

Søren Rosenbak

# The Science of Imagining Solutions



UMEÅ INSTITUTE OF DESIGN  
UMEÅ UNIVERSITY



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Design Becoming Conscious  
of Itself Through Design

Søren Rosenbæk

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Design Becoming Conscious of Itself Through Design

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Dissertation for the degree of Doctor of Philosophy in Industrial Design

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# abstract

This dissertation addresses a paradox in design: we currently live in a day and age that is fundamentally conditioned by artifice on all scales, and principled by a deep sense of contingency and possibility. In this world, any thing could always be something else. Design is a discipline uniquely capable of configuring artifice, instantiating it into a stream of different design artefacts that we are able to interact with. Beyond the comfort, joy and meaning these artefacts might bring to our lives, design in this way uniquely captures and shows forth possibility, not only on the scale of individual products, services etc., but also on the level of the artificial, in other words speaking directly to our contemporary human existence, to the sense of possibility *as such*.

We can say that—distinct from other disciplines—design contributes knowledge through this very practice of possibilizing. Strangely, design displays a curious lack of consciousness of itself with respect to this unique capability, preferring to instead put its growing array of design methods and design thinking tool kits to use in the latest problem areas, thereby implicitly affirming the lack of any distinct knowledge contribution at its core. With a commitment to reverse this dynamic by exploring this very capability, this dissertation concerns the prototyping of a pataphysically infused design practice, as a way of making design more conscious of itself.

Pataphysics, articulated by the poet Alfred Jarry at the turn of the 20th century Paris, and popularly referred to as ‘the science of imaginary solutions’, is a notoriously slippery substance, successfully eluding academic autopsy, let alone categorisation or definition. While critical design practice has extensively adopted methods and tactics from the avant-garde movements following and drawing on pataphysics—such as dadaism, surrealism and situationism—this dissertation seeks to rectify this incomplete lineage, by bringing out the timeless pataphysical impulse in design. This process of bringing out the pataphysical impulse, is what I discuss as an ‘infusion’ of pataphysics into my research practice.

The research practice consists of a series of five different projects, carried out in the methodological tradition of research through design, where I explore pataphysics as a possible conceptual foundation for design. In each of the projects, design’s capability to possibilize, is brought out just beyond the edge of design’s disciplinary domain, making a self-conscious foray into contemporary problem areas: printmaking (Workcentre 7120), global mass surveillance (Meta(data) morphosis), smart cities (Designing for a City of Lies), future making (Future

Domestic Landscape), and design discourse building (Design Research Failures).

By playing out across the material and immaterial, fluidly and consciously transgressing the actual and the imaginary in this range of different contexts, the dissertation shows what a pataphysically infused design practice is: a design that not only views its artefacts, experiments, and projects, but also itself, along with the world in which it operates, as imaginary solutions.

In addition to the practice itself, one of the imaginary solutions produced through the research practice is the science of imagining solutions. This is a theory describing the way in which a design conscious of itself is uniquely able to show forth possibility to the world and to knowledge as large. It discusses the study of this capability as an ‘epiphenomenology of design’, and offers ‘quantum poetics’ as a nascent vocabulary for describing the aesthetics of this capability. Further, it offers a reconception of criticality in design away from a historical perspective, arguing that a design consciously engaging with the edge of its own domain, understood as the space where it can comfortably possibilize, is a critical design practice.

Finally, this dissertation does not only concern design itself as a discipline, but with its focus on design’s unique capability to show forth possibility *as such*, more broadly speaks to a world that currently sees the sense of possibility being curtailed in numerous ways.

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ity to not only imagine the kind of design research community and discourse, I would like to see, but to build it together. Also, I want to thank Designfakulteten, in particular Maria Hellström Reimer, for connecting the dots across the Nordic countries in such an inspired manner. Many, many more people deserve a mention in this context—to name a few: Aya Musmar, Bastien Kerspern, Moritz Greiner-Petter, Max Mollon, Henriette Stykow, Sasha Abram, Feileacán McCormick, Andreas Streinzer, Saba Golchehr, Pablo Calderón Salazar, Virginia Tassinari, Nik Baerten, Peter Lloyd, Erik Stolterman, Clive Dilnot, Tristan Schultz, Régis Frias, Joachim Halse, Ingi Helgason, and Michael Smyth. Approaching the 100%, I also want to thank Peter Hall (50% opponent) and Nicolas Nova (90% opponent), for their generous input at two critical stages in my work.

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As much as I have made an attempt to mention the amazing participants and collaborators within the various project descriptions, I am sure some are not explicitly in there. Irrespective of the reason, I want to send everyone a big thanks for their crucial participation.

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# introduction

In the age of the artificial, human life is fundamentally conditioned by artifice, understood as that which could be other. This is a landscape principled by possibility in a profound sense, and a world in which design has a unique contribution to offer, not only by way of its capability to show forth possibility through the configuring of artifice (as a myriad of different design artefacts: products, services, experiences), but also by showing forth possibility *as such*. With all this in mind, it is puzzling how little we know about this capability, what design is actually capable of? Perhaps most puzzling of all, is design's own disinterest in this very question (Dilnot, 1999).

This dissertation addresses this double conundrum through the prototyping of an infused design practice, and the making of the science of imagining solutions. This is a theory describing a design that is becoming conscious of itself through design experimentation, approaching its unique ability to possibilize<sup>[1]</sup>, not as an abstract theoretical proposition, but as a concrete exercise—and indeed possibility—also for redesigning itself, both in terms of its practice and its conceptual grounding. This programmatic research journey has been fuelled by pataphysics, an appropriately instabile and radical remedy for waking up design from its slumber.

Pataphysics, articulated by the poet Alfred Jarry at the turn of the 20th century, and popularly referred to as “the science of imaginary solutions” (Jarry, 2006 [1911], p. 145), is a notoriously slippery substance that succesfully eludes academic autopsy let alone categorisation or definition (Department of Dogma and Theory, 2016). For design, finding itself unproductively stuck with these very questions, e.g. the search for a universal definition, pataphysics curiously offers a simultaneous attraction and repulsion: while one might reasonably exclaim that designers do nothing else but imagine solutions<sup>[2]</sup>, pataphysics too challenges design in a number of ways, perhaps most notably in design's aspirations towards a metaphysical realm. Importantly, rather than naively trying to do away with this contradictory relationship between pataphysics and design, this dissertation instead explores this tension in an unresolved manner through a series of five different projects in the tradition of research through design.

In each of these projects, design is making a foray of possibilizing into a seemingly impossible design space located at the edge of design's maneuvering space, confronting the question of what design is capable of through practice: printmaking (Chapter 4: Workcentre 7120), global mass surveillance (Chapter 5: Meta(data) morphosis), smart cities (Chapter 6: Designing for a City of Lies), future making



(Chapter 7: Future Domestic Landscape), and design discourse building (Chapter 8: Design Research Failures).

In this way, the projects, with their experiments and discussions, collectively set out to answer the two research questions:

1. What is a pataphysically infused design practice?
2. How can design, through the prototyping of this practice, become more conscious of itself?

Structurally, this dissertation has been composed with the reader in mind, as you are probably still baffled by the earlier mention of pataphysics, thinking: “what is this thing?” Chapter 1 is dedicated to this very question and to why it is so hard to explain? As we shall see, the difficulty in pinning down pataphysics is in fact revealing some of its essential qualities. As we are already on our way down the rabbit hole at this point, Chapter 2 then expands the bafflement to also include design, by unpacking the contradictory relation between pataphysics and design. This chapter also substantiates design’s lack of self-consciousness, while pointing to the potential for a design that cares for its unique contribution to the world and to knowledge at large. The research structure of the dissertation is discussed in Chapter 3, and on the other side of the five research projects already mentioned (Chapter 4–8), Chapter 9 concludes the dissertation by outlining a series of contributions, collectively laying out the science of imagining solutions, a theory for a design becoming conscious of itself.

[1] The term ‘possibilize’ is from Deleuze and his discussion of Jarry as a precursor to Heidegger (1998). In this dissertation, ‘possibilize’ is referring to the action of design showing forth possibility through itself, both in an artefactual sense, and in terms of possibility as such.

[2] I am indebted to Peter Hall for making this very exclamation.

## chapter 1

# Why Is It So Hard to Talk About Pataphysics?



Pataphysics, popularly referred to as “the science of imaginary solutions”, has been described as everything from “a method, a discipline, a faith, a cult, a point of view, a hoax. It is all of those and none of them” (Schattuck, 1960, p. 27). In this sense, for the outsider, pataphysics can be considered a notoriously slippery substance. Importantly, rather than a question of fanciful evasiveness or obscurity as empty posture, this slippery character tells us something essential about pataphysics itself. In this way, for someone unfamiliar with the term, the question of “what pataphysics is” is met with a response that at once dissatisfies any expectation for a straight answer, and simultaneously reveals something essentially pataphysical in this very refusal to offer a clear-cut response.

To offer a bigger picture, we can thus say that the difficulty with pinning down pataphysics from an external perspective, is nothing but a natural consequence of an internal pataphysical logic that radiates outwards in all and every direction, and hence also encompasses pataphysics itself, since pataphysics pervades all aspects of life. This conundrum is at the heart of the initial question posed. Andrew Hugill, in his recent book on pataphysics, opens by stating that “to understand pataphysics, is to fail to understand pataphysics” (Hugill, 2012, p. 1). To this one can easily add that “to fail to understand pataphysics, is to fail to understand pataphysics”—the point being that the crucial component here is not the success or failure to understand pataphysics, rather it is the notion of understanding it (especially in an exhaustive academic manner) to begin with. Through this lens, the whole enterprise of doing a PhD on pataphysics in an academic context quickly seems like a deeply self-contradictory task. While pataphysicians might not necessarily agree with this, it is important to stress that this is not the task undertaken, as this is a PhD in industrial design, infused with pataphysics. While this is an endeavour riddled with its own distinct paradoxes, it shifts the challenges in tackling pataphysics significantly, including the challenge in elaborating pataphysics in greater detail.

In one way, this initial chapter hopes to set down the preconditions for the reader to start seeing the need for introductory remarks such as this one, to gauge the vicious circle so to speak, so that we can enter its swirling motions with greater pleasure. This is not a matter of gaining an exhaustive, definitive knowledge about pataphysics, but rather starting to experience the qualities in the pataphysical substance that has infused this PhD in design throughout the last five years. Pataphysics is not something to be naively done away with in this chapter, neatly tied up in eight pages. On the contrary, it will seep through design foundations, design experiments, and concluding arguments, brought to the fore at times, and residing in the background at others. Additionally the chapter, together with the next, seeks to address the puzzlement, whether it has a taste of discomfort or perhaps curious delight, stemming from pataphysics, head on. At this stage it might be good to simply dive into pataphysics, to plunge into the rabbit hole with open eyes, to then later reflect further on the difficulty in articulating pataphysics, both in itself and in relation to design. However, hanging mid-air, a quick note: please notice that as pataphysics is not only illimitational but also “immune to categorisation and thus to appropriation and academic autopsy” (Department of Dogma and Theory, 2016), there will be no exit plan. Put in simpler terms, while the chapter devoted to introducing the reader to pataphysics might find its nominal end at page 19, pataphysics will never end, neither in this dissertation, nor elsewhere. With our insatiable academic expectations thus tuned, let us proceed.

## 1.1 What is Pataphysics?

To blatantly contradict all words of caution ushered so far in this first chapter, let us now immediately turn to the most popular definition of pataphysics in use: Pataphysics is the science of imaginary solutions.

As enticing and definitive-sounding as this response might be, it is however only a fragment of a much longer and richer definition, offered by the French poet Alfred Jarry in a work written 1897-1898 and published posthumously in 1911: *Exploits and Opinions of Dr. Faustroll, Pataphysician: A Neo-Scientific Novel* (Jarry, 2006 [1911]). With Jarry we can trace pataphysics back to his early days as a schoolboy at the Lycée Rennes, when he and his comrades would lampoon their teacher Hérbert, exclaiming that he was teaching them pataphysics. As Jarry made his way to Paris, the exorbitant pranks and their main subject of ridicule had matured into Ubu Roi, the main character of the notorious play of the same name, famously causing a riot at its opening and closing on Dec 10, 1896 at the Théâtre de l'Œuvre. Ubu would then again metamorphose into Dr. Faustroll, the titular figure of *Exploits and Opinions of Dr. Faustroll, Pataphysician: A Neo-Scientific Novel*, which offered this following passage of extralucidity:

An epiphenomenon is that which is superimposed upon a phenomenon. Pataphysics, whose etymological spelling should be ἐπί (μετὰ τὰ φυσικά) and actual orthography 'pataphysics'<sup>[1]</sup>, preceded by an apostrophe so as to avoid a simple pun, is the science of that which is superinduced upon metaphysics, whether within or beyond the latter's limitations, extending as far beyond metaphysics as the latter extends beyond physics. Ex: an epiphenomenon being often accidental, Pataphysics will be, above all, the science of the particular, despite the common opinion that the only science is that of the general. Pataphysics will examine the laws governing exceptions, and will explain the universe supplementary to this one; or, less ambitiously, will describe a universe which can be – and perhaps should be – envisaged in the place of the traditional one, since the laws that are supposed to have been discovered in the traditional universe are also correlations of exceptions, albeit more frequent ones, but in any case accidental data which, reduced to the status of unexceptional exceptions, possess no longer even the virtue of originality.

DEFINITION.– *Pataphysics is the science of imaginary solutions, which symbolically attributes the properties of objects, described by their virtuality, to their lineaments* (Jarry, 2006 [1911], p. 145).

Jarry is a key figure in pataphysics, as he produced not only a range of seminal pa-

taphysical texts, but also theatre plays, architecture, graphics, and much else. Testament to the prolific pataphysical output within his short life span, one frequently encounters accounts of his highly pataphysical existence. Without questioning these assertions, it is important to understand that there has been, and still is, a degree of confusion around what pataphysics *is*, with how it was eloquently *formulated and exerted* by Alfred Jarry himself about more than a century ago in Paris. While it is easy to ascribe this inclination to Jarry's sheer pataphysical radiance, it is also important to remember that Jarry did not build a cult around himself as part of his articulation of the pataphysical dimension of the universe (as will be elaborated in Chapter 2: The Eclipse of Metaphysics). As the later Vice-Curator of the Collège de 'Pataphysique<sup>[2]</sup>, Opach puts it: "I insist, here and now, that even had Jarry never existed, that we are pataphysicians, and so would have invented 'pataphysics anyway" (Brotchie, 1995). The Collège de 'Pataphysique was founded in 1948 as an institution dedicated to the conscious study of pataphysics, "these most important and serious of all problems: the only ones that are important and serious" (<http://www.college-de-pataphysique.fr/>). While pataphysics itself pervades time and minds in its sheer illimitational glory, the founding of the Collège, with its intricate hierarchy, statues, ceremonies, departments etc., points to a fundamental difference between conscious and unconscious pataphysics. As they put it themselves: "It is not a question, as some simple minds who take Jarry for a satirist seem to think, of denouncing human activities and cosmic reality; nor is it a question of promoting a mocking pessimism or a corrosive nihilism. On the contrary, it is a question of discovering the perfect harmony in all things, and through this harmony the profound concordance between people's minds (or, equally, the ersatz which takes the place of mind). It is a question of a few people doing consciously what all others do unconsciously" (ibid.) Since then a wealth of other institutes and initiatives has sprung up across the world, as e.g. visually documented by 'Patakosmos – Pataphysical Terrestrial and Extraterrestrial Institutes Tourist Map (<http://patakosmos.com>). With pataphysics seeping into the world at large, it is also worth mentioning its radiant influence on subsequent avant-garde movements, such as dada, surrealism, futurism, situationism, and oulipoism<sup>[3]</sup>, and the postmodern (e.g. Bök, 2002; Levy & Rabaté, 2005). Notably, contrary to the general exhaustion felt across this diverse strand of -isms, pataphysics has managed to fly under the radar.

At first the notion of a pataphysical institute might seem contradictory to pataphysics itself. For the untrained eye meeting the Collège de 'Pataphysique at first glance, it could seem like the pinnacle of both academic self-importance and sectarian convictions. Rather than simply inhabiting these qualities, the Collège is rather demonstrating its pataphysical conscious through this at once outmost serious and most laughable existence. Part of the joy of pataphysics lies in this

fundamental paradox: the intricate structures, statutes, ceremonies, calendars, etc. built on a fundamental understanding of their imaginary nature, demonstrating a conscious effort to reveal not only the pataphysical nature of themselves, but the world at large, by example, by doing. Shattuck stresses how “[t]he Collège of Pataphysics no better and no worse than the French Academy or than the Hilldale Garden Club Men’s Auxiliary Committee of Three on Poison Ivy Extermination. The Collège, however, being aware of its own nature, can enjoy the spectacle of its own pataphysical behavior” (1960, p. 29).

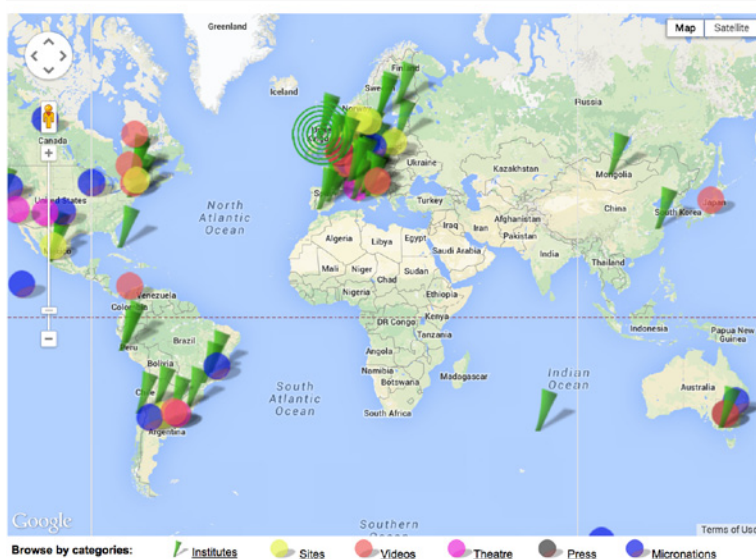


Fig. 1. Screenshot of PATAMap from PATAKOSMOS, <https://www.patakosmos.com/>.

This joy is due to each of these institutions being exceptions. Indeed, for the pataphysician, seen through the science of the particular, the world is wholly comprised of exceptions. Any exercise in deducing or inducing conventional logic or rules in a positivist manner is at best the amusing fruit of scientific imagination, at worst lazy circumventions made in the name of progress, utility, truth claims etc. And yet, how do these exceptions constitute a science? Bök points out that “[w]hile a metaphysical science must rule out exceptions, such exception are the rule (in which case they are no longer exceptions); instead, the rule is itself the exception in a ‘pataphysical science that rules out the rule’” (Bök, 2002, p. 39). With this acute awareness that “nothing is any other thing” (Brotchie, 2014, p. 24) the pataphysician thus treats all these exceptions as equivalent.

This is a great cliffhanging moment, where certain pataphysical aspects brought forth already start pointing forward to other sections in the dissertation, in which they unfold in the company of design. Thus, this question of exceptions and equivalence is more fully developed alongside the designerly notion of ‘the ultimate particular’ (Nelson & Stolterman, 2012) within Chapter 2 (2.3). Similarly, Bök’s comment on the distinction between pataphysics and metaphysics traces back to Jarry’s definition, in which pataphysics as “the science of that which is superinduced upon metaphysics, whether within or beyond the latter’s limitations, extending as far beyond metaphysics as the latter extends beyond physics” (2006 [1911], p. 145). This question of pataphysics superinducing or perhaps superseding metaphysics within design is the focus of ‘The Eclipse of Metaphysics’ (2.4). Related to the intricate, complex structure of the Collège de ‘Pataphysique, Chapter 2 also sees a discussion on the role of bureaucracy as a trivial everyday intersection between pataphysics and design (2.5). Finally, from pataphysics’ ability to fly under the radar, its curious omission in the tracing of the avant-garde roots of design is explored in ‘A Non-History of the Pataphysical Impulse in Design’ (2.7).

Leaping back to Jarry’s conclusive short-hand definition, one part in particular begs a bit of further explication already at this stage, since it will show up in much in various guises across the dissertation: “Pataphysics is the science of imaginary solutions, *which symbolically attributes the properties of objects, described by their virtuality, to their lineaments*” (2006 [1911], my italics). As noted by Hugill (2011), this second part of the sentence is perhaps the most challenging. He goes on by providing the following citation of Ruy Launoir, which should illuminate the matter further:

We represent the real according to our usage of it or according to our very anthropomorphic perception of it. The lineaments could therefore be either the outline of these practices, or, which amounts to the same thing in the end, a sort of elementary structure—we know not what—of what is made manifest. All our ideation bears its mark, and no doubt always exactly in the same way, even though circumstances, and indeed individuals, may vary.

We cannot suppress these lineaments [...] but we can at least divert our habits and free up our thinking.

We must, by considering the possible ways in which we can imaginatively extend all the aspects of an object, be able to combine them in order to obtain a new representation of a linear “something”; pataphysical freedom will be attained at the moment when we can think of objects at once as ordinary and in many other ways, being conscious only of the differences in ingenuity between these representations.

This does not exclude other interpretations: one could say, more simply, that the pataphysician proposes to decorate with new solutions our representations of the poverty-stricken, linear, “world” (Launoir, 2005 via Hugill, 200t, my emphasis).

It is worth keeping this conception of the lineaments in mind, as they will surface through the dissertation, implicitly and explicitly.

What else? As a new member of the London Institute of Pataphysics, you receive a remarkable small book titled *'Pataphysics: 123 Definitions and Citations, from 69 Authors, in Dutch, English, French, German, Italian and Latin*, published by The Department of Dogma & Theory under the London Institute of 'Pataphysics (Brotchie, et al., 2003). As pointed out by Racinski in her dissertation on creative computing and pataphysics (2016), this kind of strategy for defining pataphysics is highly instructive. Thus, like she opens her introduction on pataphysics with a few examples of different definitions, I would like to end this subchapter in a similar manner, as no text sporting the headline 'What is 'Pataphysics?', would be complete without this:

If physics proposes: 'You have a brother and he likes cheese', then metaphysics replies: 'If you have a brother, he likes cheese'. But 'Pataphysics says: "You don't have a brother and he likes cheese".  
(Perec in Brotchie et al., 2003, p. 46).

Beyond 'Pataphysics lies nothing, 'Pataphysics is the ultimate defence.  
(Shattuck in Brotchie et al., 2003, p. 56).

'Pataphysics passes easily from one state of apparent definition to another. Thus it can present itself under the aspects of a gas, a liquid or a solid.  
(Patafluens in Brotchie et al., 2003, p. 12).

## 1.2 An Incomplete Lexicon of Pataphysical Concepts

This is a short lexical intermezzo, listing just a few of the key pataphysical concepts. Of course this work has already been done in various ways, both more extensively, such as the London Institute of Pataphysics' special issue of its journal devoted to 'equivalence' (Foulc et al., 2014), and also less extensively, as on the Wikipedia page of "pataphysics".



Here, I will focus on pataphysical concepts which are at the forefront within this dissertation: ‘syzygy’, ‘clinamen/swerve’, and ‘anomaly’. Other concepts such as ‘plus minus’ and ‘antinomy’, will of course not cease to exist by way of their deliberate omission of this section. So while the lexicon is incomplete, these omitted concepts will nonetheless exert their influence in the background.

Finally, some of the concepts mentioned here will surface more fully within the design experiments, with additional elaborations in relation to design practice. While the following entries hopefully will equip the reader with later delightful *déjà vu* experiences, the main point of supplying this very brief and incomplete lexicon is to show how the concepts already in this ‘pure pataphysical state’ exist, intersect, and together constitute a certain pataphysical logic.

### 1.2.1 Syzygy

Syzygy finds its origin in the Ancient Greek *syzygos* (“yoked together”), a combination of *syn-* (“with, together with”) and *zygon* (“yoke”) (<http://Merriam-Webster.com>). In astronomy it describes the alignment of three planetary bodies within a gravitational system, as can be experienced in an eclipse. In pataphysics, such unexpected alignments, e.g. surfacing in surprising constellations of language, are a great source of laughter, “[p]ataphysical laughter (...) is the one human expression of the identity of opposites (...) if we pataphysicians often feel our limbs shaken by laughter, it’s the dreadful laughter from facing the clear evidence (...) that life is a scandal” (Daumal, 1995 [1970], p. 28-29 via. Bök, 2002, p. 42). Hugill highlights the difference between syzygy and serendipity, arguing that the latter doesn’t have the scientific exactitude of the syzygy (2012, p.14). He goes on: “Here we see a parting of the ways between pataphysics and surrealism, for while both embrace Chance as a productive principle, pataphysical chance is neither irrational nor subconscious. There are laws that lie behind pataphysical chance, but they are the laws of pataphysics: contradictions, exceptions, and so on” (ibid.).

### 1.2.2 Clinamen/Swerve

The concept of *clinamen* finds its origin in the dispute between Epicurus and Democritus (both grounding their philosophies on atomic theory): “Democritus argued that atoms, the prime and irreducible components of all matter, fall with unvarying linearity: this motion sets up causal patterns that determine everything from physical phenomena to human thought and action. Epicurus chose to refute this notion of an endless chain of causality in its most crucial point: linearity. He argued that the atoms do not always fall straight down, but rather swerve from time to time; it is precisely this swerve that becomes the locus and the guarantor

of free will” (Motte, 1986, p.263). As with the rest of Epicurean philosophy, this concept survived through ‘De rerum natura’ by Lucretius, in which he coins *clinamen atomorum* as “swerve of the atoms.” He further explains:

Here too is a point I’m eager to have you learn.  
Though atoms fall straight downward through the void  
by their own weight, yet at uncertain times  
and at uncertain points, they swerve a bit-  
enough that one may say they changed direction. And if they did not  
swerve, they all would fall downward like raindrops through the boundless  
void; no clashes would occur, no blows befall  
the atoms; nature would never have made a thing.  
(II, 216-24, via *ibid.*, p.264).

Pataphysical energy finds one of its primary sources in this sudden deviation from the boundless (deterministic) void. Chance, uncertainty, and unexpected, if ever so slight, bias, comes to signify this motion. To this, Lucretius adds:

To continue: if all movement is connected,  
(new movement coming from old in strict descent) and atoms never, by  
swerving, make a start  
on movement that would break the bonds of fate and the endless chain  
of cause succeeding cause,  
whence comes the freedom for us who live on earth? Whence rises, I say,  
that will torn free from fate, through which we follow wherever pleasure  
leads,  
and likewise swerve aside at times and places not foreordained, but as  
our mind suggests?  
(*ibid.*, p. 264).

As noted by Warren F. Motte, Jr., Lucretius himself performs a swerve by following and reaffirming the atomic theory of Democritus (“that atoms are the constituents of all matter and the antecedents of all phenomena, agreeing that their movement can be characterized as a downward fall”) to a point where he deviates, with the introduction of deviation (swerve) itself (1986, p. 265). Not dissimilarly, Hugill notes that for Epicurus, “the idea of *clinamen* is a fine example of an imaginary solution, since [he] had little or no experimental evidence on which to base his theorizing” (Hugill, 2012, p.15).

### 1.2.3 Anomaly

Anomaly as we know it refers to a deviation from the common rule. As recalled from the earlier definition from Dr. Faustroll, “the laws that are supposed to have been discovered in the traditional universe are also correlations of exceptions, albeit more frequent ones, but in any case accidental data which, reduced to the status of unexceptional exceptions, possess no longer even the virtue of originality” (2006 [1911]). Thus, any anomaly is nothing but yet another (equivalent) exception, and as such it only exists within this rule, “the rule [itself being] the exception in a ‘pataphysical science that rules out the rule” (Bök, 2002, p.39). Seen this way, the anomaly is deeply enmeshed in pataphysical contradiction.

[1] As noted by Hugill (2012, p. 7–8), this is the only time Jarry uses the apostrophe preceding pataphysics. There is a debate around whether to use it or not, as well as an official ruling by the Collège de ‘Pataphysique. In this dissertation, in line with this ruling, I will generally refrain from using it, unless discussing the pataphysics of the word ‘pataphysics itself (see 9.1.), or when making other direct references to e.g. the Collège.

[2] Dr. Faustroll himself serves as the Immoveable Curator of the Collège.

[3] The Oulipo, short for Ouvroir de littérature potentielle, in fact started as a subcommittee of the Collège de ‘Pataphysique in the 1960s.

chapter 2

# Why Is It So Hard to Talk About Pataphysics and Design?



"Why is it so hard to talk about pataphysics and design?" might warrant an immediate preceding question: "Why talk about pataphysics and design in the first place?" This is the question that lies at the heart of this chapter. As we shall see, if not echoing Ubu's famous utterance: "Pataphysics is a branch of science which we have invented and for which a crying need is generally experienced" (Jarry, 2003 [1893] in Broatch et al., 2003, p. 33), design certainly displays an occasional pataphysical longing. Pataphysically, we can of course view this entire exercise as yet another imaginary solution—the appropriate question then becomes "to what problem?"

As we shall see, the relation between pataphysics and design can be characterised by different degrees of attraction as well as repulsion. Importantly, these two contrasting forces don't seem to cancel each other out—rather they amount to a curious relation riddled with paradoxes and potentials. And thus—as our initial bafflement and objections over glaring incompatibilities join hands with surprise and excitement over emerging affinities—while it is indeed hard to talk about pataphysics and design, another, just as valid headline might be 'Why Is It So Easy to Talk About Pataphysics and Design?' While the two questions will be tackled as two sides of the same coin in this chapter, it seems inescapable that the bringing together of pataphysics and design at first glance presents a number of more or less obvious challenges from a design perspective. This is essentially what the headline reflects, and this initial difficulty will serve as our natural point of entry into the unraveling of what will emerge as a more complicated, and arguable much more interesting, relationship throughout this chapter.

## 2.1 Finding Ground: Tracing the Topography

### 2.1.1 The Landscape

Where are we? What is this landscape in which we exist? To begin with, one might simply recognise that no developed account of pataphysics and design exists at this point. While all design of course is pataphysical, it is curious to note that neighbouring fields to design all display a higher degree of pataphysical articulation, such as literature (Price, 2011; Castro-Klarén, 1975), philosophy (e.g. Baudrillard, 1992; Deleuze, 1964; Deleuze 1998), fine art (Levy & Rabaté, 2005; Wallis & Wilson, 2011; Venis, 2013), architecture (Ahmed & Jameson, 2013), music (O'Dair, 2014), theatre (Esslin, 1960), digital humanities (Drucker, 2009; Hugill et al. 2013), gaming (Giddings, 2007) etc. How come the relationship between pataphysics and design is so strangely unarticulated? What to make of this gaping absence?

Before we approach this question more directly from within design, it might be interesting to dwell a bit on these neighbouring disciplines, and see how they reflect on this question of broader pataphysical uptake. From the perspective of literature, Katie Price, a literary scholar, highlights how Dr. Faustroll acts as a pataphysical illustration rather than an (impossible) description. From this fact that Jarry chose to bring forth pataphysics in a novel rather than a treatise, she goes on to induce that literature “is the most appropriate venue in which to conduct ‘pataphysical research (even research into how to define the term itself)’” (Price, 2011, p. 28). While this somewhat protective claim in part can be read as an example of the before-mentioned confusion between what pataphysics is (illimitational and eternal) and how Jarry articulated it, we should also note that Jarry (indeed by his life illustrating a tremendous pataphysical energy) designed graphics for the magazine *L'Ymagier*, designed his own home, *Le Tripode*, etc., took great delight in public performances, etc. and much else (Brotchie, 2011). Already at this stage, it is possible to spot a tension between the way in which conscious pataphysics observes the world at large as its playground (the departments at the Collège are a great testament to this), and the way in which other disciplines attempt to limit pataphysics, perhaps to better tame and it to fit some of the hegemonic knowledge structures which pataphysics so obviously—and in this case somewhat ironically—parodies and explicitly exists beyond. In this light, it is worth speculating on the degree to which the lack of pataphysical articulation in design has to do with the particular coupling of pataphysics and design, or whether it can be ascribed to more general power structures across various practices, disciplines and knowledge domains. In the next section, we will look further into this situation, which Tony Fry, cited by Dilnot in his discussion on design and knowledge (1999), has

perfectly captured with the sentiment: “Design . . . does not currently occupy the minds of many disciplines” (Fry, 1997, p. 53 via Dilnot, 1999). Perhaps design, seen as an applied art, the icing on the cake so to speak, is simply a latecomer to the party? This discussion becomes interesting, inasmuch as pataphysics views everything as pataphysical. We can say that pataphysics, per definition, is not able to be contained in one party. So while design, like everything else in this world, has always been pataphysical, something can instead be said for design becoming aware of this fact. In other words, design is already at the party, but rather than doing tequila shots and dancing salsa with fine art, literature, and the rest, it is currently napping in the corner of the room.

Importantly, stating that there is a gaping absence in the articulation of the relationship between pataphysics and design is not to say that any connections haven’t been made whatsoever. Just like designers haven’t shied away from incorporating later avant-garde movements such as surrealism and situationism, several design practitioners and theorists have brought pataphysics and design into play in various ways and for different reasons. It is thus entirely possible to find design articles as well as design projects that reference pataphysics explicitly. To this one can add implicit references that are unarticulated, but exist nonetheless if one looks for them. Examples could be the evocation a certain pataphysical spirit in a design artefact<sup>[1]</sup>, whether in its immediate aesthetical qualities or perhaps in the motivation behind its instantiation.

However, taking a closer look at the more conscious, existing connections between pataphysics and design, we notice that they are fragmentary and highly different in kind. Here, the attentive reader might already exclaim: Sounds very pataphysical to me! Absolutely. This initial scan of the field is by no means an attempt to discredit the significance of said connections, but merely to point out that this is the kind of landscape in which this doctoral dissertation in industrial design exists: Pataphysics occasionally surfacing in various projects and arguments, to then dissolve again as the trains of thought, along with serially monogamous design practices, continue onwards and elsewards. Much more rarely, if ever, do we see a sustained and more developed engagement between pataphysics and design. Before heightening the resolution of this picture further, I would like to zoom in and present a few initial examples for the reader. Rather than a full review of all existing projects that bring pataphysics and design into play, the hope is that this initial glance will help increase our understanding of the topography of this landscape. At this point, it should be noted that other examples will surface later in the dissertation, e.g. when a fruitful link can be made in relation to a certain design experiment or a line of argumentation. Thus, in lieu of an exhaustive scan of the field, other works will be illustratively weaved into the text in an ad hoc

appositive manner.

Pataphysics Design (n.d.) by Andrew Wenner

Pataphysics Design appears to be a company/studio of Andrew Wenner, a digital prop designer. Originally hosted on <http://pataphysicsdesign.com/>, the site no longer exists (as of May 2 2018), and thus it appears that the company/studio has closed down as well. The landing page originally offered the following definition of pataphysics:

pa-ta-phys-ics  
/.pätə'fiziks/ noun

The branch of philosophy that deals with an imaginary realm additional to metaphysics. Also described as “The science of imaginary solutions” (<http://pataphysicsdesign.com/>).

The rest of the site contained a quote on computer animation by John Lasseter, and a list of services on offer: Motion Graphics, 3D Animation, 3D Product/Environment Modelling etc. Together with social media plug-ins, all of this is placed on top of layers of motion graphics (most likely a show reel). However, a short intro animation of Pataphysics Design do still exist on the video streaming services Vimeo and Youtube (Wenner, 2013). In this clip of motion graphics, a 3D animated particle or cell subsumes twelve other smaller cells against the backdrop of outer space, to then heat up and explode. A Pataphysics Design logotype emerges in a spiralling, swerving effect, and a part of the conclusive logo is an abstracted 2D version of the exploded particle, with a smoking effect added. The reference to pataphysics primarily lies on this short intro video. The featured definition of pataphysics is at a bare popularised minimum, and there is no ‘About’ section explaining the link between pataphysics and design further, let alone how the given practice reflects on this relation.



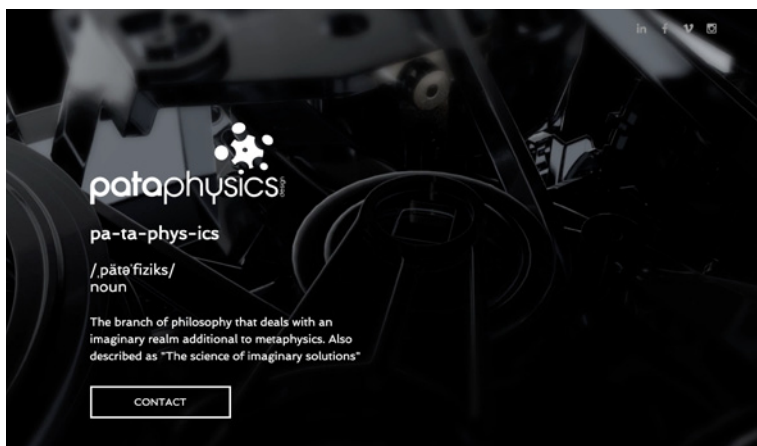


Fig. 2. Screenshot of the now defunct website <http://pataphysicsdesign.com> by Andrew Wenner.

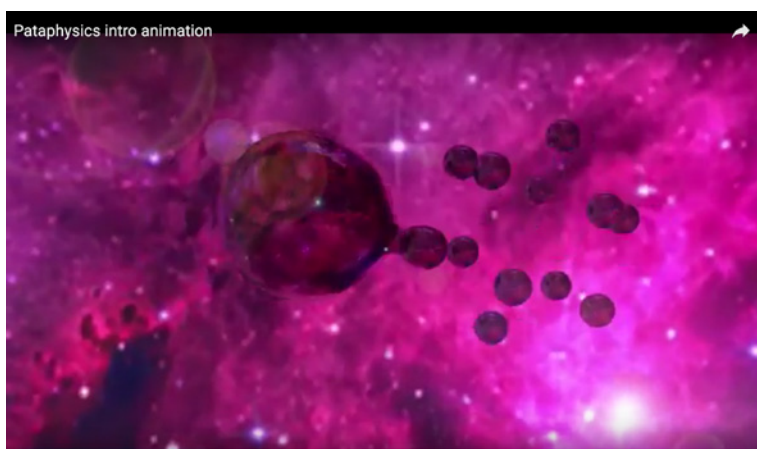


Fig. 3. Still from intro video to 'Pataphysics Design' by Andrew Wenner (2013).



Fig. 4. Still from video of The 'Patachronic Clock (2009) by Tobias Revell

### The 'Patachronic Clock (2009) by Tobias Revell

The 'Patachronic Clock is a kinetic motion clock by Tobias Revell from 2009. As each constituent second is represented by an individual clock, and the larger wheel turns with a speed of “one second per clock” passing along, the clock effectively traps each second in a given position (assuming the clock is viewed from a static position). On his website Revell elaborates:

Based on the work of the notorious 'Pataphysicists, this clock shows us a different view of time and the flaws and potentials of the constructions we use to measure it. One minute is trapped forever on the clock, the body winds the minute in as each second hand winds it out. Time remains the same at any one point and to move through time, the user must walk around the clock, releasing the minute from its eternal bondage. A clock is only our best representation of time and our best attempt to tame it, the 'Patachronic Clock extends that metaphor, creating a minute in captivity. (Revell, 2009)

We don't see the clock in use in the video (by an external user, i.e. not counting the gaze of the camera as a “POV user”), and the clock itself appears decontextualized, placed on the floor in what looks like an empty hallway. A series of extreme close-ups show us its various parts, presenting us with enough clues to understand its operation and mechanisms. In this way, the video communicates the clock itself and gives the audience an idea of the experience of looking at the object and its

various parts. On Designboom, one of the sites where the project originally was featured, Revell adds: “pataphysics is a pseudophilosophy dedicated to studying what lies beyond the realm of metaphysics. thus each second has its own clock that changes by hitting a stopping as a wheel spins around. this principle thus ‘separates time from it’s unilateral bond to space’” (<http://tobiasrevell.tumblr.com>)

Asked to reflect on the project in 2018, Revell points out that he was an undergraduate at the time—nine years ago—and that his current reflections on his past thinking and motivations naturally should be read in this light (personal communication, March 16, 2018). On the question on how the ‘Patachronic Clock is pataphysical, he highlights the way he was thinking of “expanded notion of everyday interactions - what else things could be and how they could work - how an absurd perspective might give us new insight. I have always been into humour as a communicative tool and this felt rich and appropriate for this project too. I had (maybe still have) an understanding of pataphysics as a ‘metaphor of a metaphor’ and I was looking at how we measure time as a metaphor of what time is” (ibid.). In this way Revell makes a particular coupling of design and pataphysics within his project. The question of time (its importance, meaning, measurement etc.) can be said to be one hinge between design and pataphysics in the work.

As one can imagine, from a pataphysical perspective, time is one of the dimensions of life that has attracted some of the grandest imaginary solutions, such as the Western notion of a linearity: with a set past behind us, an ever fleeting present, and an open future ahead of us. It should thus come as no surprise that pataphysics has devised its own calendar, and that Jarry—himself a student of the philosopher Henri Bergson, who formulated a philosophy of time around his particular notion of ‘duration’ (*‘la durée’*)—produced an elaborate treatise on time and how to build a time machine (Jarry, 2013). At once presenting a rather complicated and yet very pedagogic argument, he famously concludes “Duration is the transformation of a succession into a reversion. In other words: THE BECOMING OF A MEMORY (ibid., p. 16). This is important, due to the way in which design, understood as a modern discipline in a Western context, is completely intertwined in a core industrial logic along with a highly particular Western conception of linear time and societal advance. Bringing us back to the watch and in this way to the question of time contained and brought to expression through a designed artefact, Jarry elsewhere exclaimed: “Why should anyone claim that the shape of a watch is round — a manifestly false proposition — since it appears in profile as a narrow rectangular construction, elliptic on three sides; and why the devil should one only have noticed its shape at the moment of looking at the time? Perhaps under the pretext of utility” (Jarry (2006) [1911], p. 146). From a design perspective, we thus see how pataphysics destabilises the dominant Western



(AA) Pataphysics in Albertopolis (2013-14) by Miraj Ahmed and Martin Jameson

Pataphysics in Albertopolis was a full-year course running 2013-14, taught by Miraj Ahmed and Martin Jameson at Architectural Association School of Architecture (AA) in London for the class Intermediate 13. At its base the recurring annual course tackles the concept of 'otherness' in architecture in various ways. Before pataphysics, it had thus examined otherness through a natural evolution of concepts including heterotopia (after the Foucault essay), formless-ness (through Bataille) and Void through artists such as Yves Klein and Marcel Duchamp (personal communication, December 9, 2015). For the school year 2013-14, Ahmed & Jameson focused on Albertopolis, the affectionate synonym designating the museum district in South Kensington, London, as a site for pataphysical explorations in architecture. Albertopolis emerged following the Great Exhibition of 1851 as a vanguard of new knowledge (Ahmed & Jameson, n.d.), and its many cultural and scientific institutions includes the Victoria and Albert Museum (V&A), to this day one of world's most influential museums for art and design. Part of the Pataphysics in Albertopolis course brief reads:

Throughout the 20th century we have seen great shifts in all spheres, where what was apparently certain or rational became ruptured. Ideas in science went through huge upheavals. We live in a time in which physics – or 'natural philosophy' – is discussing strange behaviours that are perhaps beyond the physical and might be described as 'metaphysical' or even 'pataphysical'. Pataphysics, Alfred Jarry's science of exceptions and imaginary solutions, takes systems and ideas and destabilises or reinvents them to the point of absurdity. What is interesting here is the importance of the existing order and its relation to the reinvention. This viewpoint will become the backbone to the year in order to intervene within Albertopolis by proposing new institutions that are representative of current and future thought (Ahmed & Jameson, 2013, p. 2).

Following the discovery of the course's existence, I met with Miraj and Martin at AA in November 2015 to discuss the course with them, and we followed this up with an interview in writing. Pataphysics in Albertopolis is an extremely interesting and rich pata-design encounter for several reasons. First off, while architecture and design has notable differences (as well as obvious similarities), the task of bringing pataphysics into architecture through a year-long curriculum of intertwined theory and practice, makes the course highly relevant. This is amplified by the fact that course brief is directed towards a particular architectural problem field (Albertopolis), which is simultaneously explored by ten students. Notably, during the year, each student would first design a device that would embody and

explore a certain phenomenon that would later act as the guiding principle for a larger structure. This iterative way of bringing pataphysics and architecture into play is interesting, in that it does not only supply a wide variety of pataphysical architecture/design output, but also addresses this process of bringing the two together across various scales and experiments. Additionally, in an education context, *Pataphysics in Albertopolis* almost reads as a brief, prompting one to speculate what a similar course in design might look like, e.g. at Umeå Institute of Design, or elsewhere.

All the student projects from *Pataphysics in Albertopolis* present different novel ways of bringing together pataphysics and design. Viewed as a whole, the diversity across the output is striking, with all students not only picking up on different pataphysical phenomena, but also displaying a novelty in form language and aesthetic qualities within the various designerly/architectural explorations. As a result, a range of promising tactics surface through the various interventions and encounters. While a complete discussion of all these outputs is far too extensive at this point, I would instead discuss two projects here, in order to illustrate the larger collective outcome.

Yassmina Jaoude ended up designing a vastly tall, flexible modular structure soaring upwards through the skies above Albertopolis. As part of her process she investigated the way in which a helium balloon carrying a pencil tied to a string would draw on a surface. She then extended this structure into her pataphysical device, two helium balloons, encased in a very light rectangular balsa wood structure, again carrying a pencil. With this device she supplies a rigorous mathematical formula concluding that the structure will float. The formula in part reads as a pataphysical reference to Jarry's theorem on time and the construction of a time machine as well as his calculation of the surface of God. Reading the explanatory captions detailing the various parts of the structure, it is clear that the floating structure is for habitation. The pencil has the function of "draw[ing] the history of inhabitation" (Jaoude, n.d.). Looking at Jaoude's final architectural design, the device clearly reads as an early explorative prototype, important in the way it—pataphysically speaking—combines the floating of balloons with living into an imaginary solution.

