real is said to resemble the possible, is this not in fact because the real was expected to come about by its own means, to 'project backward' a fictitious image of it, and to claim that it was possible at any time, before it happened? In fact, it is not the real that resembles the possible, it is the possible that resembles the real, because it has been abstracted from the real once made, arbitrarily extracted from the real like a sterile double. Hence, we no longer understand anything either of the mechanism of differentiation or of the mechanism of creation. (Deleuze 1991: 98)

The only true 'difference, divergence or differentiation' (Deleuze 1994: 212) happens in what Deleuze calls the 'inventive drama' of actualisation – the movement from the virtual to the actual, where a contraction of virtuality takes place, whilst containing the germs of yet more virtual events to come. Only actualisation is genuine creation because it breaks with the principle of identity, whilst opening up new problem frames

that question the existent. Actualisation can be thought of as a *problematic* and problematising event, and it is creative precisely because of this. If actualisation is the (problematic and problematising) relationship between what is and what could be it has certainly plenty to offer to design.

These are just a few examples of the many themes that occur throughout this book, but already we can see how these encounters between Deleuze and designing manifest an impact on the boundaries of design as a discipline. What we are finding, then, is a milieu that theory and practice are constructing as a critical, contested space where multiple ways of theorising design and practising philosophy might be imagined.

Theory and Practice

Because of our position as philosophers (with an interest in Deleuze) immersed in the theory and practice of design, we are both intimately motivated to reflect on what might possibly emerge from an encounter between Deleuze and design, on what mutating shapes the Deleuze-designing assemblage might take. Another creative impulse for this book was given by the awareness that a field like design, steeped in tricky, always complicated, and never linear modes of expressing the relationship between theory and practice, could benefit greatly from a remapping of such a relationship informed by Deleuze's analyses. 'No theory can develop without eventually encountering a wall', says Deleuze in conversation with his friend Michel Foucault, 'and practice is necessary for piercing this wall' (Foucault 1977: 205). And furthermore he adds:

Possibly we're in the process of experiencing a new relationship between theory and practice. At one time, practice was considered an application of theory, a consequence; at other times, it has an opposite sense and it was thought to inspire theory, to be indispensable for the creation of future theoretical forms. In any event, their relationship was understood in terms of a process of totalization. For us, however, the question is seen in a different light. The relationships between theory and practice are far more partial and fragmentary. On one side, a theory is always local and related to a limited field, and it is applied in another sphere, more or less distant from it. The relationship which holds in the application of a theory is never one of resemblance. Moreover, from the moment a theory moves into its proper domain, it begins to encounter obstacles, walls, and blockages which require its relay by another type of discourse (it is through this other discourse that it eventually passes to a different domain). Practice is a set of relays from one theoretical point to another, and theory is a relay from

one practice to another . . . Representation no longer exists; there's only action – theoretical action and practical action which serve as relays and form networks. (Foucault 1977: 205)

As each one is necessary to the development of the other, theory and practice must be seen as an integrated assemblage. What matters are the connections between them and the creative opportunities that their capacities for affecting and being affected by each other promote, rather than their synthesis, the hierarchy of their positions or their relationship of direct causality. This immanence of theory and practice allows us to get closer to a practical and materialistic philosophy capable of examining matter without ever presupposing its structure, and capable of investigating both the uncharted territories of design processes as much as the elsewhere of thought (Deleuze 1988). A great deal of Deleuze's work focuses on the problem of practice, specifically how the force of creativity can be triggered, and how a philosophy can be truly a practice. His insistence on philosophy as a practical and experimental enterprise, as the creative act of inventing concepts, and always outside of itself, traverses all his work. Deleuze's idea that philosophy is creative and revolutionary precisely because it is always creating new concepts deeply resonates with the demands of designing, always engaged as it is with thinking about the 'not yet'. Even more pertinent to designing is Deleuze's affirmation that new concepts should be both necessary and unfamiliar, as well as being a response to real problems (Deleuze 1995: 136), and express an event (of which more later). Deleuze's discussion of the notion of a problem in his book on Bergson (1991) is of particular relevance here. In relation to what he regards as the misconception that thinking is the search for solutions to problems, Deleuze writes that 'True freedom lies in a power to decide, to constitute problems themselves . . . the truth is that in philosophy and even elsewhere it is a question of finding the problem and consequently of positing it, even more than solving it' (Deleuze 1991: 15). Positing a problem has therefore to do with invention, rather than uncovering solutions that already exist; it is about creating the space, the milieu in which problems may become, along with the solutions that go with them. It is about creating the terms by which a problem will be stated. Problems have no given solution; they must generate solutions by a process whereby what did not exist, what might never have happened, is invented.