*Albertopolis - An Acoustic Investigation* by Shu-wai Chang (Sophia), has a video as a final output. Here, we follow Chang on her acoustic investigation between the Royal College of Music and the Royal Albert Hall, two institutions nested within Albertopolis. In the 5 minutes and 16 seconds long video we see Chang standing and singing in front of the Prince Albert statue, at a car park entrance, in a telephone box, the South Kensington tunnel, and more places. Exactly halfway

through (2:38) the screen turns black and the “imperfect rehearsal soundscape” (Jameson & Ahmed, n.d.) fades, only to return 40 seconds later, at 3:18 (still with no visuals). At 3:43 the sound is muted again, and the rest of the video neither has visuals nor audio. Through careful spatial arrangement of herself, the microphone, and the camera, Chang not only performs her acoustic investigation, but also seriously yet humorously engages the socio-material space she is located in, as in the tunnel, when her investigation due to its context of busy people rushing by, momentarily alludes to busking. At the same time, her singing down into a negative space next to the Prince Albert statue brings up the absurd quality in her experiment, as evidenced by the passersby. In a sense, Chang’s investigation reads as an imaginary solution for how to accurately, yet poetically trace the space in-between rehearsal and performance, the Royal College of Music and the Royal Albert Hall, inhabiting this imperfect acoustic negative space with her presence and voice, in a profound sense making an absent acoustic space present.

### 2.1.2 The Legend

Having populated the landscape with a few initial examples, let us accept that this is an incomplete map, and instead turn our attention to the legend. In his book *Making Design Theory* (2017), Johan Redström argues for a design theory made through design (as opposed to a theory about design, as often developed from outside of design itself), what he coins ‘transitional theory’. As part of this thesis, he opens a fluid spectrum through which we can begin to gain a deeper understanding of this landscape of ours. Situated in-between the particular and the universal, the spectrum consists of the notions ‘product’, ‘project’, ‘programme’, ‘practice’, and ‘paradigm’ (see fig. 7, p. 34). To get an initial grasp: The iPhone X could be a product, and the aesthetics and design philosophy imbued in the aesthetics of Braun/Apple could be an example of a paradigm.

Redström (2017) investigates the nature of these categories, noticing that although the terms can be (and indeed have been) treated as discreet entities, contained in a stabile, universal (classically academic) manner, this is missing the point of how they actually work: rather than solid concepts that can be fixated and stabilised through scientific definitions, they are interrelated and highly contextual terms, capable of simultaneously reflecting what a given *design* is, and at the same time what *designing* is as such. In this way the spectrum can be viewed as a fluid design space fit for developing theory through design across these contingent points, as opposed to a more conventional regime of axiomatic, hard-cut categories (bid.). Interestingly, Redström notes that the axis itself is imaginary—to this we could add that transitional theory as whole can be seen as an imaginary solution to the problem of how design theory actually is made.



As will be more clear in the coming subchapter 2.2, Redström's imaginary solution differs from other imaginary solutions to the same problem, as exemplified Love (2000) and Hatchuel & Weil (2003), both seeking definitive definitions of design and more exhaustive accounts of what design theory is. Set against this drive for solidification, and as stated in his motivation for seeking out an alternative road, Redström is interested in trouble (2017, p. 2).

The shift made by Redström finds its grounding in design's penultimate occupation with change. In this sense, stabilised and less flexible definitions risks the process of quickly fossilising into irrelevance, as Redström demonstrates with the examples of 'form' and 'users,' showing how the continuous expansion of design practice into new domains—responding to important shifts in a changing society—increasingly struggles to find any theoretical foundation. In our eagerness to relevantly address the problems facing us here and now, we thus find ourselves on increasingly thin theoretical ice.

At this point, let us return to the three illustrative encounters between pataphysics and design. Pataphysics Design by Wenner is a good place to start in that it forces us to take a step back and discuss what we mean by 'an encounter', and whether this example should even be treated as such an instance? Rather than a specific bringing together of pataphysics and design, the project speaks to a pataphysical fascination that extends way beyond design. In a way it is testament to the wider allure of pataphysics, as this obscure entity that jokingly presents itself as the greatest possible mind fuck ever. As coolness goes, the mainstream attraction of pataphysics should not be underestimated. It is perhaps also here we find the source of an initial scepticism, finding its expression in a question such as "Why Pataphysics and Design in the First Place?" A project like Pataphysics Design seem to confirm this initial scepticism, as it is quite unclear exactly how Pataphysics Design is consciously pataphysical—perhaps we get the closest in the intro video, showing the one cell subsuming the other twelve in outer space, to explode and give way to a spiralling animation of the Pataphysics Design logotype. Or perhaps in the drawing of an animated spiralling text? But how does pataphysics exist on any level beyond this branded surface? To reiterate, this is not to imbue some taste regime, denoting Pataphysics Design as unpataphysical (for everything surely is pataphysical), but simply to say that from the perspective of this dissertation, the coupling appears rather unarticulated. Put differently, it is hard to see what pataphysics does in Pataphysics Design, beyond putting up a cool façade, pointing to the pataphysical dimension of all instances in this world. While, from a pataphysical perspective, this quality of being a façade might raise the spirits, the result appears shallow from a design perspective. This becomes all the more evident when compared to The 'Patachronic Clock, a product that draws from pataphysics in its tactics as well as



its form (time spiralling away). While we never see The “Patachronic Clock” in use, the video does communicate the way that pataphysics influences the artefact itself, its form language stripped down to the bare basics, exposing its mechanisms. Finally, in Pataphysics in Albertopolis we see several longer projects play out within an educational programme. As shown by the examples mentioned earlier, each project displays a large degree of consciousness around the pataphysical principles brought into the design process, from the initial device to the final architectural design. First, this iterative process of prototyping across scale is an important point in itself, as we get a glimpse of how pataphysics and architecture (and design) can crystallise along a part of Redström’s spectrum. Second, one of the main reasons for at describing at a minimum two projects within the programme, concerns the plurality of output. This is a distinguishing feature compared with the singular lives of Pataphysics Design and the ‘Patachronic Clock. We will discuss this further in 2.3: The Ultimate Particular & The Exception. As a consequence of the plural output, between them, all ten projects set within the Pataphysics in Albertopolis course brief, start pointing to what a design space stemming from the bringing together of pataphysics and architecture could look like. Third, a key point lies in the fact that the programme ran across an entire school year. As Ahmed & Jameson reflects: “I think that pataphysics cannot be systematised but can be absorbed and emanated. So for the year it was a process of absorbing - some students tried to live it (...) and i think thats when it works.. it should be an obsession” (personal communication, December 9, 2015). Finally, we should also notice how Pataphysics in Albertopolis is a programme nested within a recurring educational structure, a larger programme around ‘otherness’ in architecture. I return to some of these points in 3.4: An Infusion of Pataphysics.

At this point, let us take a step back and revisit Redström’s spectrum. Recalling that the three encounters between pataphysics and design described here are illustrative examples, they do however point to a larger tendency. Seen through this lens, it is notable how a limited group of design products and projects, and to an even lesser extent programmes, might reference pataphysics in various ways, and yet we know much less about how a more fully developed pataphysical design practice plays out. To be sure, this is not a matter of collecting all existing design projects displaying even the slightest pataphysical consciousness, to then attempt to tick all the boxes along the horizontal axis. Rather, what we see here is a lack of conscious interplay between these different points: we don’t know how pataphysical design programmes change over time, nor how the dialectic between e.g. product and a practice unfold. In short, what we are lacking, from a design perspective, is conscious shifts and maturations across this entire spectrum, fluidity in action, a reflective navigation so to speak. Perhaps most importantly, what we lack is an account of what a transitional theory for pataphysical design

looks like, what it responds to, how it is being developed, what the implications are for design, and what is at stake.

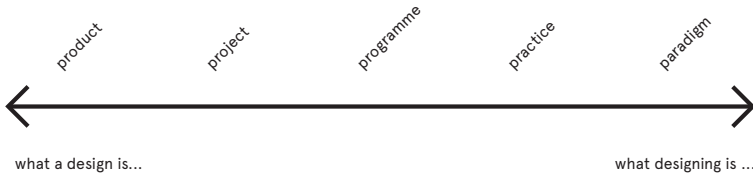


Fig. 7. Reproduction of Redström's fluid spectrum (after Figure 3.4, in Redström, 2017, p. 39).

## 2.2 Design and Artifice: Grasping the Possible

### 2.2.1 "What Is It That Design Is Capable Of?"

If a 'science of imaginary solutions' does not readily speak to design, then we can perhaps take a cue from the instructive slippage made by Julian Barnes in his story *Gnosienne*: "What was the definition of pataphysics? 'The science of imagining solutions'" (Barnes via Hugill, 2012, pp. 50-51). Through this rather pataphysical swerve from 'imaginary' to 'imagining', we thus reach a concept perhaps much more readily akin to design, for is this not what designers do all the time, 'imagining solutions'?<sup>[2]</sup> We should note how effortless this swerve is for design, its malleability inscribed in its very linguistic structure (existing as a simultaneous noun and verb, 'a design' and 'to design'), disclosing its essential ability to transgress between thing and act. However, this distinction might be subtler than we immediately realise, depending on our answer to the question: "What is it that design is capable of?"

This is the key question put forward by Clive Dilnot in his unpublished manuscript *Design and Knowledge* (Dilnot, 1999). Here design is argued to explicitly concern possibility, "since possibility is integral to design no question that does not ask about possibility—but remains tied to the given—can grasp design in the full sense" (ibid., p. 59). Dilnot reaches this question through an extensive critique of the lack of knowledge in design, or more precisely, design's lack of understanding of, or even interest for, its own distinct knowledge, what he refers to as design-knowledge. In a differentiation not unlike Christopher Frayling's research into/through/for design (Frayling, 1993), design-knowledge, a distinct knowledge emerging from within design—akin to Frayling's research through design—is positioned against knowledge-about-design, a mode of knowing which

Dilnot argues to be grounded in a master discipline (such as e.g. engineering or sociology). This latter mode is essentially an asymmetrical one-way power relationship of knowledge transfer. His concern for design-knowledge precisely relates to this asymmetrical set of relations, as design—as a discipline in the sense of a distinct field of knowledge—should be able to export knowledge back into knowledge at large, and not simply import (ibid.)

As a first impulse, it would be tempting to extend design-knowledge into a methodological dimension. While I will return to the question of methodology in the following chapter on research structure (Chapter 3), it is telling that Dilnot's focus does not lie on methodology, but rather on epistemology and ontology, around which he formulates the foundational problem facing design: design's capacity to know itself, and thus be a relevant discipline ably contributing design-knowledge to knowledge as a whole and acting as a conscious force in the world. Much is at stake in this current inability to address design's lack of knowledge of itself. Dilnot makes an important point in this regard that resonates with Redström's insistence on staying with the trouble as the driving force behind his work on making design theory: the ability and persistence on keeping alive the fundamental, particular questions of design, such as what design-knowledge is, rather than attempting to answer them or shut them down, is argued to be at the heart of an intellectual discipline.

Dilnot's conception of design is intimately tied to the artificial. From Herbert Simon's seminal *Sciences of the Artificial* (1969), he argues how artifice, and by extension the artificial, understood as a condition, plays a crucial role for design, simultaneously signifying its subject matter (that which design configures) and its horizon (so pervasively present that our age has been referred to as the Anthropocene: a point in time where the continued human imprint on our planet presents itself as a determining characteristic above all others). Noting how Simon arrived at the importance of design from studying artificial systems (and thus not from an intellectual inquiry into design itself), Dilnot elaborates the essential role that design has in knowing the inner workings of artifice through Simon's point that "[t]he possibility of creating any science or sciences of design is exactly as great as the possibility of creating any science of the artificial. The two possibilities stand and fall together" (Simon, 1996 [1969], p. xii via Dilnot, 1999). In summary, one can say that 1) understanding the conditions of the artificial is design's true calling, and without one science (of design, of the artificial) the other is impossible, and 2) understanding the conditions of the artificial is not only paramount for understanding design, but also for grasping a changing world increasingly pervaded by and defined precisely through artifice.

But why is design in this way uniquely positioned to wrangle the artificial, and how can we understand this intimate connection? Dilnot notes that artifice, essentially understood as that which could be other, is contingent in the extreme. Like Simon, he adds a palette of nuances to this base through the simple, yet revealing exercise of listing synonyms from a dictionary: ‘the synthetic, the ersatz, the plastic, the pseudo, the simulated, the counterfeit, the fictitious’ (Dilnot, 1999, p. 89). The obvious discrepancy between science and this framing of the artificial, extends much further than a disciplinary nuisance, as “artifice challenges the actual as absolute” and thus destabilises not only design, that is as reductively and detrimentally perceived as objects of science, but the underlying stability of the “mono-causal explanation of the universe itself” (ibid., p. 115), as presented to us through Law, whether grounded theologically (e.g. God), metaphysically (a higher Truth) or rationally (e.g. the Newtonian world). In contrast, this deep sense of contingency offers a striking consonance with design’s inherent leap into the realm of the possible through proposing change (rather than accepting the given):

This suggests (...) a point already implied in earlier stages of the argument, which is that possibility is to design what determination and the law are to science. If this is so then design therefore becomes the subject-matter for the science of the possible. (And Alfred Jarry’s marvellous turn-of-the-century invention “Pataphysics,” or the science of imaginary solutions, may then find its eventual realization in an extended understanding of our grasping of the possible (Dilnot, 1999, p. 49).

### 2.2.2 The Double Failure of Design

In this way, Dilnot arrives at speculating pataphysics as a foundation for understanding design understood as the subject matter for a science of the possible. Again, recalling how a science of design and the artificial stand and fall together, it is important to stress that much more is at stake than understanding design itself here (as though this would not be a sufficient accomplishment in itself): this science of the possible, accounting for possibility and potential, is argued by Dilnot to be concerned with knowing possibility and potential as such (Dilnot, 1999, p. 20). The way that design—uniquely situated to tackle these topics—has failed to do so, thus also reflects on the ways in which possibility and potentiality continues to be scoped and conditioned, in a largely unchallenged manner by powerful economic and technological forces (ibid). In some sense, this double failure of design in some way thus presents itself as a self-reinforcing wicked problem, with the consequences of design’s lack of self-consciousness too scoping design’s capability for becoming conscious of itself, further distracting it.

When design simply ignores this situation (and indeed, we should never forget that this is the case 99% of the time that design is taking place), it thinks it can fix the problem at hand. However, in Dilnot's conception of design, these systemic forces conditioning design exist way outside of design's sphere of influence. While largely sympathetic to the works of Victor Papanek, Tony Fry and John Chris Jones, and the key premise of the world being constructed by design that undergirds their arguments, Dilnot critiques the "absolutism" or "totalling" character of claims made concerning design's destructive role in shaping the world: "To say of this techno-economy that it 'arrives by design' is therefore absurd. Design has both been construed and placed within this economy" (Dilnot, 1999, p. 57). With its attention thus fixed on this impossible challenge, and consequently misunderstanding both its problem space and actual potential for producing positive change, design too fails to understand its own capacity to act. This is precisely what makes Dilnot arrive at the key question of design being: What is it that design is capable of?

### 2.2.3 Illimitable, Inexhaustible, Inutillious

In the argument, this unfortunate deadlock can also be read as the direct consequence of the inferiority of design-knowledge vis-à-vis the economical or technological knowledges filling up the vacuum of knowledge in the domain of design. Here it is as if design suffers an existential anxiety, a sort of impostor syndrome. It is against this deep fear of impending epistemological—or we might even say intellectual—implosion, that design proliferates itself into all spheres of life, over-stretching itself in its claims of being able to change the world (Dilnot, 1999). Of course, we should not fail to remind ourselves that this dynamic is occurring in concert with a surrounding world that ably responds to design's condition, turning its anxiety into self-fulfilling prophecies by commercially cannibalising it and thus rendering it into a profitable fad, whilst intellectually subsuming it under e.g. technological or humanities faculties within the university.

Reading design through Dilnot's diagnosis, it is clear that there is a considerable contrast to pataphysics, the Science of Sciences, in this respect. Against design's refusal to know itself along with its consequences, implications and responsibilities (ibid.), compare pataphysics as "the last available mode of thought" (Belassi in Brotchie et al., 2003, p. 15) or as being "inexhaustible" and "illimitable" (Sandomir in Brotchie et al., 2003, p. 50). In comparison we have a painfully finite design that is utterly confused about its own domain and abilities. As for pataphysics, how would another discipline even attempt to subsume, infringe, or subordinate such a deeply un-instrumental enterprise that proudly proclaims itself as inutillious? A few instructive examples come to mind: as when Asger Jorn proposed pataphysics

as a religion in 1961<sup>[3]</sup>, and the Collège de 'Pataphysique made an official response in which they proclaimed that "Pataphysics is apostasy from itself" (d'Y, 1995 via Hugill, 2012, p. 84). Or when Dr. Irénée-Louis Sandomir, Vice-Curator and Founder of the Collège, a week before his death in his address to the Argentinian members of the Collège on the occasion of the Inauguration of the Instituto de Altos Estudios Patafísicos in Buenos Aires stated: "Is it necessary to hope that 'Pataphysics should be at Buenos Aires? It was everywhere before we even existed and it transcends everything. It will always be and will always transcend everything. It transcends even being. For it does not even need to be in order to exist" (Taylor, 1960, p. 154) In its slipperiness, pataphysics has not only managed to salvage itself from being assimilated into mainstream culture (save perhaps Maxwell's Silver Hammer by The Beatles: "Joan was quizzical, studied pataphysical, Science in the home...), but has also attained a remarkable resilience, looking all the more impressive when compared to the way other related -isms of the 20th century have been instrumentalized to the degree of exhaustion (and we shall see this effect mirrored unto design later in the case of cultural probes (Gaver et al., 2001)).

#### 2.2.4 The Question of Definition(s)

The question of definition perhaps best puts this issue to the forefront, illustrating the difference in attitudes between pataphysics and design concerning their understanding of themselves. As designers and design researchers are painfully aware, any account of design has to come with an upfront qualification concerning what is actually meant by "design" in this particular situation and context. This is true, whether we find ourselves in casual small-talk with someone outside of design at a dinner party, or in the opening paragraphs in a book on design. Closely mirroring Dilnot's analysis, this ever-present task of qualification has several aspects. At the dinner party, the person we are talking to is from the business sector. She keeps hearing how design adds value to business, but is confused with the way its being used to designate everything from organisational structures to the layout of websites. The issue is one of pragmatism and delimitation, cutting through the hype: "what are you *actually* talking about". The example feeds of the effect of design willingly over-stretching itself: when everything is design, and design has both destroyed the world and is yet capable of redeeming itself by saving the world, where does this leave us? The book on the other hand might be targeted to fellow designers, but also to a broader audience of practitioners and researchers from neighbouring fields, who seek a foundational understanding of design. Within this diverse crowd, there might be an unspoken recognition of design denoting something profoundly different in 2010s, than say the 1960s. However, there is not necessarily any agreement on what this difference consists of: what has design truly become? What is it in essence? This issue is one of intellectual substance, a

concern stemming from design's inability and lack of concern for knowing itself. Of course, in reality these issues intersect and converge, amplifying each other. But through these examples—and we can surely think of many more—we start to see how the confusion around what design truly is manifests itself in practice.

Importantly, we should note that design is undergoing a significant shift in terms of how it views this dynamic: from the perspective of the 1960s, notably dubbed by Buckminster Fuller as the 'design science decade', a lack of a definitive definition of design and an exhaustive accounting of what design theory is, looked extremely problematic. This perspective is indeed alive and well here 50 years later, with its particular driving questions and concerns continuing to exert their power in design and beyond. As an example, in their paper on introducing C-K theory (Concept-Knowledge theory) as a unified design theory, Hatchuel & Weil (2003) motivates their project in part with "[being to offer] a clear and precise definition of 'design': this definition should be independent of any domain and professional tradition. It should give to 'design theory' the same level of rigour and modelling that we find in decision theory or programming theory. This means that design theory should have robust theoretical roots linked to well recognized issues in logic" (2003, p. 1).

Against this continued insistence on a unifying design theory, including a definitive universal definition of design, we also see a different attitude to this question, namely lines of argumentation that views this lack of a unifying definition not as an disciplinary deficiency, but as an essential characteristic of design. Design's inherent instability thus becomes an opportunity or a quality, rather than a problem. This stance is at the forefront of both Dilnot (1999) and Redström (2017), the latter reflecting: "I believe that the absence of one basic definition is significant, and it tells us something crucial about what is at stake in design theory. Indeed, I argue that the presence of many different definitions is not a conceptual shortcoming of our thinking but in fact an effective strategy for coping with certain kinds of complexity (...)" (2017, p. 6). It is important to keep these differing perspectives on the instability of design in mind (problem vs. quality), in terms of contextualising this dissertation in the broader design research landscape. In this sense it can be seen to belong to an emerging, momentous shift in design research (here discussed primarily through Redström and Dilnot), insisting on the necessity in dealing with design's fundamental questions, without any aim of providing a solid, definitive answer.

How does pataphysics treat the question of defining itself? Here we recall the remarkable small volume, *'Pataphysics: 123 Definitions and Citations, from 69 Authors, in Dutch, English, French, German, Italian and Latin*, given to new members

of the London Institute of Pataphysics (2003), and the selection of definitions we encountered in 1.1. In this way, Pataphysics famously resists any “academic autopsy” (Department of Dogma and Theory, 2016), and rigorously applies its pataphysical logic to itself, just like everything else. It is highly indiscriminate in this sense. From any other un-pataphysical perspective, and especially in an academic context, the ensuing slipperiness can seem incredibly problematic. However, it is interesting to observe that pataphysics does not simply cloak itself in obscurity. Pataphysics exists in this world (a pataphysician might say it is the only thing that truly exists in this world), and thus it also partakes in the academic games of defining itself. However, tellingly, this engagement is equal measures of excessive insistence and steady withdrawal: pataphysics excels at this game like any other, exposing the imaginary nature of its solution, a feature necessarily shared by all other—and we could add, often less imaginary—solutions in this space. Pataphysics is playing the game by understanding that it is inherently imaginary, then by way of its excitement and ingenuity exposing to all other participants that the game is a game of imagination (we can say exposing *by example*), and finally that these imaginary solutions are all that we are left with, a realisation prompting an unavoidable state of serious laughter (for how else can we react?).

With LIP’s beautifully designed *Pataphysics: 123 Definitions and Citations*, pataphysics displays the comfort with which it destabilises itself, just like anything else in this world. It does so with a stone face so imperturbable, that it leaves others wondering whether what they did not see was a slight chuckle or a brushstroke of melancholy? As design, understood as a distinct field of knowledge, begins to come to terms with understanding itself, a task necessarily taking place through a lens of design—i.e. embracing instability, fluidity, and transitionality—rather than those of technology, sociology etc., it seems as if pataphysics has something significant to offer with its radically different attitude to the question of self-understanding and definition.

## 2.3 The Ultimate Particular & The Exception

### 2.3.1 The True, The Real, The Ideal

From the domain of design-knowledge, let us now turn towards design as tradition and inquiry. In Harold Nelson & Erik Stolterman’s *The Design Way* (2012), the tradition of design is carved out as a third way between the true (universal, general, abstraction) and the real (particular, messy, experiential). They ground this argument in a historical observation on the way in which human beings have come to bias observation over imagination by way of “discovering” fire or the



wheel rather than “designing” it (ibid.) This historical dominance of the true, testament to the favouring of scientific inquiry above all others, is argued to have obscured design’s legacy as being the first tradition, (re-)integrating the stream of dichotomised collateral damage produced throughout Western thought, such as science vs. craft, science vs. humanities, thought vs. action. To be sure, Nelson & Stolterman do not advocate for abandoning the true in favour of the real. Refusing to see the two as polar opposites, they instead suggest that “design is based on a compound form of inquiry, composed of true, ideal, and real approaches to gaining knowledge” (Nelson & Stolterman, 2012, p. 34). Importantly, this quality of being a compound extends down from the scope of design as tradition to the scope of any given design artefact, what Nelson & Stolterman frames as the ultimate particular: “(...) a concept that distinguishes design from other traditions of inquiry and action. The real must be approached through judgment (...) augmented by science-based tools and methods—the true” (ibid., p. 40). While the true thus can provide helpful means to reaching the ultimate particular (we can think of the example of studies in ergonomics as part of designing a particular chair), it can never be more than a limited aid in the process: “There is no scientific approach for creating an ultimate particular because science is a process of discerning abstractions that apply across categories or taxonomies of phenomena, while the ultimate particular is a singular and unique composition or assembly” (ibid., p. 31). Completing the triad by way of adding the ideal to the real and the true, we can say that in Nelson & Stolterman’s perspective, the ultimate particular is the real (the given design), as brought-into-existence by the impetus of the ideal (intentions, design judgements etc.), augmented by the true (science). What would be an example of this? At this stage, it might be easier to think of a design artefact such as a unique 3D printed piece of jewellery, as opposed to a mass-produced IKEA chair, as an ultimate particular. However, ultimate particularity in the conception of Nelson & Stolterman is not to be confused with industrial scaling or “uniqueness” understood as a selling point: “We create a particular, which when taken together with other particulars, makes up the whole of our experienced reality. Even when products are designed in great numbers, with wide distribution, they still have the quality of being particular and not universal, since they do not represent the only possibility for accomplishing the same end or serving the same purpose and in situ they are truly unique and an ultimate particular” (ibid.).

The ultimate particular is an interesting concept in that it is what distinguishes design as a form of inquiry (*designing*), and at the same time that which reveals itself as *a design* in all its singular glory, possibly bettering someone’s life in a fleeting moment. Particular attention should be paid to Nelson & Stolterman’s comment on design products retaining their status of ultimate particulars due to them not representing “the only *possibility* for accomplishing the same end or

serving the same purpose” (ibid., my italics). To exemplify: Although one could find the IKEA chair I am currently sitting on, in hundreds of thousands of other homes across the globe, this particular chair emerged as the solution for me having a needed rest in the living room after this one particularly long working day, being able to face my partner while we converse. An infinite number of design artefacts could have done the same, and yet this particular IKEA chair emerged and materially instantiated out of possibility to singularly respond to my need in this here and now. Object, subject and situation in a moment of harmonic bliss. Most of us are able to recall situations like this, when the sheer brilliance of design artefacts exhilarate us, not only in fulfilling our immediate need (the design) but also in their sheer ingenuity (designing). Often these experiences occur when we find ourselves in new situations and cultures, in which design has been conceived of in brilliant ways unfamiliar to us, perhaps calling our everyday habits, interactions and fundamental values into question. In essence, this is one of the main reasons that people are willing to pay for designed artefacts that exceed the most basic needs, going beyond the most basic notions of functionality. To return to our example, one could cheekily say that it is the reason for people not getting the most basic IKEA chair, but instead investing in e.g. a Danish modern classic Wegner chair from the 1960s. What we experience in this double-layered pleasure is both the immediate satisfaction from our human need being effectively met (the ultimate particular) and the sensation of ingenuity (a result of the design inquiry). Perhaps it is possible to discuss the degrees to which different designs reveal their ultimate particularity to us (in Nelson & Stolterman’s sense, reveal themselves simply as design)?

While this framing of design might seem self-evident to some, it is important to recall that design certainly has been conceived of and practiced in ways straying from any conscious notion of ultimate particularity, by e.g. instead employing the true as its master, with a scientific optimisation regime as a sound measure of success. Chair wise, a stool from Hochschule für Gestaltung Ulm could testify as a result closer to this approach. However, the concept of ultimate particularity seem to resonate well with Redström’s spectrum (2017) as discussed in 2.1. Here, in the spectrum, rather than solely describing what *a design* is as a discreet entity, such as e.g. a chair (product), it was argued that any point also reflected on what *designing is as such*. In fact, the central role of fluidity and transitioning in Redström’s argument can be read a design response, precisely to the dialectic between an ultimate particular (a design) and design inquiry (designing), embracing this dynamic as a strength, rather than attempting to steamroll it with rigid, imported notions of hard-cut theories.

When a design artefact, understood as an ultimate particular, is able to produce this double-layered pleasure, Nelson & Stolterman argue it is because it has been designed with attention to an 'ultimate particular situation' and that the design process commits to reality in its 'ultimate uniqueness' (Nelson & Stolterman, p. 243). We see this turn in design towards user and situation, not only as an end concern but as a fundamental bind in the entire design process, brought to the fore in fields such as design anthropology, participatory design, and co-design. This shift fundamentally testifies to an attention to a messy, contradictory, ever-changing reality (what Nelson & Stolterman simply refers to as 'the real') as opposed to a version of reality projected from science. This view of the ultimate particular, creating an ultimate particular situation in a reality of ultimate uniqueness, seems to resonate strongly with pataphysics as the science of the particular rather than the general. Specifically, it seems to connect to the pataphysical view of the world as wholly comprised of exceptions, recalling the way that Nelson & Stolterman describe how particulars "make up the whole of our experienced reality" (ibid., p. 31). Indeed, for pataphysics, there is nothing but exceptions in this world. Seen this way, perhaps the designerly attention going into designing an artefact with the conscious knowledge of it being an ultimate particular, starts pointing to the design equivalent of what pataphysics would consider a pataphysical consciousness.

### 2.3.2 Perspectives

However, is this concept of ultimate particulars/exceptions not simply a matter of perspective? Just because someone buys an IKEA chair and believes it to be a universal thing for sitting, this surely does not mean that the chair is less of an ultimate particular from a design perspective? Similarly, because one group of people have decided to believe in Newton's law of universal gravitation, this does not mean that an apple falling from a tree is less of an exception, save Newton's law of universal gravitation less of an imaginary solution from a pataphysical perspective? Of course, one could argue that indeed, this is simply a matter of perspective, of diverging subjective viewpoints. While this may be true, there is something more at stake in his question. From a contemporary perspective the example is illustrative, as noted by Cruickshank:

CERN's anti-matter press release states, 'Newton's historic work on gravity was supposedly prompted by watching an apple fall to earth, but would an 'anti-apple' fall in the same way? It is believed that anti-matter 'works' under gravity in the same way as matter, but if nature has chosen otherwise, we must find out how and why.' To which Jarry replied, ninety-odd years before CERN asked the question, 'Instead of formulating the law of the fall of a body toward a center, how far more apposite would be the law of

the ascension of a vacuum toward periphery...' (Cruickshank, 1995 via Hugill, 2012, p. 222).

Notes made by Sandomir casts further light on the dynamic on full display here:

It is often doubtful whether so-called 'objective Science' does in fact affect so-called 'reality'—despite the fact that this 'reality' is intrinsically aberrant and that the successes of 'Science' hardly ever cling to its initial justification (the reactions of thirty years later, for instance, are revealing). Nevertheless it is no less true to say that imaginary solutions are just as efficacious as supposedly real solutions. These imaginary solutions influence events. They influence people. And sometimes far more powerfully (Sandomir, 1960c, p. 180).

By means of a slight swerve from anti-matter to dark matter, we start heading back to design. Black Quantum Futurism (BQF), a multidisciplinary collaboration between Camae Defstar and Rasheedah Phillips, explore the intersections of futurism, creative media, DIY aesthetics, and activism in marginalised communities, through the fusion of afrofuturism, quantum physics, pataphysics and African traditions of spatial-temporal consciousness. From the perspective of design, a discipline thoroughly entrenched in this very intersection, it is possible to read BQF as a critical design practice, prototyping non-Western concepts of time e.g. through participatory workshops. In describing their practice, BQF explains:

The term 'Black' as used in Black Quantum Futurism is not only referring to skin pigmentation, race, lineage, and cultural identity. The concept of 'Black' in BQF encompasses each of those complicated phenomenon, but it also refers to the Blackness that permeates deep space, what is commonly known as 'dark matter'. It encompasses the Blackness or darkness that permeates mental space and inner space. It refers to the light absorbing darkness of melanin, and the speed of darkness which surpasses that of light by not needing to move at all (Philips, 2015, p. 13).

BQF illustrates how a consciousness of the science of imaginary solutions allow you to provide alternative imaginary solutions, here challenging a very particular Western conception of physics intimately coupled with race and power. As Shat-tuck writes: "Pataphysics welcomes all scientific theories (they are getting better and better) and treats each one not as a generality but as an attempt, sometimes heroic and sometimes pathetic, to pin down one point of view as 'real' (1960, p. 28).

Returning to the question of perspective, we can thus say that a given instance thus can produce several (sometimes conflicting) theories as understood as imaginary solutions. Thus, pataphysics has no problem with a chair simultaneously being a universal thing for sitting while also being an ultimate particular, a specific and unique instantiation of possibility. While pataphysics views both of these explanations as imaginary solutions, what we can say is that in doing so, pataphysics points to the imaginary dimension of this—and in fact any—solution (as opposed to e.g. a techno-determinist framework). Notably, this perspective includes pataphysics itself, as pataphysics too exposes the imaginary nature of itself, and its inquiry into things. If anything, this pataphysical lens seems to point back to Dilnot (2.2), and the crucial distinction between the instability inherent in an understanding of design as configuring that which could be other vs. the static nature of a design as that which simply is, or even as that which could not have been otherwise.

### 2.3.3 That Which is Given vs. That Which Could Be Other

Thus having circled back (or indeed forward) to design, let us now further unpack the ultimate particular and exception by taking a closer look through the grandest of scales, and the smallest possible detail. Maybe a way to further this argument would be to expand Nelson & Stolterman's notion of ultimate particularity through Dilnot's understanding of the artificial as both design's subject matter and horizon. Isn't this a world increasingly and decisively littered with ultimate particulars, in a way approaching the pataphysical world wholly comprised of exceptions? It is certainly not uncommon to come across individuals advocating the abandonment of Earth as a massive, failed design experiment (in fact the unfortunate unplanned aggregate of multiple failed design experiments), their eyes and hopes set on colonising space, building settlements on Mars etc. As pataphysics will have it, Dr. Faustroll famously defined the universe as that which is the exception to oneself (Jarry, 2006 [1911]).

Against this grandest of perspectives, it might be instructive to dive into the smallest possible detail, an exercise not dissimilar to Dr. Faustroll making himself smaller than himself in order to study drops of water, as well as the way in which this shift in size would affect their mutual relationship (Jarry, 2006 [1911], p. 146-147). Similarly to studying an atom, by way of its protons, neutrons, and electrons etc., let us now investigate what an ultimate particular consists of and how it produces such delight as a design artefact. As part of an entire chapter devoted to the metaphysics of design (which will be covered more elaborately in 2.4) Nelson & Stolterman discusses the value and meaning of design, what they refer to as the splendour of design. This extends on the previous point concerning the pleasure one could feel from the ingenuity of designing, expressed through a

design. However, Nelson & Stolterman discusses this question in greater detail. They begin with the intrinsic value, framed through Nozick's notion of 'organic unity' denoting "an integrated, unified, and emergent whole" (1989 via Nelson & Stolterman, 2012, p. 194). Meaning then emerges through the relations between things we value, that is in the relation between valuable designs. The point on relations extend to a situation, the way in which a design artefact fits in a given time and place. This is argued to be the crucial prerequisites for 'ensoulment' to happen as a desirable, emergent quality in a given composition (a compound of the true, ideal, and real). Admitting that the discussion of soul in design artefacts requires more abstract conceptualisations threatening to diverge too much from the overall integrative approach to design employed in their larger argument, Nelson & Stolterman conclude: "We will stop here and define the appearance of soul in design as an emergent phenomenon that is made possible when value and meaning in a design are in resonance with a particular situation—in other words, when it is a holistic compositional assembly" (ibid, p. 196). They go on to discuss the way in which soulful designs can be experienced as timeless, at once making sense in particular context and situation, and at the same time resonating with something more "enduring, constant and eternal", suggesting religion, cultural heritage and above all others, nature (ibid, p. 197). Much is at stake in this point, as soulful design is argued to ultimately evoke life and bring us energy, while soulless design in turn drains us of energy to the point of lifelessness.

On his part, Dilnot, in his search for design knowledge, places a central importance on the configurative act in design as "the artefactual translation of the negotiation of incommensurabilities" (Dilnot, 1999, p. 118). Incommensurability here is not simply a matter of a 'bad fit' but is used in a deep sense, referring to world-views that "cannot be reduced to a single plane of representation out of which a calculation can be made to produce an optimum solution (as can be done in technology)" (ibid, p. 106). Further, the negotiation itself includes "the multiple heterogeneity of immanent contexts, subjective and objective, within which it operates" (ibid.) Importantly, design-knowledge does not simply lie in the given result of this negotiation, i.e. a compound of different knowledges negotiated (instantiated through a contingent design artefact), but rather in this process, or perhaps better in "design as the agency of bringing forth the capacity of things to configured" (ibid., p. 117). When other disciplines, and historically design itself, views design artefacts as things in and of themselves, this capacity is lost, and other seemingly suitable knowledges (e.g. technological, sociological) are brought in to make sense of what in reality is simply a materialised residue of design's true knowledge of the configurative act: capacity, agency, possibility.

While it is important to note that Nelson & Stolterman and Dilnot in many significant ways offer congruent ways of understanding design as a distinct inquiry and knowledge, there is something important at stake in this difference concerning the essence of design. In their discussion, Nelson & Stolterman describes how the most excellent design artefacts sometimes can leave us with the impression that “such a design could not have been different” (ibid., p. 192). Against this, we have Dilnot’s framing of artifice, the subject matter and horizon of design, precisely as that which could be other. In this contrast, we thus return to the conclusion of the discussion of perspectives. With a risk of overstating the difference, we could say that while Nelson & Stolterman’s conception of design splendour is a design that displays or at least aspires to a certain metaphysical stasis (ensoulment, timeless eternal qualities), Dilnot’s conception of design is one of inherent dynamic contingency: capacity, possibility, bringing forth, revealing, concealing etc. Pataphysically, we could translate this quality into the equally dynamic way in which pataphysics produces imaginary solutions, while exposing them (and everything else) as precisely that, imaginary solutions. To more fully grasp the difference here, we should note that Nelson & Stolterman and Dilnot speak from different contexts and to different audiences. Nelson & Stolterman explicitly seek to lay out the design way, not only for designers or prospective designers, but for everyone. This perhaps goes to explain their attention put into e.g. discussing the appreciation of design splendour. They started this work in the 1990s, with the first edition of the book published in 2003, and the second edition in 2012. Dilnot’s unpublished manuscript is a working paper built on a plenary presentation at the first international conference on doctoral education, taking place at Ohio State University in 1998. In this context, the question of what constitutes knowledge in design is a key concern that needs to be addressed ‘from within’. The manuscript builds on a paper published as part of the conference proceedings: “The Science of Uncertainty or the Potential Contribution of Design to Knowledge” (Dilnot, 1998).

#### 2.3.4 The Inherent Plurality of Design

Yet another way we could approach ultimate particulars and exceptions, relate to their essential state of being plural. This is crucial, in the way that it is almost impossible to imagine the singular ultimate particular without other ultimate particulars. After all, how are we supposed to begin to understand design as a science of the possible, with artificiality—that which could be other—as its subject matter in this sense? While the singular quality in both the ultimate particular and the exception is highly important, the notion of “the possible” and “the other” presupposes a certain plurality. Part of the difficulty in readily grasping this when confronted with a design artefact lies in the phenomenon that Dilnot describes as a simultaneous revealing and concealing of design-knowledge. Within this dynamic,

the concealment can be very powerful, as the instantiated, materially realised design artefact seems to ooze singularity. In fact, a well-designed artefact can be so overwhelming in its singularity that it is hard to fathom its design character. This is perhaps what Nelson & Stolterman is getting at with their discussion of a design artefact leaving the impression that “such a design could not have been different”. Keeping their audience in mind, we could emphasise the distinction further between how design is being experienced, in particular from a non-design perspective, with what it actually does, and on what knowledge it rests.

This tension between the singularity of the design artefact, and yet the relationship to other, equally singular design artefacts is crucial. It is a paradox in essence: Imagine a world entirely of nature (the antidote to the world defined by the artificial). This might not be so difficult, in that many religions and accounts of utopias operate with some version of this vision, e.g. the central role of the “fall from grace” in the Abrahamic religions, a moment that forever was understood to define human life in sin, outside the Garden of Eden. Now, the tricky thing: Imagine an Apple Watch Nike+ in this space, complete with built-in cellular, Siri (a voice-controlled intelligent personal assistant), ergonomic wristband, and much more. How does this design artefact make sense in this space? How would you, placed in this world of pure nature, make sense of it? Imagining user scenarios would be getting too far ahead of ourselves. Instead, just stick with mere existence. The answer is that already at this basic level, it does not make any sense. How can we understand this ultimate deprivation of design context? What we experience here is in essence an instantiation of the science of the possible unable to make sense of itself given an *impossible* context, in the most literal design sense of that word. Put differently, what we are facing is a deprivation of possibility itself. Not only are we unable to process Apple Watch Nike+, as a wearable, watch, computational device etc., i.e. assigning it a mental category for sense-making. This is not really our concern here, and neither is a lacking charging station, server facilities etc. What is interesting is how we are unable to grasp design as a science of the possible, since our sole design artefact, the Apple Watch Nike+, appears to behave as much as a solid God-given entity than any other part of this utopian world of pure Nature. To reiterate, from a pure technological perspective, this particular aspect is not really problematic at all. Surely, technology would face a set of different problems in this thought exercise, e.g. no solid reference point for measuring performance, a critical lack of infrastructure etc. All these are indeed technological problems, and thus completely different than the deprivation of possibility due to the singular existence of the design artefact.

Now, imagine the same space, now with an added sundial. This changes everything from a design perspective. We are now looking at two different ultimate particulars,



each responding to a unique situation, potential users etc. In this sense two means plural, and we could just as well imagine an infinite number of possible designs. Another way to state this in more spatial terms would be to say that a design space per definition can not be comprised by a single data point, such as the Apple Watch Nike+. Pataphysically speaking, in this last scenario with the Apple Watch Nike+ and the sundial, we have two exceptions, two imaginary solutions to the problem of how human beings make sense of time. Here we should pay attention to how pataphysics has no problem whatsoever coping with any of the scenarios described. We already came across Nature in itself, i.e. devoid of any design artefacts, as the universe as an exception to oneself. In the case of the lone Apple Watch Nike+, we are faced with a single imaginary solution. Pataphysically this is unproblematic, although it is likely to require a large degree of pataphysical extralucidity on our part. In other words, there is a considerable chance that we would mistake a singular imaginary solution for a God-given absolute solution.

Interestingly, the converse thought experiment renders a different outcome, that is imagining a singular slice of nature in an otherwise completely artificial world. Here we don't need to reach back to notions such as a lost paradise, but can instead think of something as mundane as our living room within which we have a small potted plant. Ignoring the fact that this plant has also been thoroughly cultivated (a fancy synonym for designed) through centuries, it at least alludes to a single piece of nature in our otherwise completely designed, artificial home. And it works! There is nothing difficult in this, since the natural is completely proficient in representing itself in a singular form, due to its inherent stasis, status as given, quality of eternal essence, authenticity, truthfulness, etc. in a singular form, as a single entity. If anything, the natural finds its power exactly through this ability. This is why our potted plant is not simply a potted plant, but a small piece of an eternal, calming, natural world, a synecdoche of sorts, allowing us to emotionally re-connect with a Nature that we intellectually understand is being increasingly eclipsed by the artificial every day. We might even go as far as to say that the care for our cultivated and completely designed plants at home (the Bonsai tree comes to mind), can be seen as a process of nostalgia and perhaps even mourning—a small-scale enactment, offering us the chance to try to come to terms with the fact that our plant is in fact too thoroughly designed, and thus also a moment for us to perform a safer version of the sometimes terrifying process through which our planet is becoming artificial through and through.

Against the singular power of Nature, design is inherently plural and draws its strength from this very fact. To summarise, all this is to say that any attempt at grasping the concept of ultimate particulars/exceptions, necessarily includes their plurality, their relations. We pay attention to how this understanding of design

is clashing with Nelson & Stolterman's metaphysical arguments concerning how the highest form of splendour in design is the one that alludes to nature. Here it seems as if Dilnot offers us a different road ahead for reconfiguring the splendour of design in the image of the artificial. In this sense, we might ask ourselves why design would aspire to be perceived as something drastically different from what it is actually doing? Is this mechanism fuelling design's misconception of itself, and consequently the broader misconception of what design is? A challenge arises: similarly to Dilnot arguing for design-knowledge to necessarily contribute to knowledge as such, how can design authentically bring out its unique offering as that which could be other; its capacity, agency, possibility, all *through* design? In this re-conception of design splendour, we can start imagining what a pataphysics of design could look like. To start peeking around the corner, this seems like a good moment to recall the way that pataphysics is playing the game by understanding that it is inherently imaginary, then by way of its excitement and ingenuity exposing to all other participants that it is game of imagination (exposing *by example*), and finally that these imaginary solutions are all that we are left with. Isn't this much like the way that Dilnot observed how design simultaneously reveals and conceals itself, i.e. its design-knowledge? How can design allow us to experience this very mechanism through itself?

### 2.3.5 Value and Equivalence

When discussing value in relation to design, the first point to make would be that design's clients and the market of course dictate this. As a modern discipline born out of the industrial revolution and thus fuelled by concerns for mass production and a capitalist economic apparatus, this notion of monetary value above all others is an inseparable aspect of design's DNA. This is not to argue for a fatalist path where design is only conceivable in a destructive and highly violent coupling chiefly between technology and economy, but rather to make a coupling between this first glance at the question of value and Dilnot's earlier point of the forces scoping and conditioning design's maneuvering space. With that said, can we consider value in other terms? Nelson & Stolterman discusses the question of value in their chapter dedicated to the metaphysics of design, more precisely as part 'the splendour of design', as intimately linked to meaning. First, they decidedly look beyond qualities such as functionality, efficiency, cleverness, usefulness, quality or excellence, pragmatic measures which they argue are not fit for capturing the whole (Nelson & Stolterman, 2012, p. 192). Indeed the missing part relates to the experiences evoked (and transformation brought about in the subject) by a given design artefact. The qualities of organic unity and ensoulment are key in this respect, as are our ability to connect a given design artefact to other things we value in order for us to make sense. This is what makes the experience meaningful.

I will expand this aspect of experience through in the direction of phenomenology in the next section on *The Eclipse of Metaphysics*. Now, this question of value is also important for pataphysics, as it touches on one of its basic tenets, namely the principle of equivalence. This is also a way of adding another layer to the previous discussion around the exception and the inherent plurality. Pataphysics does not simply view all instances in the world as exceptions, it also goes further to describe the relationship between all the (necessarily plural) exceptions through the principle of equivalence. Sandomir has summarised and exemplified the matter well:

There is thus no difference whatsoever, either of nature or degree, between different minds, any more than there is any difference between their products, or indeed between one thing and another. For the complete Pataphysician the most banal graffito equals in value the consummate book, even the *Exploits and Opinions of Doctor Faustroll* themselves, and the humblest mass-produced saucepan equals the *Nativity of Altdorfer*. Who among us would dare to consider himself as having reached such a point of extralucidity? Such is nevertheless the postulate of Pataphysical Equivalence (...) (Sandomir, 1960c, p. 179).

This principle puts quite a bit of pressure on design, in the way it is usually tied up in its material instantiation (whether product, service etc.), presenting a finely balanced organic unity and perhaps a soul. While Nelson & Stolterman do also stress the role of the interrelations between design artefacts in bringing together value and meaning, we have already touched on the problems in the metaphysical aspirations within this conception. Consequently, the principle of equivalence seems to point towards a different notion of value: a quality stemming more directly from their status as exceptions. Here we should note the shared etymological root between ‘ex-ception’ and ‘ex-cellence’ (one measure of value that Nelson & Stolterman denounces as insufficient in capturing the whole). Indeed, ‘ex-ception’, from the Latin ‘excipere’ means ‘to take out, withdraw; make an exception, reserve;’ from ex ‘out’ (see ex-) + capere ‘to take’. Similarly, ‘excellence’ finds its root in ‘surpass, be superior; to rise, be eminent,’ from ex ‘out from’ (see ex-) + -cellere ‘rise high, tower’. Thus, we also talk of the exception as ‘that which stands out’, and the excellent as ‘that which is outstanding’. Interestingly, the extension of ‘the exception’, ‘the exceptional’, start to conflate the two, imbuing a certain value into that which stands out. Surely, while a vintage Porsche 911 for some might denote an exceptional car design, the notion of this car as an exception—equivalent to all other exceptions—is drastically different. By way of a further unpacking the ‘exceptional’ to ‘exceptionalism’, a range of additional nuances are added, including some notable political overtones. This point is important and will serve as the lens for Chapter 7: Future Domestic Landscape.

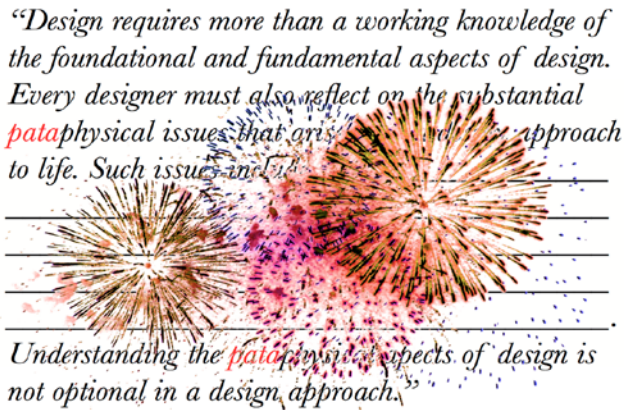


Fig. 8. A graphic visualising the swerve away from Nelson & Stolterman’s call for reflection on substantial metaphysical issues (2012, p. 181) towards the possibility for a pataphysics of design.

## 2.4 The Eclipse of Metaphysics

### 2.4.1 A Call for a Pataphysics of Design

When Nelson & Stolterman described the splendour of design in the previous section, they did so as part of a larger chapter dedicated to metaphysics, setting out to describe “the substantial metaphysical issues that arise from a design approach to life” (2012). We ended the section eyeing a pataphysics of design. Here we will look further into the tension between metaphysics and pataphysics of design, more precisely described as an eclipse of the former, and an opportunity for the latter.

In addition to the splendour of design, Nelson & Stolterman’s chapter on metaphysics is divided into the sections: The Evil of Design, The Splendour of Design, and The Guarantor-of-Design (g.o.d.) (2012). Much like Dilnot’s more direct call for pataphysics as a science of the possible, is there any other way to read this entire chapter as a not so subtle call for considering a pataphysics of design as well?

To understand the nature of our calling, we might do well to remember the way in which Jarry positions pataphysics in relation to metaphysics, quickly recalling part of this definition from Dr. Faustroll: “Pataphysics (...) is the science of that which is superinduced upon metaphysics, whether within or beyond the latter’s limitations, extending as far beyond metaphysics as the latter extends beyond physics” (Jarry, 2006 [1911], p. 145). From this description, the visual mind will perhaps start ordering physics, metaphysics and pataphysics in layers or a hierarchy,

be it horizontally or vertically, or perhaps in a three-dimensional space. In any case, a relation between the three is established. How can we understand these relations? Another excerpt from Jarry's definition will serve us: "Pataphysics will examine the laws governing exceptions, and will explain the universe supplementary to this one; or, less ambitiously, will describe *a universe which can be – and perhaps should be – envisaged in the place of the traditional one*" (ibid., my italics). What we are witnessing here is a pataphysical and physical universe potentially collapsing.

#### 2.4.2 A Façade of a Façade vs. The Supplementary Universe

One of the most lucid accounts of this point emerges from the preserved fragments of a letter correspondence between René Daumal and Julien Torma, two pataphysicians and friends born around the turn of the twentieth century (Duncan & Hale, 2012). Their correspondence partly revolves around Daumal courting Torma in an attempt to engage him with his group *Le Grand Jeu*. However, in addition to this, Torma also attempts to distance himself from his debut, *La Lampe obscure*, and perhaps more than the work itself, Daumal's captivated reading of it. This discord grows into a fundamental difference in the pataphysics of the two, as Torma increasingly distances himself from Daumal's marriage of pataphysics with mysticism. This coupling is particularly present in Daumal's essay "Pataphysics and the Revelation of Laughter" (2012). In this text, Daumal opens with a section titled "On Pataphysics in General," in which he cites Jarry's definition of pataphysics from Dr. Faustroll, to then elaborate it in his own direction, establishing a tension between the existence of the individual against the universe supplementary to this one. "On Pataphysics in General" will be cited here in its entirety, as it will serve the double purpose of grounding Torma's critique below, while also, together with Torma's critique, acting as a foundational reference for much of the design experimentation in later chapters.

'DEFINITION. – Pataphysics is the science of imaginary solution, which symbolically attributes the properties of objects, described by their virtuality, to their lineaments' (Jarry). It is the knowledge of the particular and the irreducible, therefor the reverse of physics. Now, the existence of the irreducible is another aspect of my existence as a particular being, a contrary existence since I know myself to be part of the One. So I cannot know the irreducible except by becoming the All-in-One. Hence we can begin to see that pataphysics cloaks a mysticism whose perspectives it discovers in concrete form. These few words will require hundreds of volumes if they are to be properly elaborated. I would point out nevertheless this *revelation* from Jarry: 'It will study the laws governing exceptions, and WILL EXPLAIN THE UNIVERSE SUPPLEMENTARY TO THIS

ONE.' This 'supplementary universe' is the inside-out world where the dead and the dreamers go, according to primitive beliefs; it is the hollow mold of this world; put this world in its mold, and nothing is left, nothing hollow, nothing extruded, just one unified whole. Consider, if you will, this Joe Blow and all the attributes by which he is circumscribed. From the complete knowledge of Mr. So-and-So, one could deduce the knowledge of the rest of the universe by virtue of the principles of causality and reciprocal action. Similarly, remove in thought So-and-So from the world without changing anything else: you still imagine him right where he was, because from the knowledge of the universe minus So-and-So it is possible to deduce knowledge of So-and-So. Both relationships are symmetrical and reciprocal, and you can thus weigh So-and-So against the rest of the universe. Getting this idea into your head will help you get a firm hold on pataphysics. To know  $x$  = to know (Everything- $x$ ) (Daumal, 2012, pp. 7-8, author's italics).

In addition to the mysticism readily emanating from the content, it is worth noticing the way in which Daumal almost talks of Jarry as a prophet. Echoing the earlier point on the confusion of Jarry and pataphysics, we can compare Daumal's text with the way in which the Collège de 'Pataphysique, through the Vice-Curator Opach, later would insist that "had Jarry never existed, that we are pataphysicians, and so would have invented 'pataphysics anyway" (Brotchie, 1995). Returning to the letter correspondence, Torma writes to Daumal (critiquing "Pataphysics and the Revelation of Laughter"): "Your pataphysician laughs too much. And that laughter is both too comic and too cosmic. Put metaphysics behind pataphysics and you make it merely the façade for a belief. Now the essence of pataphysics is that it is a façade of a façade, behind which there is nothing" (Torma in Duncan & Hale, 2012, p. 20). From a letter to his friend Jean Montmort, who is likely to have seen the letter that houses this quote above and then written Torma, we have further elucidations by Torma, still referring to Daumal, in his response back to Montmort:

When he says that pat. is the opposite of physics—I'm already suspicious. When he clarifies the first summary by putting forward 'the knowledge of the particular and irreducible', as soon as I see that word 'knowledge' I know that what's coming is going to be nonsense. If you still believe that anything whatsoever can be known, that is not pataph. This is just naivety. For me, if the opaque remains opaque, that doesn't bother me (...) I fear that Pat. is just a nice trompe-l'œil to dress up his mysticism so it doesn't look old-fashioned—like those priests who make out that they are modern. In one sense, he is right to trompe his œil, but he deceives either too much or not enough. If pataph. is just a veil or a symbol, then it is no longer

anything. It is a symbol only of itself (Torma in Duncan & Hale, 2012, pp. 23-25).

It is difficult not to recall Dilnot's refusal of the "absolutism" or "totalling" character of the claims made by Papanek, Jones and Fry concerning design's role in shaping the world. In turn, Torma's last sentences also seems to resonate with Dilnot's point regarding the way in which design is emblematic, simultaneously revealing and concealing artifice, along with the configurative, to us in and through design (Dilnot, 1999, p. 133).

#### 2.4.3 Ontological Design: The Viciousness of Circles

As a consequence of artifice being the subject matter of design as well as its horizon, Dilnot discusses the way in which we can not simply consider a design artefact as a 'thing', but instead are forced to focus on the way which things are designed to act along with the implications of their acting (1999, p. 88). In other words, as artifice is our horizon, and thus conditions our being unlike anything else, it gains a profound ontological valence. However, Dilnot makes a distinction between an ontology of the past, "understood a process a process of ascribing metaphysical or transcendent qualities and identities to things" (1999, p. 100), and an ontology of the artificial as "the negotiation with the historical implications of our own making" (ibid., p. 101). Perhaps the urgency in an ontological framing of design has most explicitly been described in the discussion of "ontological designing" as particularly outlined by Tony Fry and Anne-Marie Willis (e.g. Willis, 2006; Fry, 1994; Fry 1999 and also Tonkinwise, 2004; Schultz & Barnett, 2015) along with the related call for 'redirective practice' and 'defuturing'. Ontological designing draws significantly on the work of Martin Heidegger, in particular his concepts of 'the ontology of equipment', 'worlding', 'thinging' (1996), and to this adding Gadamer's 'hermeneutic circle' (2008).

Ontological designing is a complicated proposition—in fact one could say that in many ways this very complication is posited as a necessary counter-reaction to the ways in which designing in a Western context has been devised in an oversimplified vacuum-packed fashion, enabled by a wholesale subscription to an extensive range of problematic Cartesian dualisms, such as subject-object, mental-physical, self-world etc. We already encountered this baggage in *The Ultimate Particular & The Exception* (2.3), along with similar arguments around the way in which design, as tradition and inquiry, is capable of (re-)integrating said schisms. To this extensive list, Willis adds the split between the observer and the observed, tracing it to a Western metaphysical rationalist tradition. As a reaction against all this, ontological design posits the human condition as being-in-the-world, drawing on Heidegger's 'Dasein', in oversimplified terms the being that is human



due to its ability to understand being, to take issue with it (Heidegger via Willis, 2006, p. 71). Importantly, this being-in-the-world is “grounded, situated, always already caught up with the concerns of the world and with doing” (ibid.) In making sense of the world, the role of interpretation is paramount in its intimate link with understanding. This is the hermeneutic circle that structurally describes the conditioning for being-in-the-world. While grounded in language, it readily speaks to design, in the way that the designer simply does not design a design artefact. Rather, “[w]e are designed by our designing and by that which we have designed (...) we design our world, while our world acts back on us and designs us” (Willis, 2006, p. 70). Ontological design is a way of understanding particular circular motions within this dynamic, in a sense to bring them to consciousness in order to negotiate them. ‘Worlding’ is another way of describing this process, the being-in-the-world, as the process of constant human engagement (‘dwelling’) with the entities of the world, looping through the hermeneutic circle, so to say. Notably, this engagement extends across material and immaterial entities. Willis further discusses ‘thinging’ through Heidegger’s example of a jug juxtaposed against a juice box. Here, the ‘thingness’ is to be understood as the thinging of the thing, designating how the thing discloses its gathering of materials, ingredients, components, labour and fits its own being, its performing of itself (ibid., pp. 78-79). Willis exemplifies this through Heidegger’s example of a jug that gathers wine (and with that the sun that shines, and water that nourishes the grapes) and in doing this gives, by pouring the wine and quenching thirst (ibid.) Importantly for later discussions, she makes the point (illustrating the transgression between the material and immaterial): “While it exists for the maker as an idea or image that precedes and makes possible its making, this idea/image does not constitute the essence of the jug-thing (contra Plato’s ideal forms). That only emerges when its holding nature is discovered in filling it. Strangely and appropriately, the jug achieves its thinging through its emptiness, through the nothingness that is its centre” (ibid.) Willis further asserts that the thinging thing in this respect is ontologically distinct from ‘the object’ as ascribed by Western metaphysics, a much more flat conception of thing, meaning anything that is at all (ibid., p. 79). This is in alignment with Dilnot’s distinction of the way in which technology treats design artefacts as things (simply seeing the concealment), while design decidedly concerns itself with the dual motion of concealing and revealing, as the agency of bringing forth the capacity of things to configured (Dilnot, 1999).

Ontological designing both adds further richness to several of the previous points made, while also fundamentally clashing with other parts of the line of argumentation. To start with the latter, it is now more clear to see how an ontological design perspective necessarily ends up with the “absolutism” or “totalling” character of claims made concerning design’s destructive role in shaping the world. This was



where Dilnot drew a sharp distinction to Fry (along with Jones and Papanek), in a sense staying more in line with Simon's pragmatism. As I believe this demarcation of design's domain is crucial, I will return to it more fully in 2.6: Towards A Re-conception of Critical Design Practice. At the same time, ontological designing extends the present argument in several ways, perhaps most readily through the hermeneutic circle with its strong pataphysical resonance—Willis even refers to it as a vicious circle. This has a distinct pataphysical importance. A recorded dialogue between the Proveditor-General Adjunct and Rogatory and Sandomir sheds further light on these issues. Asked if it is vain to explain pataphysics, Sandomir responds:

Not only vain, but pataphysical. Ah yes! That is the paradox. All these miserable little pedants who attempt to explain Jarry and his 'case' (there were some even during his lifetime) by psychoanalysis, poetry, homosexuality or parthenogenesis, pathological psychology, sociology, ontology or "humour noir," do not realise that they are practicing 'Pataphysics! Only 'Pataphysics, in fact, does not explain itself but establishes its own position within a vicious circle that is proclaimed, smelt out and relished. Only 'Pataphysics, too, is capable of rendering an account of psychoanalysis, poetry and the rest. We say 'the rest' deliberately, meaning everything and all that is beyond everything (Sandomir, 1960b, p. 176).

From Sandomir's response it is clear that ontology is subsumed within pataphysics (this should not be a surprise at this point), as it simply stands as yet another imaginary solution, in this particular case of trying to make sense of Jarry's life. We understand the list is not exhaustive, and rather "the rest" simply is everything in this world, be it material and immaterial. Pataphysics, taking an exclusive delight in exposing its own imaginary nature, at once asserts and annihilates itself in this landscape, leaving us with everything and nothing. In this exposure, this showing-itself-forth as continuous withdrawal, lies its rightful claim as the Science of Sciences, as the most serious and the most laughable undertaking of all. This swerving motion, this restless spiralling, radiating energy unto the remains of the world, is what Sandomir is referring to as a vicious circle. To return more directly at the hermeneutic move between interpretation and understanding, we can perhaps see something similar in the very etymology and spelling of "Pataphysics" itself, as this goes to the very heart of what pataphysics is—Hugill e.g. argues that "[t]he greatest symbol of pataphysics is both the word itself and its curious spelling" (Hugill, 2011, p. 7). The crux is the apostrophe immediately preceding the word, as we remember from Jarry's definition: "'Pataphysics (...) preceded by an apostrophe so as to avoid a simple pun". Of course, it is entirely unclear what this simple pun might be, and numerous proposals have been put forth, including

‘pas ta physique’ (“not your physics”) and ‘pâte à physique’ (“physics dough”) (see *ibid.*, p. 8). Here, we are witnessing a circling, if not a pollination or amalgamation, between interpretation and understanding. Further, we should notice the way in which this spectacular omission, indicating a missing word, renders “Pataphysics” pataphysical. As Hugill points out, it thus acts an imaginary solution to the question of the meaning of the word pataphysics (2012, p. 8). The way in which the word “Pataphysics” thus radiates pataphysics itself, in some ways make us recall Heidegger’s jug gaining its existence/being/thinging through its absence turning into presence, its gathering and performing. In the discussion of Heidegger’s use of the word ‘thing’ in relation to his example of the jug, Willis stresses how he traces it back to the Old High German word for thing (‘dinc’), meaning a gathering to deliberate on a matter, and thus expanding its richness considerably. Thus, from a pataphysical perspective, the Heideggerean equivalent to Jarry’s ‘Pataphysics’, could be to somehow illustrate the workings of the jug, by gathering and pouring ‘dinc’ from it. Seen this way, the vicious circles in pataphysics appear much narrower, and in some sense more self-destabilising, in the way they insistently point to their own imaginary nature. Perhaps we can simply say that they are more vicious than their hermeneutic counterparts. As has already been asserted, pataphysics would view ontological design as an imaginary solution to the problem of making sense outside of a decontextualized, violent, and highly linear Western conception of design. From a design perspective, it is however interesting to pay attention to the emerging affinities as well as differences between an ontological conception of design, and the emerging contours that begin to point towards what a pataphysically infused design practice could be.

#### 2.4.4 Opening a Path to Epiphenomenology

This connection between pataphysics and Heidegger should not be surprising, insofar as Gilles Deleuze has already described Jarry as an unrecognized precursor precisely to, arguing for Heidegger’s work to be a development of pataphysics (Deleuze, 1998). Deleuze sees a striking resemblance between the two authors in the way in which the overcoming of metaphysics is inseparably linked to a new comprehension of phenomena. Turning away from Husserl’s notion of phenomenon as appearance or apparition, the phenomenon is not a matter of consciousness but rather ‘Being’ (presencing, showing itself forth: “Something comes to presence. It stands in itself and thus puts itself forth. It is. For the Greeks, ‘being’ fundamentally means presence” (Heidegger, 2000, p. 64 via Willis, 2016)). Deleuze argues the Being of the phenomenon to mean the epiphenomenon, “nonuseful and unconscious, the object of pataphysics”, a self-showing of the phenomenon (Deleuze, 1998, p. 92). He goes on by describing how metaphysics erroneously treats epiphenomena as other phenomena, other beings: “In truth,

rather than considering Being as a superior being that would ground the constancy of other perceived beings, we must think of it as an Emptiness or a Non-Being, through the transparency of which singular variations come into play, ‘an iridescent mental kaleidoscope (that) thinks itself (Faustroll, p. 343)’” (Deleuze, 1998, p. 92). This notion of the ‘Emptiness’ or ‘Non-Being’ offering a transparent space for singular variations to come into play, resonates with Dilnot’s point regarding the way in which design is emblematic, simultaneously revealing and concealing artifice, along with the configurative, to us in and through design. Perhaps we can say that with design, the vast majority of unconscious beings (what Deleuze also discusses as the degeneration of Being, of life and thought (ibid., p. 72)) reach their distractive, or perhaps even destructive, zenith. Deleuze goes as far as to say that “beings cross out Being, they put it to death and destroy it, or that life kills thought-so that we are not yet thinking” (ibid., p. 92).

Deleuze further notes that technology plays a decisive role for both Jarry and Heidegger: “In both authors, technology seems to be the site of a combat in which Being is sometimes lost in forgetting or in withdrawal, while at other times, on the contrary, it shows itself or unveils itself in it” (ibid., p. 93). In an earlier text, Deleuze had already argued for pataphysics as a way of overcoming metaphysics and opening a path to phenomenology (1964). He does so on the basis of declaring that “God is dead” and “The Human dies also” (referencing Nietzsche), ultimately delineating pataphysics along two paths:

The path of actual history and the development of technology, and the path of poetry and the poetic creation of fantastic imaginary machines. This conception demands a new thinker (a new subject of thought, ‘death to the Cogito’), new concepts (a new object to be thought), and new forms of thought (which integrate to the old poetic unconscious and today’s powerful machines, e.g. Heraclitus and cybernetics) (Deleuze, 1964, p. 76).

Recalling Deleuze’s later point regarding the epiphenomenon, we might say that his arguments in tandem suggest pataphysics as opening a path to epiphenomenology, as a science of the (Non-)Being of phenomena. This science would then necessarily describe the mechanisms of the simultaneous withdrawal and showing forth, and would be another way of discussing The Science of the Possible that Dilnot proposed in the previous section. Indeed, ‘the possible’ is also a central theme in Deleuze’s discussion. Within this motion of withdrawal and showing forth, Deleuze argues for a dual existence of Being, as an immemorial past and an unassignable future, with a central focus on the possibility of Being through technology (Jarry in his theory of machines such as the bike frame or time machine,

Heidegger with this 'standing-reserve', resources to be exploited as means to ends, and later 'Ereignis', the eventuality of an Event (Deleuze, 1998, p. 94). Deleuze contextualises his proposition and argument in a wider philosophical context, detecting different degrees of pataphysical radiation across Nietzsche, Marx, and Heidegger. Further elaborations of this philosophical trajectory of pataphysics exist outside the scope of this dissertation.

#### 2.4.5 The Role of the Imaginary

Thus, rather than continuing on a purely philosophical tangent, here I would like to tie this notion of epiphenomenology back to design, by briefly discussing Mads Nygaard Folkmann's *Aesthetics of the Imagination in Design* (2013). Interestingly, Folkmann, entering design from a grounding in the humanities, states his overall aim with the book to be a conceptualisation of the possible in design on the basis of phenomenology, more specifically through a specific interest in the phenomenology of imagination (as the possible) and its implications for an ontology of design objects. Folkmann's discussion of the role of imagination in design seems highly pertinent for further unpacking the key pataphysical notion of *imaginary* solutions, here focusing more on the way in which imaginations plays out in design. Adding to this, Folkmann himself views imagination as the heart of design, vital for all thinking and creation, as a carrier of meaning (Folkmann, 2013, p. 67). While drawing on an eclectic range of sources, spanning romanticist poetry, philosophy, psychology and criticism, much of the value in Folkmann's framing of imagination lies in his conscious delimitation of his scope and focus, including an explicit disinterest in sustaining the division between subject and object, of further celebrating the creative individual genius-designer, or of engaging the more ideological discourse concerning "the nature of creativity in a line that runs from romanticism to contemporary guidebooks on managing creativity (...)" (ibid., pp. 4-5). This aligns him well with the argument brought forward so far. Rather, Folkmann thinks of the imaginary as a vehicle for connecting sensual and conceptual meaning, looking at design as the medium through which this process happens and makes itself detectable. Finally, the design artefact, thus imbued with the imaginary, carries over its inherent possibility into its contextual implications in the world, what Folkmann terms transfigurative effects: how design can transform experience and mediate culture, and thus affect "major paradigm shifts in our ways of seeing, perceiving, and understanding the world" (ibid., p. 11) This question of implications and transformations echoes the discussion of Nelson & Stolterman's arguments around value, ensoulment, and meaningful experiences in 2.3: The Ultimate Particular & The Exception.

Of particular interest here is the process of negation and unrealisation, together

understood as the act of the imaginary that opens up the material closure of design artefacts (ibid., p. 151). Negation finds its root in romanticism, with its inward gaze on one hand, transforming the exterior world into meaning in the consciousness, and its outwards gaze on the other hand, channelling these newfound meanings back out into the world, e.g. through art, the preferred medium at the time (ibid., p. 69). Folkmann ties this to Dewey's (2005) idea of imagination being precisely the interface between this inner and outer world (Folkmann, 2013, p. 70). A critical notion brought forth, building in particular on Maurice Blanchot, is the way in which the imaginary, as an image of an object, makes the given object absent by the very presence of the imaginary object: "In its production of the imaginary, imagination not only makes the object absent; it also paradoxically makes the absence present. The imaginary displays a presence of the absent object; the object is made present *as absent*" (ibid., p. 74, author's italics). This circular, spiralling (ibid., p. 80) process is characterised by an oscillation between productive enthusiasm (conveying a new image) and reflective destruction (externalising it, exposing it to reflection). With reference to Schlegel (1988), Folkmann talks of this as an oscillation between self-creation and self-annihilation. The intimate connection between the two is significant. Folkmann e.g. references Liddament (2000) and his critique of any metaphysical notions of conveying a new image, that this image somehow emerges from an essence within ourselves (2013, p. 97). At this point, it is hard not to relate this to Schön's key notion of 'reflection-in-action' (1983), especially as Folkmann ties this dynamic back to the importance of objects, and their dual functioning of anchoring imagination, preventing it from turning into pure abstract visions, while also supplying imagination with the empirical foundation for further alteration and transformation (2013, p. 80). Indeed, the imaginative act starts with the annihilation of the previously given (ibid., p. 83), echoing Dilnot's framing of the artificial as that which could be other, and consequently designating the subject matter of design (Dilnot, 1999). This process of annihilation, the productive moment where the imaginary meaning is detached from the world of reality is what Folkmann, through Sartre (1940), refers to as 'unrealisation' (Folkmann, 2013, p. 84). Again, from a design perspective, this process seems to readily describe the imaginative dimension of iteration loops in prototyping. Finally it is worth returning to the point concerning the way in which imagination operates across the material and immaterial, as Folkmann explains:

The imaginary can be regarded as a vehicle of meaning that mediates material and immaterial; through it, material meaning becomes immaterial, even as the unrealised meaning remains connected to the material. The imaginary presents a productive challenge to design ontology: It does not promote an ontology based on solely negated meaning (thus the locus of Sartre's investigation); instead, it

underpins a new ontology of design that combines materiality and immateriality, actuality, and possibility (Folkmann, 2013, p. 152).

This key passage resonates strongly with Dilnot's distinction between an ontology of the past, understood "a process of ascribing metaphysical or transcendent qualities and identities to things" (Dilnot, 2013, p. 88), and an ontology of the artificial as "the negotiation with the historical implications of our own making" (ibid., p. 101). Further, from an emerging pataphysically infused design perspective, it appears as if the operations of negation and unrealisation provide us with further valuable clues as to what an epiphenomenology of design investigates.

## 2.5 Bureaucratic Reality

As already described, design finds itself in a somewhat strange situation, existing in a world defined by artifice (its subject matter), and yet with a narrow manoeuvring space for engaging artifice, due to the larger societal forces of economy and technology, forces that so powerfully and violently condition the artificial for its own destructive ends (Dilnot, 1999). This picture might seem extremely grand in its scope—let us again zoom in and ask how it actually plays out? Out of the numerous examples, we can e.g. think of the annual Black Friday consumerist meltdown as one possible epitome of this dynamic. Keeping in mind design's inclination to taking on the biggest problems in this world, here I would like to dwell a bit on this more quotidian and in a sense practical side of the situation laid out by Dilnot, how it plays out on an everyday basis, seeing as both design and pataphysics are not pure philosophy, but also highly practical undertakings that exist in societal contexts, human interactions, commercial markets, academic structures etc., both with their eyes set on particularity.

John Wood, in his book *Design for Micro-Utopias* (2016), discusses the role of bureaucracy in relation to design, carefully observing the grinding tension between the two. Wood's observations and arguments concerning the current state of bureaucracy find its base in part history and part philosophy, through the primary example of the transition from pictorial to alphabetical writing. Pictorial writing, crafted by a human being and produced in a situated context, ripe with tacit knowledge and emotional layers, gives way to alphabetical writing, a pure abstracted code, extremely consistent and functional, existing beyond any specific context or human being (Wood, 2016, pp. 51-65). What is at stake in this transition? The significance of the shift from pictorial to alphabetic writing is argued to be one of abolishing an imaginary four-dimensional realm in favour of an instrumental, two-dimensional realm (ibid., p. 54). At this point in time, it might be hard to

even begin to grasp the implications this shift, seeing as our contemporary world is largely inscribed with alphabetical language (Wood's exemplifies this point with 'Business-English' or 'word-processor English', not as the highest common multiple but as the lowest common denominator (*ibid.*, p. 60)). Posing the rhetorical question of why society would want to introduce such an alienating discourse, he answers: "The short answer to this question is that alphabetical writing helped to facilitate imperialism and international trade. Historically, its introduction makes it easier for governments or corporations to implement clear operational boundaries that make unequivocal distinctions between individual items of property or discrete actions" (*ibid.*, p. 63). While Wood describes the shift from pictorial to alphabetical writing in the historical context of Ancient Greece, it is worth moving two millennia forward in time to the point where the Gutenberg Press, as a revolutionary piece of technology, matched the logic already inscribed into the alphabetical language with a suitable (and also economically motivated) medium for mass publication. This is of course just one arbitrary moment in a longer and much richer trajectory, exceeding well beyond the 15th century up until our day and age. Wood himself traces the significance of the shift to alphabetical writing all the way up to the algorithmic logic that enables computer programming, grammar in language (as inflexible, and yet imaginary rules added on top of a living language) and the field of jurisprudence, the philosophy of law (imposing rules with the knowledge that they will be "challenged, bent and broken" (*ibid.*)). The main contribution Wood makes is in showing how this world, with a seemingly sharp divide between epistemology and ontology, and successfully presenting itself as a self-evident and inevitable reality, is a result of a series of human decisions driven by urges for "maximis[ing] profits, maintain[ing] power and elicit[ing] maximum compliance with the status quo" (*ibid.*). In other words, the division rests on human choice, not a God-given truth, divine Law, or "Nature".

He makes this point through a two-way deconstruction. Firstly, by revisiting Heraclitus, and his observations on the profound lack of constancy in the world, citing one version of his aphorism stating: "[W]e both step, and yet do not step into the same river" (p. 58). Here we would do well to pause for a second and visit the Chronological Pantheon of Pataphysics (Dant & Brotchie, 2012), where we too find Heraclitus nested in the swerving spiral of pataphysical eminences (fig. 9, p. 65), although with a different, complimentary, citation: "The road up & the road down are one & the same" (Dant & Brotchie, 2012). In a written commentary to the illustrated pantheon, his pataphysical relevance is further explicated: "BC500 Heraclitus, only fragments of whose works survive, is credited with first proposing the notion of the unity of opposites" (Dant & Brotchie, 2012, p. 7). From Heraclitus, Woods himself makes the following connection back to bureaucracy: "It is important to realise that the post-Heraclitean legacy of thought



has tended to overlook the entanglement of ontology and epistemology (...) In believing that bureaucracy is a 'reality' one withdraws from the ecological domain in order to emphasise the artificially rigid domain of nomenclature and codes" (Wood, 2016 p. 58). With Heraclitus' contribution to pataphysics thus already established, the second part of the deconstruction made by Wood should come as no surprise, as it is of course in the form of a pataphysical speculation that goes right to the heart of the matter. However, it does not come without its reservations in terms of practical uptake:

How can we find freedom if we are unable to rewrite the codes that pertain to a given situated question or task? (cf. Minsky, in Horgan, 1994). The early Dadaist and Surrealist Alfred Jarry (1873–1907) postulated a 'counter-science' that he called 'Pataphysics'. Jarry sought to see each and every entity as totally unique and subject to its own laws. This idea may seem mischievous, or even baffling for many of us who, from our early years, have been steeped in the apparent certainties of mathematical and alphabetical writing. Indeed, Jarry's provocation is so unusual that it is hard not to see it merely as a joke. It is corroborated, however, by the later theories of Alfred North Whitehead (1861–1947); if true, this argument suggests that Jarry's claim cannot logically be disproved, because all 'laws' are merely propositions that would be subject to the same fluctuations as things in the so-called 'real' world. This is the central argument of the chapter. If we were to work towards a more micro-utopian TOE (that is 'Theory of Everything'), a Pataphysical approach is helpful because it puts the citizen into a kind of devotional stance that invites reverie and wonderment. This is a tall order, as it soon leads to an idea of holism that resists any definition within a factual (that is atomistic) framework. If we were to write down some secrets of survival in the wilderness they are most likely to prove dangerously incomplete, in practice. This is why 'wisdom' is probably too mercurial and emergent to be encapsulated in the rigid codes of alphabetical writing (Wood, 2016, pp. 57-58).

Here, Wood takes us right back to the very headline of this chapter, in articulating some of the difficulties for design in taking pataphysics on-board, as it so decisively contradicts the logic we have known since childhood. Against this we see the promise of pataphysics as a way of ridding the contemporary confusion of epistemology with ontology, dispelling the truth claim put forward in governing rules and laws by exposing them as imaginary solutions, rather than Absolute entities. Tellingly, Jarry's *The Exploits and Opinions of Doctor Faustroll, Pataphysician*, (2006 [1911]), opens with a dense bureaucratic confrontation between Dr. Faustroll and a bailiff, who wants his three years of unpaid rent (Jarry himself was





Fig. 9. Heraclitus in the Chronological Pantheon of Pataphysics by London Institute of Pataphysics (Dant & Brotschie, 2012).

evicted as well). The section is narrated in thick legal jargon, a most alphabetical language, effectively exposing its imaginary nature.

Wood's last words of caution are interesting in that they point to the potential challenges in practically reconciling the pataphysical approach with our contemporary society. Further, the risk of holism echoes the correspondence between Daumal and Torma—in this sense Wood's concerns regarding the effects of the reverie and wonderment, can be read in parallel with Torma's concerns regarding his friend turning pataphysics into a fashionable rendition of mysticism. How do we avoid pataphysics thus dressing itself in metaphysical robes, and forgetting that it exists well beyond the metaphysical, as the ultimate defence, a façade of a façade? Perhaps Wood himself offers a starting point for exploring the answer elsewhere in the text, by way of his examples of the way in which alphabetical writing continues to extend its power as abstracted truth in computer programming, grammar, and jurisprudence. With their pervasive presence, at least all these areas present a spacious playground for pataphysical secretion.

At this point it might be worth quickly observing where these rapidly developing fields are at today. First of all how do they manifest themselves in the most extreme sense? From the vantage point of 2018, we could think of computer programming in terms of the magnitude, power, and global reach of state sponsored global data-veillance. A name like 'The Five Eyes' almost says it all in that respect, invoking the image of a Cerberussian beast. Or with respect to grammar and language, we could also think of the way that private tech companies continue to pervade our

everyday lives and language, e.g. how we now say “just Google it”, simultaneously referencing the act of searching online, a particular search engine on the internet (<http://google.com>), and also a googol, the number designating ten raised to the power of a hundred, from which Google took their name. Or take the constantly changing legalese constituting the terms and conditions for a service such as Facebook. The examples are countless.

It is interesting to note that, as part of a larger trend of glorifying Jarry and with that the time in which he lived, it is also easy to get stuck in the way in which pataphysics anno 1900 France was tackling the most beguiling contemporary intermingling of science and poetics. I believe the confusion is in part due to the way in which Jarry up-front announced pataphysics as an inherent, and thus immemorial dimension of the world, while at the same time expounding this central principle with an outmost curiosity to his particular day and age. One key example of this, as mentioned in Alastair Brotchie’s biographical account of Jarry, is the “luminiferous ether” described by Lord Kelvin, the most celebrated scientist of the time, a supposedly invisible and undetectable substance that was believed to fill out the universe, and explain the propagation of light (Brotchie, 2011, pp. 32-33). Similarly, in his novel *The Supermale*, a five-man biking team races a locomotive across ten thousand miles. During the race, one of the cyclist dies, only to keep on pedalling even faster in a state of rigour mortis. Key to the exorbitant speed of the team is Perpetual Motion Food, an invention by the character William Elson, modelled on Thomas Edison, a contemporary of Jarry. The Perpetual Motion Food, developed on an alcoholic base, is further in line with the contemporary opinion that “the only hygienic beverage is pure alcohol” (*Supermale* 1999 [1902], via *ibid.*, p. 250). Of course this novel, more than any other output, is testament to Jarry’s love for his bicycle, defining it as the “combination of inexorable mathematics and human action” (*ibid.*, p. 252). For Deleuze, in his argument on Jarry being an unrecognised precursor to Heidegger, the bicycle is argued to simply be the quintessential machine available in the times of Jarry:

More generally, Jarry’s entire oeuvre ceaselessly invokes science and technology; it is populated with machines and places itself under the sign of the Bicycle. The bicycle is not a simple machine, but the simple model of a Machine appropriate to the times. And it is the Bicycle that transforms the Passion, as the Christian metaphysics of the death of God, into an eminently technical relay race. The Bicycle, with its chain and its gears, is the essence of technology: it envelops and develops, it brings about the great Turning of the earth. The bicycle is the frame, like Heidegger’s “fourfold” (Deleuze 1998, p. 93).

Between 1900–1903, Jarry would write a column in the magazine *La Revue Blanche*, simply titled “Speculations” (2001 [1969]), in which he would expose the pataphysics of a highly diverse series of recent events. From all this, the dual question lingers: from which corner do we see the pataphysics of today radiate most purely, or conversely, where do we currently see the alphabetical logic reaching an absurd mundane zenith, completely unaware of its pataphysical wonder?

I will later return to this question as part of discussing some of my design experiments, particularly in Chapter 5: Meta(data)morphosis and Chapter 6: Designing for a City of Lies. However, against the pursuit of extreme manifestations of alphabetical logic, here I would like to dwell a bit on the mundane, everyday occurrences happening within computer programming, grammar, and jurisprudence. To be sure, this shift in attention is merely in degree and not in kind. In a sense, it is a matter of addressing the most common interface through which we experience the extreme manifestations. In the case of computer programming, this could be the limitation we face in the way you treat colour or space by using a given piece of software, like e.g. the Adobe package. Or the time you spend on annual digital surveys measuring the quality of your performance, the quality of your employer, your feedback etc., draining away the time you actually have for producing value. Or the difficulties stemming from how you are not able to fit your name into a standardised online form, because there simply isn’t enough space for all your characters. Or as an alternative, highlighting the colonial dimension of this last example, the way that a digital service such as Facebook would not allow you to create a profile, flagging your Native American name as “inauthentic” (Sanburn, 2015).

This logic is so deeply engrained in our everyday tasks, that it can be hard to spot the exact ways in which it not only conditions our patterns of actions, but also patterns of thought. If you execute all your design in the Adobe package, you will not only start thinking of *designing* as that particular *design* you are able to produce within that particular set of computational operations. You might also start to unknowingly circle certain design problems, which are likely to be effectively solved through this particular set of computational operations. To be sure, a whole range of problematic, yet invisible baggage is spilling over in this way. All this of course echoes the previous discussion of ontological designing (2.4), and how design designs us (Willis, 2006, p. 84), albeit also in a highly trivial and small-scale fashion. What the focus on bureaucracy perhaps reveals is the pervasive, invisible nature of this conditioning, along with the myriad potentials for engaging the contemporary expressions of alphabetical logic.

One thing that typically slips these discussions is how this plays out in all its mundane glory. What is of interest here, is the way in which the sheer triviality

of this logic can make it slip under the skin as an invisible given that we simply have come to accept as part of e.g. 'work'. Like any other field or activity in society, this dynamic too traps design. In a sense this is a very low-fi way of looking at the consequences of Dilnot's diagnosis of design.

One recent design example of this dynamic comes to mind. At Nordes 2015, a biannual design research conference hosted by the Nordic Design Research network, that year held in Konstfack, Stockholm, Cameron Tonkinwise was giving the closing keynote. As part of his presentation, he polemically challenged the value of the event itself by questioning its ability to address its own theme: "Design Ecologies. Challenging anthropocentrism in the design of sustainable futures". As a result, a heated debate followed the presentation, where Tonkinwise received a significant pushback. This particular discussion is of less relevance to the argument here. However, as Tonkinwise made a passing reference to pataphysics in his presentation, I was curious for him to elaborate this reference further, and asked him to please do so in an email after the conference, receiving the answer:

(...) I have only a vague memory of saying that so am not exactly sure of the context.

When I do say things like that, it is normally in relation to 'audit culture', that is, the obsession with measurement that is characteristic of neoliberal organizations. I may have been referring to the way current university administrators insist on measuring research output, which means not only measuring the number of publications for instance, but also the quality of those publications (measuring harder to quantify things like the esteem in which an academic journal is held by a discipline) and even the impact of research (which to my mind is impossible to measure).

In reaction to such regimes, I often suggest pataphysics. I take this to be an act of ironic resistance, where you attempt to comply with the audit culture stipulations but in ways that you yourself do not believe. You play the game of trying to 'scientifically measure' qualitative phenomena, but only in order to show how absurd the project of management-by-measurement is.

Perhaps the example I was giving concerned my attempts to draw attention to the privilege associated with being able to attend academic conferences. Many people's institutions will only pay for them to attend such symposia if they are presenting peer reviewed papers. My pataphysics response would be to pretend to the outside world that all participants are

giving papers while actually using the time and space of the conference to get smart people from around the world to work on accomplishing something significant. This would be more than an act of deception and something closer to pataphysics if some designing went into how to stage the appearance of the papers being presented - e.g., by collating feedback through some other media than people sitting in a room listening. Done well, there is a chance the pataphysics response could prove actually useful (personal communication, July 8, 2015).

Here, the format of a conference, very much a “given” standard for sharing and discussing work in academia (framed by certain language, formats, technology etc.), is framed in startling accordance with Wood’s argument on a bureaucratic reality of nomenclature and codes superseding the ecological domain—ironically the theme of the Nordes2015 conference itself, and also highly reminiscent of his earlier point concerning the confusion between bureaucracy and reality leading to a withdrawal of the ecological domain. Tonkinwise’s suggested strategy echoes a point made by Shattuck: “Life is, of course, absurd, and it is ludicrous to take it seriously. Only the comic is serious. The pataphysician, therefore, remains entirely serious, attentive, imperturbable. He does not burst out laughing or curse when asked to fill out in quadruplicate a questionnaire on his political affiliations or sexual habits: on the contrary, he details a different and equally valid activity on each of the four sheets” (1960, p. 29). We should also pay attention to Tonkinwise’s distinction between the pataphysical response as “actually useful”, with the implication of the audit culture which he reacts against being less useful.

While Tonkinwise makes a call for action and speculates on a possible pataphysical response, Isabella Brandalise and Henrique Eira have already executed this plan in the course ‘Patadesign: Design of Exception, Absurd Artifacts and Imaginary Interfaces, which they have been teaching for three semesters across 2016-17 in the Design undergraduate program at the University of Brasília, Brasília. While inspirational on several levels, from the perspective of this current argument, it is particularly interesting to note that ‘Bureaucratization’ is one out of many other ‘Patadesign principles employed in the course, in order to make ‘Pataphysical texts, history, practitioners etc. more applicable to design projects (others include ‘Poetic Language’, ‘Uselessness’, ‘Absurdity’, ‘Latency’, ‘Humour’, ‘Equivalence’, ‘Ambiguity’ and ‘Exception’) (personal communication, March 26, 2018). The inherent paradox in this setup is an integral point made in the course. Brandalise & Eira answer the question of how their practice is pataphysical in this way:

We see the ‘Patadesign course as an exception in the design program at the university, where design is mainly taught under rational perspectives and

traditional pragmatic methodologies. Also, we are aware of the contradictory and paradoxical nature of establishing a course about the science that consciously has avoided being institutionalized and escapes utilitarian definitions. As if creating such a structured course was not enough, we even developed a list of 'official' principles to guide the work, playing with the humor of excessive bureaucracy (ibid.).

They further elaborate on these insights, in answering the question: Why bring pataphysics into design?