Deleuze compares the force of inventing concepts to a feedback loop, to an echo chamber, where in order to get moving an idea has to traverse different filters, different fields. Philosophy clearly needs

non-philosophy: ‘philosophy needs not only a philosophical understanding, through concepts, but a nonphilosophical understanding, rooted in percepts and affects. You need both. Philosophy has an essential and positive relation to nonphilosophy: it speaks directly to nonphilosophers’ (Deleuze 1995: 139–40). This has two main implications both relevant to the theory and practice of design, as well as to design’s problematising of their relationship: first, that there is no thinking without doing; and then, that there is no hierarchy between thinking and doing. This has an impact upon how we consider philosophy, especially in its relation to designing.

The key question is no longer what *should* philosophy do, but what *can* philosophy do? What sort of impact can it have on other disciplines? On design itself? Indeed, this is a philosophy that is concerned not with justifying established notions, but with exploring the unthought-of, not simply a way of thinking existing problems anew, but a way of formulating entirely new ones. Philosophy for Deleuze is no longer a set of injunctions: *you should think this*, but an exploratory machine, a voyaging in the possible, an adventure in inventing concepts and experimenting with experiences: *what thoughts does it allow me to think?* Which new problems does it allow me to formulate? The problems are not the point of philosophy, but the milieu in which problems are problematised is. Here we find the creative sparks from the connection of the Deleuze machine to the designing machine most illuminating. Designing thought similarly not only untethers itself from the teleological demands of *problem solving*, but pushes beyond even repositioning itself as *problem generating*, to an even wider scope of *possibility creation*.

In ‘What is the Creative Act?’ (2006), Deleuze maintains that ideas must be taken as potentials already *engaged* with a specific mode of expression, and inseparable from it, so to think an idea means being already engaged with a certain milieu, be it philosophy or the arts or sciences. Or, design: as O’Reilly examines in this volume in relation to illustration practice. And this engagement is necessary. Not only does philosophy have the same status as the arts and sciences and therefore cannot exert any claim of superiority over other disciplines, it must also continuously forge alliances, even rudimentary ones, with them. Without alliances with other disciplines, philosophy cannot be properly practised. Again, philosophy needs nonphilosophy with which to form networks of mobile relations – be they sciences or the arts or design. Design, in turn, needs its own network of connections, junctions and conduits, not least – as Sauvagnargues shows here – with the art machine.

One of the aims of *Deleuze and Design* as a whole, then, is to bring to the fore some of these rudimentary alliances, to tap into these emerging networks and foster new transversal relations to show the multiplicitous ways that the two creative practices of philosophy and design can assemble new machines. This is why we are convinced that philosophy needs design. Likewise, design needs philosophy, if it wants to capture and problematise some of the concerns that are turning it more and more into a magnifying lens with which to observe and critique the existent.

The Creation of the New

In a way, this whole book is about this topic, and some contributors address it specifically (in particular Brassett), but it's worth mentioning here some of the key thoughts about the creation of the new that help orientate this work as a whole. For Deleuze one of the key tasks of philosophy is to figure out not what should be thought, but under which conditions the new is created – in other words to explore the process of creation. Thus, the key question is: how is it possible to think about the production of the new? Bound up with a creative evolution, the production of the new is not something transcendent, a mysterious founding break, or a drastic interruption, but something completely immanent happening in time. It is always about virtualities being actualised. What is important to underline here is the extent to which the virtual is always process and production, rather than a product; a container of manifold tendencies or propensities that can be actualised, rather than a fixed sequence with a teleologically predetermined goal; an urgent, insistent, unpredictable force that can insert itself into (and break apart) the tangibility of concrete reality.