We believe that a pataphysical approach to design challenges current practices and established ways of thinking. Traditionally, design practice follows concepts such as rationality, order, and clarity. It is usually guided by technological developments, functionality, and efficiency of form and content. In general, design approaches the future as a given within a collective imaginary, dictated by media and market trends. An example of such phenomenon is formal design education in Brazil, a heritage of schools like the German Ulm, that had as one of its founding principles technical rigor and separation of art and design. Although those principles stand for relevant competencies that design students should develop, we also believe that their narrow implementation can limit the potential of creative and critical extrapolation that design can reach (ibid.)

As bureaucracy pervades society, it too exerts its influence on design as well, very concretely as in the particular educational structure here described by Brandalise and Eira, or in the Nordes conference, and its particular academic conference format, as described by Tonkinwise. Interestingly, across these two examples, we see how each of these structures, manifesting bureaucracy and the alphabetical logic described by Wood, come with in-built possibilities to be subverted by a sort of override from within. While this is not to disregard or downplay the detrimental effects carried by these structures, the examples do offer some concrete scaffolding for seeing how pataphysics in design can play out in real life. If anything, the approach of Brandalise and Eira, and the speculation on Tonkinwise's part, seem highly practical, and far detached from the risk of holism ushered by Wood. In fact, his point regarding the survival in the wilderness seems to be more acute in this sense. As Brandalise and Eira state: "We are excited about the potential for conceptual and aesthetic experimentation, unexpected outcomes, and a move away from the monopoly of imagination possibilities we often find ourselves trapped in" (ibid.)

## 2.6 Towards A Reconciliation of Critical Design Practice

We've already discussed the way in which artifice, understood as that which could be other, strikingly resonates with design's inherent leap into the realm of the possible through proposing change (rather than accepting the given). Also, we started tracing the possibility of design, understood as a distinct field of knowledge, beginning to come to terms with understanding itself as such, via the lens of pataphysics and through design practice—i.e. embracing instability, fluidity, and transitionality. Here we will dive a bit deeper into the relationship between design and the artificial, specifically paying attention to the character of the boundary drawn between design and the world at large.

A world increasingly defined by the artificial, surely is resounding with “that which could be other”. This has to be the foundational quality ascribed across all scales of artificial manifestation. Consequently, it should transcend a design discipline that engages with all these different scales. An example of this engagement reverberating between the artificial world and design: How could a chair be different? How could sitting be different? How could domestic living be different? How could Swedish society be different? How could the world be different? How could living be different? This is of course an exemplification of Dilnot's point about design not only concerning possibility, but concerning possibility as such (1999), resonant with Simon's notion of the science of the artificial and the science of design as standing or falling together (1969 via *ibid.*).

And yet, as we observe the way in which design's ability to reflect on itself as dealing with artifice as that which could be other, along with the myriad of implications, consequences, opportunities arising from this truly unique position, we also notice the way in which this pursuit of self-reflection has its practical limits. We already discussed the way these limits, or perhaps better this demarcation, is nested in the wicked problem of design's failure to know itself, and how the world outside of design reacts to this failure in a way that distracts design further away from rediscovering itself, and ultimately in fulfilling its potential as a self-conscious discipline, i.e. simultaneously knowing itself and offering its unique knowledge to the world. As complex as this unfolding dynamic may be, the demarcation of design can also be more pragmatically read as an outcome of an on-going power negotiation, something that happens between economy, technology, politics and in extremely rare cases design (*ibid.*, p. 57). Unlike the dual coupling between artifice being the horizon of the world, as well as the being the subject matter of design, the questions of quantification and scale plays a large role in this negotiation. In fact, these are the ways in which economy and technology assert their mandates of power. To this we could add that their current global dominance secures them



an equally asymmetrical degree of political weight. In summary, as these areas have largely defined the rules, and with that the measures of success, it is unsurprising that they have secured such a large degree of power, in a world that continues to accept those rules as reality.

This negotiation, essentially a question of disciplinary agency and power, but also of regimes of knowledge, includes a range of different stakeholders, none of them as intimately coupled with the artificial as design. Here we are of course revisiting the wicked problem already laid out earlier, namely how the failure of design to scope the design space of possibility as such (hitting a wall constructed from technology, economy etc.) continues to undercut design's agency and relevance in the world, causing further over-inflation in its misguided claims of importance, along with its fear of impending intellectual implosion. Another way of stating this would be to say that design, in failing to grasp its demarcation, purely performs and reinforces it in an unconscious manner. In this way, failing to grasp this external demarcation of design (and thus failing to act on the importance of Simon's and Dilnot's crucial connection between the artificial and design) leads to a scenario where design will be reduced to whatever this space allows it to become, in the manner of a self-fulfilling prophecy. This is necessarily an incapacitated version of design that accepts its existence in a gilded cage, an arbitrary, claustrophobic space full of infringing glass ceilings and red tape. Design at its least capable, in terms of truly challenging the given hegemony of societal forces. It is not hard to imagine this future: design as applied art or styling, the icing on the future cakes that technology and economy bake in toxic union. Future design historians could write accounts on how design started its life exactly as this, to then experience a flare of wider relevancy and urgency, to then again fold and return to its initial life as an applied art. Of course this future life would differ from the initial conception of design. In this state of ultimately being subsumed in the status quo, it is easy to see the way in which design will be employed for creating pseudo-change ('design washing' could then be added to growing vocabulary of 'green washing', 'pink washing' etc.). This would then continue to relativize and trivialise the possibility for radical societal change to happen, accelerating the pace with which the world would lose any remaining faith in design's consciousness as a field, and most tragically, lose a sense of possibility as such.

However, there are of course many alternatives to this future, including one in which design truly engages in this negotiation, and really fills its unique and highly important role of standing with the artificial. Several design domains testify to this push, each highlighting different dimensions of this direction. Viewed through this lens, 'design activism' e.g. speaks to a design capable of understanding and mobilizing its own agency (e.g. Fuad-Luke, 2013; Thorpe 2012);



‘adversarial design’ addresses the agonistic nature of the political negotiation in which design has a vital part to play (Carl DiSalvo, 2012) and ‘discursive design’ speaks to design’s ability to carry its ideas into a broader public discourse (Tharp & Tharp, 2008). ‘Speculative design’, ‘critical design’ and ‘design fiction’ all have a particularly pleonastic ring, in that they all speak more directly to the root of this argument, namely the nature of the artificial, the extreme degree of contingency, the way in which something can always be other, the abolishment of any sense of the Absolute etc. Here I am not concerned with the inception of speculative and critical design, design fiction etc., as commonly attributed to certain individuals, institutions or companies, neither affirmatively or belligerently, but a much more extensive and diverse strand of critical design practices. An increasingly well-trodden path in this kind of argument would be to pull out a range of historical, canonized examples, such as Italian Radical Architecture, Anti-Design etc. (see e.g. Malpass, 2017 for a recent example). As a slight alternative, Bardzell & Bardzell critiques critical design on the grounds of the non-designerly Critical Theory developed in the Frankfurt School (Bardzell & Bardzell, 2013). Here we should note that the arguments put forth ultimately discuss critical design very much in an HCI perspective, and further answer their own rhetorical question: “What is Critical About Critical Design?” with a very specific critique of Dunne & Raby’s critical design programme (and thus not critical design practice as such).

While highly sympathetic to the genuine attempts of tracing a critical legacy within design practice as well as exposing the field to multiple lines of critique from outside design, I will follow a slightly different road in this present argument. From the previous discussion regarding the demarcation of design, I will tentatively argue that a critical design practice is a design practice that seriously engages with the demarcation of its own maneuvering space, and consequently takes artificiality seriously as its subject matter. In actively engaging with the boundary of design’s domain, design itself is negotiating its space to act, to influence, confronting the question of what it is capable of? (Dilnot, 1999). This self-consciousness and sense of responsibility and care towards setting the perimeter of its own domain is a significant point in itself. This is a design that commits to its own valence, not as superficial branding, but as a substantial and unique form of inquiry and contribution to the world. To this we can add the value of the additional space that is being negotiated, assuming that design is capable of asserting itself as a conscious force in the world and not simply observing its own irrelevance.

Let us remember that this is not a tug-of-war, where design simply needs to pull harder in order to win, e.g. against the tech industry in the racing development in artificial intelligence and machine learning. In a way this mind-set is exactly missing the point, as it will just produce more rhetoric of the sort that dresses

design thinking up as some holy grail. The key problem lies in not understanding oneself, or metaphorically speaking, not finding a firm ground. Finding your ground, achieving balance, and in that gaining a level of consciousness, has to be a prerequisite for any game, whether tug-of-war or something more imaginative. In a sense, we can say that a design that commits to knowing itself (design-knowledge) and thus knowing the world at large (the artificial as horizon), is necessarily critical, by how this question naturally extends to the question of demarcation. It is a design that acts in its own interest (and by serving others at its core, we can extend this to those who design serves), and by doing so defies the interests that are capitalising on its lack of self-knowledge, with detrimental consequences not only for design, but for the larger world. Importantly, addressing the question of how things could be different from a design perspective (and notably doing so through design), whether it be in the scope of an artefact or the artificial as horizon, is much more than a narrow intellectual exercise. Criticality as a fundamental potential in design latently pervades design in all its aspects, and we find it present across entire spectrum laid out by Redström (2017), from product to paradigm.

Signifying certain design practices or programmes as ‘speculative design’ or ‘critical design’ could then seem redundant in some sense. Certainly, arguments have been put forward that such labels are without substance, i.e. largely being a branding exercise, and that good design is already critical and speculative (Tonkinwise, 2015). Without ignoring this important discussion, another way to look at this could simply be that different design practices, programmes, studios etc., put different qualities and foci to the fore, whether it be criticality, speculation, activism, transition, decolonization, sustainability, systems. In this sense it is not an ontological spectrum of discreet entities. To exemplify, surely a systems design practice can also be speculative, just like a decolonising design practice can also be critical. Considering design’s obsession with design methods, another way of reading this is that each qualifier simply points to the programmatic vision of given practice/studio/group/institution (Redström, 2017). The qualifier is thus methodologically grounded as a constructive frame, lending gravity to the design experiments taking place within it, and is less a matter of a descriptive classification scheme, let alone ontology. Finally, a less optimistic reading would be that all the qualifiers are a result of the inflation of design’s relevance, happening in tandem with its intellectual void and lack of self-knowledge. This is not to offer a trichotomy; surely all three of these explanations can co-exist as imaginary solutions to the problem of how to make sense of speculative design, critical design and design fiction.

Perhaps pataphysics is instructive in this sense, in the way that everything is pataphysics through and through, and yet there is a distinction made between unconscious and conscious pataphysics, with the Collège de ‘Pataphysique (and all

the other pataphysical institutes etc.) being an institution devoted to the latter. In design, we could understand this distinction as unconscious design being the kind that refuses to know itself along with its consequences, implications and responsibilities (Dilnot, 1999). In other words, design purely on the terms of its client and the market, as an aesthetic icing on top of Western technological and capitalist cakes. Against this we could then position conscious design as the design that commits to knowing itself (design-knowledge). As we have seen, there is a wide range of ways this can be done. Further, we should note the way pataphysics asserts its right to assume the name of Science (as opposed to all other sciences) through its “illimitation and auto-critical faculty alone” (Sandomir, 1960c, p. 180). This notion of auto-criticality and illimitation appears to speak directly to the issue of whether design accepts its domain as a servile applied art, or whether it openly challenges the boundaries of its domain through committing to the artificial (and thus the world at large), and itself. Notice how this conception of criticality/auto-criticality differs from a design that assumes to know itself, and this limits its critique to a forceful barrage set against a certain external topic, e.g. capitalist market logic, machine learning, gender inequality, the unsustainable use of materials, synthetic engineering etc.

Viewed in this way, it is not surprising that the more conscious design practices that have put criticality to the fore, have drawn explicitly on avant-garde movements such as dada, surrealism and situationism (e.g. Dunne, 2006; Gaver et al., 2001; Kristofferson, 2003 via Redström & Mazé, 2007) seeking to tap into the way in which these ‘-isms’ have effectively imagined how things (reality, society) could be conceived of in radically different ways and thereby challenging basic notions of reality and society. Just like it comes as no surprise that the ‘Patadesign course taught by Brandalisa and Eira combined ‘Pataphysics as a theme and Speculative Critical Design as an approach (Brandalisa and Eira, 2018). However, it appears that a commitment to pataphysics through design carries with it a certain shift in what criticality, speculation and fiction means. Rather than an archipelago consisting of a cosy equilibrium of small islands built on a few decades of canonized individuals, practices, studios, groups, or institutions (not unlike The World Islands in Dubai), pataphysics has the potential to reconcile all these islands, along with others, through a shifting notion of criticality. Here, the illimitational nature of pataphysics grinds against the (sometimes painfully) limitational domain of design. In this friction, the frontier of design’s domain is constantly being negotiated and thus brought into awareness, necessarily producing a constant stream of self-questioning: what is design capable of? In a similar vein, we find this notion of the limit of design and possibility in Folkmann as well, in relation to design experimentation: “Design experimentation is about investigating the possible of the design to the limits of impossibility, challenging design by pushing it to its

border, but doing this on the basis of the object—as an emergence of possibilities explored in and through the concrete object (Folkmann, 2013, p. 206). This ability is not only a matter of niche experimentation in certain practices in design. It is an inherent critical impulse in design that can be brought to consciousness.

## 2.7 A Non-History of the Pataphysical Impulse in Design

From the instances of pataphysics and design coming together we have thus far encountered, we see a curious pattern. To start off, let us recall how the unarticulated relationship between pataphysics and design is all the more striking, given that the neighbouring fields to design all display a higher degree of pataphysical articulation. This is the context in which we operate. From this foundation, I would like to extend a bit on the landscape sketched out in 2.1. In addition to the highly limited pool of pata-design projects I have come across during my research, I have carried out a limited survey, asking a select group of people behind some of the pata-projects and practices to reflect on the relationship between pataphysics and design. Based on this what can we say about how they came together?

The first point to make is that the pata-design projects are very recent. It seems as if a large part of the self-proclaimed and more or less conscious pata-design projects emerge on the back of the field of critical and speculative design practices. This is not to suggest a causal link; A leading designers to B. Rather, the ways of bringing together pataphysics and design appear rather haphazard. It seems as if designers either arrive at pataphysics through direct exposure to pataphysical literature, be it either self-directed or via personal connections. Indeed, I see myself conform to this pattern as well: the first time I personally remember encountering pataphysics, was at some point during my design studies, when an artist friend showed me Christian Bök's *'Pataphysics: The Poetics of an Imaginary Science'*, recommending not only the book, but also an exhibition of Barry Flanagan's early works that was on at Tate London at the time<sup>[4]</sup>. Blown away by the radiant colours, esoteric structures and cryptic humour inherent in Flanagan's works, needless to say I quickly devoured not only Bök, but countless other pataphysical illuminaries.

This point about inter-personal relations is not merely anecdotal—is also forms vital links through history. This is perhaps especially the case with the Science of Sciences, as its conscious appreciation and exertion has only reached a rather limited circle of people, which is maybe not so surprising, given the fact that it does not have a battle to win, by way of the world being pataphysical through and through. As Sandomir puts it: "The College is not a Church. It is not concerned with winning as many 'souls' as possible" (Sandomir, pp. 172-173 in Shattuck,

1960). On the topic of the limited uptake of pataphysics, one should also mention the period of 25 years of occultation initiated by the Collège from 1975-2000 (vulg.). Now, especially on the backdrop of this extensive period of occultation, it seems as if pataphysics has been gaining a wider visibility in recent years, with e.g. the publication on pataphysics by Brotchie (2011) and Hugill (2012), both on MIT Press. Another aspect to consider concerns whether the pataphysics of the world simply is shining forth with a hitherto unseen brilliance, e.g. by the world becoming more visibly absurd?

During my doctoral research, I became a member of the London Institute of Pataphysics (LIP). Realizing that situationism has had a considerable uptake in design and design research, in particular the situationist methods such as *dérive* and *détournement*, and further having come across accounts of a certain divide between pataphysics and situationism, I was curious to dive deeper into this matter, in order to shed further light on the relationship between all the three parties. Thus, I reached out to the LIP with a question on the matter. The official response I received from the Department of Dogma and Theory, a part of the LIP, written on 25 As 144 (November 27, 2016 vulg.), was highly revealing. At its core, the Department of Dogma and Theory denounces any historical divide between pataphysics and situationism—in fact they even deny any engagement in the first place:

The only historical connection, tenuous as it is, was between a few of the members of these associations. There was never a ‘split’, because there was not even an engagement. Asger Jorn was a friend of both Noel Arnaud and Jean Dubuffet, both of whom were members of the Collège. Arnaud was also the co-editor of *The Situationist International* with Jacqueline de Jong, which was not connected to the *Situationist International of Debord et al* (one of the many misapprehensions of Monsieur Hugill). How the text on Pataphysics by Jorn in *Internationale Situationniste* came about is a little unclear (is it discussed in Debord’s published correspondence? We have not checked). Guy Debord was an admirer of Jarry’s works, but not of the Collège’s disengagement, he perhaps asked Jorn to write this text, but he certainly comprehensively rewrote it for publication. The Collège replied with a text which demonstrated that “Pataphysics is apostasy from itself” in Dossier 17. This was the end of any debate between the Collège and the SI. Jorn had been awarded the OGG by the Collège but this does not mean he was ever a member, and the Occultation of the Collège had nothing to do with the events of May 1968, despite Hugill’s (presumably humorous) suggestion to the contrary (Department of Dogma and Theory, 2016).

The critique of Monsieur Hugill (Andrew Hugill, author of *'Pataphysics - A Useless Guide* (2012)), and in particular his very generous coupling of pataphysics with a whole range of different authors, phenomena etc. is elaborated further in the editorial introduction piece "Prolegomenon" in the *London Institute of 'Pataphysics Journal Number 12* (Blegvad, et al., 2016). A level of detail is required here. In this text, various types of apophenia are being unpacked, the base term referring to 'projected meaning'. Two examples relating to Hugill are given for further clarity, 'Linguistic Apophenia', and 'Category Apophenia'. In 'Linguistic Apophenia' we are witnessing how "the death rattle of a wild beast" (from the Jarry's novel *Mes-salina*) is said to allude to Oscar Wilde's surname, despite the fact that the novel is written in French, "wild" translating as "fauve" (Blegvad, et al., 2016, p. 12). Much excitement and anticipation is spurred as a result: "[t]hanks to this conceptual leap a vast field of enquiry is opened up: any word in a text as it appears in any other language can now be considered pertinent. Remarkable results are anticipated from this method" (ibid.). 'Category Apophenia' in turn centers around syntax, in particular the turn of phrase "by extension", as used by Hugill in the following assertion: "Joyce seemed to have absorbed Jarry in much the same way as he absorbed the work of many other writers and so, by extension, did Flann O'Brien" (Hugill, 2012, p. 169 via Blegvad, et al., 2016, p. 12). The LIP concludes: "According to this method an unproved assertion can be considered proven simply by referring to another unproved assertion (since the "seems" here signals that no connection between Joyce and Jarry has in fact been established)" (ibid.).

Why is this important for our argument? Precisely because the critique of LIP maintains and in fact restores an admirable, and frankly necessary level of (pataphysical) precision faced with the thorny issue of disentangling a somewhat all-too-tight embrace of one of the slipperiest of substances and everything it does and does not stick to. Elsewhere, in *A True History of The College of 'Pataphysics* (1995), Brotchie writes that: "Even unconscious pataphysicians acknowledge that among the sciences, exact and otherwise, history is among the most imaginary solutions" (Brotchie, 1995, p. 7) Again elsewhere, in the introduction to *A Chronological Pantheon of Pataphysics* (Dant & Brotchie, 2012), a wonderfully large illustrated gidouille spiralling us through an elaborate gallery of pataphysical personages, we are told:

The drawing seeks to portray some of the cast of persons who have contributed to the Science. It is laid out chronologically because it had to be organised somehow, and a chronology is no more arbitrary than any other taxonomy. Such an attempt does not, however, imply an attempt at a 'history of Pataphysics,' which would be a rather quixotic enterprise. Instead it is concerned with individuals, while events tend to be repres-

ented only when they introduce a new character into the narrative (Dant & Brotchie, 2012, p. 5).

This question of the quixotic enterprise of writing a pataphysical history is of course a different problem altogether than our current one of approaching the unarticulated bind between design and pataphysics through a historical lens. Or is it? Against any quixotic attempts at the history of pataphysics, and after this appropriate interlude into apophenia, we do well to return to the conclusion of the response from the Department of Dogma and Theory:

The Collège proposes that all human beings are pataphysicians, some being aware of the fact, and others not. All design is therefore pataphysical, consciously or otherwise — especially this so-called ‘situationist design’ — and it is thus both undercurrent and mainstream, perfectly equivalent to an apostasy of itself and therefore — delightfully — immune to categorisation and thus to appropriation and academic autopsy.

CONCLUSION: Situationist design is in fact pataphysical design, but the category is so extensive as to be meaningless (Department of Dogma and Theory, 2016).

Notice how this is a substantial claim not different in degree but entirely in kind to Hugill’s mirage visions of historical connections. Following this it appears that a history of the pataphysics of design, in the most readily conceived sense, would make a fine example of showing pataphysics in action (by demonstrating history as an imaginary solution), while not necessarily being aware of its own wonders and perhaps apophenic devices. What now? With the conclusion of the Department of Dogma and Theory in mind, and thus equipped for our journey, what better way forward than to embrace the meaninglessness, than to take a peak down into the rabbit hole.

We already paid attention to the way that situationism has been picked up and hailed within the design ranks. The phrase ‘picked up’ is of the essence in this context, as testified by a design research paper title such as “Taming the Situationist Beast” (Leahu et al., 2008), which can be read as a critique of the instrumentalization of situationist tactics (effectively tools or methods) in HCI design, without a sufficient grounding in the sensibilities brought forth by this artistic movement. Of course this is part of a larger pattern we see happen in design, one of the most stark mainstream examples perhaps being the way that fashion design incorporated Punk aesthetics (as opposed to the movement), e.g. in the famous case of Vivienne Westwood.



The case of cultural probes might be particularly illustrative in this respect. Cultural probes were developed as part of Presence, an EU-funded research project, in which a group of researchers then at Royal College of Art (RCA) in London, set out to address “ways technology can be used to increase the presence of older people in their local communities” (Gaver et al., 2001, p. 11). The cultural probes then started out as an experimental way for opening up possibilities in the dialogue between designers and people (Bochner et al., 2014, p. 185)—the probe kit itself, with its idiosyncratic tasks for people, wrapping into a playful aesthetic, presented a novel, sustained embrace of the ambiguity inherent in the design process. As such it can be seen as an antidote to the rational, scientific design methods of the 1960s, and to the notion of a singular scientific truth as such (ibid. p. 195). Gaver et al. goes as far as describing the motivation “of leaving room for the unexpected driv[ing] a probe process that is at once destabilizing and playful, provocative and at the same time inviting” (ibid.). They also make an interesting point in the way that probes articulate aspect of design as such: “In their playfulness, openness, and embrace of ambiguity and absurdity, probes seemed to mirror aspects of the design process itself” (ibid. p. 198). While cultural probes themselves have gained a huge popularity as a design method since the Present Project, what is perhaps most interesting is the ways in which Gaver has been vocal about their misappropriation (Gaver et al., 2004; Bochner et al., 2014), either as a form of “discount ethnography”, or as a data-gathering tool for information, effectively reducing possibilities (Bochner et al., 2014, p. 199). In many ways these misappropriations seem to fold back cultural probes into the tendencies in design that they sought to escape.

Situationism is however not the only avant-garde movement, that, unlike pataphysics, continues to be explicitly acknowledged as highly influential and foundational for the more critical vein of design. To stick with the Presence, Gaver, Hooker and Dunne reflected: “We drew inspiration from the tactics used by Dada and the Surrealists, and especially, from those of the Situationists, whose goals seemed close to our own” (Gaver et al., 2001, p. 23). Indeed, these three particular movements; dada, surrealism, and situationism, are also brought up as an explicit inspiration for Italian Anti-Design (Kristoffersson, 2003 via Maze & Redström, 2007), one of the most oft-quoted precursors (along with Italian radical architecture) to Dunne & Raby’s paradigmatic framing of critical design in the 1990s. Krzysztof Wodiczko, another early pioneer of critical design practice, in his delineation of the public practices of the past avant-garde, too starts with the period “Historic Avant-Garde (1910–40s)” which includes futurism, dada, suprematism, constructivism and surrealism (Wodiczko, 1999, p. 29). Folkmann describes experimental strategies in design, understood as design that deals with their own properties, in what way these constitute design, and consequently what design is (design ontology) (Folk-



mann, 2013, p. 203). Noting these strategies are prevalent in “the critical design movement”, he too traces this movement’s origins back to Italian antidesign and radical design movements (ibid.). The omission of pataphysics is striking across all these accounts, considering the way that it has influenced the -isms which are argued to be foundational for the more artistic conceptions of design. Even when it seems to stare design right in the eye, pataphysics seemingly escapes an explicit mention. As an example Mallol, in her article “Displaying f(r)ictions. Design as Cultural Form of Dissent” (2010), discusses the role of the everyday from a quote by George Perec (Oulipo illuminary and member of Collège de ‘Pataphysique): “Georges Perec in his article Approaches to What?, has troubled and inspired several intellectual traditions too, from Surrealism to the Situationists; and today from cultural studies, to relational art or critical design” (Mallol, 2010, p. 108). This way of understanding the link through certain individuals exposes a different line of inquiry, not unlike the pataphysical one we encountered earlier in the *Chronological Pantheon of Pataphysics* (2012). Indeed, following this tangent, several other traces back to pataphysics exist. In their artistic grounding of the ‘Showroom’, Koskinen et al. writes: “It links research to historically important artistic movements like Russian Constructivism, surrealism and pop art [...] It certainly created links to radical writers and theatre directors like Luigi Pirandello, Bertolt Brecht, and Antonin Artaud, who broke the lines between the artists and their audience” (2011, p. 90). Here we should pay special attention to Artaud, who—after briefly having ran the Alfred Jarry Theatre with Roger Vitrac (1926-28)—would make his own swerve and formulate the Theatre of Cruelty. As part of Hertzian Tales, Dunne discusses the concept of para-functionality, “a form of design where function is used to encourage reflection on how electronic products condition our behaviour. The term ‘para-’ suggests that such design is within the realms of utility but attempts to go beyond conventional definitions of functionalism to include the poetic” (Dunne, 2006, p. 43). Referencing a host of different works all bringing forth various aspect of this central concept, he discusses a particular work by Paul Klee, the Twittering Machine, “[in which] a strange device hovers in the imaginary space of the drawing, suggest[ing] a realm where machines do not simply mirror rationality through nonsensical functions, but embody alternative physical laws to ours, like Marcel Duchamp’s ‘Large Glass’ and the ‘Pataphysics’ of Alfred Jarry” (ibid., p. 53). Here we should pay attention to the fact that Klee taught at the Bauhaus. This is important, as Redström, in his work *Making Design Theory* (2017), discusses Bauhaus as one of the key examples of the way that design, in lieu of the ‘basic research’ underpinning science, instead has established artistic foundations. Redström goes on to argue that a conceptual foundation, like the one developed at the Bauhaus, amongst others by Klee, is very much still in place, despite the fact that the contemporary design practices keep extending into new domains beyond the confines of its industrial legacy (Redström, 2017, p. 89). In

a sense we already encountered one facet of this discrepancy in the earlier call for “taming the Situationist Beast” (Leahu et al., 2008).

What is characteristic of these inter-personal relations back to pataphysics is their highly anecdotal character. This becomes clear if we compare it e.g. to Atzmon’s (1996) account of the synergetic collaboration between De Stijl artist/designer Theo Van Doesburg and Dadaist artist Kurt Schwitters, describing and showing the increasing cross-pollination of artistic practices through a series of collaborative projects. We should note how an account of this in a way is the opposite of Hugill’s apophenia. Indeed, an account like this goes beyond a utilitarian focus on methods as well as anecdotes of personal career trajectories, to instead point towards larger questions of methodology and the deeper implications of creating a new interface between design and avant-garde art. In fact, it takes us back to the pataphysical distinction between the quixotic enterprise of a history of pataphysics (in design) vs. the pataphysical consciousness in design brought out through practice.



Fig. 10. The absence of pataphysics. Highlight from the cover of Koskinen et al. (2011).

[1] 'Design artefact' used in the widest sense of that word, spanning products, systems, services etc.

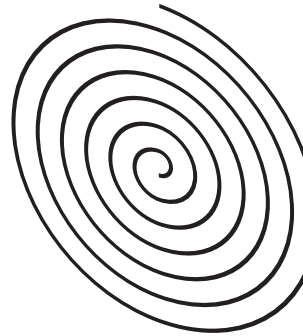
[2] I am indebted to Peter Hall for pointing this out.

[3] It should be noted that Jorn's text (1961) was rewritten for publication by Guy Debord, who was a fan of Jarry's work, but not the Collège (Department of Dogma and Theory (2016).

[4] The exhibition is documented in Wallis & Wilson (2011).

chapter 3

# Research Structure



This chapter is a bit of structural anomaly. It could precede the experiments, contextualising them in advance and thus setting the stage for their particularities. Yet, it could also follow the experiments, pinpointing their particularities as illustrative examples. Irrespective of this question regarding placement, this chapter is about both research structures and the structuring of research. As part of this, particular attention is paid to the research traditions it exists within, constructive design research and research through design, along with the broader trajectory underpinning them. The chapter further discusses the programmatic aspects of my research, including the nature of the infusion of pataphysics into my evolving research practice. As part of this, the development within the research programme is discussed as 'swerving' in contrast to the notion of 'drifting'. Finally, in relation to an important revision of my research questions, one particular swerve is emphasised, namely the motion from the prominent presence of methodology as an anticipated research outcome, to its prominent absence as a realised research outcome. This absence made present, is argued to be an epiphenomenological occurrence.

### 3.1 Constructive Design Research & Research Through Design

A discussion on research structure necessarily has a strong methodological dimension. In this sense it might be useful to recap ways in which we have come across this question of methodology already. Dilnot's conception of design-knowledge, discussed as part of 2.2 (Design as the Subject Matter of the Science of the Possible), already offered the possibility for extending the discussion into a methodological dimension. Here, knowledge-about-design was discussed as the result of knowledge arriving to design from its outside, in many ways enforcing design's subaltern status as a discipline devoid of its own knowledge. Design-knowledge, on the contrary, "is knowledge that derives centrally from design action: it is the representation, as knowledge, of the modes of knowing directly involved in design processes and actions" (Dilnot, 1999, p. 60). As was already mentioned, it is tempting to extend design-knowledge in a methodological direction towards Frayling's notion of research *through* design (1993), as distinct from research *into* design, and research *for* design (as the research typically happening as integral part of any design process, e.g. into materials, layout, supporting the work itself). Within this distinction, research into design would then correspond to Dilnot's knowledge-about-design, e.g. knowledge grounded in a master discipline, e.g. sociology, engineering, economy, all investigating design as its topic. Along these lines, we also find Cross' historical disentangling of science and design, and his resulting arguments for "designerly ways of knowing" constituting a distinct intellectual discipline of design (2001).

Since Frayling first introduced this differentiation between different research modes, research through design has gained a considerable momentum as a design methodology, with a biannual conference initiated in 2013, simply called Research Through Design<sup>[1]</sup>, explicitly built around this emerging research tradition. At this conference you e.g. find rooms of interest where design research artefacts can be shown and demonstrated, literally occupying the centre stage, as opposed to the more prevalent and conventional tracks of paper sessions. Further testifying to the momentum is the fact that funding schemes directly addressing research through design have emerged (Giaccardi & Stappers, 2017). It is important to keep in mind that 'research through design' (abbreviated RtD) as a design research methodology denotes a research practice that is referred to by several other overlapping terms, such as practice-based research, constructive design research, experimental design research, programmatic design research and more (see Giaccardi & Stappers, 2017, p. 20, for a more extensive list). While there are nuances within this broader spectrum of research practices, it is just as important not to overstate these differences. Indeed, at this point in time, the terms are still used in an overlapping sense, as they simply haven't become sufficiently developed to consolidate into meaningful,

and broadly acknowledged, distinctions.

In spirit with the science of imaginary solutions, I will use two terms throughout this dissertation, essentially denoting the same kind of research practice, but bringing different aspects to the fore, as two different imaginary solutions to the same problem. First, I will use ‘constructive design research’, as it clearly ties into the workings of the imaginary, with its negation and unrealisation, as described in 2.4: *The Eclipse of Metaphysics*. In this sense, ‘the constructive’ carries with it a sense of ‘the destructive’ (self-annihilation), adding an important aspect to how the design research is carried out across the material and immaterial. As will be more evident in the descriptions of the experiments, this offers a beneficial frame for understanding the way experiments unfold, while also being in alignment with the focus on the imaginary, as already discussed in 2.4.5. In this way, ‘constructive design research’ in this dissertation is a lens primarily—though not strictly—employed in understanding the work itself. Secondly, I will use RtD from a more pragmatic perspective, from the realisation that this term is becoming increasingly ubiquitous and acknowledged for describing the kind of design research that occupies the landscape in which this dissertation exists. Thus, research through design can be said to be a more outward-facing lens, emphasised for its ability to engage with a research community, while also tracing a legacy back to Frayling, and also through his distinctions, further connecting to Dilnot’s discussion of design-knowledge. To be sure, I don’t see any substantial difference between the terms, and I will use them interchangeably, referring to methodology with each of them, each term highlighting different aspects in different contexts for different purposes.

### 3.2 From Science to Imagination

From certain perspectives in design research, and surely for research more broadly, this situation with several overlapping terms could be seen as a highly dissatisfying situation. Here we should note the way in which the issue seem to resonate with the earlier discussion regarding the several co-existing definitions of design, and the described shift away from the lack of a unifying definition as a disciplinary deficiency towards this lack being embraced as an essential characteristic of design (Redström, 2017; Dilnot, 1999). Surely, the question of precision within methodology is vastly different than the question of a unified definition of design (ontology). Perhaps the issue has less to do with several co-existing, overlapping terms covering the same emerging methodological direction, and more with a lack of precision as to the connection between how research practices play out, and on what foundations this happens. We will return to this point. For the present project of infusing pataphysics into an unfolding design practice, the issue appears

somewhat less problematic. Indeed, as was already hinted at, one could say that the current plethora of terms more or less denoting the same kind of design research practices—all exhibiting a strong emphasis on design experimentation and its resulting artefacts as the locus for new knowledge—somewhat appropriately puts the imaginary nature of each of these terms on full display. In fact, this seems quite appropriate given that imagination has a special place in constructive design research (Koskinen, et al. 2011).

In fact, this emphasis on imagination is argued by Koskinen et al. to be one of the results of the notable shift we've seen happening in design research since the 1960s, what Buckminster Fuller termed 'design science decade' (ibid.). In a sense this was the zenith in design and science rubbing shoulders, as evident in the design methods movement, seeking to systematize all design methods (Bayazit, 2004). *Sciences of the Artificial* by Herbert Simon (originally published 1969), which we already encountered through Dilnot's tying of design to the artificial, can be read as the crowning of a decade's efforts towards fusing design and science together. However, as is well-documented (see particularly Bayazit, 2004 for a detailed account), the 1970s took a sharp turn away from this strive towards the efforts of scientising and rationalising design. At this point Christopher Alexander and John Chris Jones famously turned their backs to the paradigm that they had greatly helped foster and drive. As another indication of this turn, the Hochschule für Gestaltung in Ulm, "the best known attempt to lay design on rational foundations" (Koskinen et al., 2011, p. 16), closed down in 1968. As part of this shift in design and design research, Koskinen et al. stresses that rather than rational problem solving, "[constructive design researchers] imagine new realities and build to see whether they work. The main criterion for successful work is whether it is imaginative in design terms. Theirs is a *science of the imaginary*" (ibid., p. 42, my italics). Here we do well to briefly pause and notice how congruent this statement is with the driving notion of design in this present work, namely design as 'the science of imagining solutions'. In fact the swerve from 'imaginary' to 'imagining' (discussed in 2.3), by way of its shift from passive to active tense, precisely points to the way in which design happens by way of imagining solutions. To this statement Koskinen et al. add that imagination too plays a significant role in the research output, i.e. the design artefacts that get produced within this tradition, typically prototypes, mock-ups, scenarios and interventions. In contrast to mass-produced design artefacts in industry, these artefacts retain an imaginary quality, a hypothetical, embryonic status—this does not however stop them from potentially altering social reality in their engagement with society, by e.g. raising questions. On the contrary, as the authors argue, in line with Folkmann's discussing of the role of imaginary in design (2.4.5): "Having a discourse based on hypothetical designs has several consequences: it enriches imagination and opens new ways of seeing and discussing possibilities" (Koskinen



et al., p. 46). This was what Folkmann on his part discussed as transfigurative effects: how design, imbued with the imaginary, carries over its inherent possibility into its contextual implications in the world, potentially transforming experience and mediating culture, and thus affecting “major paradigm shifts in our ways of seeing, perceiving, and understanding the world” (Folkmann, 2013, p. 11).

### 3.3 The Programmatic

Here I would like to dive deeper into the programmatic aspect of my doctoral research (recalling the discussion of ‘programmatic design research’ was one of the overlapping terms mentioned in 3.1). Indeed, we have encountered ‘the programme’ prior to Chapter 3 as well—it surfaced twice in Chapter 2, as the education programmes *Pataphysics in Albertopolis* by Ahmed & Jameson (2.1) and Isabella Brandalise and Henrique Eira’s course *Patadesign: Design of Exception, Absurd Artifacts and Imaginary Interfaces* (2.6). Further this section extends on Redström’s framing of transitional theories, as discussed in 2.1.

As a way to start unpacking the research structure of my dissertation, I will now turn to the programmatic aspect of my work. To start from a very top down perspective, one of the chief reasons for grounding my work in constructive design research has to do with the research programme in which my work is situated. When I started my PhD at Umeå Institute of Design (UID) in 2013, with the theme of design as critical practice, it was as part of *Prototyping Practices*, a research programme and funding structure concerned with prototyping “practices in order to experiment and explore the implications of social, cultural and technological changes and challenges to design” (Redström, 2014). My fellow doctoral candidate Aditya Pawar too undertook his own research programme within this larger programmatic frame, which also counts Johan Redström, both Aditya’s and my main supervisor, Carl DiSalvo, my assistant supervisor, along with Jamer Hunt, Aditya’s assistant supervisor. It also originally included then rector and professor at UID, Anna Valtonen. *Prototyping Practices* has revolved around a series of seminars, workshops, lectures, a conference, supervision, and more. From this example, we can uncover some initial characteristics about programmes as such. Through an initial formulation of the research trajectory ahead, and by putting in place a range of components to guide the experimentation happening within it, it falls in the propositional domain, blending questions and answers (Redström, 2011, p. 2). Indeed, programmes in design research in this way explicitly can be said to balance a bold and particular direction for the research inquiry with an openness to be surprised through the design experimentation.

As the results of Prototyping Practices are currently being written up in a separate publication, and as they also fall outside the scope of this dissertation, I won't describe this collective output in greater detail here. However, it is important to stress that Prototyping Practices and my doctoral research, as two research programmes running alongside one another, with one formally embedded within the other, naturally has influenced each other. This is perhaps most evident in the adaptation of an open and experimental mind-set around this question of how new practices are prototyped. In fact, one could say that by its very formulation, as was even evident in the short citation included here, Prototyping Practices, as an overarching programme clearly subscribes to a constructive design research methodology—this is however not a blind methodological subscription, but rather a critical awareness of how we, simply put, are able to design design practices. We should also pay attention to the way in which this framework aligns with the arguments put forward in 2.2 around the identification of and response to of a missing articulation of an unfolding para-design practice as opposed to products, projects and programmes. In this sense Prototyping Practices supported the exploration of the concluding questions stated in 2.2: What does a transitional theory for para-physical design look like, what does it respond to, how is it being developed, what are the implications for design, and what is at stake?

Within this structure, we find my own research programme, guided by the two research questions:

1. What is a para-physically infused design practice?
2. How can design, through the prototyping of this practice, become more conscious of itself?

At this point in the dissertation, having lived with these co-existing, intersecting programmes for nearly five years, it is sometimes easy to forget that the notion of prototyping a practice (and thus not a product, whether a thing or a service) is in itself a radical proposition in the larger design research landscape. Going back and reading my application for the position, it was in fact one of the initial attractions for me, in that it pointed towards a criticality and curiosity not exclusively pointing outwards, but also inwards: how can we not just intellectually rethink design (something that a fair amount of people would probably agree is a worthy undertaking), but how can we do this through designing itself? Looking back at the framing of Prototyping Practices, I can see that it has this duality built in: an attention set towards what Redström discussed as staying with the trouble in relation to his proposition of making design theory (2017), and what Dilnot described as a continuous engagement with design's fundamental questions—not to be answered once and for all, but to be brought continuously into play through

design, in order for the discipline to move forward and gain an increasing degree of consciousness of itself (Dilnot, 1999).

Here we can add some further insights to this situation, through Redström's reflections on the discrepancy between design's conceptual foundations and its practices. Redström points to the way in which science (especially the applied kind) rests on "basic research"—the kind that e.g. brought us modern quantum theory in the 1920s and just a few years back experimentally asserted Einstein's prediction of gravitational waves in the universe, as part of his general theory of relativity<sup>[2]</sup>. These are steps forward that shake the entire foundation of science, forcing it to continuously rediscover itself and re-evaluate its inner workings. In fact, quantum physics still continues to puzzle physicians (Polkingborne, 2002). As a parallel, Redström argues that design, as the "applied art" it was seen to be until very recently, resolved this question of "basic research" through establishing artistic foundations for its work, as was perhaps most evident in the case of the Bauhaus. This dialectic between artistic—and more broadly—conceptual foundation and contemporary application is very much still in place within design and design research. However, the problem identified by Redström relates to the way in which design keeps expanding its domain of application, without nurturing and developing its artistic foundation (2017, p. 91). He further suggests that the biggest problem is the way in which this unsustainable discrepancy between application and foundation has normalised itself within design, how designers don't see a problem in e.g. tackling social innovation on a basis formed on skills and knowledge around visualising and materialising prototypes for mass production (ibid). This situation is of course another way of approaching the self-inflation of design that Dilnot discusses in relation to design's disinterest or inability in knowing itself. Interestingly, Redström ties this point explicitly to methods as our go-to cop-out: "Then, as so many other times when in doubt, we instead turn to methods and process to articulate and explain what we do—as if that would somehow make the issue of conceptual foundations disappear" (2017, p. 91). Rather than turning the blind eye to this critical issue of disappearing foundations, programmes in design research allow us to address this very gap constructively.

How do the program and its experimentation affect one another as the research unfolds? With reference to Imre Lakatos' work on programmes in science (ibid., p. 86), Redström discusses a hard core in the programme, a set of world views and foundational beliefs around which a series of design experiments start gravitating as the programme unfolds over time. This was what we previously discussed as the bold and particular direction for the research inquiry. Through this juxtaposition, the question of the dialectic between foundation and application in design research are brought into play, within the programmatic design research method-

ology (ibid.) Thus, we can say that while the programme is centred on a particular proposition of what *designing* is, experiments engage (and potentially alter) this proposition through showing what *a design* conceived within the programme is. The point echoes the previous discussion of the ultimate particular (2.4): the way in which any design artefact simultaneously reveals a given design (an ultimate particular) and designing as such (design inquiry) (Nelson & Stolterman, 2012). Crucially, the value lies precisely in this dialectic—a research programme without any design experiments is nothing but a declaration or a manifesto. Likewise, design experiments without any programmatic frame, are a mere collection of dispersed projects and/or products. On this topic of experimentation, it should be noted that Dilnot, in his discussion on design-knowledge, makes the case that experimentation within design is impossible, due to the necessity of an underlying law, which the experiment can be measured against (Dilnot, 1999, pp. 45–46). Keeping design’s extreme degree of contingency in mind, this is what leads Dilnot to largely denounce this notion of experimentation with its reference to rule (“if this, then that”). In its place he puts forward the proposition, instead asking: “could this be”? This is yet another way of probing the propositional nature of the programme, and the role of its experiments:

In design, by contrast, the reference is to enactment, i.e., is along the lines of, ‘could this [potential thing] be . . . successful in its enactment in terms of desired ends and in relation to the likely environment/s it will encounter.’ What is referred to in design possibility is therefore a real thing. Or, more exactly, the reference is to the enactive translation and transformation of a fictive proposition (“this?”) from the status of proposition to realization and actualization, at least at the level of the prototype or model (“this?!”) (ibid., p. 46).

Indeed, this notion of the proposition seems to mirror Redström’s conception of the experiment showing what *a design* is (“this?!”), with the knowledge not embedded in each experiment as some discreet (let alone metaphysical) entity, but rather in the unfolding dialectic between program and experiments in the “!?” so to speak. It is precisely in this dialectic that we find the ability for evaluating the design experiment, what Dilnot here refers to as the degree of “[success] in its enactment in terms of desired ends and in relation to the likely environment/s it will encounter” (ibid.). Thus, I will maintain the use of the term design experiment in the coming argument, in the sense used by Redström and Dilnot, and further in line with the unpacking of “experimentism” in practice-based design methodology use of the term as advocated by Dagmer Steffen, who—in tracing the ways in which experimentalism has evolved through the sciences, the arts and design research—concludes: “It rather stands to reason that practice-led design research

has the potential to following up the experimental practices in Renaissance and to reconcile the “two cultures” – not necessarily science and the arts, but the culture of scholarly discursive knowledge and the presentational symbolism of the arts” (Steffen, 2014, p. 15).

Next, I would like to address the way in which the connection between pataphysics and design has evolved throughout my programme, through the unpacking of the central notion of “infusion”.