If 'to design' means always to engage with the making of the new, designing involves having a powerful perspective on the future. Where some design theorists argue that there is a future *only* by design (Fry 2009), we might say that design makes possible futures materially present now. It is in a crucial creative position that generates present experiences and the futures that they might become, by engaging with those future becomings. Designing creates the milieus where future, present and, indeed, past enter into being as process. Alfred North Whitehead writes: 'Immediate existence requires the insertion of the future in the crannies of the present' (1961: 191). It seems to us that this existence is one that is designed, in that it is constructed upon the manifold affects and effects of designing; and that this process of designing

existence also requires the milieu of the present (and all its crannies) as it inserts the future.

With all its own ‘middles’ (see O’Reilly here on milieu), designing also produces vectors that intersect a multiplicity of other forces – political, economic, social, cultural, experiential, institutional, and, as we have been arguing here, philosophical – and in so doing complexifies even further the processes engaged in the construction of present, future and past. It is not the future in itself but participates in its creation through becoming; it is not an event in itself but participates in its generation; it is not history itself that is designed, but the becoming past of the present. To be a designer, then, means to occupy the extraordinary space between the world as it is, the world as it could be, and the world that was. It means always to be ready to leap into the unknown. Which is, of course, not without risk.

There is a steadily growing awareness from within the world of design that the faster the pace of change (see Hroch and Marenko in this volume), the more engaged designers need to be, precisely because of the position they occupy in-between so many problem spaces, future-present-past complexes, and other social, cultural, political, economic entanglements. So: if designers are key agents directly and actively involved in this process of making worlds, they will need an array of theories, tested methods, strategic positions, figurations and fabulations with which to think. The aim of this book is to suggest that these can be found by connecting with Deleuze’s philosophy, and its own multitude of middles. Design theorist Victor Margolin (2007) believes that only few calls for social change have come from designers, and that the design community is yet to produce its own arguments about the kinds of changes it would like to see, though in the years since he said this, design has made more effort in impacting in this area (as Hroch discusses here). Unlike Margolin however, we think that the world of design is already traversed by terrific debates and is continuously in the process of re-assessing itself, its role and its aims. Margolin’s call for a deeper engagement of designers who face increasing complexity not only in terms of the array of products they design, but also in terms of the issues emerging from new practices, behaviours, lifestyles and relationships with the designed world, is not falling on deaf ears.

Genesis of the Book

We have already mentioned how our fortunate position working in theory and practice has contributed greatly to foment the reflections that

culminated in this book. Here we would like to chart some of the events and opportunities that informed the evolution of this project. Some of the material that has found a location here has come from a number of interventions that have kept us occupied and thinking in the past few years.

Betti Marenko was invited to present a paper at the *Deleuzian Futures* conference hosted by The Porter Institute for Poetics and Semiotics, Faculty of Humanities, Tel Aviv University in May 2011. This event constituted the ideal backdrop that enabled the initial idea of working design through Deleuze to develop forward and acquire unexpected articulations. Thanks must go to Ian Buchanan who was the first to suggest that a book on Deleuze and Design was indeed due for the Deleuze Connections series. While working on our book proposal a call for papers was issued and we received a huge number of abstracts and proposals. This gave us a clear indication of the appetite (in both the world of design and that of Deleuze studies) for a project that could combine them in original and innovative ways. The project started to acquire a ‘shape by debate’ during events and occasions both in London – where a series of talks and seminars with our postgraduate students at Central Saint Martins helped us to refine ideas and keep on sharpening our theoretical tools – and abroad. Like our ideas, we travelled far and wide, taking these interrogations to various parts of the world. In February 2013 we hosted in New York – together with fellow contributor Derek Hales – the *Design Studies Forum* panel on the theme of *Deterritorialising Design: Rethinking the Relationship Between Theory and Practice*. This event, which took place at the 2013 College Art Association conference, allowed us to test some of the initial lines of flight of the book with an audience of design theorists, practitioners and educators. Thanks to Stuart Kendall for graciously inviting us to share ideas in this forum. Further and equally stimulating discussions took place during the First Deleuze Studies in Asia Conference, *Creative Assemblages* at Tamkang University, Taipei, Taiwan in May 2013, when we hosted a panel titled *Deterritorialising Futures: Deleuze and Design*, with Derek Hales and John O’Reilly.