### 3.4 An Infusion of Pataphysics

‘Infusion’ is worlds away from ‘application’. It carries with it a range of connotations: from the more basic introduction of a new element or quality into something else, to e.g. the extraction of chemical compounds or flavors from e.g. plant material into a liquid, such as the infusion of tea into water, or medically speaking, the introduction of fluid other than blood into a vein, as in the case of intravenous infusion. In both these cases, there is a notable slowness associated with this process, which I found highly appealing. The concept of infusion emerged arose from the early research I did in the pataphysical uptake in design and its related disciplines, and most explicitly on a research trip I did to London early November 2015. On this trip, I conducted an interview with Miraj Ahmed and Martin Jameson concerning

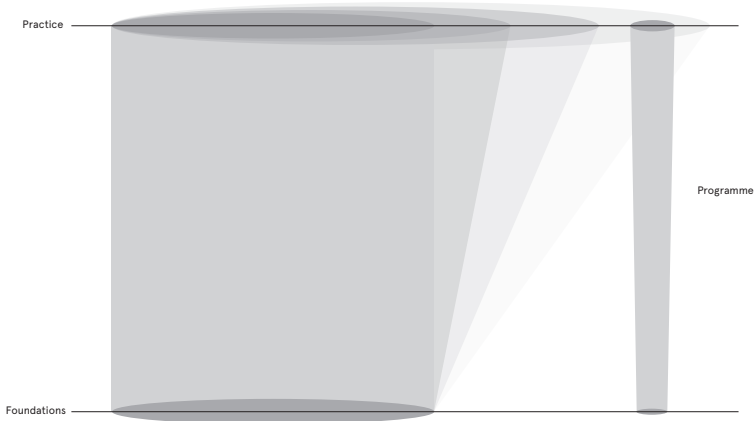


Fig. 11. Reproduction of Redström’s diagram showing the discrepancy between design practice and its artistic foundation, as well as the programme’s ability to bridge the layers (after Figure 5.6, in Redström, 2017, p. 95).

Pataphysics in Albertopolis, a full-year course running 2013-14, which they delivered for the class Intermediate Unit 13 at Architectural Association School of Architecture (AA) in London<sup>[3]</sup>. In addition to the interview on site at AA, I was able to follow up the conversation with a series of written questions. The explicit concept of 'infusion' emerged across the different stages of our conversation, e.g. in the way that Ahmed & Jameson described their motivation for doing the course:

We are interested in the notion of 'otherness' in architecture. Architecture has the ability to transcend the ordinary through the ordinary. The idea of the infra-ordinary is embedded in dada, surrealist and metaphysical art. Of course Pataphysics is that beyond Metaphysics as metaphysics is that beyond physics. Having explored architecture of the 'other' through heterotopia (after the Foucault essay), formlessness (through Bataille) and Void through artists such as Yves Klein and Duchamp....Pataphysics was a natural evolution (personal communication, December 9, 2015).

This comment extends on a point made by Ahmed & Jameson in the conversation at AA, discussing the way in which literature, and its poets and writers, can affect us to a degree where they infuse into buildings. As an example they offered classicist buildings being infused with ancient mythology. There is a particular point in the way that the year-long course, we can say as part of an educational programme revolving around the role of 'otherness' in architecture, was able to facilitate this infusion. This becomes all the more pressing when compared to UID, where we offer much shorter courses for students, typically 10 weeks, except for BFA and MFA degree works. At AA we had discussed the way in which pataphysics needed to be lived, and I wanted to push this further, asking them why this is the case. They responded:

Pataphysics in the past was generally 'thought' 'lived' and performed by its proponents. One has to see the world differently - constantly look for anomalies, absurdities. It is a discipline and requires practice - a good comedian has to constantly work at his craft through observation that can then translate in to the jokes / absurd scenarios (ibid.).

I found this interesting as it tied back to the point of 'infusion', particularly in relation to the role that literature played in their course, and the argument we previously encountered in 2.1 (Finding Ground: Tracing the Topography), with the favoring of literature as the most ideal form for conducting pataphysical research (Price, 2011). My question attempted to address the tension in the fact that, on one hand, every occurrence in the world is pataphysical, and Jarry too designed graphics, designed his own home, publicly performed etc., and on the other, that

their course directly addressed the infusion from literature into architecture in its structure and design, along with perhaps the surfacing of pataphysics from architecture in the evaluation of the student work. They responded:

I think that pataphysics cannot be systematised but can be absorbed and emanated. So for the year it was a process of absorbing - some students tried to live it (...) and i think thats when it works... it should be an obsession. Its true that every thing is pataphysical (after all we are 90% water and there are huge voids between our atoms), but this has to be read through experience. And if you can't experience that then we read those who do experience it (...) (ibid.).

Looking back, the insights produced through the conversation with Miraj and Martin were very influential for my way of working, or perhaps better, my understanding of how I was working. 'Infusion' eventually ended up at the very foreground of my research, around the time of my 50% seminar in mid-May 2016<sup>[4]</sup>. From this point of the conversation at AA, and through the 50% seminar, the concept of 'infusion' however matured considerably. The image of tea being infused into water has stayed with me, as it opens up for further productive considerations by way of its metaphorical and poetic dimensions, as an imaginary solution. For example, leaving a tea infuser (or tea bag) in a cup of hot water, you see how the water immediately surrounding the infuser starts changing colour, in an expanding gradient, eventually changing the entire cup from water to tea. Further, there is a point in the way that a tea infuser should not stay in too short or too long. While it is hard to be precise about the exact level of infusion in this way (depends on the particular tea leaves, taste, whether we add milk or not etc.), there is definitely an unspecified window where we recognise the tea as having attained a great (notice, not optimal, ideal or best possible) quality. In other words, a moment when we can exclaim: "This is a great cup of tea!" This image seems to mirror the way in which we can think of programme as having a certain life, and perhaps especially the elusive nature of the best point to end it (Redström, 2011). While we can think of the cup of tea going cold as the programme exhausting itself, it seems as if the tea going bitter<sup>[5]</sup> points to the possibility of too much infusion of pataphysics, which could perhaps better be described as a lack of balance or focus in the programme between its constitutive elements. To be sure, the image of tea infusion is not the perfect metaphor that beautifully captures my programme and its mechanisms in each and every aspect. As an example, if you think of the way you would have tea as a substance being dropped into boiling hot water, the programme performs very differently. Here, it is not so much about dropping a new substance into design, in an almost alchemical fashion, but rather, following Chapter 2, a detecting and nurturing of the pataphysical impulse already latent

within design, bringing it out, and with that bringing design to consciousness. Infusion, and with that the imaginary solution to the question of how to visualise this process, has helped me reach the point where I can see this critical distinction clearly, and get a better grasp on the way in which the programme, as well as its experiments, performs dialectically. Please see fig. 13 (p. 106–107), for one way of visualising ‘infusion’.

Still, the question of pataphysics as a substance outside of design lingers. Methodologically, this is important, as the exposure to pataphysics—not as pataphysical tactics, but in and of itself—has been an important part of my research. In an obvious sense, this was a necessity stemming from the initial curiosity that sparked the work: that no ready-to-hand pata-design tactics, practices or theses existed. Still, more significantly, I see the exposure to pataphysics precisely as a way of committing to the foundation of my programme, to not simply skate the ever-thinner surface of design methods, but to insist on a vertical movement to the foundation beneath me (recalling Redström’s diagram, see fig. 11, p. 93). Of course, another way to say this is that I commit to design, and with that its foundation. Notably, this exposure was erratic and continuous throughout the five years, much in line with the discussion with Ahmed & Jameson. Considering other ways of approaching this PhD is instructive: another alternative would have been to look at examples of the ways in which surrealism and situationism has been methodologically instrumentalized as design methods, and then tweak them slightly with the most basic, superficial idea of pataphysics, without any consideration for the lack of foundation (or for the response from the Department of Dogma and Theory (2016) discussed in 2.7). Or to latch on to the very few examples of pata-design that exist and just do variations over the tactics they use. In fact, pataphysics would be perfect for doing so, in that it appears incredibly obscure and opaque for the uninitiated. In this way you could imagine that it would work really well as an exotic, pseudo-philosophical, hermetically sealed humorous import in the more art-oriented domain of design, a kind of design for designers, who might find it amusing. This is a few glimpses into what life skating the surface of pata-design could look like, with disregard for foundation and infusion. Needless to say, from the perspective of this dissertation, such a shallow appropriation would be saddening, not only by selling pata-design as an irrelevant fetishisation within design’s self-inflation, but also by fundamentally failing to understand what is at stake for design in the potential of bringing out its pataphysical impulse in order to revisit its fundamental questions anew, and through this process become more conscious of itself through itself.

With all this in mind, I not only read a diverse collection of primary and secondary pataphysical literature throughout the entirety of my doctoral studies, but also



visited two pataphysical institutes, Vilnius Institute of Pataphysics (VIP), and London Institute of Pataphysics (LIP), becoming a member of the latter. VIP was wonderful to visit in that it was very new, founded only in 2013, and I greatly enjoyed conversing with its members over the vastest of sciences while I was doing a design research residency at Rupert in Vilnius. As part of visiting LIP, I had the pleasure of discussing pataphysical matters with Her Magnificence Tanya Peixoto of the London Institute of Pataphysics as well as Bookartbookshop, who also serves as the current Vice-Curatrice of The Collège de 'Pataphysique. In addition, I have been in contact with Department of Dogma and Theory, a department under London Institute of Pataphysics, concerning a clarification of situationism, pataphysics and design (as elaborated in 2.7). Also, in a way similar to how I was able to discuss the pataphysics of 'AA in Albertopolis' with Miraj Ahmed and Martin Jameson at AA in London, I have been able to engage other design researchers over pataphysical obsession, most importantly Isabella Brandalise and Henrique Eira.

This is not any attempt of a complete account of pataphysical encounters and radiance, but rather to point out the prioritised, continuous submersion into pataphysics happening as part of this PhD. It is an acknowledgement of Ahmed & Jameson's point on obsessing over pataphysics, living and practising it on a continuous basis, not unlike the comedian working on her jokes. Importantly, in a structural sense, this exposure happened throughout the entire PhD, rather than within a discreet initial stage, followed by a series of design experiments, to then be neatly wrapped in a final phase of dissertation writing. On that note, this is also a good moment to acknowledge the way in which the particular structure of doing a PhD in UID (Umeå University), and Sweden at large, directly enables this kind of research, supporting the way in which an infusion can even take place. At UID, across five years, 80% of my time has been allocated to research and the remaining 20% to teaching and other departmental work. The point in mentioning this—besides paying attention to the fact that any research structure happens in larger structures—is that other PhD structures, e.g. providing you with three years of 100% research, would make this slowness inherent in the notion of 'infusion' very challenging, if even possible. To return to the image of tea, it is easy to imagine how it is possible to drink a cup of tea without the full infusion of tea leaves, and how certain tasting notes would be missing, skewing the overall taste considerably, yet indecipherably. Let us quickly turn towards the other end of the spectrum, and look at the possibility of the pataphysical obsession continuing beyond five years: this is perhaps where we hit the wall in our tea metaphor. I expect that a design practice, pataphysically infused to the point where it is completely conscious of itself, would simply find comfort and joy in its own absurdity, e.g. the fact that it through its instantiation obscures its unique knowledge offering to the world, and continues to find new ways of playing with its own demarcation as domain.

This insistence on a continued pataphysical exposure (in and of itself) also relates to the relationship between design and pataphysics within the research. Through the unfolding research experimentation, it allowed me to reflectively maintain the simultaneous attraction and repulsion described in Chapter 2. Notably, this process was not about trying to force the two into any kind of union, but rather to be comfortable with the friction happening alongside the emerging connections, to in a way maintain calm, faced with a prolonged experience of destabilisation and uncertainty. Looking back I see how this structuring of the research allowed both pataphysics and design to stand out clearer. It also demonstrates my disinterest in constructing pata-design as a new hybrid design field, stranded somewhere midway between pataphysics and design, irrelevant for either. I have attempted to transpose this structuring of the research into the structuring of its dissemination (this dissertation), by continuing to keep pataphysics and design in play in a deliberately unresolved manner throughout, rather than attempting to first lock down pataphysics in an exhaustive opening chapter, to then define design, and serve a platter of experiments, neatly tying it all up in the proposed new hybrid field of pata-design. As should hopefully be evident for the reader of this dissertation, this decision around the structuring of the research is not an aesthetic revolt against a boring academic format in the sense of an empty gesture, but rather a necessity stemming from within the work. To stick with the example laid out: pinning down pataphysics in a standardised lay-of-the-land opening chapter, first of all would fail to capture pataphysics, as the illimitational Science of Sciences. In this way it would be an exercise in throwing buckets of water on the pataphysical spark within design, failing to extinguish anything, but rather covering the whole affair up in a thick nasty smoke. This hazy scenario in turn would be the space in which design should first be found, to then be defined once and for all. It is doubtful whether we would ever make it to the experiments. To put this differently, the effort would necessarily be a failed attempt at the “categorisation and thus to appropriation and academic autopsy” that the Department of Dogma and Theory at LIP concluded that design—all being pataphysical—was immune to (2.7).

This dissertation, as is hopefully becoming further evident from this discussion of ‘infusion’, concerns the point about bringing out the pataphysical impulse in design, and by doing so—through the affinities and tensions scattered across experiments and arguments in this work—making design more conscious of itself. I refer to ‘making’ in this sense, as e.g. Redström argues for “making design theory” (2017), i.e. through a constructive design research scope. A statement like the one before rests on the fact that this notion of *making* design theory, or to yet again put it differently, researching through the *doing* of design, fundamentally resonates with the key pataphysical distinction made by Sandomir in relation to the role of the Collège de Pataphysique in excreting conscious pataphysics: “(...) the unique and

fundamental distinction (...) made between 'Pataphysics as the substance, if one may say so, of being and non-being, and 'Pataphysics as the science of this substance: or in other terms, between the 'Pataphysics that one is and the 'Pataphysics that one does" (Sandomir, p. 172, in Shattuck, 1960).

### 3.5 Programmatic Swerve

#### 3.5.1 Beyond Drifting

Here, I will extend on the discussion of the dialectic between programme and experiments, particularly as it dynamically shifts the overall research trajectory over time. This motion of the programme will here be discussed as a programmatic swerve, a careful choice of wording reflecting the core of the programme, namely the prototyping of a pataphysically infused design practice, and in particular the pataphysical concept of clinamen. Additionally, this notion of 'swerving' follows Redström's discussion of 'drifting' within research programmes, referring to the continuous recalibration of experiments vs. programmatic vision, and the reflection and action demanded in reaction to this dialectic turbulence (Redström, 2011). 'Drift', in this sense, can be considered the other side of the coin of 'stabilisation'. Each needs the other for the programme to solidify and yet instantiate something new we did not already now from the outset (in a sense be research). We already encountered the concept of 'swerving' in 1.2.2 as part of the "Incomplete Lexicon of Pataphysical Concepts", as the deviation from the boundless (deterministic) void and the endless chains of causality.

More specifically, I will discuss 'swerving' as a way of furthering Redström's notion of 'drifting', while positioning 'swerving' away from Gall Krogh et al.'s work on "ways of drifting" (2015), which also builds on Redström, although taking the argument in a very different direction. In the article by Gall Krogh et al., the authors lay out a typology around the notion of 'drift', in part sympathetic to Redström (2011), while seeking to contextualise it more firmly in a classic science terminology. As we shall see, the differences between Gall Krogh et al. (2015) and the present work won't help illuminate methodological questions as such, but rather help explore the foundations on which these matters come into being.

In the article, we are presented with a typology consisting of five different ways of drifting, on the basis of different "exemplary and well-cited" PhD theses all subscribing to constructive design research methodology: accumulative, comparative, serial, expansive, probing (2015, p. 40). These types, also referred to as methods, are presented as a table with one sketch explaining each of them, in addition to a

few keywords, and their exponents among the theses studied. This reading of PhD theses and the indicative model is grounded on a critique of the lack of “detailed accounts of the process and basic constituents of design experiments” (ibid., p. 41) in RtD literature. Further, the reason for making a typology in the first place exists within a stated aim of “providing design researchers an extended footing when participating in the language games of research in general” (ibid., p. 43).

Considering its explicit “[concern] with the actual internal work activities of RtD processes – designing stuff” (Gall Krogh et al. 2015, p. 40), it seems like a clear limitation that the argument builds on post-factum categorisation of ten theses in the area of RtD. While a close reading of RtD work, including theses done in this area, without a doubt is an important contribution to the growing field, more extensive engagements with the experimentation—and why not from *within* the unfolding experiments?—seems like a promising way forward in terms of providing detailed accounts. Further, one might ask why a static 2D diagram is the best way to communicate this work? Why not a typology made through design? To be clear, the paper is noting its own limitations in terms of the small fraction of theses studied, and of the non-exhaustive state of the typology.

While the proposed taxonomic perspective might be instructive for eyeing *certain* trajectories in constructive design research (five to be precise), there is however no discussion about the trajectories that are left out of the limited sample and analysis, nor of the effects that a formal typology that excludes them will have on their adaptation and life as “apocryphal” methods. Also, perhaps most critically, within the sample of the five methods, there is no discussion around the risk of glossing over the considerable instability within each of these trajectories. In this way, the transitional aspects of the constructive design research undertaken, escapes the typology completely. Surely, this question of transitionality would reside within the stated “[concern] with the actual internal work activities of RtD processes – designing stuff” (Gall Krogh et al. 2015, p. 40)?

Still, is this such a big deal, given that these questions simply might reside outside of the scope of the paper? To be sure, much is at stake in this question. From an external taxonomic perspective, the transitionality in design experiments can indeed be dismissed as a bit of creative static, turbulence of no significance, the kind that in no way substantially challenges the typologies put forward. The stated focus on the interface between design research and research at large is important here. From this perspective it seems as if the mess that risks design from being taken seriously by other disciplines, is conveniently swept under the rug. However, from within the programme, and from the perspective of its unfolding constructive design research practice, the mess (the transitionality) plays a crucial

role in answering how research is actually unfolding, what Redström discusses as how theory is made (2017). As was elaborated across Chapter 2, and again emphasised in 3.1, design-knowledge, design's unique contribution to the world, is intimately tied to design processes and actions (Dilnot, 1999). Consequently, in the context of this dissertation, this glossing over of transitionality for the sake of neat typological schemas, coupled with implicitly and explicitly stressing the need for compatibility between RtD and 'research proper' by way of emphasising the maintenance of "classical terms" in design research (Gall Krogh et al. 2015, p. 42), seems highly problematic. While this is unlikely to be the aim of the article, it risks undercutting design's unique knowledge contribution, what Dilnot refers to as design-knowledge, by way of underselling design's contribution as a catalogue of methods in a vocabulary that is explicitly non-designerly. It thus plays into the inferiority complex of design, distracting from its lack of knowledge of itself, by having its gaze fixed on other disciplines and domains.

The use of 'swerving' in this dissertation, rather than a default use of 'drifting', let alone a specific way of drifting, points to this very problem. This is not a discussion around whether experiments do in fact drift or swerve, although a schema for these different motions (and their typologies) without a doubt could be produced. Rather, it is about pointing to the fact that design research is capable of making theory just as much as design artefacts. Thus, for this present dissertation, 'swerving' has been put in place as a pataphysical steering rod for tracing the methodological trajectory, a lens through which to reflect on the unfolding research practice, not in a causal sense of A looking at B, but as part of the dialectic emerging from within the programme. It is important to acknowledge that this is the dynamic that has taken me to a place where I can formulate this very critique, alongside showing and discussing what swerving looks like in a programmatic sense through the descriptions of my experiments (Chapter 4–8).

Having acknowledged this, and briefly looking down a possible route to meta-typologies, let us now consider how a typology of swerving in itself would make even less sense. Would this not be an attempt at applying a deterministic principle to a motion that explicitly arises from an otherwise boundless deterministic void? For sure, this would in fact be a quite pataphysical exercise, as elegantly captured by Launoir: "To claim that you can explain (i.e. reduce) pataphysics by methods which are not themselves pataphysical, that's a bit... well, in fact that's very pataphysical" (Launoir, 2005 via Hugill, 2011).

If anything, pataphysics would expose a typology of ways of swerving (as well as drifting), as an imaginary solution to the question of how design research is made through experimentation. However, the question would then become: why not

sketch out more imaginary solutions to this problem, taking some delight in the absurdity of the exercise? Why only five ways of drifting? Why not 5,000? In this light, it should be clear that with 'swerving', I am not proposing a new way of drifting, to be added as a sixth category in the table, just like I am not arguing for superseding Gall Krogh's et al.'s work with another model, or making any hints at a meta framework for drifting, swerving, bouncing, veering, skidding, swaying etc. Rather, I am pointing out a series of problems I see from a design research perspective, and the potentials from a pataphysical perspective.

### 3.5.2. An Epiphenomenology of Methodology as Research Outcome

This dialectic is visible even within the research questions guiding my work through the vast majority of my PhD:

1. What is a pataphysical design practice?
2. What methodological vocabulary does the process of prototyping this practice produce?
3. How can pataphysics inform design understood as a critical practice?

Through the exertion of some auto-criticality in action, I have come to realise that my dissertation ironically speaks to the way that a question such as the second one, has a way of creeping into design research. And thus, while there are multiple swerves happening across this dissertation on several different levels, I won't attempt to uncover them all, but rather illustrate this motion through its most appropriate exponent, namely through the motion from the prominent presence of methodology as an anticipated research outcome to its prominent absence as a realised research outcome. If anything we can consider this very text—the making of theory in a chapter dedicated to research structure—as an epiphenomenology of methodology as research outcome: an absence of a research outcome yet made present as a research outcome.

My very first formulation of my research programme, in my application for the PhD position (2013-02-20), has no explicit mention of research questions. Curiously, it does however make a strong mention of clinamen/swerving already at this early stage. In fact, it features in one of two possible research topics outlined, under the rubric: "Clinamen & Social Friction". The research questions first appear in a research plan written out the same year (2013-11-15), written out to assist my annual Individual Study Plans (ISP), a mandatory component in the Swedish doctoral system, essentially tracking past results and stating future plans. In this first formal formulation of the research programme, one multifaceted research question is stated:

“How can pataphysics inform design understood as a critical practice?  
What is a pataphysical design practice and what methodological vocabulary does the process of prototyping this practice produce?”

In other words, in this structuring, the question of the methodological vocabulary is put at the very forefront in terms of anticipated research outcomes. This formulation is explicitly kept in place across the two following years, up until my 50% seminar (2016-05-15). As part of the 100-page text produced for this seminar, I wrote out an explicit “research programme” section for the first time. Here, the questions are kept, but broken up in separate lines of inquiry, and also re-ordered into:

1. What is a pataphysical design practice?
2. What methodological vocabulary does the process of prototyping this practice produce?
3. How can pataphysics inform design understood as a critical practice?

These questions and their structure are kept in place to the point of full time dissertation writing in 2018. In fact, across several research plans between the 50% seminar and dissertation writing, it is stressed how “initial research questions remain intact, and no major changes or radical shifts in direction have taken place”. In other words, it is only within the last year of writing, and through the revisiting of experiments as well as the attraction and repulsion between design and pataphysics, that I have come to realise how the dissertation in fact isn’t about methodology as a research outcome. Consequently, the research questions underwent a final overhaul into their current state:

1. What is a pataphysically infused design practice?
2. How can design, through the prototyping of this practice, become more conscious of itself?

This shift was implicitly articulated in the text produced for my 90% seminar (2018-05-23), which put methodology to the background. Also, on the level of experiments, it was perhaps most detectable in the case of the project Meta(data) morphosis (MDM), where I had previously co-published an article discussing its mix of participatory and speculative methodology (Rosenbak & Feckenstedt, 2016), presented at MEDIATIONS, the concluding conference of TRADERS: Training Art and Design Researchers for Participation in Public Space’ a three year EU Marie Curie research project examining different dimensions and roles of participation in public space. I carried this discussion over to the discussion of MDM in the 90% seminar text, prioritising the rewriting of what is now Chapter

1 and 2 in this present dissertation. This carrying over was a pragmatic decision, a matter of choosing your battles wisely. At the point of the 90% seminar this methodological discussion thus already felt fossilized, and strangely incongruent with the arguments coming together in Chapter 1 and 2 (arguments that have largely carried over to this final dissertation). As a consequence I decided to rewrite the MDM discussion and experiments for this present text, finishing a journey that has seen methodology exist at the very forefront as research outcome, to then be nested below the question of how pataphysics inform design understood as a critical practice, to now be omitted to the point where its absence, rather than presence, is a research outcome. What to make of this journey?

Another reason for ending up at this point has to do with the realisation that my own research trajectory not only has grappled with Dilnot's diagnosis of design in theoretical terms (e.g. across this present text) but also through practice, with the problem at hand coming increasingly into focus. I have personally felt the allure and comfort of putting methodology upfront as a research outcome, playing into the diagnosis. In all honesty, it was comfortable because it felt more manageable, as compared to e.g. stating: "how can pataphysics make design more conscious of itself?" or "how can pataphysics reconceive design as a critical practice?" The addition of 'vocabulary' added a bit of edge and ambition, as compared to "what design methods does the process of prototyping this practice produce?" Still, as the pataphysical infusion went on, it eventually got bumped down to a second place, to disappear and now finally reappear as disappearance.

Inevitably, this maturation, stemming from a pataphysical saturation, is not strictly concerned with the research, but also the researcher. Just like the question of who is in a position to state a failure as a research outcome (8.2), there is also something to be said about getting to the point of being comfortable with choosing to stay with the trouble from the fundamental questions in design research. While this is very present in the context of being a doctoral student, this point also touches on the previous discussions on having the time for an infusion to happen, to undertake several iteration loops in design experimentation, and allow a certain pataphysical joy in self-destabilisation, e.g. from the centrifugal forces of vicious circling. In this sense, it is somewhat ironic, and yet revealing, to note that without a dedication to 'swerving,' as part of the early focus on methodology as research outcome, it might not have been possible to reach this point of discussing the ways in which the infusion of pataphysics led to the absencing and yet again presencing of methodology as research outcome, now as an epiphenomenon, rather than the anticipated vocabulary.



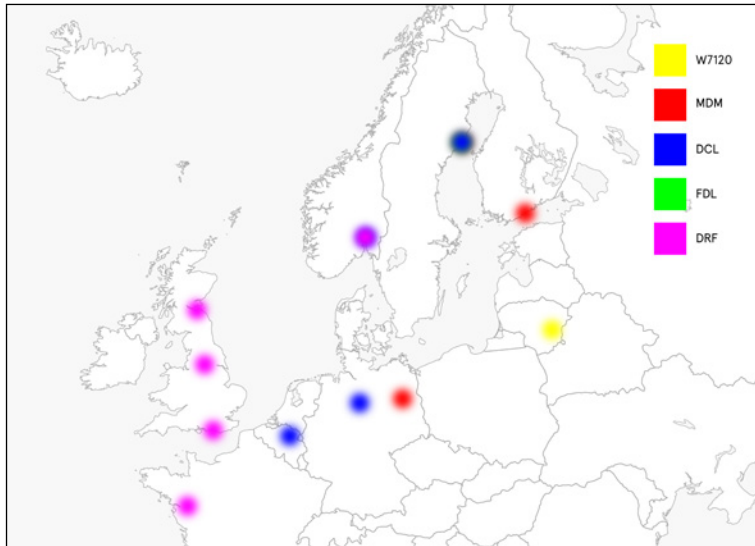


Fig. 12. A geographical mapping of the various experiments within each project (minus San Francisco).

Fig. 13. (next spread). A visualisation of 'infusion'.

[1] See <https://www.researchthroughdesign.org/> for more information on the conference series.

[2] This break-through detection was done by LIGO, the Laser Interferometer Gravitational-wave Observatory, supported by the National Science Foundation and run by Caltech and MIT, USA. The gravitational waves were detected on September 14, 2015 at 5:51 a.m. Eastern Daylight Time (09:51 UTC) by both of the twin LIGO detectors (LIGO, 2016).

[3] This conversation laid the foundation for the discussion of the course outcomes in 2.2.

[4] Both the 50% and 90% seminar are voluntary informal formats for PhD education in Sweden that loosely follow the structure of the thesis defense, i.e. inviting an external opponent, with the PhD producing a text beforehand.

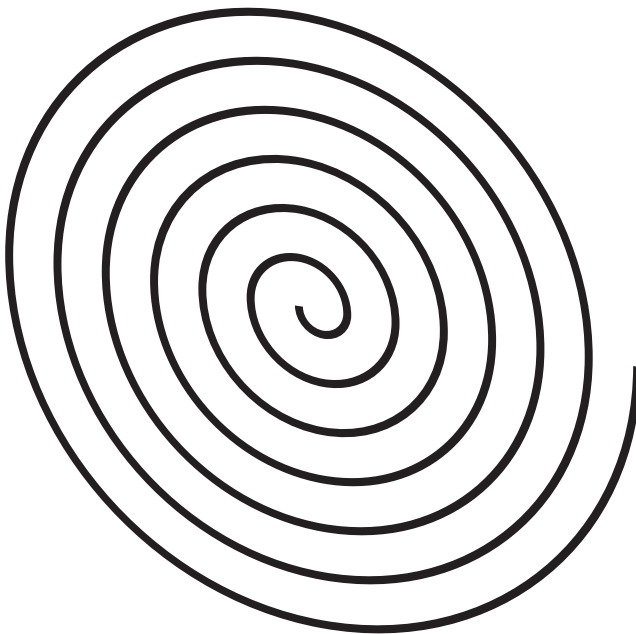
[5] I am indebted to Heather Wiltse for pointing out this facet of the tea infusion image.





chapter 4

# Workcentre 7120





Workcentre 7120 (W7120) is project that emerged out of a research residency at Rupert on the outskirts of Vilnius in spring 2014. At the outset it can be characterised as a small experiment, a glitch in an unfolding body of other work produced during this time. However, its significance for my evolving design practice has been profound. Thus, all that other work at the residency that seemed to be the primary matter at the time, from the perspective of this dissertation now looks like elaborate scaffolding, a process supporting and bringing about the instance that is W7120, a significant occurrence of epiphenomenology through design.

## 4.1 Experiment 1: Workcentre 7120 Job Report

During the 3-week design research residency at Rupert, I had difficulties printing. In fact, I had such great difficulties, that I was not able to print a single b/w sheet of A4 until one of the very last days before returning back home. After much hassle and assistance from local staff, a single A4 reluctantly came out of the printer. It was a job report, essentially telling me that I was not able to print. This became the most significant design experiment emerging from the residency.

## 4.2 Discussion

The conclusion of not being able to print, was based on the information in the job report, notably a table split into the sections ‘User Details’ and ‘Print Service’ (see fig. 16 & 17, p. 114–115). In the ‘User Details’ section, the printer had identified ‘sorenrosenbak’ as a user. This is a curious swerve away from any digital identity I know to make use of, and so left me slightly baffled, as it was unclear where this information had been pulled from.

In the ‘Print Service’ I was faced with an elegant quantification of triple absence, as both ‘Quantity’, ‘Total Printed Impressions’ and ‘Total Printed Sheets’ had the value ‘0’ ascribed to them. Below this, ‘Printed Impressions Details’ and ‘Printed Sheets Details’ were listed, with no value listed at all. Let us dwell here for a second on the difference between a printed ‘0’ and a white space that is highly active, due to the overall grid that leave us with the expectation of some sort of entries to the right of both ‘Printed Impressions Details’ and ‘Printed Sheets Details’. Also, let us notice the difference between the ‘Total Printed Impressions’ and ‘Total Printed Sheets’. How does a situation with ‘1’ printed impression and yet no printed sheets look like? Indeed, this single A4 sheet, which had miraculously, and quiet impossible, escaped the Workcentre 7120, posed more questions than answers. As an imaginary solution to the problem of printing nothing, it echoes Bök’s assertion that “(...) each solution is itself the catalyst for a phantasm that in turn becomes a problem” (Bök, 2002, p. 45).

Read as a pure act of industrial auto-response (communicating a deficiency yet through the production of a useless thing), it is interesting to note that the artefact is highly designed. Rather than the binary response (true/false, print/no print etc.) one might expect in the vein of alphabetical language discussed earlier by Wood, the job report is a piece of graphical design consisting of carefully arranged elements (b/w gradients, lines, text) that through hierarchy and layout come together as a whole. Graphically speaking, the chaos resulting from the error in

the operation (printing my desired A4 here and then), is contrasted with a neat, balanced layout that even manages to mobilize the white space (nothingness made active in graphic design language) in its delivery of an elegantly detailed inability to print. Curiously, as a result, not only does this force you to consider the content on the sheet, it also activates the sheet of A4 paper itself as a material thing. The symmetry between the top gradient bar and its thinner mirror image at the bottom visually fills out the A4, diluting the worst sting of absurdity with a non-negotiable aesthetic pleasure. This feeling does however not convolute the white space that is trapped inside the job report. Rather, it enframes it effectively and beautifully.

One of the most striking details on the sheet relates to time. As we can see between the tables and the top gradient bar, the date and time the job ended was 16/4/2014 16:19 (left side). However, on the right side, another entry simply states the date and time to be 16/4/2014 16:26. What happened in these seven minutes, from the job being done to the report (the material outcome of the labour) being time-stamped. What meaning can we ascribe to this difference between instrumental time and normative time? Also what does the timestamp signify? In the juxtaposition between job done and time printed, it seems as if we are facing yet another type of white space or, perhaps better, absence made present, namely a temporal one (perhaps the timestamp simply measures the extent of this present absence?)

The job report appears to offer an imaginary solution to the problem of impossible printing. The reflection above emerged through a process of annotation and graphical manipulation of the report. The tweaking, bending and breaking was a way for me to playfully examine and understand the various graphic elements, up to a point where I can write this text. The question of white space lingered through all of this. With its very fundamental graphic mobilization of white space, the job report seems to speak to Kenya Hara's thought on "white", not so much as a colour, but as a design concept:

In ancient Japan, the term 'kizen' was used to describe a situation of implicit action, the moment before something happens, and thus becomes explicit in the real world, in response to a particular impulse. White, the very possibility of the introduction of color, is then the color of kizen (...) White is a synthesis of all colors and, at the same time, the lack of color, achromatic. As a color that escapes color, it is a special one. Put another way, color is no more than a single aspect of white. Insofar as it avoids color, and thus more strongly awakens physicality, it is a materiality; like empty space or a margin, it is pregnant with time and space. It even entails concepts like absence and absolute zero (...) White has always been a concept and resource underpinning aesthetics, which is an invariable

object of human consciousness (Hara, 2014, p. 216).

What Hara describes here seems to be a poetic graphic dimension of an epiphenomenological occurrence through design. Through a trivial glitch in industrialised graphic production, an artefact shows forth itself and its possibility, not simply as a phenomenon/being (the actual A4 I sent to print) but as the being of a phenomenon, an inability to print (absence), printed out to me (presence). This revealing and concealing extends into the design of the job report itself with its mobilisation of white space. Indeed, the kizen job report precisely extends across its materiality (the possibility of printing) and its layout (the possibility of design content). Thus, we also pay attention to the way in which the job report effectively transgresses the immaterial and material.

While the job report in some sense can be regarded as a small design experiment, it had a significant effect on the following experiments.

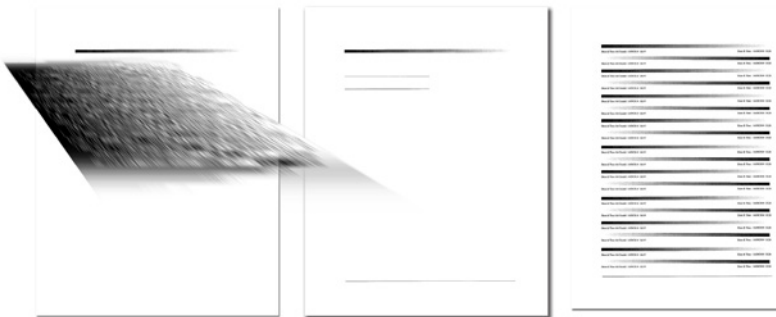


Fig. 14. (above) Snapshots of the tweaking, bending and breaking as a way to playfully examine and understand the graphic elements of the job report.

Fig. 15. (opposite). The Workcentre 7120 Xerox printer at Rupert © Dovalde Butenaite.

Fig. 16 & 17. (next spread). Left: The job report. Right: Annotated job report.





# WorkCentre 7120

## Job Report

Date & Time Job Ended: 16/04/2014 16:19

Date & Time : 16/04/2014 16:26

### User Details

User Name	sorenrosenbak
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### Print Service

2 Sided Printing	
Quantity	0
Total Printed Impressions	0
Total Printed Sheets	0

Printed Impressions Details

Printed Sheets Details

Lack of

## WorkCentre 7120 Job Report

Date & Time Job Ended: 16/04/2014 16:19

Date & Time : 16/04/2014 16:26

### User Details

User Name

sorensonbak

### Print Service

2 Sided Printing

Quantity

Total Printed Impressions

Total Printed Sheets

Printed Impressions Details ?

Printed Sheets Details ?

0  
0  
0  
0

details?

where is this coming  
from?  
spelling?

Quality

Excellent Metrs, Standard

conclusion:  
white space, general



chapter 5

# Meta(data)- morphosis

Meta(data)morphosis (MDM) is a project concerned with designing digital ghosts: the proxy versions of ourselves that are generated as a negative image based on the troves of metadata that we know are being collected on us all the time, in the age of global mass surveillance. Examples include: our physical locations, when we texted our partner, the duration of a phone call. Through a series of participatory workshops, MDM first extracts a metadata set from the day in a life of participants, to then design these metadata sets into film script templates (the missing data translating to white space where you would usually see dialogues), and then finally invite the participants to speculate on the content of each other's lives. By writing out the dialogue in the script, and reading them out to each other, the participants are faced with their digital shadows: parallel versions of themselves that might already have come true. Rather than an abstract notion or technical issue, MDM shows how design is able to let us access and affect parts of our lives that are otherwise notoriously shut off from our active influence. MDM played out across several different experiments across Umeå (SE), Helsinki (FI), Berlin (DE) and San Francisco (US).

## 5.1 Unpacking the Qualities of Metadata

Data is being collected on an unprecedented scale in history—notably by governments and corporations, but also NGOs, data brokers, hackers, artists, designers, and so on. Big data has immense value, both as a financial asset and as tool of governance, intelligence, in short power. All this is thoroughly uncontroversial in 2018. The surveillance disclosures by Snowden, as well as the whistle-blowers before and after him, continue to provide insights into how exactly data is being collected and how it is being used. While intelligence agencies such as NSA (US), GHGQ (UK), Säpo (SE) etc., can access most kinds of data, metadata (“the fact that a communication occurred” (VICE on HBO, 2016), for instance timestamps of when you called a friend, your physical location in that moment, how long you spoke on the phone etc.) continues to be of special importance. How come?

First of all, from an economic perspective metadata is much cheaper to collect in bulk through algorithms, rather than employing costly in-person/selector-based surveillance for extraction of data (as well as metadata). However, this is assuming that it can be easily and cheaply scraped—one of the key arguments for the wide uptake of even very basic encryption measures is precisely that a mainstream adaptation would quickly render bulk collection of data economically unfeasible (Appelbaum, 2016; Schneier, 2015).

Secondly, metadata naturally extends beyond the individual into networks of interaction. As an example, the fact that you call a particular friend Sunday afternoon at 16.06 not only implicates yourself, but also your friend. Composed of call logs, social media interaction, GPS locations and more, metadata thus weaves an increasingly fine-grained web of interconnected profiling of citizens, providing a detailed portrait of each person along with the relations between all actors. This social collective aspect is important. From becoming complicit in our own surveillance through voluntarily handing over our data to social media such as Google and Facebook in exchange for optimised services (Frank, 2015), we also entangle our social network within this process. This is a point that has been made increasingly clear in recent years, e.g. in the case of the Cambridge Analytica scandal suffered by Facebook, and the simultaneous—though much later reported—bug that Google discovered in Google+, which too gave third-party app developers access to not just the data of users who had granted permission, but also to their friends (MacMillan & McMillan, 2018). As was already hinted at, this social dimension also exists in the protection against surveillance: encryption measures don’t simply protect the individual, they also has a collective aspect, as they can perform as an act of solidarity. If dissidents, critical journalists, whistle-blowers, etc., are the only individuals employing encryption measures, they become easy,

very visible targets in the matrix of mass surveillance. As cryptographer and security specialist Bruce Schneier puts it, in his call for ubiquitous encryption: “Every time you use encryption, you’re protecting someone who needs to use it to stay alive” (Schneier, 2015, p. 3).

Thirdly, one of the key qualities of metadata is its speculative nature. As a rich frame surrounding the data itself, we can think of metadata as an invitation to speculate on the portrait in the middle. In fact, not only is it possible, and indeed preferable (Poitras & Risen, 2013), to draw an accurate current portrait from the frame (Cole, 2014), it is also possible to extrapolate this portrait into the future by leveraging the past, e.g. by asking a question such as: how likely is this person to become a terrorist? As NSA General Counsel Stewart Baker has explained, “metadata absolutely tells you everything about somebody’s life. If you have enough metadata, you don’t really need content... [It’s] sort of embarrassing how predictable we are as human beings” (Rusbridger, 2013). When Law Professor David Cole brought this quote with him to a debate at the Johns Hopkins University on April 1, 2014, his opponent, former director of the NSA and the CIA General Michael Hayden, famously added: “We kill people based on metadata” (Cole, 2014). Of course ‘terror’ is but one filter. The same metadata and algorithms can be tweaked and used for a range of different purposes and ends, such as a dating service (how likely are these two people to fall in love?) or for assessing prospective students (how likely is this student to graduate and repay a loan?).

Lastly, while much of the current discourse around metadata, particularly in relation to global mass surveillance, naturally plays out with an acute awareness of the digital realm, there is a point to be made concerning the fact that metadata does not necessarily have to exist as digitized bits of information on server farms. While some generations might associate metadata with burning a CD on their computer, inserting year of production, artist etc., older generations might have other reference points. As part of the initial exploratory research in this project, I visited the Stasimuseum in Berlin during January 2015, in order to learn more about the way that pre-digital metadata has been utilised in mass surveillance. Stasi, a popular alias for the Ministerium für Staatssicherheit (MfS) in the German Democratic Republic (East Germany) during 1950-90, is an organisation notoriously famous for its extensive spying programs, both abroad, but also on its own population. Unsurprisingly, its surveillance methods and archives of intelligence is pervaded by metadata, with logs of conversation paying outmost attention to when something occurred, with who, where etc. The magnitude of the Stasi surveillance is hard to fully grasp: “By 1989 the Stasi relied on 500,000 to 2,000,000 collaborators as well as 100,000 regular employees, and it maintained files on approximately 6,000,000 East German citizens—more than one-third of the pop-

ulation” (<https://www.britannica.com/>). And yet, even this gigantic machinery dwarfs in comparison with the global mass surveillance apparatus of today, the costly process of in-person/selector-based surveillance having been supplanted by algorithmic processing of big data. However, it is curious to notice the way that the two other dimensions already described, somewhat exist across this digital/analog divide. It seems pretty straightforward that Stasi surveillance using metadata had a social dimension. This is clearly seen e.g. in the psychological harassment programs, where the surrounding network of the “target subject” was employed to unnerve, instil fear or cause disrepute (State Security in the SED Dictatorship, n.d.), e.g. with professional and personal setbacks and people distancing themselves from the target subject. These network structures were further complicated by the fact it was not unusual for Stasi informants to be target subjects as well (Museum). Perhaps most surprisingly, the research into Stasi revealed that the speculative nature of metadata is not strictly limited to the extrapolation allowed by digital tools. As an example, the MfS district administration of Berlin received a complaint on January 17, 1982, from several people who had found fliers in their mailboxes. Based on an analysis of the form and content of the flyer, the MfS speculated on the perpetrator, ending up assuming he was “a male punker between the ages of 16 and 25 who had refused to serve in the military and probably lived or worked at one of the “crime sites” (ibid.). Across the digital and analog domain, this kind of profiling appears to be an inherent feature of large troves of metadata.

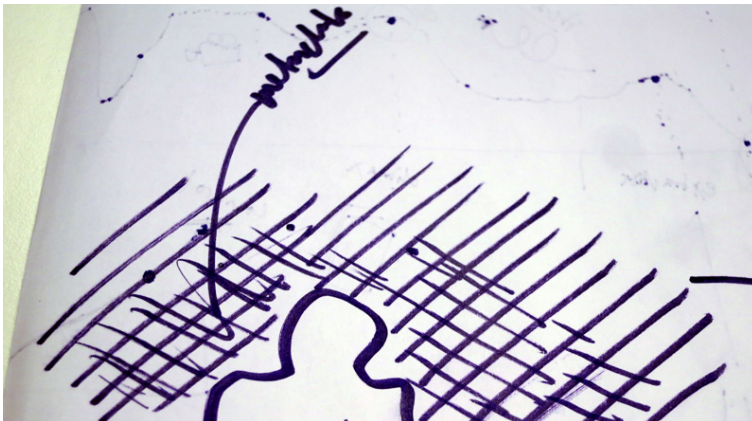


Fig. 18. Very early sketch exploring the relation between ‘metadata’ and ‘digital shadow’.



## 5.2 The Not So Trivial Question of What A Digital Shadow Is

Having outlined some of the basic qualities of metadata, in particular in the context of global mass surveillance, let us now turn to the question: what is a 'digital shadow'? As we shall see this is a not so trivial question.