Conclusion

One of the main ideas driving this book is that design is a profoundly disrupting force that can be used to disrupt the Deleuzian paradigm, or what the field of Deleuzian Studies is becoming. Thus, the aim is twofold: to use Deleuze to disrupt design, while simultaneously using design to

disrupt Deleuze – taken as the complex of discourses coalescing around the name. It is a tenet both of Deleuze’s use of ‘becoming’ and of theoretical discussions of creativity (in the sciences as well as arts), that the act of becoming/creativity should allow others the space and energy to become/create. It is for this reason that an encounter between Deleuze and design must allow for the creative disruption of each element and that each is not positioned as a totalising discourse with power over the other. We might even say that the title should have been *Re-designing Deleuze*, that is, how to deterritorialise Deleuze through and with the disruptive force of design.

Acknowledgements

JB: Thanks, first, to Betti for reconnecting me with Deleuze; having dropped out of the Deleuze Machine since the Warwick conferences in the mid-1990s, my intellectual focus has been elsewhere (even though it has always had a strong whiff of Deleuze). I first encountered Deleuze while a postgraduate student at University of Warwick in 1988. My doctorate was supervised by Nick Land, whose genius was unfathomable and whose influence still affects me like radiation burn. I owe him much more than I can imagine. My colleagues and students on both BA Product Design and MA Innovation Management at Central Saint Martins have taught me much; I would like especially to thank two colleagues, Nick Rhodes and Monika Hestad, without whom my thoughts on design and innovation would be poorer. Another colleague, Dominic Stone, has been very supportive of my work on this project, as well as providing a space for discussion about design, management and complexity. In all my years at Central Saint Martins Lorraine Gamman has supported and cajoled me in so many ways. Working with Ruth Clarke on translating Anne Sauvagnargues’s chapter was an absolute joy.

Some of my thoughts collected here have been test-driven elsewhere. My chapter-specific thanks are found with that piece. Finally thanks to my family, Joanna, Ewelina, Tomasz and Jacek, for creating a productive milieu for this work with patience and much support.

BM: Thanks to the colleagues and scholars met at the numerous Deleuze Studies conferences I took part in during the past five years. The countless inspiring conversations I had in different parts of the world and the dazzling atmosphere of heady brainwork and free-spirited concept-making stayed with me long after the conferences were over, and inform obliquely this entire project. In particular I want to thank Nir Kedem, Patricia Pisters and Anne Sauvagnargues. All my colleagues on the team of BA Product Design, Central Saint Martins and in the Programme of Ceramic, Industrial and Product Design have been instrumental, each one in their own often idiosyncratic way, in shaping my understanding and love of design, and making me question it, always. They are too numerous

to mention. Thanks to Lorraine Gamman for her unfailing support. Thanks to the research team at CSM, in particular the Associate Dean of Research, Janet McDonnell, for believing in this project and supporting us with a research grant that allowed us to carve some precious time to think and write. Thanks to Carol MacDonald at EUP for her immense patience and for sticking with us even when the project seemed to be moving exceedingly slowly. I am grateful to, and humbled by, my students at Central Saint Martins. They are my most challenging audience yet. Finally, a very special and felt thanks to Piero Ricci, my former Professor of Sociology of Culture at the University of Urbino, who in 1990 one day told me: 'It is time you read Deleuze.'

JB and BM: This book is dedicated to our colleague and friend Nic Hughes who died when this book was beginning to take shape. Nic was a formidable designer and educator, and he had unfailing enthusiasm and dedication towards this book project. We wish to remember him by including here the abstract of the chapter he never had time to write:

Nic Hughes, 'Chattering Objects'. This chapter takes Deleuze and Guattari's connected notions of 'schizo flux' (1984) and assemblage and identifies their presence within various critical design collaborations. It shows how these concepts can be mutated through practise, culminating in alternative design approaches and new methodologies. In a 1972 issue of *L'Arc*, Deleuze describes how Guattari treated writing as a highly productive 'schizo flux' – a generative tool that produces numerous lines of flight. Transpose this idea into design and one immediately destabilises its key teleological mandates; design as 'schizo flux' is no longer primarily concerned with either achieving goals or solving problems. In fact, it neatly inverts the classic design formulae of providing answers, favouring instead a continuous flow of questions. Design as 'schizo flux' can be developed further by introducing the related concept of assemblage. This is useful if you take the view that design is an act of terraforming. It brings forth new worlds and artefacts. Seen through a Deleuzian lens these whole worlds are constructed from disparate heterogeneous parts – assemblages. In this 'flat ontology' the designer is only one of many entities contributing to the wider design matrix. Under this model designers essentially curate patterns, clusters and networks in order to establish worlds and spaces that pose questions. They re-order the existing furniture in order to produce question-factories. The two concepts from Deleuze and Guattari will be supported by three case studies from critical design: Dunne and Raby, DWFE and DSG. In their commitment to innovation and 'creating concepts' (Deleuze and Guattari 1994), Deleuze and Guattari augmented and re-patterned the work of many philosophers, practitioners and outsiders, using their ideas as DNA and giving birth to some wonderfully monstrous offspring. This chapter seeks to promote a similar approach within design, outlining existing progressive design trajectories and accelerating them further through a Deleuzo-Guattarian framework.

Notes

1. We have encountered design's collusion with capitalism a little above, for philosophy's see Deleuze and Guattari's *What is Philosophy?* 'Modern philosophy's link with capitalism, therefore, is of the same kind as that of ancient philosophy with Greece: *the connection of an absolute plane of immanence with a relative social milieu that also functions through immanence*' (1994: 98; original emphasis).
2. Management theorists Haridamos Tsoukas and Robert Chia take concepts from chaos and complexity theories deep into management and organisation theories (Tsoukas 1998; Tsoukas and Chia 2002). See also Brassett (2013).
3. See *Open Design Now* (Van Abel et al. 2011), a collaborative effort of Creative Commons Netherlands, Prensela, the Netherlands Institute for Design and Fashion and Waag Society, and events such as *The Future in The Making: Open Design Archipelago* (Milan Triennale 2012).
4. See Binder et al. 2011 for an excellent analysis of the meanings of design and its current transformations.
5. This is a practice promoted by IDEO (Brown 2008, 2009) and others (Berger 2009; Martin 2009; Neumeier 2009) as a way of incorporating design into business practices (as well as public and third sector organisations) in ways that were not traditional. It has been argued by these people that design offers ways of doing business (strategically, organisationally and culturally) that is necessary because traditional approaches (as taught on MBA courses (Neumeier 2009)) are inadequate. Some designers have found this liberating as it offers them new avenues for developing their own creative offers. Others have criticised it as cheapening their skills by saying that quick-fix workshops for CEOs on 'design thinking' involving post-it notes and brainstorming can be equated with designing (McCullagh 2010). Excellent overviews/critiques of this idea can be found in Kimbell 2011, 2012; Johansson-Sköldberg et al. 2013; Tonkinwise 2014.
6. We should note here that the difference embodied by each of these modals maps entirely different design scenarios, agendas and values, partially reflected in the distinction between Simon's and Buchanan's positions above.
7. See, for example, Centre for Philosophy and Design (CEPHAD), The Royal Danish Academy of Fine Arts, and *Design Philosophy Papers* (DPP), founded by Tony Fry, Professor, Design Futures Program at Griffith University, Queensland College of Art Australia, to name some of the most influential and established. Some notable design journals are open to more philosophical expressions: *Design and Culture* and *Design Issues* for example.
8. See, for example, Anthony Dunne and Fiona Raby's work (2013). Dunne was Professor and Head of the Design Interactions programme at the Royal College of Art in London, and Raby is Professor of Industrial Design at the University of Applied Arts in Vienna.
9. Signs of these affinities and alignments are evident, for example, in the way a dialogue has recently emerged between design and Bruno Latour's agential theory (2008) and Jane Bennett's radical materialism (2010). See also Kimbell 2013. Though this position is not without its critics too. See Hables Gray who writes: 'Like all subcultures, STS [Science and Technology Studies] has a number of shibboleths, conventional wisdoms that are charming, even though they are ridiculous if interrogated closely. The "agency of things" is one of the most annoying' (2014: 375).

References

- Alexander, Christopher (1971), *Notes on the Synthesis of Form*, Cambridge, MA: Harvard University Press.
- Almqvist, J. and J. Lupton (2010), 'Affording Meaning: Design-Oriented Research from the Humanities and Social Sciences', *Design Issues*, 26:1, pp. 3–14.
- Ballantyne, A. (2007), *Deleuze and Guattari for Architects*, London and New York: Routledge.
- Ballantyne, A. and C. Smith (eds) (2001), *Architecture in the Space of Flows*, London and New York: Routledge.
- Bennett, Jane (2010), *Vibrant Matter: A Political Ecology of Things*, Durham, NC and London: Duke University Press.
- Berger, Warren (2009), *Glimmer: How Design Can Transform Your Business, Your Life, and Maybe Even the World*, London: Random House Business Books.
- Binder, Thomas, G. De Michelis, P. Ehn, G. Jacucci, P. Linde and I. Wagner (2011), *Design Things*, Cambridge, MA and London: The MIT Press.
- Brassett, J. (2013), 'Networks: Open, Closed or Complex. Connecting Philosophy, Design and Innovation', in J. Cai, T. Lockwood, C. Wang, G. Tong and J. Liu (eds), *Design-Driven Business Innovation. 2013 IEEE-Tsinghua International Design Management Symposium Proceedings*, Beijing: IEEE, pp. 1–11.
- Brott, Simone (2011), *Architecture for a Free Subjectivity: Deleuze and Guattari at the Horizon of the Real*, Farnham and Burlington, VT: Ashgate.
- Brown, Tim (2009), *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*, New York: Harper Collins Publishers.
- Brown, T. (2008), 'Design Thinking', *Harvard Business Review*, June, pp. 84–92.
- Buchanan, R. (1992), 'Wicked Problems in Design Thinking', *Design Issues*, 8:2, pp. 5–21.
- Cache, Bernard (1995), *Earth Moves: The Furnishing of Territories*, Cambridge, MA and London: The MIT Press.
- Carpo, Mario (2011), *The Alphabet and the Algorithm*, Cambridge, MA and London: The MIT Press.
- Christensen, Clayton (1997), *The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You do Business*, Boston: Harvard Business School Press.
- Cox, Sir George (2005), *Cox Review of Creativity in Business: Building on the UK's Strengths*, Norwich: Her Majesty's Stationery Office.
- Coyne, R. (2005), 'Wicked Problems Revisited', *Design Studies*, 26, pp. 5–17.
- Deleuze, G. (2006), 'What is the Creative Act?', in G. Deleuze, *Two Regimes of Madness: Texts and Interviews 1975–1995*, trans. A. Hodges and M. Taormina, New York: Semiotext(e), pp. 312–24.
- Deleuze, Gilles [1990] (1995), *Negotiations 1972–1990*, trans. M. Joughin, New York: Columbia University Press.
- Deleuze, Gilles [1968] (1994) *Difference and Repetition*, trans. P. Patton, London: Athlone.
- Deleuze, Gilles [1966] (1991), *Bergsonism*, trans. H. Tomlinson and B. Habberjam, New York: Zone Books.
- Deleuze, Gilles [1970] (1988), *Spinoza: Practical Philosophy*, trans. R. Hurley, San Francisco: City Lights Books.
- Deleuze, Gilles and F. Guattari [1991] (1994), *What is Philosophy?* trans. G. Burchell and H. Tomlinson, London: Verso Books.
- Deleuze, Gilles and F. Guattari [1980] (1987), *A Thousand Plateaus. Capitalism and Schizophrenia 2*, trans. B. Massumi, London: Athlone.