The vast majority of people leave an extensive trail of digital traces behind, such as when we visit a website, call a friend or simply change our geographical location. This can be due to carrying a smartphone around, being recorded on CCTV etc. As we just discovered, metadata plays a key role in this respect. One way to talk about the aggregate of these traces is a digital footprint. Much like how we can talk of a CO<sup>2</sup> footprint, this term is inherently reactive, building on the idea of leaving a trace behind. However, perhaps due to the abstract yet personal nature of the topic, as well as the way it operates across societal and disciplinary domains, we find a host of alternative terms in use. These include 'digital shadow', 'digital ghost', 'data double', "data doppelgänger" (Appelbaum, 2016), and "phantom bodies" (Crawford, 2016). From a pataphysical perspective, perhaps we can look at all these figures as equivalent imaginary solutions to the problem of making sense of the data that stands in *as us*, and of relating to this data set in some way. Here I will not enter some lengthy discussion concerning the discursive baggage or etymological trajectories of each of these co-existing terms. Instead, I will briefly start unpacking two of these, namely the 'digital ghost' and the 'digital shadow', with an eye to the way they were deployed in MDM.

The figure of the ghost is interesting in that Daumal (who we encountered as one of two discussants in 2.4.2) specifically has written on "The Pataphysics of Ghosts" (Daumal, 2012), approaching the question of whether ghosts exist through the study of absences, i.e. through pataphysics, all on the basis of the definition of a hole as "*an absence surrounded by a presence*" (Daumal, 2012, p. 91, author's italics). Thus, Daumal argues, when we see a ghost, we see an absence by way of its surrounding presence, terrified individuals who claim to see them, particular locations of the ghosts etc. On the point of the individuals who allow themselves to contemplate the existence of ghosts for the sake of curiosity and fear, he argues that when our critical faculties lower their guard and we descend into "shadowy regions" (ibid., p. 93), we leave an absence in our upper chamber, meaning the place where we contemplate the world using our senses (ibid.). He goes on:

[T]his emptiness will be projected into the representation of the world, this emptiness will make itself at home within whatever subsists of rational vision, and that absence surrounded by presence is a ghost; it is, properly speaking, an entity *returned* from beyond, insofar as our fear and our

curiosity are directed toward the dead (...) Thus, when my reason gives in, fear is aroused in me and, seeking an external excuse, it finds it in that absence—for whatever exists clearly does not frighten. Therefore, the ghost will be terrifying; therefore, I will be afraid; therefore, the ghost will be terrifying—and there I am, caught: the ghost and I, we beget each other, it pursues me like shadow pursuing light (ibid., p. 94, author's italics).

Daumal makes further elaborations on the topic, including a distinction between ghosts (living dead beings) and vampires (dead living beings), to conclude that pataphysics is not satisfied by simply explaining facts, but in fact makes it possible to combat ghosts. This is not done out of a hate for absences, but rather a love for what *is*, which in the end of course is simply a matter of rhetorical preference, the glass being half full or half empty so to speak (Daumal, 2012, p. 97).

Besides providing us with more nuances to the notion of the absence and its relation to presence, the above quote by Daumal (2012) also mentions the figure of the shadow as well, framing a curious situation where the shadow is pursuing light (ibid., p. 94). What can the figure of the shadow more broadly reveal in the context of our argument? Before touching more on this relationship between subject and our shadows, it is worth noting that shadows naturally extend beyond a dualistic bond, as e.g. evident in the framing of the 'data double', the 'stand-in', the 'doppelgänger' or the 'evil digital twin' or single 'ghost'. In comparison, a shadow might as well be one out of many, such as when we cast a multitude of moving shadows due to a myriad of light sources and their possible reflections hitting our moving bodies. This aspect of multiplicity is important considering the way that our digital shadows operate in the world, with a co-existent cohort located across various server farms of intelligence agencies, corporations, data brokers etc. To exemplify, the version of 'you' that Facebook operates with in order to render your newsfeed and provide you with optimal targeted adds, is most likely significantly different from the version of 'you' that GCHQ uses for determining the potential threat you pose to the national security level in UK. Different objectives are in place, different metadata (and possibly data) sets are being scraped, different algorithms sift through the data, different computational capabilities are being leveraged, different agendas employed, different human beings are involved in the processes etc. However, all of these digital shadows are intensely real, in the sense that they bring about ripples of real-life consequences for you along with your surroundings. Also, not unlike the way that shadows are subject to the dual movement of the sources of light and objects and subjects blocking said light, digital shadows exist in a perpetual state of flux, as you click and move and interact throughout the world, browsing a news site, passing a CCTV on a public square. Thus, the digital shadow as a figure is inherently plural and ever-shifting. Consequently, when we talk of *a*

digital shadow, we always talk of a fleeting instantiation, and of one out of many.

How do we relate to our digital shadows? First of all, this is assuming that we acknowledge the power that these proxy versions of ourselves hold in our lives. We might appreciate their existence indirectly, as when we get a cheap loan or when we are matched with someone we find attractive on a dating service. While the relationship between ourselves and our digital shadows can be ignored, passively accepted or even cherished, the recent sweep of surveillance disclosures by Snowden and others have brought a somewhat sobering wave of well-grounded public paranoia, uproar and anger over the non-transparency in this unfolding dynamic. This is beautifully captured in Laura Poitras and Kate Crawford's call for divorcing your metadata (2015), in effect divorcing your digital shadow. What Daumal's treatise on the pataphysics of ghosts does so well in this respect, is to point to the spiralling emotional dynamics, the vicious circling endemic to this relationship, as when a momentary sway to the realm of superstition, away from our sensory apparatus and critical faculties, leaves us with a terrifying void in precisely this vision of reason, subsuming us further into fear and so on.

This is not dissimilar to the way that our relationship to our digital shadows—knowingly or unknowingly—can spiral into self-fulfilling prophecies as well. This extends on the earlier point concerning the speculative nature of metadata, and the point on the defiance and transcendence of linear causal linear time. This is perhaps the biggest disservice inherent in the notion of a 'digital footprint', as a trace you leave behind by walking onwards. As journalist, computer security researcher, and hacker, Jacob Appelbaum reminds us:

Your voice is unique. Your typing is unique. The websites you visit and the systems you use to interface with the world are unique. The pattern of travel you take through the city, the consumption of electrical power tied to your daily routines: those paying attention to you as an element of a larger picture and to you specifically will try to predict everything from the patterns of data you leave behind (Appelbaum, 2016, p. 157).

A recent example could be Facebook's FBLearder Flow, an artificial intelligence-powered prediction engine that offers advertisers future consumer behaviours, e.g. enabling them to target consumers that might consider leaving a brand (Bridle, 2018). As noted in the cited article, spiritually this method is very close to what Cambridge Analytica has been doing with regards to predictions on voting (ibid.) As another example, further illustrating how self-fulfilling prophecies could play out, say you are a young black man living in an area with an above average police presence, due to the local authorities using predictive policing, i.e. using

algorithms to predict future crime. The police officers patrol this area knowing that crime is likely to happen. All their charts tell them that young black males are very likely to commit crime, as this is the existing data sets fed to their algorithms. All of this, by itself, is making you more likely to become that criminal suspect that will in turn further enforce the data set, the algorithmic feedback loops and so on. The difference in the two examples of course pertains to the fact that while Daumal's case of "ghostly spirals" purely relies on the subject maintaining their sanity, scepticism and superior observation post (2012, p. 93), the latter example makes it all too clear that the "ghostly spirals" are a systemic feedback system beyond the full control of the subject, and in many ways outside the reach of design.

Each of these algorithmic feedback loops might come with its own human biases and irrationalities (such as e.g. racism) in their design, along with a plethora of uses and misuses, such as the famous case of NSA officers caught spying on love interests (Peterson, 2013). However, a further layer of complexity is added when looking at the way that algorithms affect one another, what Pasquinelli has described as the blind eye of the algorithm (2015). This extends on the earlier point concerning the networked, collective quality of metadata, the way that metadata ties into one another, across lives and contexts. In these networks, each algorithm exists in an entirely ungraspable system of "(...) algorithms in conflict, algorithms locked in loops with each other, without any human oversight (...)" (Slavin, 2011). This raises important questions, not only in the case of surveillance and predictive policing, but also in relation to areas such as financial algorithmic trading (famously causing the 2010 flash crash at the New York Stock Exchange, which saw \$1 trillion momentarily evaporate), and voting (as when the effects of Facebook's efforts to get people out to vote clashes with Cambridge Analytica's efforts to get people to vote on a given candidate).

How do all these human biases and irrational impulses end up affecting the labyrinthine algorithmic processes that continuously affect our digital shadows and ourselves? While the power relationship between the individual citizen (or even a collective) vs. an adversary like NSA, Google or the police force is intensely asymmetrical, it is important to stress that citizens (and designers) do have some level of agency and possibilities at hand, also with regards to our unfolding digital shadows. In other words, we too can become part of those human biases and irrational impulses feeding into the system. Seeing a digital shadow for what it is opens up the possibilities for critically altering its existence through playful and critical subversion, such as Brunton & Nissenbaum's tactics of obfuscation (2015), exemplified through the browser plugin AdNauseam that clicks every possible add in your browser window for you, making any tracking and surveillance meaningless. This is the same tactic we encountered on the point of expressing solidarity

through encryption measures “Every time you use encryption, you’re protecting someone who needs to use it to stay alive” (Schneier, 2015, p. 3).

Daumal discusses pataphysics as a way of combating ghosts (as absence), not by endlessly skirting them and thus reaffirming their (in)existence in spiralling endless fear, but by filling them out with presence, with a curiosity and insatiable attention to everything that *is*. Similarly, while it might be difficult, and in many cases impossible, to change consequences cascading unto you from the lives of your digital shadows, it might be possible to somehow fill out the negative space created by your metadata set by way of staging a relationship between yourself and your digital shadow. If Daumal’s ghost is a shadow pursuing light (2012, p. 94), what we are interested in here, is the light pursuing shadow, if only a flicker.

Even considering a figure such as the digital shadow is of course a way of dramatizing a lot of 0s and 1s, in a way an attempt to make a profound absence (the basis for speculation) tangible and in a way experientiable through some sort of presence that can make sense to us, similarly to Daumal invoking the figure of the ghost and vampire (2012, p. 97). As was initially asserted on the basis of all the co-existent alternatives (‘doppelgänger’ etc.), pataphysically, the digital shadow is ultimately an imaginary solution to the problem of making sense of the data that stands in *as us*, and of relating to this data set in some way. Daumal, as a pataphysician, consciously speaks to this imaginary nature.

From a more methodological design research perspective, we can look at this figure as a design constraint, fixing certain points in order to leave others open, allowing us to act. Another consequence of settling on the digital shadow in this way pertains to its dramatic potential, a point also intimately tied to the distinction between reality and fiction, and the ways that we are seeing metadata being instrumentalized in the deliberate blurring of these domains. A surveillance agency sifts through your metadata and casts you as a terrorist—despite the fact that you yourself think you are acting the roles of a mother, engineer, sister, parent etc.—and you have effectively become a terrorist: your behaviour will be subject to even more intense scrutiny, you might not be able to pass through airport security, etc. Interestingly this link between code and drama has also been observed from the point of programming, e.g. in the words of Douglas Rushkoff, Codevangelist at Codecademy, selling coding with the argument: “[becoming code fluent] is a way to become familiar with the operating system on which the human drama is playing itself out” (Rushkoff, 2013). To this Sam Frank, Senior Editor at the magazine Triple Canopy, adds :

When government agencies and private companies access and synthesize our data, they take on the power to novelize our lives. Their profiles of our behavior are semi-fictional stories, pieced together from the digital traces we leave as we go about our days. No matter how many articles we read about this process, grasping its significance is no easy thing. It turns out that to understand the weird experience of being the target of all this surveillance — how we are characters in semi-true narratives constructed by algorithms and data analysts — an actual novel can be the best medium (Frank, 2015, *my italics*).

What this connection between drama and metadata highlights is the issue of authorship: who gets to author this fiction, fill out the blanks, speculate on top of our astronomically dense and incredibly intimate metadata sets? With our digital shadows effectively being entities standing in *as us*, and performing us, the metadata set in this way starts looking a lot like the script undergirding this performance.

Dilnot, in discussing the possible, references the author Milan Kundera (2003), arguing that a novel is not about reality but existence, understood as the realm of human possibilities as being-in-the-world (Dilnot, 1999, p. 96). This tying together of the subjective and the world (as a world of things, the artificial as the horizon for contemporary human existence), is the hinge through which Dilnot makes the reverse connection by design “discover[ing] the possible conditions of subjectivity and possible modes of existence allegorically as it were by addressing the subject indirectly through the conditions of our dwelling and our standing to things” (ibid.) This hinge projects an interesting designerly quality unto metadata and vice versa, as when we furnish the life of a human being with design artefacts, in order for a life to play out comfortably, beautifully, perhaps even meaningfully. Or when people make the decisions to externalise their character (e.g. shy, but sophisticated) into their designed surroundings, e.g. fashion, mobility etc. In this way, we can see metadata and design artefacts as a sort of scaffolding structure upholding our “conditions of dwelling” (ibid.).

### 5.3 Experimental Format

Here I will quickly outline the experimental format that underpins the different design experiments, in order ground the different experiments and provide a point of reference. From the beginning, MDM was conceived of as a cycle consisting of a three step process (here in singular for the sake of explanation): (A) extraction of metadata, (B) transformation of metadata into potential digital shadow and (C)

co-speculation of instantiation of digital shadow. As we shall see this structure constitutes a vicious circle inasmuch as the “final stage” of co-speculation (C) can be seen as another act of producing metadata, which can then be extracted, transformed, co-speculated and so on. What follows is an outline of one such loop, (A)+(B)+(C). The reason for making this outline is to provide a service for the reader, to get an initial grasp of the basic format will provide a reference point across the various experiments. As the cycle was formulated early on in the project, it guided much of the experimentation, allowing for several of the experiments (addressing the different steps) to be carried out in an overlapping fashion. While the order of following experiments mirror their overall chronological structure, it is thus also an order that is imposed post-factum for creating clarity for the reader.

The MDM cycle:

(A) First we extract a snippet of metadata (yesterday from when you woke up till when you went to bed) from a participant’s life. This format of a day in a life was decided early on as a balanced constraint for producing a substantial but not overly extensive amount of metadata. The extraction is done in a transparent, participatory manner through a mix of qualitative interview (‘when did that happen?’, ‘where were you?’, ‘with whom?’ etc.) and quantitative, technological extraction aids (e.g. mapping your different social networks).

(B) Now we transform the metadata into a standardized short film script format. Metadata such as e.g. GPS locations in this way become locations in the script, friends you have been contacting on social media become characters and so on. Importantly, no content is reproduced. Thus, at this point, a series of script templates are designed with large parts of text missing: dialogues, descriptions etc. (what we could call ‘drama’ in the Ancient Greek sense, recalling Rushkoff’s quote from earlier: “[becoming code fluent] is a way to become familiar with the operating system on which the human drama is playing itself out” (Rushkoff, 2013)). In their place we find blocks of white space. It is important to note that this is a design process requiring a great deal of precision both in terms of curation and fictionalisation. Many concerns needs balancing at this point: the potential for recognisability by the participant whose life the template is based on (it should provide enough recognition), the potential for co-participants to speculate freely on top of the template (it should provide enough creative freedom) and so on (see fig. 20–23, p. 131–134). As a conclusion to this step, the script templates are printed and distributed.

(C) Finally, the participants fill out each other’s templates, making sense of the many blank spots by writing out the missing dialogue, descriptions etc. This is the

co-speculative part of the project where participants get to exploit the speculative qualities of metadata by means of interpretation and sense-making. After the participants have finished filling out the missing parts, the now finished scripts are read back (performed back) to the participants whose metadata the scripts are based on, not unlike when actors do the first read-through of a script together. In this way participants end up dynamically drifting across the roles of object (the surveyed) and subject (the surveyor) as the reading session unfolds. This is the point where participants are confronted with a parallel, perhaps much more plausible, tedious, or disturbing version of themselves, acting out a tiny part of their everyday life back to them. In this potentially uncanny moment, they face one particular digital shadow, one of the infinite possible versions of themselves that reside in distant server farms around the world.

I will refer to these three steps, (A), (B) and (C) throughout the descriptions of the different experiments.

The project as a whole was carried out in collaboration with my research assistant Henrike Feckenstedt, then a Master's student in the Interaction Design program at Umeå Institute of Design (UID).

## 5.4 Experiment1: Co-Speculation Script Template Prototype

### 5.4.1 Set-up

This first co-speculation script template prototype was the initial design exploration that led to the first workshop, described in Experiment 2. The prototype was a quick way to try to start playing with the dynamics and balances at work in the script template. It was a way to quickly skip past the question of extraction (A), and instead start with (B)+(C), as this seemed more critical from the outset.

While the extraction of metadata concerns the providing of a certain amount of metadata, the key question in designing the template concerned what to include and what to leave out. From an average day of metadata noise, a skeleton of potentials needs to be excavated carefully, staying true to the original metadata. This is truly a work of synthesis. For the first prototype, this work was considerably easier, since I was working backwards, first writing a storyline and then checking the (imaginary) extraction retrospectively, with a focus on plausibility, not so much in the storyline, as in terms of the metadata itself. Could this metadata actually have been extracted? This consideration was approached through the recent surveillance disclosures—what can we assume that an organization such



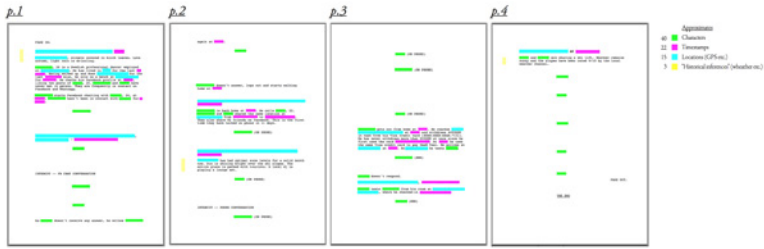


Fig. 19. Colour coding analysis of the metadata featured (type, frequency, visual placement in script) as part of prototyping.

as NSA, Säpo, Google etc., would lift from this life, this fictitious young man in the prototype, Alexander, who rushes off to Val d'Isère to do what exactly? The finished prototype included four kinds of metadata:

- Characters (e.g. the person you interact most with on Whatsapp).
- Timestamps (when did you last call your brother).
- Locations (the place you shared with X and Y for 2 years).
- ‘Historical inferences’ that can easily be cross-referenced from other available sources (what weather it was on a given time and place).

#### 5.4.2 Discussion and results

In the process of uncovering narrative potential in the script, it was important to me that the template was propositional: that a multitude of possibilities (interpretations, directions, and flavours) were present, to avoid for one predominant narrative to basically write itself out in a predetermined fashion, such as e.g. a romantic comedy. For this reason the main tension in the template lies between three characters, Alexander, Gustav and Julia. A range of complexities in their past collective history (e.g. Alexander and Gustav haven’t spoken for five years, although we don’t know why etc.) and varying degrees of white space for dialog across all possible pairings of the characters, ensure a range of possibilities. At the same time it was not an exercise in making each character equal—in fact the opposite is closer to the truth. It was paramount to have the feeling of incentive run through the template, some pattern or glitch that would spark curiosity. The active design of white space became an important way to create a nudge effect in this respect. As an example, Julia on page three only has space for a few lines in her telephone conversation with Alexander, while his response has almost four times as much white space. Julia gets the final word (again very little space), before we know that Alexander gets out of his home in Umeå, withdraws SEK4000 in cash and grabs a taxi to the airport. Another example is how Gustav writes Alexander

on Facebook chat, without getting an answer back. Gustav then writes Alexander again around ten minutes later. All these details are made to raise curiosity and help spark imagination—how come, why etc.? I should also mention that careful attention was paid to the extrapolation of highly specific, yet familiar and exotic locations. The storyline plays out in specific locations in Umeå (such as Kungsgatan) and Val d’Isère, a popular ski resort in the French Alps (e.g. Hotel Altitude), in other words contexts with a high degree of particularity as well as a more or less accessible imaginary, considering that the audience of the first workshop were students at UID. One could say that the locations are chosen to evoke highly specific connotations, both familiar and exotic, and to allow participants to empathise yet imagine.

Fig. 20–23. (p. 131–134). The Co-Speculation Script Template Prototype.

FADE IN:

EXT. STREETS OF UMEÅ - AFTERNOON 15.43

The heart of Umeå, streets covered in birch leaves. Late autumn, light rain is drizzling.

ALEXANDER, 24 is a Swedish professional dancer employed at Norrlandsoperan. He has lived in Umeå for the last 15 years. Having walked up and down Rådhusplanaden for the last 1 hour 45 mins. He sits on a bench at Rådhusparken for 20 mins. He checks his Facebook profile at 15.48, liking two posts of MARIA, 25. Alexander and Maria have never met in person. They are frequently in contact on Facebook and Whatsapp.

Alexander starts Facebook chatting with GUSTAV, 24, at 15.50. Alexander hasn't been in contact with Gustav for 5 years.

ALEXANDER

INT. GUSTAV'S PARENT'S HOME, ERSTAGATAN 14, SÖDERMALM, STOCKHOLM - AFTERNOON 15.51 (LATER)

GUSTAV

INTERCUT -- FB CHAT CONVERSATION

ALEXANDER

GUSTAV

As Gustav doesn't receive any answer, he writes Alexander

again at 16.08.

GUSTAV

Alexander doesn't answer, logs out and starts walking home at 16.15

INT. ALEXANDER'S HOME, KUNGSGATAN 32 - AFTERNOON 16.34  
(LATER)

Alexander is back home at 16.34. He calls JULIA, 22. Alexander and Julia shared the same location at Kungsgatan 32 from 1st June 2012 to 14th August 2014. They also share 82 friends on Facebook. This is the first time they have talked on phone in 11 days.

ALEXANDER (ON PHONE)

EXT.VAL D'ISÈRE, THE PACIFIC BAR - AFTERNOON 16.40  
(LATER)

Val d'Isere has had perfect snow levels for a solid month now. Sun is shining bright. The entire place is packed with tourists. A local dj is playing a lounge set.

JULIA (ON PHONE)

INTERCUT -- PHONE CONVERSATION

ALEXANDER

JULIA

ALEXANDER

JULIA

Alexander gets out from home at 17.17. He reaches Nordea Umeå on Rådhusplanaden at 17.22 and withdraws 4000SEK in cash from his Visa credit card (XXXX-XXXX-XXXX-7131). He has never withdrawn more than 500SEK in one go since he first used the card on 12th March 2012. At 17.29 he uses the same Visa credit card to pay Umeå Taxi. He arrives at Umeå Airport at 17.48. He texts Gustav

ALEXANDER (SMS)

Gustav doesn't respond.

INT. HOTEL ALTITUDE, VAL D'ISÈRE, 10.07 - NEXT MORNING

GUSTAV texts from his room at Hotel Altitude in Val d'Isère, where he checked-in the same morning.

GUSTAV (SMS)

EXT. VAL D'ISÈRE, SKI LIFT AT 12.10 (LATER)

GUSTAV

JULIA

GUSTAV

JULIA

FADE OUT.

THE END

## 5.5 Experiment 2: Workshop 1.0, Umeå Institute of Design

The workshop was held at UID, January 26, 2015, with a mixed group of twelve design students from UID. It was co-organised with Henrike Feckenstedt, my research assistant, who was also a Master's student at the Interaction Design programme at UID at the time. The purpose of this first workshop was twofold:

- 1) Understanding how young design students experience and understand metadata, in a way testing one underlying premise of the project, by asking into their relation to their metadata and digital shadows.
- 2) Testing the co-speculation script template prototype from Experiment 1, by asking participants to fill in the spaces for dialogue (and alter whatever else they desired). The session concluded with a collective presentation of all the highly different storylines where participants read them out. Discussion throughout.

The survey gave interesting insights into the participants' ambivalent relationships to metadata. It became clear that even among design students, metadata along with digital shadows are very hard to grasp and relate to. This is all more striking, considering that the students are highly skilled in tools across the analog and digital domain, and thus constitute a group you would definitely characterise as tech-savvy.

As I was giving a short introduction to the workshop and the topic as well, the point with the survey was beyond any quantitative assessment of the participants' level of knowledge of the topics. Rather, the goal was to open up for articulating their relationship to metadata and specifically their digital shadows. In addition to written responses, participants were asked to illustrate metadata as well as their personal metadata aka their digital shadow. While revealing a generally ambivalent and reflective stance, the poetic qualities and the diversity in answers were striking. Here are a few examples from responses to the question: How do you relate to your digital shadow?

I think it's scary to think about. It's like someone you don't know has a diary of your entire life that you haven't every written

Reminds me to be careful? My shadow is faint. My will is strong. Maybe it's like a distant cousin. They have a rough outline about me.

Well I'm not quite sure, I hope he's a nice guy.

For part 2), the main takeaway was the promising variety in storylines produced from the script template, an indication that a certain storyline had not written itself out, and that the prototype genuinely had opened a space of imagination. This is evident even in the genres of the finished scripts—to give an idea, a few of the titles/genres:

- Psycho Twins (romantic drama)
- The Epic Dance-Off (dance flick)
- Val D'ick (porn)
- No Poncho (indie/art-house)
- A Tiny Tiny World (family drama/kids)

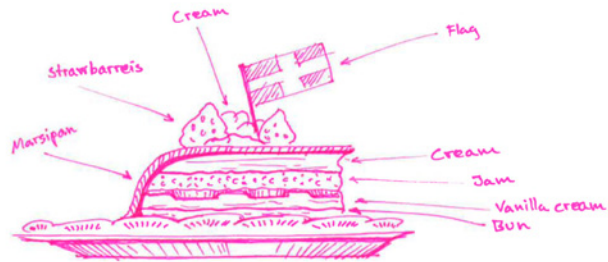
Additionally, the format of reading out the scripts worked surprisingly well. The difference in the storylines was striking, and participants had fun reading out their work, and sharing with the group. In fact, the read-through session, as it was becoming the high point of the workshop, took on an performative quality that we did not anticipate. While a close reading of the scripts did not provide us with any definitive answers, but rather a lot more questions, the workshop as whole provided us with great clues regarding the fine-tuning of our extraction/transformation for a second iteration of the project.



Fig. 24. Collage of script front (title) pages from Workshop 1. Great diversity in content and form.



9. Please illustrate metadata (in any way you prefer):



10. Please illustrate your personal metadata aka your digital shadow (again, in any way you prefer):



Fig. 25 & 26. Two of the answers from the Workshop 1 survey (same respondent)

## 5.6 Experiment 3: Metadata Extraction Prototypes

After having made an initial test of (B)+(C), the extraction prototype concerned the other end of the cycle, namely the very beginning (A). The question here was very different: what metadata could we expect to extract and how were we precisely going to do it? To address the latter, there were good arguments for heading towards either extreme of the digital and analog spectrum; doing a complete digital scraping, demonstrating the capabilities of intelligence services and corporations, or doing an analog qualitative interview, demonstrating the absurdity in metadata inquiry ('when did you do that, with who, where?' 'Ok—then what, with who, where', etc.) For our first prototype, Henrike ended up doing a purely qualitative interview, thus embodying the algorithmic extraction process, talking through the entire yesterday of a participant, and pouring everything neatly into a Microsoft Excel sheet. From this we learnt that it is crucial to build up a context for the project (why are we asking this) and of course establish a bond of trust.

Interestingly, Henrike encountered some moments where she had to back down from her inquiry protocol due to interpretation and awkwardness ("you don't watch YouTube clips for an hour with your girlfriend in the evening"). The real-time conflict between human intimacy and the relentless nature of the analogue metadata extraction was interesting, in that it mirrors the messy social amalgamates of algorithmic intervention. Henrike further took note of particularly striking absences of metadata ("it's interesting how he is not spending money. super weird").

All in all, the analog qualitative interview extraction proved promising and viable for generating a material that could be transformed into constructive script templates. The session also made us reconsider our initial drive towards extraction as a complete digital scraping, opening up to the possibility of a hybrid extraction model. This decision was also due to the technical challenges with building extraction software from scratch. Also, this was not really the focus of the project. Thus, instead of reinventing the wheel, we ended up with a bunch of technological aids, such as Immersion from MIT Media Lab,<sup>[1]</sup> which could readily map out a participant's social relationships based on email metadata and more. Through follow-up extractions carried out in Umeå and Helsinki, we tested this combination of qualitative interviews and technological aids, and found the combination promising.



Fig. 27. Documentation of one of the metadata extraction prototypes (blurred for considerations of the privacy of the participant).

## 5.7 Experiment 4: Workshop 2.0, JVEA Berlin

### 5.7.1 Set-up

For the second iteration of MDM, we got accepted to be part of the annual summer event hosted by JVEA, a platform for theory, art, and design in Berlin, which meant that we had the possibility to run the experiment at this event. This experiment saw Régis Frias, then Master's student at Media Lab in Aalto ARTS, Helsinki, join the project as a collaborator.

The main component in this experiment was a second workshop taking place in Or Gallery in Kreuzberg, on July 31 2015, co-facilitated by Søren Rosenbak, Henrike Feckenstedt (research assistant) and Régis Frias (with Régis also acting as a participant) and myself. The event was free of charge and open to anyone who wanted to join. We announced the call for participation in advance, as part of the JVEA annual event program, and further advertised the event within and outside JVEA. The workshop itself ended up having four participants (incl. Régis), and lasted throughout the afternoon, around 2,5–3 hours, with a pre-workshop extraction session for each participant. This session was a reiteration of Experiment 3. Finally, the gallery space in which the workshop took place was also hosting a specially curated MDM exhibition, with five invited artists exhibiting artworks that somehow related to the themes of the larger project. I will discuss this as a separate experiment, although the two overlapped, concretely in the Or Gallery space. Here I will instead focus on the workshop itself.

For this workshop, we wanted to run a first full circle of MDM, consisting of both (A)+(B)+(C), drawing on all our experiences from the experiments carried out up until this point. Thus the design process consisted of:

- 1) A pre-workshop extraction of metadata, done individually by the team members paired up with participants, using the hybrid format mixing a qualitative interview with technological extraction aids, such as Immersion.
- 2) Following that the metadata would be designed into script templates by the team members, based on the previous work on prototyping and testing templates (5.4 Experiment 1 + 5.5 Experiment 2).
- 3) Finally, the workshop itself would start with participants reading the script templates, followed by a co-speculation session where participants would fill out each other's templates, to then read them out and perform them to one another. This step, closing the loop so to say, was new, although we had some experience with the read-through session format from Workshop 1 (5.7 Experiment 2). Each participant filled out one copy of each other's template, resulting in each participant having three different filled-out scripts and consequently facing three digital shadows in the end. The session concluded with an open presentation format where participants organically paired up (the surveyed and the surveyor), reading out and performing the stories in front of each other through a suspended golden frame. Participants decided the order—some would “swap” digital shadows, staying on stage and taking turns reading out and performing each other's stories. One participant had her three digital shadows read out one after the other. There was discussion throughout, with short natural breaks whenever the ‘stage setup’ had to be changed. In the end there was a shared reflection session, including feedback.

### 5.7.2 Discussion and results

The workshop took several steps forward at once. Firstly, it successfully staged a full circle, (A)+(B)+(C), for each participant. Secondly, as a consequence of each participant filling out each other participants' template, the final scripts were tripled, as opposed to a 1:1 pairing between participants. This was a decision made on the spot as a response to the lower number of workshop attendees. Thus, the setup (constituted by a conceptual and physical space) could be characterised by a strong sense of agonism, as a range of more or less conflicting digital shadows would come to life during the unfolding, conclusive read-through. The plurality of equally valid, yet profoundly different (we might consider going as far as saying conflicting or even mutually exclusive) digital shadows read out and performed in a cascading disarray, highlighted the absence of any definitive answers or any

kind of truth. Rather than any solid content ('who do Facebook really think I am?'), participants were left with a frame that seem comfortably, and eerily, able to hold close to anything. In this sense the digital shadow presents itself as a faux entity, a proxy digital identity.

The session concluded with a shared reflection session where we received valuable, positive feedback. During this session participants characterized the experience of having their digital shadow read out and performed as "strange", highlighting the fact that the constant stream of authentic, plausible metadata throughout the read-through would keep you firmly in the flow of the unfolding narrative, even if the storyline would divert along some highly imaginative, absurd tangents at times. This was particularly true for one script template, in which Henrike had prototyped an anomaly, by inserting an authentic tweet sent by the respective participant/protagonist at the very end of the script. This exception to the rule of only using metadata (and not the data i.e. content) in the design of the script templates, worked incredibly well in producing a strong uncanny pay-off for this particular storyline. This was in fact nothing short but an eye-opener: during the feedback, the participant, whose metadata it was based on, recounted how—no matter how far a script swerved into the imaginary realm, thus departing from the events as he recounted them—this very last piece of authentic data turned the whole thing into a genuinely strange experience, casting everything up until then in a sudden plausible light. This "glitch" in protocol (in fact intelligence agencies, corporations etc., do scrape some data in addition to the enormous pools of metadata) or re-swerve, mirrors Motte's discussion of Georges Perec in his tracing of the history of the clinamen in literature:

The case of the late Georges Perec can be advanced as exemplary of the attitude of the Oulipo as a whole in regard to the clinamen. A fervent devotee of highly constraining structures and uncompromising literary symmetry, author of a 5000-character palindrome and a 300-page lipogrammatic novel, Perec gradually became convinced of the creative efficacy of the integration of a minimal element of chaos into literary structures of this sort. He told with relish the story of Chinese typographers who, after working for years to set an error-free text, would deliberately insert therein one typographical error (Motte, p. 274).

Here, following the points by Wood (2016) in Chapter 2: Bureaucracy, I would argue metadata can be understood as epistemology, and the imaginative data filled in by participants as ontology. The conflation, and ensuing effects on the participants whose metadata it was based on, not only speaks to the ways in which these two categories have historically been muddled together for various reasons. In the experience of having the script read out and performed, the anomaly also

brought the discussion of the epiphenomenology into play, as the being of the phenomenon. I will elaborate on this further in the final discussion of the project. Also, as a further twist, one of the participants who had filled out the given script, had actually altered Henrike's anomaly (as seen in fig 30–32, p. 144–146, changing 'Jerry-rigging' to 'Jarry-rigging'), performing yet another swerve, and further entangling any remaining notions of metadata (epistemology) and data/speculated content (ontology).

Zooming out to the context of the project as a whole, the difference between Workshop 1 and Workshop 2, between freely speculating on *some* digital shadow and having a personal stake in the exercise, was profound judged from the participants' experience.



Fig. 28–30. (above and opposite). Documentation from Workshop 2 in Or Gallery, Berlin.

Fig. 31–33. (p. 144–146). Three different digital shadows written out on the same set of metadata. Notice Henrike's anomaly at the end (and the further swerve in the third instance, fig. 33).



BARBARA

not yet...

BARBARA (CONT'D)

now! Wanna have a piece ~~of~~?  
 I'm going down to Haroush's now.  
 Are you around.

LENDL

in 12?

BARBARA

perfect.

At 3.19 pm Lendl tweets:

'Jerry-rigging ,kataphysical logics'.

THE END



BARBARA

Hi! This is cool.

BARBARA (CONT'D)

Someone posted the original on  
this site.

LENDL

What does it say?

BARBARA

EROSDEUTEMOLYSIMENESDONEI.  
GLYKIPIKRONAHAKHONORPETON.

At 3.19 pm Lendl tweets:

'Jerry-rigging ,kataphysical logics'.

THE END

BARBARA

*Dispute which takes no credit*

BARBARA (CONT'D)

*to itself is best*

LENDL

~~Meta~~ *Marianne Moore*

BARBARA

*1922*

At 3.19 pm Lendl tweets:

'Jerry-rigging ,kataphysical logics'.  
*a*

THE END

## 5.8 Experiment 5: Curation of JVEA Exhibition

In parallel to the workshop, we were able to curate an exhibition around the thematics of MDM. At this point we had accumulated a great catalogue of reference points for the project, and to reflect this rich context, I decided to curate an MDM exhibition in our gallery space, which would then double as the physical locale for the workshop. None of the five artworks that ended up as part of the exhibit had deliberately articulated their efforts in the direction of meta(data)morphosis, here understood as the speculative transformation within the metadata structure that the title refers to. Rather, they presented a surprising and highly different angles on the subject (also using different media: sound, print, video). As such the artworks, the dialogues with the artists, and the vernissage and interaction with guests, was an exercise in adding more voices by opening up the project up, and also in extolling pataphysical equivalence. The choice of hosting the second iteration of the workshop within this white-cube-gallery space-turned-into-exhibition was also a notable difference from having it in a more standard classroom. In a way the space matched the templates, in that it attempted to balance an abstract white cube gallery (abstracted absence of content) with a diverse set of content (the different artworks, all conveying different narratives/experiences for the viewer). The stage for the final read-through session in Workshop 2 (5.7) emerged as a crucial design component in the project, and while the classroom in Workshop 1 (5.5) was a purely pragmatic choice, this exhibition space became a way to bring this spatial dimension further into focus. The following is a list containing the artists' own short summaries of their works for the exhibit:

### Heini Aho (FI) - Black Hole (2010)

There is a picture of a room on the video, that has a black circle/ hole on the wall. Person is throwing black objects and clothes in to the hole. For a moment it seems like the items are disappearing in to the darkness, but instead pulled by the gravity, dropping on the floor.

### Ryan Maguire (US) - Ghost in the MP3 (2014)

'moDernisT' was created by salvaging the sounds lost to mp3 compression from the song 'Tom's Diner,' famously used as one of the main controls in the listening tests to develop the MP3 encoding algorithm. Here we find the form of the song intact, but the details are just remnants of the original. Similarly, the video contains only material which was left behind during mp4 compression.

### Emma Holten - CONSENT/En ny historie om min krop (2014-2015)

The pictures are an attempt at making me a sexual subject instead of an

object. I am not ashamed of my body, but it is mine. Consent is key. Just as rape and sex have nothing to do with each other, pictures shared with and without consent are completely different things.

Mario Santamaría - The Phantom of the Mirror. Trolling Google Art Project (2013 - 2014)

Serie, photography, Screen captures. Screen shots from Google Art Project, where the Google robot reflects itself in the mirrors of the Paris Opera. The Camera in the Mirror or The Phantom of the Mirror is part of Trolling Google Art Project.

Timo Bredenberg - Ghost Ride (2010)

“Ghost Riding involves walking or dancing alongside a car while a vehicle is still moving.”

-Wikipedia

In Ghost Ride I examine how people represent themselves in the ghost riding community and how these representations have spread from sub-cultural to global level in the Internet. Young U.S. soldiers have taken ghost riding to Iraq. Mobile phone camera footage of ghost riding soldiers gives a new perspective to our way of seeing the connection between war and our everyday life.



Fig. 34. Documentation of a part of the MDM exhibition.

## 5.9 Experiment 6: Inside/Outside: (Design As Dialectics)

During Spring 2017, I was invited to exhibit work as part of project Inside/Outside: (Design as dialectics), “a discourse manifested as an exhibition of experimental design work”, held at the San Francisco State University Design Gallery, and organised by Joshua Singer and Virginia Tassinari. The project in particular drew on Theodor Adorno’s notion of ‘dialectics’, understood as a criticism from within reality, a resistance to the way that the Western idea of rationality threatens to over-simplify and instrumentalize the richness of reality (Singer & Tassinari, 2017, p. 2). While design is thoroughly nested inside these particular structures it is argued to be able to critique them as dialectics: “Design can question existing categories, reveal meanings and values that commonly remain invisible due to their oversimplification” (ibid.).

Inside/Outside presented several opportunities for MDM: first, it allowed me to present the project in a stand-alone setup, where I had very little control, and would not be physically present. A self-explanatory exhibition would be a dramatically different format as compared to the very hands-on, participatory and extensive setup in Workshop 2 in Or Gallery. Second, this recontextualisation under a different conceptual banner allowed me to explore some new perspectives in the project.

I decided on making an interactive exhibit around MDM, with a script template (a modified version of a template from Workshop 2), printed and hanged on the wall, four sheets chronologically ordered from left to right in a horizontal line. The main character in the script is called Liza. The script template was framed on both sides by the same black outline of a portrait of Liza—each side had a set of headphones where you could listen to a distinct digital shadow being read out, invoked on the basis of the script template in the centre. These two digital shadows (Liza\_shadow\_x and Liza\_shadow\_y) had been produced beforehand, mirroring the Workshop 1 setup, with two participants filling out the same script template, and then reading them out for a voice recording, providing the two audible shadows for the installation. The audio files would run in sync and loop, allowing the visitor to switch headphones between the two performed digital shadows, while at the same time visually orienting herself on the script template in the centre. A short text on the side of the exhibit provided some background information on the project. On the right, the visitor encountered a stack of workbooks with an invitation to grab one. Each workbook featured the same script template that was exhibited, inviting the visitor to make sense of the template and write out her own digital shadow, referring to Liza\_shadow\_x and Liza\_shadow\_y as examples. The workbook also provided my email address, stating that it would be highly valuable

if participants would share their digital shadows.

In addition to this exhibition, I also responded to another call in the project, writing a short text and making a short video statement on the topic of how design as dialectics can be considered disruptive to the conception of linear time and progress. Both video and text argues how a pataphysically infused design practice, along with other practices such as e.g. afrofuturism, fundamentally challenges the Western notion of linear time, moving from a past through a present towards a future, the entire motion thoroughly intertwined with the concept of progress. Design is of course intimately embedded in this logic, but in line with the notion of 'design as dialectics', this position also allows design to critique this logic from within. This act of sidestepping the logic of Western time and futurity is argued to be an apt imaginative response to tackling a problem field such as the way that metadata and digital shadows are being brought into existence, as shadows pursuing light (Daumal, 2012, p. 94). As the shadows, and their masters, circumvent Western futurity for various ends, MDM takes a similar creative freedom, obliterating the causality between past, presence, and future.

This final experiment was in essence a challenge to rethink the context of MDM and potentially engage a wider audience. The self-explanatory exhibition setup forced me to reflect on the importance of the performative engagement in Workshop 2. The show as a whole, including the MDM exhibit, was well-received, and several work books were taken, although no new digital shadows of Liza arrived by email. It was interesting to design the interactive experience in a different format, here a multichannel audio performance, and in this way expand the ways that people can participate and engage in the project. It was clear that this more classic exhibition format produced a very different experience as compared to the experiments up until that point. In this sense, this final experiment helped bring out the unique features of the previous experiments. To put it differently, it was very clear that this kind of exhibition was not going to deliver anything near the same experience that Workshop 2 in Or Gallery had done. Recontextualising the project into a frame of experimental critical design work bringing philosophy into play, also provided a very different framing than a project dealing with digital shadows by way of design and pataphysics. This shift in focus was a useful step towards understanding the project as part of an emerging design practice existing in a larger design discourse. Perhaps most important was the reflections concerning the way that MDM critiques the Western concept of futurity—this developed further into a broader reflection on the project, which I'll return to in the next section in the discussion between rehearsing the future and rehearsing the present.

META(DATA)MORPHOSIS: THE DESIGN OF DIGITAL SHADOWS

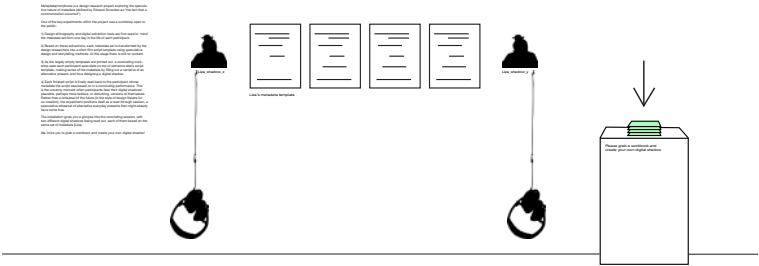


Fig. 35. Sketch of Inside/Outside exhibition set-up.



Fig. 36. Documentaion of the final MDM exhibition at the San Francisco State University Design Gallery.

## 5.10 Discussion<sup>[2]</sup>

### 5.10.1 Pseudo-Digital Shadows?

In the case of the pataphysics of digital shadows, Daumal explains the existence of ghosts from a fear of death (2012). In the case of digital shadows, we can perhaps speak of a deep sense of paranoia and anguish within this spectrum, produced by a lack of knowing how our space of possibility is continuously being scoped through our digital shadows. We can also think of this as an inherent inability to co-exist with our digital shadows. We know that some decisions open possibilities, and some shut them down. In 5.2, we discussed that way that design “discovers the possible conditions of subjectivity and possible modes of existence allegorically as it were by addressing the subject indirectly through the conditions of our dwelling and our standing to things” (Dilnot, 1999, p. 96). This is true for a rain coat, an online visa application service, or our metadata structures, scattered across server farms around the world. The point is that a part of our existence has been deliberately shut off from our human agency and experience. This is part of the reason why the revelations by Snowden and others are so powerful, as it provides us with important clues to these parallel existences of ours. MDM played into this process, e.g. by introducing workshops with a short pitch on metadata and digital shadows, followed by a questionnaire into participants’ relationship to their metadata and digital shadows. This introduction was merely meant to offer a collective starting point, and frame the subsequent session. However, it is entirely possible to think of the ways in which MDM, as a design research project, could have furthered into this direction, e.g. with an app seeking to heighten metadata awareness. In fact, looking across the development of the project, it is striking how the importance initially ascribed to this aspect of metadata awareness waned through the series of unfolding experiments. Across the project it became increasingly clear, that it was simply a point of departure.