- Deleuze, Gilles and F. Guattari [1975] (1986), *Kafka: Toward a Minor Literature*, trans. D. Polan, Minneapolis: University of Minnesota Press.
- Deleuze, Gilles and F. Guattari [1972] (1984), *Anti-Oedipus. Capitalism and Schizophrenia 1*, trans. R. Hurley, M. Seem and H. Lane, London: Athlone.
- Deleuze, Gilles and F. Guattari (1975), *Kafka: Pour une littérature mineure*, Paris: Éditions de Minuit.
- Dunne, Anthony and F. Raby (2013), *Speculative Everything: Design, Fiction, and Social Dreaming*, Cambridge, MA and London: The MIT Press.
- Eisenman, P. (1992a), 'A __ Way From/To Architecture', in C. C. Davidson (ed.), *Anywhere*, New York: Rizzoli, pp. 108–15.
- Eisenman, P. (1992b), 'K Nowhere 2 Fold', in C. C. Davidson (ed.), *Anywhere*, New York: Rizzoli, pp. 218–29.
- Eisenman, P. (1992c), 'Unfolding Events', J. Crary and S. Kwinter (eds), *Incorporations*, New York: Zone Books, pp. 423–6.
- Frichot, Helene and S. Loo (eds) (2013), *Deleuze and Architecture*, Edinburgh: Edinburgh University Press.
- Flusser, V. (1999), 'About the Word Design', in V. Flusser, *The Shape of Things: A Philosophy of Design*, London: Reaktion Books, pp. 17–21.
- Flynn, F. J. and J. A. Chatman [2001] (2004), 'Strong Cultures and Innovation: Oxymoron or Opportunity?', in M. L. Tushman and P. Anderson (eds), *Managing Strategic Innovation and Change: A Collection of Readings*, 2nd edition, Oxford: Oxford University Press, pp. 234–51.
- Foucault, Michel (1977), *Language, Counter-memory, Practice: Selected Essays and Interviews*, Oxford: Blackwell.
- Fry, Anthony (2009), *Design Futuring: Sustainability, Ethics and New Practice*, Oxford: Berg.
- Fulton Suri, J. (2003), 'The Experience Evolution: Developments in Design Practice', *The Design Journal*, 6:2, pp. 39–48.
- Giaccardi, E. (2005), 'Metadesign as an Emergent Design Culture', *Leonardo*, 38:4, pp. 342–9.
- Grosz, Elizabeth (2001), *Architecture From the Outside: Essays on Virtual and Real Space*, Cambridge, MA and London: The MIT Press.
- Guattari, Félix (1989), *Les Trois écologies*, Paris: Editions Galilée.
- Hables Gray, C. (2014), 'Agency, (Re)Invention, and the Internet: The Limits of High Theory', *Science as Culture*, 23:3, pp. 375–81.
- Hales, D. (2013), 'Design Fictions: An Introduction and Provisional Taxonomy', *Digital Creativity*, 24:1, pp. 1–10.
- Johansson-Sköldberg, U., J. Woodilla and M. Çetinkaya (2013), 'Design Thinking: Past, Present and Possible Futures', *Creativity and Innovation Management*, 22:2, pp. 121–46.
- Julier, G. (2013a), 'Design Activism: Introduction. Material Preference and Design Activism', *Design and Culture*, Special Issue: 'Design Activism', 5:2, pp. 145–50.
- Julier, G. (2013b), 'From Design Culture to Design Activism', *Design and Culture*, Special Issue: 'Design Activism', 5:2, pp. 215–36.
- Julier, Guy (2013c), *The Culture of Design*, 3rd edition, London: Sage.
- Kearnes, M. (2006), 'Chaos and Control: Nanotechnology and the Politics of Emergence', *Paragraph*, 29:2, pp. 57–80.
- Kimbell, L. (2013), 'The Object Fights Back: An Interview with Graham Harman', *Design and Culture*, 5:1, pp. 103–17.
- Kimbell, L. (2012), 'Rethinking Design Thinking: Part 2', *Design and Culture*, 4:2, pp. 129–48.
- Kimbell, L. (2011), 'Rethinking Design Thinking: Part 1', *Design and Culture*, 3:3, pp. 285–306.