Here we should recall Daumal, (2012) and how pataphysics is not satisfied by simply explaining facts, or as Sandomir puts it his explications of the Collège de 'Pataphysique: “(...) the unique and fundamental distinction (...) made between 'Pataphysics as the substance, if one may say so, of being and non-being, and 'Pataphysics as the science of this substance: or in other terms, between the 'Pataphysics that one is and the 'Pataphysics that one does” (Sandomir, p. 172, in Shattuck, 1960). Thus, the workshop format took a deliberate turn away from the informative, and rather engaged participants in speculation (doing), building up to the point of the read-through session (C) in order to combat the ghost (Daumal, 2012), bringing the digital shadows into (co-)existence literally by filling out the negative space offered by their scaffolding structure (the metadata, conditions of



dwelling) with a highly particular existence brought to life through performance. At this point one might object: in line with Daumal, was the read-through session in Workshop 2 not simply a way of skirting the digital shadows, in a way heightening the paranoia by way of a pseudo-intervention, inhabiting a pseudo-design space, that in fact does not exist (recalling the demarcation of design)? Rather than in Or Gallery, should the engagement with the digital shadows not happen in a server farm, or in *the* server farm? And aren't the digital shadows produced in MDM thus simply a strictly pedagogical aspiration, as compared to the 'real deal' digital shadows *actually* shaping the lives of the workshop participants? I would respond to this extensive rhetorical objection with a firm no.

First, from the reflection session concluding Workshop 2, the tension between the imaginative digital shadows instantiating, and the constant stream of authentic, plausible metadata scaffolding upholding them, is a central point. This was particularly true for the read-through session in which Henrike had inserted a snippet of actual data at the very end, pushing this tension even further. All of this was grounded in a specific performative setup, an axis of interaction through a suspended golden frame in a particular gallery in Kreuzberg, which was filled with different artworks speaking to the topic. This is to say that the staging of the co-existence between subject and digital shadow that unfolded was highly situated. Further, with everything we know about how digital shadows operate, there is every reason to assume that the very participation, here also including physical presence, in a public workshop like MDM, along with all the digital activities supporting the workshop across various channels (e.g. emailing about it), effectively altered the digital shadows of the participants. This point is very akin to the argument made concerning ontological designing and the vicious circling in 2.4.3. It speaks to the way in which participants and their digital shadows are deeply entangled, and yet not able to co-exist in a transparent and meaningful way. To put it differently, one could say that by way of the participants' very presence in this project, their absences have been altered. In fact, just like the participants got together around this topic, so did their shadows. Thus, I would argue that the very participation in the workshop already starts pointing to the core focus in the project, namely the light pursuing the shadows (Daumal, 2012, p. 94).

Second, by way of the speculations inherent in the project—the flickers of light pursuing shadows—new relationships between participants and their digital shadows were prototyped. Maybe some participants liked the parallel versions of themselves better than themselves, maybe they will take on inspiration from certain shadows, or maybe make an even stronger effort to delineate from a certain shadows' behaviour? Maybe others will be employing further encryption measures for the sharing of their metadata? And yet again, maybe others will take a new

delight in their parallel existences, e.g. through obfuscatory indulgence? All these are open questions following the experience of co-existing with digital shadows, questions which I am comfortable not being able to answer firmly. Indeed, I believe that a project like MDM, as part of the prototyping of a pataphysical design practice, and deliberately operating at the edge of the design domain, needs to openly accept the fact that there is a limit to the answers we can expect when addressing a problem such as this one.

Thirdly, a point has to be made regarding the very notion of ‘pseudo’ or perhaps better the virtual. Bök makes some enlightened observations concerning this point through the lens of pataphysics:

Jarry suggests through ‘pataphysics that reality does not exist, except as the interpretive projection of a phenomenal perspective—which is to say that reality is never *as it is* but always *as if it is*. Reality is quasi, pseudo: it is more virtual than actual; it is real only to the degree to which it can seem to be real and only for so long as it can be made to stay real. Science for such a reality has increasingly become what Vaihinger might call a ‘philosophy of *as if*’ (1966, xvii), willfully mistaking possibilities for veritabilities (2002, p. 8).

Surely, a science of imagining solutions will not make this same mistake, but instead treat possibilities as exactly that. In the case of MDM, Bök’s point allow us to take a step back to the very premise of the initial rhetorical question, and the distinction made between real and pseudo shadows in the first place. If anything the concluding read-through session in Workshop 2 precisely seems to be a case of “interpretive projection of a phenomenal perspective” (ibid.), by its way of transcending the virtual and real as was previously described. Surely, only the scientific rhetoric with an interest in cloaking the digital shadows as obscure creatures of our imagination, or as neutral technological occurrences indifferent to our lives, would dispute this. Thus, not only can we respond to the initial rhetorical objection with a firm no, we can also find comfort in the irrelevancy at its core, as asserted through the pataphysically infused design experimentation.

#### 5.10.2 Rehearsing the Future vs. Rehearsing the Present

Here, I would like to return to the concluding read-through session in Workshop 2, as a moment signifying a profound experience for the workshop participants as well as the researchers/workshop hosts. Within MDM, I would argue it is possible to see certain elements from the design traditions of participation as well as speculation surface at various points. Methodologically speaking, the

intersections of participatory design and speculative design is a topic that spurs a consistent interest in the design research community, as well as in HCI cf. Kerspern & Harry, 2015; DiSalvo, 2016; Elsdén et al., 2017; Halse & Boffi, 2016; Hand et al., 2010; Kerridge, 2016; Rosenbak & Feckenstedt, 2016. Indeed, it is as if there is a collective probing for a shared vocabulary around this intersection within design research discourse these years. As interesting as this hybridisation may be, I won't commit to this methodological focus here, as it is a topic worthy of a doctoral dissertation on its own. Rather, here I will pay attention to the fact that the famous 'what if...', the springboard from which designers leaps into the realm imagination, is crucial to both these traditions, and use this hinge as a way to approach the headline of this section, namely the difference between rehearsing the future vs. rehearsing the present.

Within the Scandinavian participatory design tradition, notably working towards the heightened involvement of the user in the design practice, 'what if' has been linked to drama, theatre and performance, fields that has come to play a significant role cf. Ehn's discussion of Bertold Brecht's *Verfremdungseffekt* in Ehn, 1988 and also Brandt & Grunnet, 2000; Buchenau & Fulton Suri, 2000; Halse & Clark, 2008; Buur & Larsen, 2010; Binder, 1999, Halse, 2010). As an example, in the context of using drama and props to engage users in the design process, Eva Brandt and Camilla Grunnet quote Soviet-Russian actor-director-teacher Konstantin Stanislavski's "the magic if" as an inspiration in their design research work. Trough understanding "the magic if" as that "[which] brings us out of reality into a world of art which is full of questions" (Brandt & Grunnet, 2000, p. 12), they highlight the close affinity between the questions posed in theatre (an actress e.g. contemplating: 'what if my character won the lottery, what would she do?'), empathic design ('what if the user was in this situation - how would she solve the problem...') and metaphorical design ('[w]hat if the library was a ware house, a store or a meeting place etc.') (ibid., p. 12; Kensing & Madsen, 1991 via ibid., p. 12). Binder & Foverskov (2010) elaborates further: "To see design as performance is precisely to connect the multi-facetted role-playing of the everyday with the playful exploration of the 'what-if' of the theatre" (2010, p. 206).

Joachim Halse and Brendon Clark makes the distinction between theatrical performance theory and the post-structuralist understanding of performance as an ontological condition, precisely through "the subjunctive: the famous what if" (2008, p. 135), focusing their main argument around the latter. Positioning themselves in-between ethnography and design, and drawing significantly on Victor Turner, Richard Schechner and Erving Goffman, they argue for the design workshop as a performative event with the stated goal of "creating a design space that is at once open for exploring the everyday practice of a given setting or group

of people, and at the same time to bring about a lively sense of what it might become in light of the given resources” (Halse & Clark, 2018, p. 135).

Read in the context of the participatory design tradition, it is clear that MDM includes a degree of ethnographic fieldwork (A) and further involves the participants in the design process through co-speculation (C). Interestingly, in one case during Workshop 2, the ‘co-’ extended beyond the bind between designer and workshop participant, as one participant brought a fiction work by Marianne Moore into the early stage of (C), pasting and possibly tweaking sentences from the work as content into the script template (see fig. 33, p. 146). Further, the coupling between drama and data played out in numerous ways across MDM. Even (A), a session that in one sense could be considered an exercise of standard ethnographic fieldwork, had a clear performative aspect, with the interviewer—clearly focusing away from any content—relentlessly seeking to clarify: ‘what time? where? with whom? through which channel?’, to the point where the whole interview gained an increasingly absurd quality. Of course, the performative aspect reached its high point in the concluding read-through session (C) of Workshop 2, where several co-existent digital shadows were read out and thus enacted. This last stage is most clearly where MDM presents us with a somewhat different notion of theatre, drama and performance than we find in much participatory design literature, e.g. Halse & Clark (2008). Rather than a rehearsal of the future, the MDM experiment is explicitly staged as a read-through session, a speculative rehearsal of alternative everyday presents that might already have come true. Practically, it is analogous to the moment on a film set where you hear your part read out for the first time, before you even give it a first shot.

In the later paper “Ethnographies of the Possible” (2016), a part of the anthology *Design Anthropological Futures*, Halse further refines and nuances the previous argument, complicating the simplified schism between designers inventing future practices and ethnographers documenting existing ones (ibid., p. 184) around a stronger commitment to ‘the present’, elaborated on the grounds of George Herbert Mead. Halse also borrows the term ‘the distorted here-and-now’ from a reflection by Esther Frisch, a student in one of his experimental graduate courses that brings together designers and anthropologists. In Halse’s argument, the present moment becomes the opportunity for participants to “revitalize their pasts, reflect upon the present, and extrapolate into possible futures” (ibid., p. 194) through design artefacts such as mock-ups, doll scenarios etc. At the same time, he reflects that “[a] distinct contribution of design anthropology could be to develop particular technologies of the imagination that enable and encourage reflection *during* future-making processes” (ibid., p. 192, author’s italics). The present moment, discussed through the format of the ‘the design event’, thus

presents opportunities for participants and design anthropologists alike. It is worth noting that Halse aspires to both anthropological and designerly ways of knowing, and consequently discusses the implications of ethnographies of the possible for each of these groups and disciplines. While the emphasis on the present moment underscores the fact that “ethnographies of the possible” (2016) offers certain fruitful affinities to our present argument, it is important to stress that these affinities are of a methodological nature, and further happening on top of notable foundational differences.

To go a bit further into these foundational differences, the interface between anthropology and design is obviously a different locus than the infusing of pataphysics into design, although curiously, Brotchie, in describing Jarrry’s life and oeuvre, makes certain allusions in the direction of anthropology. The first is in Brotchie & Edwards, 2001, in the introduction to Jarrry’s “Speculations,” a regular column Jarrry wrote in magazine *La Revue Blanche* across 1900-1903. Across the more than 160 speculations, Jarrry would focus his pataphysical lens on an incredible variety of different recent events in contemporary society. Discussing Jarrry’s venture into speculative journalism, Edwards argues that what Jarrry disclosed through this practice was “the *arbitrary* nature of the law, and of scientific categorisation, morals, gallantry, honour, obscenity, sexual mores and everything that is *collectively* thought. The result corresponds to an anthropological critical distance” (Brotchie & Edwards, 2001, p. 222, author’s italics). Elsewhere, Brotchie similarly discusses Jarrry’s undertaking in “Speculations” through the maturing of “Pataphysics (...) assuming its new objective tone, resembling that of an anthropologist exploring some newly discovered civilisation” (2011, p. 270). Characteristically, Jarrry practiced a pataphysical collapse of Western linear time and space, by way of collecting a selection of his pieces into a planned publication, *The Green Candle*, which was announced by the publisher in 1906, but never got released. As Edwards points out, Jarrry’s editorial choices in grouping stories, and publishing them up to six years later than the events that spurred them, had the effect of dislocating them from their immediate historical context (Brotchie & Edwards, 2001, p. 221). This is important in that it puts Jarrry’s anthropological curiosity and critical distance in sharp relief. As illustrated not only by Jarrry in the case of “Speculations,” but also in Daumal’s not dissimilar “Pataphysics This Month” (2012), the specific topic is decisively devoured by the inquiry itself. When Edwards states that “(...) although the attacks may appear somewhat random, the fundamental effect (...) is to question the esteem that is paid instinctively to reasonable discourse” (Brotchie & Edwards, 2001, p. 222), it is bound to trigger a flashback to Launoir’s elaborations on Jarrry’s definition of pataphysics: “Pataphysics is the science of imaginary solutions, *which symbolically attributes the properties of objects, described by their virtuality, to their lineaments*” (2006 [1911], p. 145, my italics).

Launoir makes his enlightened comments from an initial divergence away from the way in which we, human beings, “represent the real according to our usage of it or according to our very anthropomorphic perception of it” (Launoir, 2005 via Hugill, 2011). While this quote in itself readily speaks to design, it also indicates that pataphysics is non-discriminatory in the extreme, for such is the attitude of the Science of Sciences, bestowing its careful inattention on all corners and phenomena of this world<sup>[3]</sup>. It brings to mind the point that Nelson & Stolterman made in 2.3, when they discuss the design process’ commitment to reality in its “ultimate uniqueness” (2012, p. 243). It thus becomes apparent that Brotchie’s allusions to anthropology really has to do with a ‘tone’ and a ‘stance’, and nothing more. Indeed, in Brotchie’s depiction of “Pataphysics (...) assuming its new objective tone, resembling that of an anthropologist exploring some newly discovered civilisation”, the key word is ‘resembling’, with its strong ties to Bök’s previous point that “reality is never *as it is* but always *as if it is*” (2002, p. 8, with reference to Vaihinger, 1966).

All of this might be a rather obvious point from the outset, considering the radically different nature of anthropology and pataphysics as sciences. And yet, in the case of MDM, this distinction is an instructive step in paying attention to the ways in which the two make their various presences felt within design (in this case as the emerging field of design anthropology, and the infusion of pataphysics into design respectively).

We already touched on one of the consequences for design, namely the difference between rehearsing the presence and rehearsing the future. Halse’s “Ethnographies of the Possible” fruitfully recalibrates its temporal focal point through Mead’s conception of ‘the present’, offering a promising methodological negotiation that potentially delivers new ground for further cross-pollinating design and anthropology. As I read it, in this way it is ultimately a commitment to the present as a means to affect the future. In MDM, rehearsing the present is a means to lay bare the virtual existences of digital shadows<sup>[4]</sup>. It presents the participants with a potentially transformative experience, by offering certain designed metadata structures, scaffolding that momentarily allow their existences to come into play with the existences of their digital shadows. The digital shadows themselves show forth possibility in this sense, by displaying their beings as phenomena, precisely in the way that they are filled out as presence (recalling Daumal’s pataphysics of ghosts, 2012). In this sense, I would argue they too are epiphenomena, like the job report we encountered in Chapter 4. Interestingly, this showing forth of possibility, in MDM contains within it a profound sense of limitation, most clearly experienced in the setup of the read-through session in Workshop 2. As Daumal highlighted in his discussion of ghosts (2012), the situatedness of the encounter (the presence surrounding the absence) is essential in filling out the absence with presence—the

space itself, the reaction of people there, etc. All this was carefully designed in the various components constituting the read-through session (stage setup, exhibition, workshop format, audience etc.), just like the participants were prepared for this concluding moment. Further, the fact that a read-through session, as opposed to the curtain going up for a premiere stage performance, concludes the workshop is telling: the format in this way underscores the fact that no conventional stage performance in a sense can take place. There is no transparent window through which we can perform our digital shadows, and they can perform us. Thus, the differentiation between ‘the possible’ that is available to us, and ‘the possible’ that is unavailable to us, becomes dramatized. To understand how this was done in MDM let us briefly return to how design earlier was argued as the furnishing a human existence, vis-à-vis Dilnot’s hinge, by way of design “discover[ing] the possible conditions of subjectivity and possible modes of existence allegorically as it were by addressing the subject indirectly through the conditions of our dwelling and our standing to things” (Dilnot, 1999, p. 96). Now, picture a living room. Then slice it in half. One half was the stage in the read-through session. This is the conditions and modes, that, although being incredibly complex, are generally available for us to manipulate (consumers/clients in a weak sense, and designers in a stronger sense). This is where our lives play out, where we exist. Then there is the other half, a deliberately obscured space, unavailable to us, as it is fragmented across the world, shut off from our direct manipulation. This space is furnished by intricate morphing structures of metadata, enabling the existences of our shifting, myriad digital shadows. All this is to point back to the stage in the MDM read-through session, and the diametrical setup, with two participants (one bringing out the fleeting existence of a digital shadow) and their the face-to-face contact through a single suspended golden frame, around them the white cube gallery, a notoriously abstract space, yet made active through the MDM curated exhibition. If the session can be said to unfold on a stage, it was at least a heavily destabilised one, if not outright cut in half. While this division was actualised in the stage setup, it also dramatized the problem space itself.

In this way, the session probed into the problem space itself, the pataphysics of digital shadows, and design’s (in)ability to address them. On the point of ability vs. inability, as was already pointed out, the read-through session, being the conclusion to a design project on the topic of digital shadows, transcended the virtual and actual, material and immaterial, imaginary and real, and actually managed to re-route the different domains of possibility into a sphere of (admittedly haphazard) human connection and intervention. The infusion of pataphysics in the design practice allowed for the designers to see this potential and respond by effectively sidestepping design’s inherent sense of linear futurity, committing to the vicious circling that is rehearsing the present, and engaging the participants



in this experience.

Another significant difference I would like to briefly discuss here has to do with the embrace of absurdity, an element also clearly present in Daumal's combatting of ghosts (2012). In the case of MDM, I would argue that the read-through session pointed towards an important possible reframing of the issue of apathy in relation to the existence of our digital shadows (resistance is futile) into a playground of performing and thus embracing the larger absurdity (life is futile) that pervades much of the mass surveillance society. This points to the Theatre of the Absurd, another point in the theatrical lineage tracing back to Jarry's *Ubu Roi* (1973 [1896]), a lineage that we already encountered in 2.7, through another point, Artaud's Theatre of Cruelty. In describing the Theatre of the Absurd' Martin Esslin writes:

The Theatre of the Absurd shows the world as an incomprehensible place. The spectators see the happenings on the stage as entirely from the outside, without ever understanding the full meaning of these strange patterns of events, as newly arrived visitors might watch life in a country of which they have not yet mastered the language (...) For while the happenings on the stage are absurd, they yet remain recognizable as somehow related to real life with its absurdity, so that eventually the spectators are brought face to face with the irrational side of their existence (Esslin, 1960, p. 5).

Can we invite the spectators unto this stage, not only to see the happenings from within, but also to engage more intimately, critically and imaginatively with the absurdity of life through design? How could this Design Theatre of the Absurd play out? I believe MDM offered a first glimpse into this inquiry.

### 5.10.3 White Space as a Probabilistic Field: Quantum Interventions

We already touched on the connection between the epiphenomenological occurrence in W7120 (the job report) and in MDM (the digital shadows). Like the close reading of the W7120 job report, here I would like to dig deeper into (B), in the context of Workshop 2. The design of the script templates have already been discussed both as part of Experiment 1 (5.4), Experiment 2 (5.5) and Experiment 4 (5.7). To recap, we can look at (B) as the fine-tuning of the right amount of creative constraint for the co-speculation of the digital shadows, an attempt to anticipate participation. In itself a highly non-participatory step in the project (although in 5.9 the script templates were designed by several different designers), the design decisions were driven by a critical analysis of the metadata set, carefully considering the craft of storytelling, while maintaining a sense of plausibility from what we now know about global mass surveillance, thanks to Snowden and others. It is



worth reflecting on the fact that the script template in an obvious sense materially echoes the W7120 job report, as a series of printed A4 sheets with designed text on it. The script template made use of the Hollywood standard formatting of a fiction film script format, meaning Courier New point 12, scene headings capitalised, every scene description starting with INT. or EXT., signifying whether it is taking place in an interior or exterior location, standard margins etc. Just like the job report was not a general error, but rather a highly specific document produced from this very printer, the Workcentre 7120, produced by Xerox, the same can be said for the Hollywood script template<sup>[5]</sup>. While some of the inherent formatting dogma was inherited from the script format, much consideration went into the design within these constraints.

As was described in Experiment 1 (5.4), the most significant part of the work had to do with the design of white space, as a way of attempting to anticipate the participation in (C). This design process was prototyped throughout the project, notably in the Experiment 1 (5.4), Experiment 2 (5.5) and in Experiment 4 (5.7). As was already described, it was paramount to have the feeling of incentive run through the template, some pattern or glitch that would spark a curiosity. This could e.g. be an exchange between two characters where each has a set white space for responding, until the end when one suddenly has a much more limited space, and the other four times as much for making the final remark. In order to extend on the tie back to the discussion concluding W7120 (4.2), I would like to make a small digression by way of Johanna Drucker, and her reflections on the work done at SpecLab (2009).

We already encountered SpecLab as one of the initial examples of pataphysical consciousness in neighbouring fields (2.1), more specifically in digital humanities. SpecLab, short for Speculative Computing Laboratory, was located in University of Virginia, the place that had most highly developed digital humanities in the 1990s (Drucker, 2009, p. xii). SpecLab then undertook a series of experimental projects in the 2000s on this foundation. At the core of its operation was “speculative computing”, an effort “to push subjective and probabilistic concepts of knowledge as experience (partial, situated, and subjective) against objective and mechanistic claims for knowledge as information (total, managed, and externalized)” (ibid., p. 5). Much of the fundamental tension that SpecLab addressed (bringing humanities into computational logic) and constructively exploited through its experiments aligns with Wood’s schism drawn between the pictorial and alphabetic language (2016). One of Drucker’s prime missions in the work, is the introduction of design into information systems, not as a post-factum window-dressing exercise, but as information *in itself* (ibid., p. xv): “My central argument is that subjectivity and aesthetics are essential features in the design of

digital knowledge representation as that terrifying but very real prospect comes to fruition—the migration of our cultural legacy into electronic environments and the instrumental processing of nearly all aspects of daily life through digital media” (ibid., p. xviii). We make a quick note that this quote alone already points at the way in which Drucker’s work seem to offer an example of a conscious engagement with the perimeter of the design discipline. Additionally, her work at SpecLab also speaks very directly to this discussion of MDM, e.g. her emphasis on metadata not as dead static schemes, but

(...) as models of knowledge, as discursive instruments that bring the object of their inquiry into being, shaping the fields in which they operate by defining quite explicitly what can and cannot be said about the objects in a particular collection or online environment. Analysis of metadata and content models, then, is an essential part of the critical apparatus of digital humanities (Drucker, 2009, p. 11).

This last sentence echoes the way that the design of metadata (as the ‘scaffolding presence’ that allows the absence of digital shadows to be filled out, to be brought into existence) is an example of a critical design practice. Drucker elsewhere adds to this emergent quality of bringing the objects of inquiry into being, that “[b]ecause digital metatexts are designed to do something to texts (divide elements by content, type, or behavior) or to do something as metatexts (in databases, markup languages, metadata) they are performative” (ibid.) Notably, SpecLab responds to this crucial performative character by setting out to “envision ways to show this dramatically rather than simply to assert it as a critical insight” (ibid., p. 9). Drucker was part of several experiments employing pataphysics into speculative computing, tracing the pataphysical roots of the field: “parody, play, and critical methods such as those of the Situationist International, Oulipo, and the longer tradition of pataphysics with its emphasis on ‘the particular’ over ‘the general’ (ibid., p. 25). Here, I won’t even attempt to do the work of SpecLab justice, but instead focus on an aspect of their work that particularly speaks to MDM, the script templates, the discussion concluding W7120 (Chapter 4), white space, and epiphenomenology, as it plays out in this project.

The role and importance of interpretative act is running like a red thread through the work of SpecLab. This angle ties strongly into the earlier discussion on ontological designing, the hermeneutic circle, and the vicious circling in 2.4.3. The interpretative act is more specifically discussed as ‘quantum interventions’ (as opposed to seemingly neutral and discreet quantitative methods) (see e.g. ibid. pp., 26–27). In this leap between pataphysics and quantum physics, Drucker is not alone. In fact this link has been explicitly noted several times, e.g. in Williams’

piece “Pata or Quantum: Duchamp and the End of Determinist Physics” (2000), and also by serving as the core structure for the group exhibition *More Often Than Always / Less Often Than Never* (2010-2011) curated by Hiebert & Jarvis at the Richmond Art Gallery, London<sup>[6]</sup>. We also encountered the coupling in the case of *Black Quantum Futurism* (BQF) in 2.3. Additionally, the link exists in a larger overarching argument on the increasing affinity between pataphysics and modern day physics, as exemplified by Shattuck’s elaborations on the way in which the world of 1960 is ready for pataphysics, backing this assertion with a direct reference to the discovery anti-matter (1960, pp. 24-25). We also encountered it indirectly in Dilnot’s argument leading up to his speculation of pataphysics as a foundation for design understood as the subject matter for a science of the possible. In this argument, he pointed out that artifice challenges the actual as absolute, and as part of that, the underlying “mono-causal explanation of the universe itself” (1999, p. 115), as we see it evidenced e.g. in the Newtonian World that quantum physics forever complicated.

Drucker argues for a conscious transgression of the quantum laws beyond the atomic and subatomic level, into graphic design:

At the level of granularity we are used to experiencing, matter appears to operate with a certain consistency according to Newton’s laws. But at the atomic and subatomic level, these consistencies dissolve into probabilities, providing contingent, rather than absolute, identities. We should think of letters, words, typefaces, and graphic forms in the same way. Think of the page or screen as a force field, a set of tensions in relation, which assumes a form when intervened in through the productive act of reading. Peculiar? Not really, just unfamiliar as a way to think about ‘things’ as experienced. A slight vertigo can be induced by considering a page as a set of elements in contingent relation, a set of instructions for a potential event. But every reading reinvents a text, and that is a notion we have long felt comfortable invoking. I’m merely shifting our attention from the ‘produced’ nature of signified meaning to the ‘productive’ character of the signifying field (2009, pp. 163-164).

Consequently, in her unpacking and analysis of all the various graphic elements that dynamically constitute the probabilistic field, including the white space: “[t]he unprinted area here is not a given, inert and neutral space, but an espace, or field, in which forces among mutually constitutive elements make themselves available to be read” (ibid., 162). The attention going into the particular elements is not unlike the analysis made in the discussion of W7120. As the opposite of dismissing the job report as simply being a sheet of printed paper, Drucker points out how any

sheet of paper with designed content is a probabilistic field, just like any reading is a quantum intervention. In Workcentre 7120, the job report showed forth itself and its possibility, not simply as a phenomenon/being (the actual A4 I sent to print) but as the being of a phenomenon (an epiphenomenon), an inability to print (absence), printed out to me (presence). The mobilisation of white space in the job report pointed to this simultaneous revealing and concealing, as further discussed through Hara's poetic notion of 'kizen' in relation to white (Hara, 2014, p. 216), its strong sense of materiality and absence at the same time. In MDM, this notion was pushed further, as I undertook the task of designing white space, here making a particular absence for the digital shadows to become present by way of the co-speculation of participants.

It is an important point that this particular designed absence, or in Drucker's terms this 'probabilistic field', is one that does not already exist for the participants. It is inherently off-limits, stored away in algorithmic systems scattered across private and public computational infrastructure in the world. Also, we should add that digital shadows, in addition to being off-limits for the participants, also is a potential design space that is deliberately cut off from design. MDM is a design experiment that circumvents a particular idea of reality, what Bök described as reality *as it is*, to instead supersede it with reality *as if it is* (2002, p. 8). As we discussed earlier on this circumvention, rather than being an open gesture or a pseudo exercise, it has indirect real-life consequences for the participants and their digital shadows. In a sense, its outcomes idiosyncratically fold back into its problem space, and thus it is able to intervene in a reality that fools no one in pretending to be reality *as it is*.

To extend on a point previously made, we should note that part of the widely acknowledged brilliance in the discovery of modern quantum theory in the mid-1920s, is precisely the way that it casts the Western perception, essentially grounded on the Newtonian scientific vision of the world, as quasi, virtual and pseudo: at a subatomic level, our foundational logic effectively dissolves into probability and uncertainty. Even for physicians, it is still unclear how all of this fits neatly together (Polkinghorne, 2002). If Drucker, on the basis of the experiments carried out in SpecLab (2009), advocates for recasting the graphical elements in the same light, MDM points to the potential in design for doing something similar in a broader sense, e.g. through the ways that design designs interaction, human to non-human (or perhaps better 'proxy human' in this case). In this respect, the spontaneous decision in Workshop 2 to fill out three script templates per participant cannot be overestimated. For parataphysics, it would not have mattered in essence. A single digital shadow being read out, would still be an exception, a presence filling out an absence in a fleeting moment. However, in terms of the experience of the participants, the implication that this digital shadow could change a moment later, and

that it co-exists with an enormous group of equally valid and consequential digital shadows, might have been weakened significantly if not lost. Another way to look at this is the degree to which the infusion of pataphysics into design is made evident through design, here to the participants in a workshop. Yet another way, is to say that this particular setup emphasised the epiphenomenology of digital shadows.

[1] <https://immersion.media.mit.edu/>

[2] The discussion is based on Rosenbak & Feckenstedt (2016).

[3] George Perec's exhaustion of a place in Paris stands out as a grand example (Perec, 2010 [1975]).

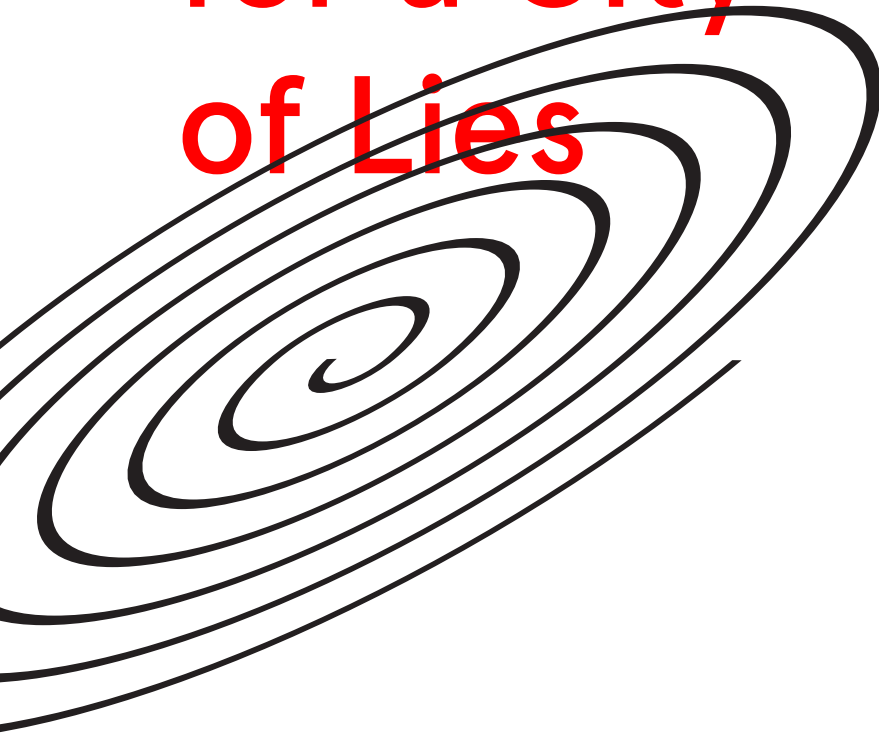
[4] A deeper discussion of Mead's perception of presence vs. Jarry's 'Imaginary Present' is beyond the scope of this dissertation. For an account of the deeper implications of a non-Western, pataphysically inspired time perception employed in design experimentation, see the work of Black Quantum Futurism (Phillips, 2015).

[5] I will not go into the critique of this dominant format here, as it exists too far away from the main argumentation put forward, but simply acknowledge—in the spirit of the dissertation—that the template, and its tying to Joseph Campbell's 'monomyth' (2008 [1949]), especially as propagated by Christopher Vogler (2007), is not a neutral given storylling mode in any way.

[6] Please see <http://www.richmondartgallery.org/exhibition/more-often-than-alwaysless-oftenthan-never/> for more information

chapter 6

# Designing for a City of Lies



In order to meaningfully speculate on what a city could become, we need to first understand what a city currently is. Designing for a City of Lies (DCL) is a project that addresses this question—not through asking what the city *is*, but what it *is not*. This is done by haphazardly engaging local citizens on the street, asking them to tell lies about their city, to then feed these lies back to the city as designed urban interventions, prototyping new urban futures. DCL played out across several iterations, first in Hannover (DE), then Oslo (NO), to conclude with the most extensive three-part experiment in Hasselt (BE), the smartest city in Belgium.

## 6.1 “Smart Cities”

The human experience is increasingly becoming an urban one. This is the conclusion across a vast array of reports, future studies and political agendas[1]. In the imagining and design of future urban life, ‘smart cities’ remains as one of the key monikers. A large part of this discourse is fuelled by digital urbanism, the lacing of tech into the urban fabric, real-time sensors, face-recognizing CCTV etc. Sterling (2018), in his call for “Stop Saying ‘Smart Cities’”, discusses the ways in which “smartness” is simply a new rhetoric[2], pointing to London as an example: “London is a huge, ungainly beast whose cartwheeling urban life is in cranky, irrational disarray. London is a god-awful urban mess, but London does have some of the best international smart-city conferences. London also has a large urban-management bureaucracy who emit the proper smart-city buzzwords and have even invented some themselves. The language of Smart City is always Global Business English, no matter what town you’re in” (Sterling, 2018). This obviously references Wood’s earlier point in 2.5, concerning the way that Global Business English is testament to the historical domination of alphabetical language, essentially championed by way of its role in facilitating imperialism and international trade. Wood further traces the dominance in alphabetical language all the way up to the areas of grammar, computer programming and the field of jurisprudence. This further goes to help underpin the direction that Sterling sees smart cities move in: “Smart cities will use the techniques of “smartness” to leverage their regional competitive advantages. Instead of being speed-of-light flat-world platforms, all global and multicultural, they’ll be digitally gated communities, with “code as law” that is as crooked, complex, and deceitful as a Facebook privacy chart” (2018). Here we should remember what was lost in the transition from the pictorial to the alphabetical language: “Psychoanalytically speaking, they [pictographs] therefore reflect the situated context from which they emerged. By contrast, alphabetical letters are merely ‘codes’ that must conform to their own rules of identity” (Wood, 2016, p. 62). The smart city rhetoric precisely feeds off this ability to simply refer to itself, to be decontextual in a sense. This is also what Sterling highlights with stressing the regional grounding, the continued significance of location, e.g. with reference to the recent vying between major American cities for Amazon’s second US headquarter (Sterling, 2018).

Taking a step back, Sarah Barns points out that “the city has been imagined both as an idealised space of utopia, or a dystopian space of upheaval, dislocation and disease, continually wrenched apart by the seemingly unstoppable forces of technological transformation” (2012, p. 151). In this sense, the city can be understood as a locus for our imaginaries, perhaps even one of their prime spaces of negotiation. To this point she adds: “Its resonance as an idealised, normative space



goes back to the Ancient Greeks, who looked to the space of the city to express the appropriate conditions of justice. As a leitmotif of the utopian imagination, the city has served to articulate hopes for a better society: the urban geography of the public sphere itself has itself been seen to express the ability for individuals to come together as a public or polity” (ibid.) Thus, temporarily departing from the contemporary discourse on smart city development, let us take a short detour back to the imaginary city as conceived by the Ancient Greeks in order to unpack the city as a locus of imaginaries.

## 6.2 The Imaginary City

The symposium ‘The Imaginary Polis’ hosted by Copenhagen Polis Centre, Jan 7-10, 2005 was dedicated to the topic of the imaginary polis—an entity that does not exist as a tangible reality, but as an imaginary construct in the minds of the Ancient Greeks of the Archaic and Classical periods. The proceedings to the symposium was later published as a book, which is introduced by the symposium host and editor of the volume, Mogens Herman Hansen, a classical philologist and classical demographer, and one of the leading scholars in Athenian Democracy and the Polis. In the introduction, Hansen makes the distinction between the conception of the polis concerning what it ought to be (the utopian polis and idealised historical polis) vs. what it is.

In the case of the former, he describes the imaginary along a shift from an ideal society, speculations on future poleis, to the idealised society, a glorification of historical poleis (2005). A broad range of the utopian poleis in Ancient Greece has survived to this day, one of the most famous perhaps being Plato’s ideal societies. Hansen observes that when the utopia concerns a polis specifically (a micro- rather than a macro state) the purpose is to deliver a model that acts as a point for reform (ibid., p. 11), what he elsewhere describes as a political program. In other words, this is something very close to the way we currently use renderings of future urban life (plazas bustling with modern architecture, technological solutions, and stereotypical human interactions), in order to visually communicate our program for a better city. The glorification of historical poleis mainly rests on praise for historical constitutions, as seen across the four main references: Sparta, Crete, Athens, and Epizephyrian Lokroi. In the case of Sparta, its ideal constitution is most often ascribed to Lykourgos, who on his part is said to have copied it from Crete. Here, Minos, the King of Crete, in turn was said to have received the legislation of Crete from Zeus himself. Across all the four idealised poleis, Hansen makes the point that they were largely in disarray, when, around the fourth century, they were held up as model poleis. Staying with Plato as an example, Hansen points out that in

his 'Laws', it is simply assumed that the institutions by Lykourgos and Minos are still intact. Against this notable discrepancy between an idealised past clashing with a present reality, which in turn draws on this idealised past in creating its ideal futures, Hansen concludes: "It seems as if those who spent their time imagining poleis were out of touch with historical realities. They were, to some extent, dreamers" (ibid., p. 15). This is interesting if we reverse back to Barns' earlier statement and ask ourselves, how this dynamic continues to influence the role we ascribe to cities as locus of imaginaries, perhaps even one of their prime space of negotiation?

From the discussion of Plato, Hansen turns his attention to what the imaginary polis *is*, here denoting the concept of a polis, in other words what it is without referencing a specific polis. We can think of this as the way we talk of 'the smart city', rather than 'the smart city of London'. This is not an easy task, as testified by Hansen's search through the poems, tragedies, dramas, historical accounts, a journey that once again takes him to philosophy (in reality Plato and Aristotle) as "the most important genre for an investigation of the imaginary polis" (Hansen, 2005, p. 18). Specifically 'Books 3-6' of Aristotle's 'Politics' present a wealth of information shedding light on what the imaginary polis is. However, Hansen makes the important point that 'polis', in Aristotle's conception, like anything else conforms to his physics and metaphysics. Thus, understood as a substance, the Aristotelian polis is divided into matter and form: 'politai', in Aristotle's understood as *ύλη*; matter, raw material, also more generally "a member of a city or state (*πόλις*), a citizen, freeman" and 'politeia' (*πολιτεία*, "a concrete, the body of citizens" in Aristotle's terms, also generally "the condition and rights of a citizen, citizenship") understood as *εἶδος*, "that which is seen, form, shape, figure"<sup>[3]</sup>. While this conception of what a polis *is*, is consistent with Aristotle's thought and principles as laid out in 'Physics' and 'Metaphysics', Hansen points out that this is problematic in the way that this likely differs from what he calls a more common or ordinary view (ibid., p. 19). He goes on: "To use Aristotle's view of the *polis* as evidence for what the Greeks thought a 'polis' was maybe perhaps be as dangerous as it would be to use the German philosopher Hegel's conception of the state as evidence for the nineteenth-century concept of state in general" (ibid., author's italics).

### 6.3 To Know X = To Know (Everything-X)

Indeed, this last point raises the question: who gets to define what the city is, let alone what it should become? The question becomes all the more pressing concerning the asymmetry between the gargantuan private and public powers that currently shape the urban environment, and the growing number of diverse citizens living with the effects. The concern is explored in a contemporary context

in a Wired article titled: “Alphabet Is Trying to Remake the Modern City, Starting With Toronto” (2017). The article focuses on the case of Quayside area of Toronto, a twelve acres urban area currently being developed by Sidewalk Labs, a company owned by Alphabet (also the mother company of Google). Indeed, in this massive undertaking, one of the key issues at stake concerns whether Sidewalk Labs will be able to make the city work for all, as pointed out by Sarah Kaufmann, who studies transportation and technology at New York University: “I think the company needs to show that it can provide city services that are not restricted to white, male millennials (...) That means serving the elderly, the disabled, the poor—all populations that cities serve and private companies do not” (ibid.) While Sidewalk Labs responds that they are deeply committed to getting this right, only time will tell. The article further contextualizes Quayside in a history of similar master-planned cities, noting how they have not worked out historically, citing a BBC interview with urban scholar Richard Burdett on the case of Oscar Niemeyer’s modernist vision that is Brasilia: “The problem is that it’s not a city. It’s that simple (...) The issue is not whether it’s a good city or a bad city. It’s just not a city. It doesn’t have the ingredients of a city: messy streets, people living above shops, and offices nearby” (Banerji, 2012). This echoes the discrepancy described earlier between idealised cities and actual urban disarray. In this project I was very much drawn to this tension between what a city *is* and what it *could/should become*. This distinction between what is and what could be (typically in a future setting) lies at the heart of speculation, also in design practices such as speculative and critical design, design fiction and more. Fundamentally, this question concerns possibility. With any proposal/speculation of what the city could become, we are necessarily implying an understanding of what the city currently is, just as possibility leaps from somewhere and not nowhere: possible for whom, where, at what time? At least this is true for design, as laid out earlier by Nelson & Stolterman, where the design artefact—as an ultimate particular—responds to an ultimate particular situation (2012, p. 243). Without any such base in messy reality, any argument for future urban development loses its steam and attraction, just like a design fiction without any substance and contextual grounding becomes a shiny surface with no critical relevance, a reflection of nothing. Design fiction in this way in fact becomes pure—and likely quite uninteresting—fiction. Importantly, ‘substance’ in this context is not referring to the Aristotelian metaphysical sense of matter and form, which in a smart city rhetoric easily could translate into the real-time collection of troves of big data somehow rendering an unfolding metaphysical truth (highly reminiscent of the “truthful” digital shadow encountered in MDM, Chapter 5). A critical question in this context, returning to the asymmetrical forces negotiating the urban future, would be: who is able to render smart city data as truth? And the inverse: what is a lie in this context and who gets to lie?

Before exploring this question any further, it is worth noting that this dichotomy of truth and lies has been the productive basis for several interventions in the datafied urban space. We can for example look towards “The Surveillance Camera Players”, “a small, informal group of people who are unconditionally opposed to the installation and use of video surveillance cameras in public places”, and who perform various plays to surveillance cameras, thus police officers, security personnel etc. The group, with clear inspiration from Situationist International, in fact staged *Ubu Roi* by Jarry in 1996 (the 100th anniversary of its first performance) in New York City, only to be shut down by the New York Police Department<sup>[4]</sup>. Playful subversion such as this one, or an application such as *iSee* by Institute for Applied Autonomy, mapping out “paths of least surveillance” based on the location of CCTV cameras in the urban landscape, question the rationality and power exercises underlying “the smart city future”. In fact, they offer other possibilities. Just from these limited examples, one starts to get a sense of what the playful nuancing of the hard dichotomy between truth and lies begin to offer. Perhaps the Cretan philosopher Epimenides of Knossos’ put it best in his famous theorem: all Cretans are liars. Crucially, we also have the notion that every lie holds a grain of truth, again highlighting the complex, ambiguous interplay between truth and lies that goes beyond two strict binary categories.

In this project, I decided to explore the notions of lies as data, specifically lies about a city as told by its citizens. In this way, I approached lies/truth as one of dichotomies which design thrives from playfully navigating (Redström, 2017, p. 1). Thus, the project ‘Designing for a City of Lies’ was born. After having delved into Daumal’s pataphysics of ghosts in *MDM* (Chapter 4), now is the point to revisit Daumal’s “On Pataphysics in General”, and in particular his formula. To re-cite the key passage:

Consider, if you will, this Joe Blow and all the attributes by which he is circumscribed. From the complete knowledge of Mr. So-and-So, one could deduce the knowledge of the rest of the universe by virtue of the principles of causality and reciprocal action. Similarly, remove in thought So-and-So from the world without changing anything else: you still imagine him right where he was, because from the knowledge of the universe minus So-and-So it is possible to deduce knowledge of So-and-So. Both relationships are symmetrical and reciprocal, and you can thus weigh So-and-So against the rest of the universe. Getting this idea into your head will help you get a firm hold on pataphysics. To know  $x$  = to know (Everything- $x$ ) (Daumal, 2012, pp. 7-8).

Without necessarily subscribing to Daumal’s absolutist, mysticist conception of pataphysics, there is something interesting in this way of thinking of a given, not

just as a given in itself, but as the dark void within possibility formed from the small portion of possibility that has transgressed away into given existence. Does this not somehow resonate with the way design works? The link to Daumal's pataphysics of ghost is obvious, with the experience of its absence by way of its surrounding presence, terrified individuals who claim to see them, particular locations of the ghosts etc. As noted in the introduction to Daumal's 'Pataphysical Essays' by Professor Thomas Vosteen, Daumal's formula offers "the key to his poetics and a method of perception", a perception which he elsewhere argues finds its basis in a conceptual void (2012, p. xv). In a way we can read Daumal's pataphysics of ghosts as an example of applying the formula, here to the area of ghosts. In this project, I was interested in exploring the way the formula would apply to the area of smart cities.

## 6.4 Experiment 1: Hannover, Lets Walk Urban Landscapes

### 6.4.1 Background

Designing for a City of Lies started its life as Tell Me a Lie About Hanover, Tell Me Where to go Next. The experiment was conditioned by its initial contextual frame, the symposium Lets Walk Urban Landscapes. New Pathways in Design Research jointly organized by Studio Urbane Landschaften and Volkswagen Stiftung, held in Hannover on September 1-3, 2015. The subject of urban walking presented a chance to deploy a new set of constraints to my research program and thereby challenge it (Redström, 2011, p. 6). It also allowed me to explore urban lies as a means of poetic navigation. Further, the concept of urban walking is not only interesting in the way it refuses the technocentric discourse around 'smart cities', but also in the way that it is actually very present in this very discourse, as when Alexander Stähle, urban design researcher and CEO of Spacescape, in a talk on urban life concluded his Top 10 of future technologies in the city with 'feet' as number one<sup>[5]</sup>.