- Kolko, Jon (2012), *Wicked Problems: Problems Worth Solving: A Handbook and A Call to Action*, Austin: Austin Center for Design.
- Latour, B. (2008), 'A Cautious Prometheus? A Few Steps Toward a Philosophy of Design (with Special Attention to Peter Sloterdijk)', in F. Hackney, J. Glynne and V. Minton (eds), *Proceedings of the 2008 Annual International Conference of the Design History Society*, Falmouth (3–6 September 2008), e-books, Universal Publishers, pp. 2–10.
- Lees-Maffei, G. (2012), 'Reflections on *Design Activism and Social Change*: Design History Society Annual Conference (7–10 September), Barcelona', *Design Issues*, 28:2, pp. 90–2.
- Lynn, Greg (ed.) (2004), *Folding in Architecture (Architectural Design)*, revised edition, New York: Wiley.
- McCullagh, K. (2010), 'Design Thinking: Everywhere and Nowhere, Reflections on the Big Re-think'; available at http://www.core77.com/blog/featured_items/design_thinkingeverywhere_and_nowhere_reflections_on_the_big_re-think__16277.asp (accessed 12 September 2014).
- Malpass, M. (2013), 'Between Wit and Reason: Defining Associative, Speculative and Critical Design in Practice', *Design and Culture*, 5:3, pp. 333–56.
- Manzini, E. (2014), 'Making Things Happen: Social Innovation and Design', *Design Issues*, 30:1, pp. 57–66.
- Margolin, V. (2007), 'Design, the Future and the Human Spirit', *Design Issues*, 23:3, pp. 4–15.
- Margolin, Victor and R. Buchanan (eds) (1996), *The Idea of Design*, Cambridge, MA and London: The MIT Press.
- Martin, Roger (2009), *The Design of Business: Why Design Thinking is the Next Competitive Advantage*, Boston: Harvard Business Press.
- Neumeier, Martin (2009), *The Designful Company: How to Build a Culture of Nonstop Innovation*, Berkeley: New Riders.
- Papanek, Victor (1985), *Design for the Real World: Human Ecology and Social Change*, 2nd edition, London: Thames and Hudson.
- Rajchman, John (1998), *Constructions*, Cambridge, MA and London: The MIT Press.
- Redström, J. (2008), 'RE:Definitions of use', *Design Studies*, 29, pp. 410–23.
- Redström, J. (2006), 'Towards User Design? On the Shift from Object to User as the Subject of Design', *Design Studies*, 27:2, pp. 123–39.
- Rittel, H. and M. Webber (1973), 'Dilemmas in a General Theory of Planning', *Policy Sciences*, 4:2, pp. 155–69.
- Sauvagnargues, Anne (2006), *Deleuze et l'art*, Paris: Presses Universitaires de France.
- Simon, Herbert A. (1969), *The Sciences of the Artificial*, Cambridge, MA and London: The MIT Press.
- Spuybroek, Lars (2008), *The Architecture of Continuity: Essays and Conversations*, Rotterdam: V2_Publishing/NAI Publishers.
- Steenhuisen, B. (2013), 'How to Design for Social Change: A Template', *Journal of Design Research*, 11:4, pp. 301–16.
- Stengers, Isabelle (2011), *Thinking with Whitehead: A Free and Wild Creation of Concepts*, Cambridge, MA and London: Harvard University Press.
- Tonkinwise, C. (2014), 'Design Studies – What is it Good For?', *Design and Culture*, 6:1 pp. 5–43.
- Tsoukas, H. and R. Chia (2002), 'On Organizational Becoming: Rethinking Organizational Change', *Organization Science*, 13:2, pp. 567–82.
- Tsoukas, H. (1998), 'Chaos, Complexity, and Organization Theory', *Organization*, 5:3, pp. 291–313.
- Tushman, M. L. and C. O'Reilly III [1996] (2004), 'The Ambidextrous Organization:

- Managing Evolutionary and Revolutionary Change', in M. L. Tushman and P. Anderson (eds), *Managing Strategic Innovation and Change. A collection of Readings*, 2nd edition, Oxford: Oxford University Press, pp. 276–91.
- Van Abel, Bas, I. Evers, R. Klaassen and P. Troxler (eds) (2011), *Open Design Now: Why Design Cannot Remain Exclusive*, Creative Commons, Netherlands: BIS Publishers.
- Verganti, Roberto (2009), *Design-Driven Innovation: Changing the Rules by Radically Innovating What Things Mean*, Cambridge, MA and London: Harvard Business Press.
- Williams, J. (2000), 'Deleuze's Ontology and Creativity: Becoming in Architecture', *Pli*, 9, pp. 200–19.
- Whitehead, Alfred N. [1933] (1961), *Adventures of Ideas*, New York: The Free Press.