### 6.4.2 Description

During the symposium, I was assigned to a workshop group focused on the storytelling aspect of urban walking. With around six hours to actually walk Hanover (more specifically the suburb Anderten) and thus run an experiment, I decided to impose an additional set of constraints to my afternoon, resulting in the following protocol:

no use of maps. only two rules for encounters/navigation/walking/sense-making.

rule one: walk up and ask someone to tell you a lie about Hanover. let any following discussion unfold.

rule two: ask the same person, where to go next, following the lie s/he just told you.

As soon as you have arrived, repeat.

The first participant I encountered wanted to remain anonymous. I then asked if I, rather than a portrait, could photograph her hand. This she agreed to. Her refusal to be documented by name, face etc., and the resulting change in format made me immediately question what kind of data and documentation was really needed for the experiment. As I was interested in tracing the lineaments of imaginaries articulated through the lies about the city as told by its citizens, I decided to leave a more classic documentation format in favour of the hand: the hand as a tool for showing the direction forward (and notably also for lying and for good luck in some cultures, as when we cross our fingers). The hand, not as neutral tool such as the ✎ (index or manicure in typography), but as a situated body part full of expression and character. I definitely like the idea of seeing that single pointed hand documented, knowing that the other one might be hidden, crossing two fingers behind the back. Here is another example of one of the local citizens I encountered, Kai (see fig. 37):

vi) [transcribed field note] encounter #5: Kai

Name: Kai

Location: Unknown

Time: After 12.23

Lie: Die Herzlichkeit (cordiality, warmth)

Proceed: [Points down] It's here!

As Kai is pointing down on the ground where we're standing, he explains how, unlike the rest of Hanover, this is an area with a lot of Herzlichkeit. He tells me how people are generally stuck up in the city. In this area of the city though, there is a lot of caring. He works in an institution nearby (Mittelfelt) and tells me about all the hospitals, the healthcare and disability centres. By the bus station, I'll find several colleagues of his. As I ask for more places to proceed to, he answers Maschsee. However, after a brief lunch I try to find the initial cluster of 'caring' that Kai first brought up as he pointed to the ground.

This took me through Anderten in the direction of the healthcare cluster that Kai had told me about. As I was constantly scanning my surroundings for ‘Herzlichkeit’ (in order to determine when I had arrived at my destination), I saw a pharmacy, a dad carrying his child along the street, road signs urging cars to slow down, a doctor’s clinic and finally a pay-off in the form of a huge hospital. In other words, I had arrived.



Fig. 37. Kai’s hand pointed us to where we are. And then onwards.

As part of a collective pop-up exhibition back at the Herrenhauser Palace, which housed the symposium, I made a small exhibition piece, synthesizing four of the lie+direction pairs around a pataphysical spiral hovering on top of a negative cube, a sort of void designating the absence of a map. The spiral also contained the main protocol and working title: ‘Tell Me a Lie About Hanover, Tell Me Where to Go Next’. All the lie+direction pairs are featured here, chronologically as they were encountered during the experiment:

Lie: It has a beautiful and big old city centre.

Direction: Go to Tiergarten.

----->

Lie: I’ve very often heard that Hanover is disgusting.

Direction: Right, next corner, straight on... you find the meadows. I pass there every day on my way to work.

----->

Lie: Hanover is very hilly. And there are nice panoramas.

Direction: Towards the hilly bit! (point towards the meadows)

----->

Lie: Die Herzlichkeit.

Direction: You can go to Mittelfelt. One are hezlickkeit.

----->

Lie: People are friends.

Direction: 5 U-bahn towards Kröpke [the city centre]. Not nice. This is a very friendly area. Have a nice stay in Hanover. I'm so sorry. Bye.

----->



Fig. 38. Compilation of hands/directions from Hannover (lower right my note-taking).



At the pop-up exhibition at Herrenhauser Palace, I also experimented with capturing the project as a GIF animation, portraying the pop-up exhibition piece through spiralling motions with the camera. The exercise was a step in pondering on the question of how to communicate the lies and their motions, how to bring them forward to an audience.



Fig. 39. The pop-up exhibition in Herrenhauser Palace.

#### 6.4.3 Discussion and results

In this experiment, I was interested in moving beyond the flawed dichotomy of truth and lies, both in a figurative and in a bodily sense. This is the reason why I asked every participant to transform her or his lie into a direction, to make it spatially tangible. I was cautious about leaving space in-between lie and direction, for any ensuing anecdotes and stories. In this way, most lies acted as catalysts for discussion and reflections on the city. Following Daumal's earlier formula, one could ask, what the remainder, 'x' = the truth, then equals? While we recall that the idea of "truth" is the most imaginary of all solutions (Shattuck, 1960), we also need to carefully assess our data, which—rather than a scientific lie or truth—presents itself as something in-between. Perhaps, more than anything, we are dealing with conscious exceptions to "truth". From this initial experiment a great deal can be said about the negative space starting to take shape from these exceptions, e.g.:

Hanover is nothing but a mirage  
Hanover is a flat city  
Hanover is perceived as a being socially cold, if not unfriendly  
Hanover is the number one summer destination for lonely centaurs  
Hanover is a city with big contrast in-between its center and its suburbs  
Hanover is miraculous  
etc.

In discussing geographical places he has nearly visited but ended up not going to, Adam Thirlwell (2013) makes an interesting assessment of the ‘not-to-be-executed’ and ‘not-quite’, linking them to the task of tracing the lineaments of the (urban) imaginaries:

Yes, I think the not-to-be-executed is its own important category. Because what you don’t execute has its own contours. By which I don’t mean things that you have never had and never will have the intention of executing. What you will never do is of no importance at all. No, what’s important is the edge: the not-quite (...) And sure sure sure: I know the tone you’re meant to take for this kind of list is very sad, or at least I think it is. I can imagine some general description of this list under the melancholy title: The Unlived Life. But I’m not so convinced that the lives you don’t live are so different from the lives you live: I kind of envisage them all stacked up together, like in some outsize armoury. So why can’t the tone for this kind of list be just as gleeful as any other? It’s like some basic theory of the silhouette. Definitely, if you want to describe where you are then you could do that with all the detail you can see around you. But also you can do it inside-out, and back to front (Thirlwell, 2013).

While this notion is intensely subjective, carrying a strong sense of imagination, aspiration, and a deeply intertwined personal narrative, I believe it is still entirely valid as a promising resource for design. In a way this offered a new spatial metaphor for Daumal’s formula, prompting a reflection on the question: what design space does Thirlwell’s armoury actually denote, and how do we access, let alone navigate it meaningfully?

In *Ex-formation* (2015), Kenya Hara offers yet another perspective on this space with his key question: “How to unknow the world?” Using New York City as an example, he imagines an information guidebook that, rather than “contain[ing] an enormous amount of rationally edited and easily retrievable information” (*ibid.*, p. 13), makes us realise how little we actually know of the city. Having run the *Ex-formation* program in the Science of Design department at Musashino

Art University in Tokyo, Hara has challenged design students throughout a decade along this questioning. By positioning 'Ex-formation' as a counterpart to 'Information', "[he'd] like to think of the form and function of information not in terms of making known, but in terms of making unknown" (ibid., p. 16). The early decision of not using a map in the experiment seems to relate to this point. Human beings love making maps. From across the scientific and artistic spectrum we find a host of professional map-making: information designers, visual artists, cartographers, climate simulation researchers etc. Much has been said about the politics and power implicit in each of these flawed representation of our world(s). Evidently, all maps—irrespective of agenda or the level of "realistic" or "fantastical" aspirations—are saturated with purposes, subjectivity, and limitation. While this aspect of map-making has been acknowledged and discussed critically in design as well (e.g. Hall, 2012; Schultz, 2015), it is striking how every kind of new map nonetheless pertains a certain aura of truth:

And yet, explicitly or not, all maps carry with them a certain claim: that *this* one is somehow *truer* than the others with which it competes; that it depicts a territory in a more subtle, penetrative, intimate or nuanced way. The fantasy that lies behind cartography is that of seeing space deeply, totally and *really* – either from its outside or else from some buried, hidden inner vantage point that commands all sight lines and allows no enclave, pocket or aporia to elude its visual field and slink away into the dark (McCarthy, 2014, p. 8).

Importantly, as an inescapable inherent condition of "a map", this can be said to apply as much to the widely adopted Mercator projection atlases as to the psychogeographical maps, e.g. in the style of the Situationists. As exemplified by the latter, there are of course ways to critically subvert and counter the inherent truth claims in maps, particularly in the context of the city. And while this might be a path carrying a distinct Situationist legacy<sup>[6]</sup>, it would of course be possible to engage in maps through a pataphysically infused design lens. However, this was simply not the point of the experiment, and while it would have been possible, it also risked taking the work into a direction straying too far away from the research programme set out. The skirting of the Situationist domain in turn risked bringing methods to the forefront (making a psychogeographical map, doing a *dérive*, *détourning* street signs etc.), a focus in conflict with the arguments put forward in the discussion of research structure in Chapter 3. Instead, I found myself, through Hara's 'ex-formation', and Thirlwell's 'armoury of the not-quite', gravitating further towards Daumal's formula, wanting to amplify the different parameters at play. With a deliberate turn away from maps, there was an implicit challenge to further explore other forms of documentation and visualisation, such

as the pop-up exhibit and the GIF animation in Hannover. While maps eventually would resurface in later experimentation, they never critically entered into the foreground of the project again.

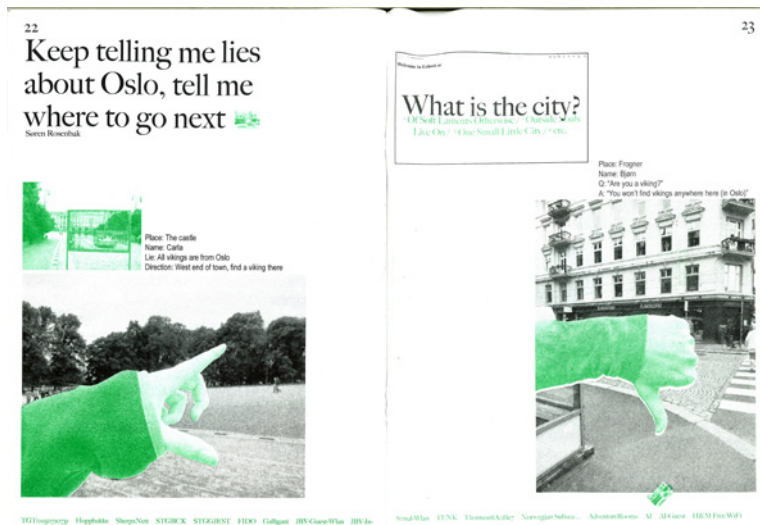
## 6.5 Experiment 2: Oslo, Ventriloquist School

The second iteration of the project was an experiment run as part of the Ventriloquist Summerschool on August 8-13, 2016 in Oslo. The theme of the summerschool was ‘illusions’. During the week, I was part of a multidisciplinary group of mainly graphic designers, who formed a newsroom together with our tutors Harry Gassel and Eric Hu (Talk Magazine). Within the group we did a range of experiments in terms of trying to capture the city of Oslo, in a practice that would cut across design and journalism. Throughout the process, there was a focus on a very quick turnover, and thus we produced three editions of our OSLO Magazine during the summerschool, each printed on risograph on the spot, and freely available in our workspace, the gallery 1857, centrally located in Oslo’s Grønland quarter. While engaged in other experiments as well, I chose to do another iteration of ‘Designing for a City of Lies’, at this time called ‘Tell Me a Lie About Oslo, Tell Me Where to Go Next’. Oslo was interesting in that I know the city very well, and even without a map I would not have this constant feeling of being completely lost which I experienced in the suburbs of Hannover. In other words, the shift in geography allowed me to pay closer attention to the particularities of the journey, where I ended up and also e.g. where people did not send me.

Perhaps most importantly, the experiment—by being situated in a graphic design summerschool—allowed me a greater degree of aesthetic experimentation concerning the output, both by myself and in collaboration with other team members. I went out several days asking for lies, and could thus run the experiment as a feature in all three OSLO magazines. During the summerschool, the experiment thus became part of our editorial practice. Opening up the process, and seeing it in a new context was interesting in the way that it felt like a step forward, trying something new, while I also became increasingly aware of the limits of the experimental setup. As part of this realisation I tried playing further with the notion of absence/presence aesthetically, cutting out my “lie destinations” from a tourist map and photographing these cut-out parts as fragile 3D objects on a mirrored surface. It was open aesthetic experimentation, and I was not really sure what to do with the outcome. With the newsroom team work, I became very aware of the limitations of doing the actual data collection myself. It felt as if the project had hit a wall in terms of the subjectivity imbued from the role I played.

I was very excited about keeping up the photo documentation of the hands—in Oslo, on the Christiania square in the area Kvadraturen, there is a famous fountain sculpture of a large hand pointing to the ground. This is the hand of the Danish king, Christian IV, who, after a big fire destroyed the city in 1624, decided to rebuild the city from this very spot, supposedly announcing “The new town will lie here!” and naming it after himself (the city was named ‘Christiania’ up until 1925, when it changed to modern day ‘Oslo’). This story seemed to lend a particular local importance to the documentation of hands, in a way materialising parts of the discussion points in the Hannover experiment (6.5). I explored this tension in the Oslo magazine, juxtaposing the hand of Christian IV (this is what the city is and will become) with the hands from the people who told me lies (this is what the cities is not).

As a whole, the second iteration of the project was a mixture of energy, from the new context of Oslo coupled with a higher sensitivity to aesthetically communicating the project and the group work, but also with a feeling of having exhausted the project in its current format at the end of the three issues of our Oslo magazine. While the focus on the hands made sense in the project’s execution in Oslo, and in this way adding a certain depth, it also felt a bit like—if not a dead end—then not the most promising direction forward in the project





Place: Hegdehaugsvien  
Name: Hego  
Lie: Everyone is alike  
Direction: Torggata, Youngstorg ... ("what is the most diverse place in town?") Elsker (gay club)



I believe that being away from the known and disconnected from spatial familiarities awakens senses and forces reflection. Lately, I've been exploring themes of authenticity, camouflage and identity. Scandinavian people are known to be very good looking, my research project aims to supports that assumption. @GoldenBlond in an intensive week-long documentation of Oslo's stereotypical abundance of gorgeous blonds.



Place: By the fortress  
Name: Eva  
Lie: It's a huge city.  
Direction: The street going up to the castle.  
Karl: Johans Gata



Place: Middle of Karl Johans Gata  
Name: Magnus  
Lie: It's the first place where the king lived (it's the original capital)  
Direction: The castle and Slottsparken, straight up the road.



## Ch6. Designing for a City of Lies



## 6.6 Hasselt: The Smartest City in Belgium

### 6.6.1 Project structure

This marks the point where the project became ‘Designing for a City of Lies’ (DCL), a project now moving to the context of Hasselt, the smartest city of Belgium (Agoria, 2016). The experiment was structured into two workshops, divided by nine months (April 2017 and January 2018). Together they formed the first full cycle of collecting lies told by the citizens and then feeding them back as interventions in the same public space, prototyping new urban futures of Hasselt. Structurally, the first workshop focused on collecting lies (6.7), and the other on designing interventions (6.9). In-between these two, there is a bridging step, namely the design of the lies data kit (6.8). Finally, the project concluded by opening up to a new audience of PDC2018 conference participants, and also feeding back the results to the city of Hasselt at large (6.10). In this present subchapter, I will offer some contextualisation for all these four experiments, both in terms of Hasselt, as the smartest city in Belgium and the site of the experimentation, and also by way of briefly outlining different ways in which the city has already engaged its citizens.

### 6.6.2 Hasselt, the Smartest City in Belgium

Hasselt is a Flemish city of around 77,000 inhabitants, and the capital of the region of Limburg, Belgium. It is also the smartest city in Belgium. As the site of experimentation, this was interesting in that it allowed going beyond the rhetoric of “smart cities”, and actually intervene in a (presumably very) smart city, not solely as a concept, but also as a real situated place. Consequently, and following the discussion in 6.2, unpacking the smartest city of Hasselt, becomes a way to unpack not *a smart city*, but *the smart city*.

As a start, one might ask what makes Hasselt the smartest city in Belgium? This crowning is due to the city achieving the highest score across the five smart city parameters employed by Agoria (Belgium’s largest employers’ organisation and trade association) in their smart city survey across Belgium. The parameters are (with year of the data sets listed): Average kilos of household waste per inhabitant (2013), megawatt of energy consumed per inhabitant (2012), number of renovation permits in urban areas per 1000 inhabitants (2014), number of ICT companies per 1000 inhabitants (2014), and the sum of PM2.5 concentrations of PM10 of O3 and NO2 expressed in nanograms per cubic meter (2013). When considering how lies told by the citizens could make up a data set, the next question naturally is: why these specific five parameters? Hasselt makes an interesting case

study in this sense, as the parameters and data used is constrained by a series of bottlenecks, as elaborated in a private email response from Agoria. These include the need for the data to be public, to be comparable across the different regions in Belgium, to be up to date, in line with smart city ideas/concepts, and apolitical (personal communication, April 27, 2017).

Zooming out a bit, it is also worth mentioning that Belgium, in line with the discussion of bureaucracy (2.5), can be said to be a quite complicated country, in the sense that it is made up of three highly autonomous regions, three linguistic groups, and a complex system of governance, made up of six different co-existing governments. Of course, it is also an EU member, with its capital city of Brussels housing a number of the key institutions of the European Union, making it the EU's de facto capital. Thus, this larger context already sets a lot of limitations in place when employing Agoria's criteria concerning data sets that are public and available across regions—that is at least without any firm pataphysical principle of equivalence put in place. On the topic of imaginary solutions: it is important to remember that all of these criteria reflect decisions being made, and not any kind of given truth. Smart city criterias vary, just like idea of what “smartness” denotes do. This is why it is very valuable to get under the hood of “the smartest city in Belgium” and to be able to asses the criteria put in place here along with the requirements behind them, and even look at some of the actual data sets in question. For Hasselt we were able to access two of these data sets: average kilos of household waste per inhabitant (2013), and megawatt of energy consumed per inhabitant (2012). Practically, both of these are two vast Microsoft Excel files.

### 6.6.3 Citizen engagement in Hasselt

Another important point for the project concerning Hasselt, beyond the conditions surrounding its status as the smartest city in Belgium, is the way in which the city makes an active effort to engage its citizens in the process of making sense of its presence and future. Here, I will briefly describe three such efforts.

One example is the project Co-Creëer Hasselt, an online platform for citizen engagement run by the city, and built on Citizenlab, “an all-in-one citizen participation platform for local governments”, promising to “reach more citizens, manage their input efficiently, and drive better decisions” (<https://www.citizenlab.co/case-studies-en/hasselt>). In Co-Creëer Hasselt (2017), the City of Hasselt sought to include its citizens in the renewal project of Kapermolenpark, the biggest park in the city. On the online platform users could submit ideas, which could then be up- or down-voted. A citizen leader board would show top users<sup>[7]</sup>. While the project website is no longer up and running, the Citizenlab case study done on



the project, tells that the project ran over the course of three-four months time, and in the end resulted in the regrouping of 42 ideas out of 105 to in the end form eight proposals which are now further discussed by the City Council, their future dependant on feasibility and budget. The platform further boasts the quantified engagement in the four month process: 1,800 monthly visitors, 500 registered citizens, 1,940 proposals, 1,550 votes and 195 comments. In addition to this purely digital platform, two other engagements are notable in this context.

The first one is called MAP-it, and is a project sponsored by Dienst Cultuur Stad Hasselt part of the City of Hasselt. In essence, MAP-it is “a participatory mapping method that enables designers to moderate design processes through workshops with diverse participants” (Schepers et al., 2013). MAP-it, developed by the research unit Social Spaces at LUCA School of Arts, has been applied to several different contexts, and has its own online platform, incl. instructions, mapping reports (cases), and the option of buying a copy of the physical participatory mapping toolkit (<http://www.map-it.be>). The final report on Hasselt presents work in 2014-15, of first engaging  $\pm 24$  city officials for framing the most important challenges and opportunities, to then use these as a foundation for several MAP-it sessions with the citizens of Hasselt (399 participants) through workshops ran by voluntary facilitators. MAP-it is striking by the fact that is a qualitative design research tool with a relatively large scope of implementation—engaging 400 people in a city with around 77,000 inhabitants. Its final report is structured along the chronological development of the project (Map-it, 2015). It also features examples of all the different materials, ranging from workshop materials, a guide for voluntary facilitators, a screenshot of the maps used in the workshops with the challenges, ideas added by participants, and an example of a raw data set. Additionally, contains two appendices, one describing summary statements from the voluntary facilitators, and another the statements of the 399 participants, thematically structured and with summaries by the facilitators. MAP-it displays a breadth in application, by both surveying the city in a more general sense, and also being more narrow, focusing on a particular issue: the lack of meeting places in the city. Consequently, it zooms in on a particular area in Hasselt, Runkst, the place with the highest population density, where the wider problems faced by Hasselt is argued to become the most tangible. Despite its scope, the MAP-it report comes with an upfront disclaimer, saying that the goal is to make a mental map without any “attempt to take an objective position, nor to evaluate the opinions of the many hundreds of participants in the study” (Map-it, 2015, p. 7).

In tandem with MAP-it, the research practice Dear Hunter also produced a report (incl. a map) of Hasselt, also commissioned by the city, Dienst Cultuur Stad Hasselt (2015). Dear Hunter is “a spatial-anthropological research practice and

produce alternative maps and atlases through qualitative fieldwork”, adding that “[being] a ‘Dear Hunter’, referring to the behaviour and methods of hunters, means that we thoroughly immerse in situations in order to understand them completely, mostly by living and working on-site for relatively long periods of time” (<https://dearhunter.eu/about-dear-hunter/>) Thus, Dear Hasselt was a project that ran across three months in the summer of 2015, focusing on the Green Boulevard/R70, the ring around the inner city of Hasselt, which is perceived negatively by local citizens, as evidenced in research. Thus, the brief from the City of Hasselt was for Dear Hunter to research further into this, and eventually learn how to improve the situation. Situating themselves on the Green Boulevard/R70, their final report of findings show a myriad of different mapping exercises with various insights added as captions (2015). Short metaphorical reflections are added to this, e.g. one poetically describing Hasselt as a carpet. Indeed, the report balances observations of the whole of the Green Boulevard/70, and an attention to the highly different parts and their identities. It is clear how the work consciously seeks to balance the objective (e.g. detailed observations of the environment leveraging architectural knowledge, SWOT analysis of areas etc.) and the subjective (e.g. emphasising how ‘they’ (Dear Hunter) experience various phenomena, and the deliberately non-technical style of drawing used for mapping). The work further makes a conscious effort to balance the spatial-anthropological research with a propositional outcome, delivering particular suggestions for the city to pursue in urban development. Similarly to MAP-it, the Dear Hunter report states upfront that it is an inspirational atlas, and as any other map is argued to be “a ‘snapshot’ of a particular moment in time (three months in summer 2015), and as such gives an impression based on our encounter in this period” (Dear Hunter, 2015).

These three examples of citizen engagement in Hasselt are not an attempt of making an exhaustive review of all the ways in which the local citizens have been drawn into the development of the city, as such a study falls outside the scope of this dissertation. Rather they serve to ground the design experimentation with an attention to the specific context of Hasselt, in a sense to what is already there. While this grounding is incomplete, this contextualisation itself is an important difference as compared to the experiments in Hannover (Experiment 1, 6.4) and Oslo (Experiment 2, 6.5): in Hannover, I deliberately embraced my complete lack of knowledge of the place. In Oslo, I attempted to leverage the personal knowledge, I had about the city (both experiential and factual).

Hasselt	VS	76833	129	19	7,3	18	2,74	16	2,81	20	138	12	85
Namur	WA	112646	135,5	16	7,7	14	2,16	9	0,98	11	93,79	19	89
Luxemb	LS	88176	186	17	9,0	3	3,08	17	2,02	18	105,5	13	68
Mechelen	VS	63975	140	15	8,7	8	2,52	15	2,16	11	111	9	56
Leuven	VS	65463	140	14	5,2	20	2,23	11	0,79	7	108,6	11	63
Bruxelles	VS	75219	154	13	7,6	16	2,58	14	1,29	14	117,5	3	60
Lège	WA	129668	164,1	11	8,0	12	1,92	7	1,07	12	105,33	15	17
Leuven	WA	63972	120,8	20	7,6	16	1,25	2	0,86	9	108,99	10	17
Bruxelles	VS	60095	162	12	7,3	17	2,04	8	1,23	13	113,5	7	17
Leuven	VS	76839	167	10	7	19	2,33	10	0,99	10	114,7	6	17
Leuven	VS	253262	182	7	8,2	11	3,38	19	1,80	17	118	2	16
Leuven	VS	96211	174,8	8	8,0	7	2,34	13	0,80	8	105,36	14	10
Leuven	VS	88709	120	18	11,9	3	3,49	20	0,94	2	112,5	8	49
Leuven	VS	117886	189	5	7,9	13	3,16	18	0,77	6	114,5	6	48
Leuven	VS	68756	168	9	8,9	7	1,98	8	0,77	4	90,00	20	45
Leuven	VS	201480	206,6	3	8,9	7	1,86	6	0,57	4	101,5	17	17
Leuven (agglom.)	BR	11793173	182,4	6	8,4	10	1,51	4	1,77	18	120	1	17
Leuven	VS	70649	215	2	9	11	2,19	10	0,54	3	95,5	18	36
Leuven	VS	513530	219	1	8,9	7	1,52	5	1,89	15	117	4	12
Leuven	VS	80375	195,8	4	8,5	9	1,19	1	0,00	1	102,02	16	11

inwoners	HUISHOUDLIJK	ENERGIEVERBRUK	RENOVATIEGRAAD	DIGITALISERINGSGRAAD	LUCHTKWALITEIT	EINDSTAND
RESTAFVAL (kg/inwoner) 2013	(inwoner) MWh/inwoner 2012	renovatievergunning/ 1000 inwoners 2014	aantal digitale ondernemingen/ 1000 inwoners 2014	nanogram per kubieke meter PM2.5 PM10 O3 NO2 2013		
L'environnement et le nombre moyen de kilos de déchets ménagers par habitant (kg/habitant) (2013).	L'énergie : la consommation moyenne d'énergie par habitant (MWh/habitant) (2012).	Les bâtiments : le nombre de permis de rénovation en territoire urbain délivrés par 1 000 habitants (2014).	Les TIC : le nombre d'entreprises numériques par 1 000 habitants (2014).	La qualité de l'air : la somme des concentrations de PM2.5, de PM10, d'O <sub>3</sub> et de NO <sub>2</sub> , exprimée en nanogrammes par mètre cube (2013).		

Fig. 43. The Smart City data set by Agoria, in which Hasselt comes out on top.

## 6.7 Experiment 3: Workshop 1: Collecting Lies (TRADERS)

The first part of the project was carried out in April 2017, as part of the TRADERS Open School, in collaboration with fellow PhD candidate Saba Golchehr. Here, a multidisciplinary team of workshop participants went out into Hasselt and asked locals to tell them lies about the city. The team consisted of four people, all students, two locals with a high degree of familiarity and knowledge of Hasselt, and two from abroad, who were highly unfamiliar with the city.

The participants followed the same protocol for collecting lies that I had used in the experiments in Hannover (6.4) and Oslo (6.5), and were also encouraged to document their journey with photographs of hands, and the places where they could experience the lies they were told. The experiment was notable for being the first time someone else than myself would venture out into the city and collect lies. In order to be able to leverage my experiences from previous experiments, I decided to keep the format pretty similar, also in order to get an idea of whether it made sense for someone else. While this was a deliberate loss of control on my personal account, I made an effort to try to keep an overview of the data, e.g. with colour-coding the data collection sheets, each participant having a distinct colour. Structurally, Hasselt is a city with a very prominent, circular old city centre in its midst. This is the area inside the Green Boulevard/R70 traced by Dear Hunter. From my experiences in Hannover and Oslo, I saw a clear tendency to at one point or another end up in the centre of the city. Countering this through starting the collection of lies in a suburb had been a productive tactic in both cases, and thus I decided to replicate this tactic for this experiment, with each team member

receiving a different starting point in the suburbs. All of them collected several lies (five on average). Some of the lies collected:

All parking spaces in Hasselt are for free.

They're very good at solving problems (of homeless people and drug addicts).

The dirtiest city.

Hasselt is a city of fashion.

Big appartments. Docht gebound.

Profiled. A big city.

There is a big cultural hall. Japanese garden. Very interesting part of the city. Hasselt is not cozy.

You can't find anything good to eat in Hasselt.

Hasselt will fuse with Genk.

Hasselt has the most ugly buildings.

The number of places in Hasselt that are not cozy are increasing.

You can't find cheap beer in Hasselt.

As a conclusion to this initial fieldwork, the team gathered and shared their lies, by reading them out to one another. From this session, several issues emerged: e.g. encountering people who did not have a lie to tell and people who would want to share a lie but did not want to sign a consent form. As a data set of lies started emerging through the session, so did its broken nature. From this process of sharing, we gradually arrived at a synthesis session. On one wall, we put up all the coloured lies data sheets, and started grouping them around common concerns, trying to spot any striking conflicts or similarities. On another wall, we projected a map that Saba had collated from the routes of the participants, with their lies mapped unto the city. We would use this as base layer, where we could physically hang post-its with insights on top. Finally, we had a big A1 sheet where we collected the insights that emerged in the discussion, as notes from the synthesis session. Having synthesized collectively across all these different surfaces and formats, this

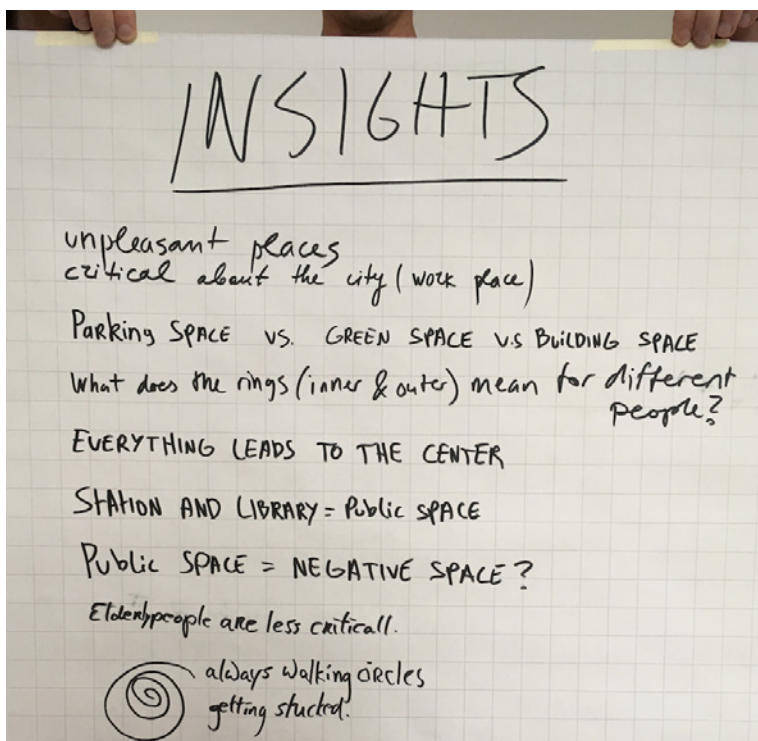
was the point where the workshop formally ended.

The map showed how three out of the four participants ended up in the centre at some point. The particular spiralling routes up until that moment were an important discussion point, with attention paid to the significance of the two ring roads circling Hasselt, an outer and an inner, what they meant for different people, and how they acted as mental and physical gateways into the centre. It was as if the gravitation to the centre had a sense of inevitability to it. Within this dynamic, two of the entry points to the inner city, the public library and the station area, were discussed as public spaces with clear negative connotations for the local citizens.

In the following days, I asked the participants to reflect on their experience of being part of the workshop. While they univocally expressed how they enjoyed the experience, a couple of participants expressed certain difficulties they faced in the setup, one with filling in the papers while walking in the wind, and the other expressing pity with the decision of not doing the research in pairs, as this would allow you to reflect and discuss on the go. Another participant, one of the two locals, reflected that he “ended up in streets where I hadn’t been before (I study here for 7 years now)”, and added: “If this exercise could be done with a big amount of people, I really believe that It could generate more information about what people have in common in a city but I understand that this is difficult”. I wrapped up the workshop by neatly collecting all the materials produced in the field and during the collective synthesis, as this would form the basis for the lies data kit.



Fig. 44–46. (above and next page). Synthesizing findings. Above: Projected map with all their lies overlaid. Next page, top: Grouped sheets containing collected lies grouped on the wall. Next page, bottom: A1 with collective insights.



## 6.8 Experiment 4: Designing the Lies Data Kit

Between the two workshops, I compiled the materials into a lies data kit, consisting of the collected lies along with any secondary data recorded from the field encounters such as additional notes made, and the synthesis material produced collectively. This work was carried out “remotely”, initiated in Hasselt at the back of the first workshop, and executed in Umeå in preparation for the second workshop. In addition to the analog maps from the WS1 participants, I also GPS-tagged their lies and destinations in Google maps, sometimes back-tracing their locations from cross-referencing pictures they took of a hand somewhere, with the location marked in handwriting on their maps. The point was not to make a more precise rendition, but instead provide them with many different entry points to the data set of lies, whether as a set of Microsoft Excel data sheet, as synthesized insights, or mapped in space in various ways. Another reason for doing the Google map was that it also allowed to pin all the photo documentation of hands and destinations they had done on a map, something the analog one did not do. Further it added another layer of software incompatibility with the Microsoft Excel data sheet.

Designing the data kit had a strong element of data sanitisation, a process that I had learnt existed at the TRADERS Open School, from discussing the project with Sean Chester, a data scientist from NTNU in Norway, who also participated in the Open School. The process of data sanitisation speaks to the smartness criteria used by Agoria in naming Hasselt the smartest city of Belgium by being a process of handling errors, glitches and gaps in your dataset. In other words, making sure you have *good* data and not bad data, keeping the former, getting rid of the latter. While I was not faced with the potential of algorithmic errors due to incomplete data sets, the question of sanitisation instead offered a way of reflecting on the broken nature of the data kit as a whole, and how this would play into the second workshop. The reflection both tied back to the problems and limitations that Agoria faced with their smart city parameters, but it also brought a different sensitivity to the data from first workshop. The absence of certain information in my small Microsoft Excel sheet became very clear through this exercise, as a the smallest most tangible entity that exemplified a larger aspect of brokenness. Were the absences or discrepancies problematic, or were they in fact essential material for the coming workshop? The question of sanitisation also had a more ethical dimension, with decisions having to be made, e.g. around whether it was acceptable to feature the lie of someone who did not list any other information, and did not sign a release form. Except for ethical concerns, I decided to not gloss over the brokenness of the data set, but instead show it forth as possibility, concretely by giving the Workshop 2 participants both views in the case of the Microsoft Excel sheet: the sanitised “good data” with coherent sets of information,



and the broken “bad data” with notable absences and incoherencies, see fig. 47 & 48 below. By not resolving all the highly different representations, I hoped to accomplish something similar with the lies data kit as a whole. Ultimately, with this decision, I hoped to engage the participants more fully in the ambiguity and also imagination inherent in the data kit, leaving the contours of the data fuzzy in a sense, making the data set operation, but also showing the broken premise of said operationality. Or to put it differently, hand it over as an imaginary solution.

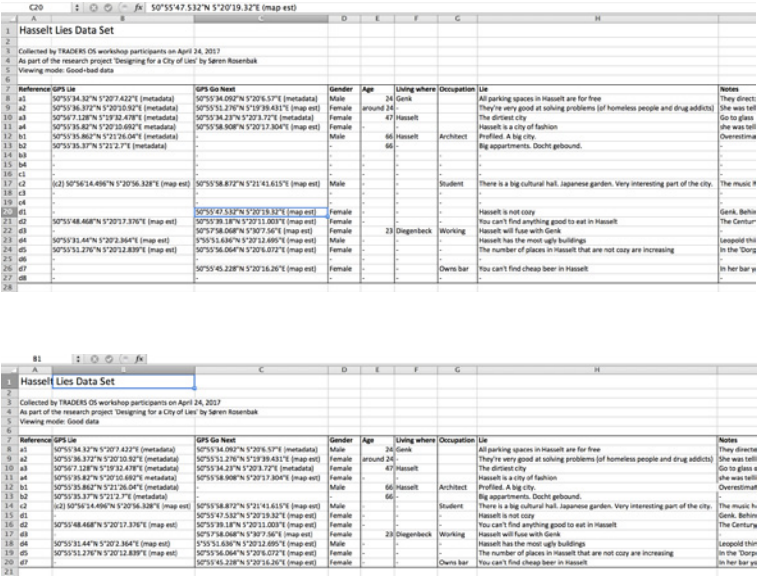


Fig. 47–50. Parts of the Hasselt Lies Data Kit.

Fig. 47. (above, top). Excel sheet including both good and bad data. Notice all the empty fields of absent data.

Fig. 48. (above, bottom). Alternative viewing option of the same data set as fig. 47, only showing the good data.

Fig. 49. (opposite page, top). Vectorized map based on the analog mapping done by Workshop 1.0 participants in the field, while collecting data. Both good (coloured dots) and bad data (grey dots) included. Each participants has a distinct colour.

Fig. 50. (opposite page, bottom). Digital mapping of Workshop 1.0 on Google Maps, e.g. using metadata on pictures taken, and also detective work (see fig. 51 & 52, p. 194).



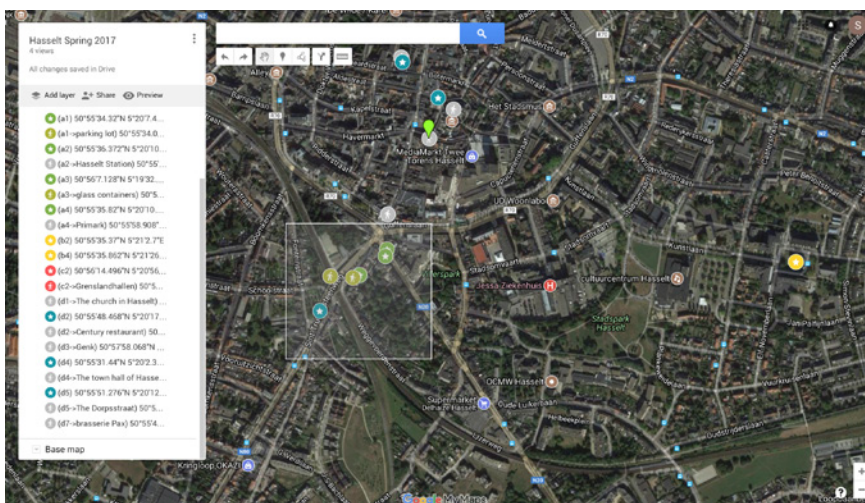
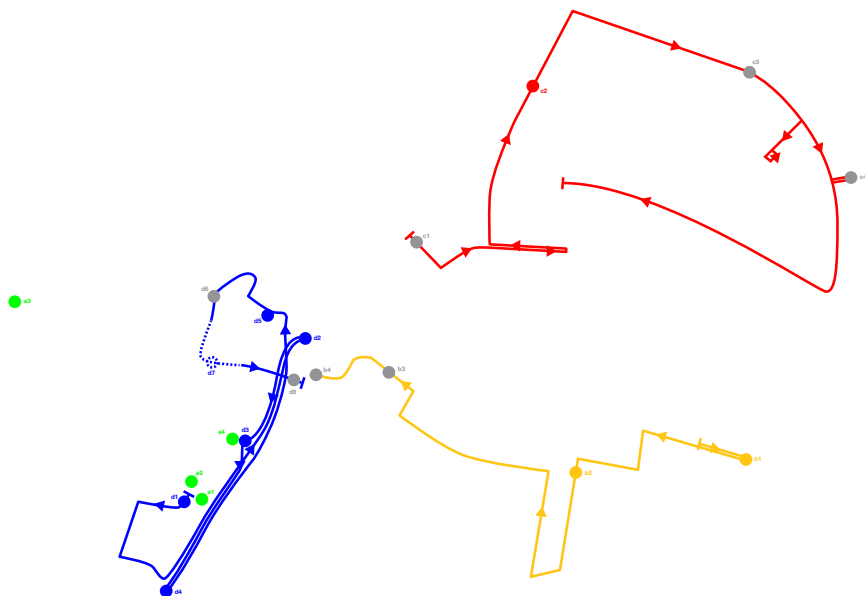




Fig. 51 & 52. (above). Example of detective work done as part of the digital mapping on Google Maps. Finding the locations of the images, using material such as the top image of a hand, and an analog indication on a map (the basis for fig. 49).

## 6.9 Experiment 5: Workshop 2: Designing Interventions (The School)

The second workshop took part nine months later, in January 2018, picking up from the part of the conclusive synthesis in Workshop 1. For this part, the project collaborated with a group of residents from The School in Hasselt, “a post-academic and ongoing multidisciplinary festival, residence and happy city experiment” (<https://www.theschool.city/>). The workshop came together with the help of Pablo Calderón Salazar, then fellow PhD candidate, coach and participant at The School, and also Pablo Hannon, part of The School team, and responsible for International Creative Collaborations.

The workshop kicked off with The School residents receiving the designed and sanitized lies data kit from the first workshop, consisting of Microsoft Excel sheets, photo documentation, hand drawn and digital maps showing the points where lies had been collected, as well as the suggestions for where to go next, along with synthesis materials. From this kit, participants were encouraged to conceptualize and execute urban interventions as a form of prototyping new urban futures for Hasselt. The group developed three interventions, and subsequently executed two of them. The residents were working on several other projects in Hasselt in addition to the workshop, and leveraged their knowledge and interests in designing and staging the interventions. Thus, as the basis for intervention ideation, they brought together the synthesized findings from the first workshop with a particular interest in the way in which the two main entry points to the inner city, the public library and the station area, were perceived as uninviting and unwelcoming public spaces. An intervention started taking shape around each of these places, with a few residents driving each process, and a group forming around each project. The third intervention took its cue from the lie “They’re very good at solving problems (of homeless people and drug addicts)”, and developed a concept where the signs inside the City Hall would be hacked so that all wayfinding signage would point to a place such as “Department for Solving problems (of homeless people and drug addicts)”. This intervention was planned but never realized in the end, for unknown reasons. Here I will describe the two interventions that were executed, Library Party (public library) and The Sofa Intervention (station area), by way of the descriptions and reflections from two of The School residents. Each of them spearheaded the collective effort to bring about the respective intervention:

### Library Challenge

Written by Serena Chalker, Choreographer and dancer working in site-specific arts practice, The School resident:

The synthesised data from Designing a City of Lies W1 indicated that the public spaces of Hasselt, particularly the Library (as an entrance to the city) and the Station area have negative public associations. The area is perceived to be uninviting, or unwelcoming. This intersects with The School Challenge C3 – Library, where we have been asked how the Library as a destination, and a “gateway to the city” can be more inviting. Based on previous research there is a natural phenomenon occurring daily from 9:45am-10:01pm which involves around 35 people of all ages (from students, to older men in their 70s) gathering, waiting to rush into the library the minute the doors open. This runs contrary to public opinion in the media that Libraries are dying, and that people don’t use them anymore. The Library serves as a meeting of ages and cultures, people using it for socialising, research, studying, and for the environment. The surrounding area is currently very non-descript: the street is narrow and dark, the shops aren’t particularly inviting, and the public square is very empty when there is no market.

To draw attention to the Library, and to create a sense of occasion to this building at the entrance to the inner city, I imagined how the natural gathering of people could become a welcome ceremony. How could we highlight this, and create a sense of occasion in an area that has a negative public perception. To match the energy when the doors open, I envisaged throwing a party for the Library – a spontaneous, short lived party that lasted only 15 minutes that would put a frame around the official opening of the doors. With the residents from The School, we organised party hats, streamers, confetti, music and tooters, with an official ribbon cutting for the opening of the doors. I designed “I love my bibliotheek” stickers for the public and the team to create different layers of engagement for the party.

We approached the public with the proposition that we were “throwing a surprise party for the Library”, as a way of opening up a conversation about public space, and public institutions in Hasselt. This also coincided with a reunion of a group of older ladies, some of whom were apparently former Library guides. There were various levels of engagement in the party, with differencing responses. People noted in conversation that this was a “city library” and was therefore “important”. Some people were celebrating that different people were using the Library for different reasons, and many young students came to study. One member of the public commented that the Library is an “endangered building” and that they enjoyed that we were putting it in the spotlight. Interestingly no one questioned our

motivation behind the party.

Translating a party atmosphere to 10am in the morning, in an area that is normally a place of negative association in the broader psyche, creates a certain degree of social awkwardness in people. Those least keen to participate were older men, and young students. However many of the older men were happy to take a sticker, or cheer when the doors opened. One man performed a spontaneous rendition of “Fly me to the Moon”. People are conditioned not to trust each other, and are prepared for the worst in strangers. By intervening, we were able to change the dynamic of the space, with a more dispersed energy and a sense of occasion (even if it was somewhat confused at times). Very few people refused outright to participate. By creating small moments of shared community and positivity around the setting, it is hoped that those people will now leave with a different memory of the public space. In order to counteract the culture of public suspicion of strangers, these small interventions can shift the balance of how we interact in public space. Perhaps there is a future where we can celebrate these moments of human connection to create a more positive atmosphere in our cities.

#### Station Area Intervention - Cozy Sofa - January 2018 - Hasselt

Written by Yanina Shevchenko, visual storyteller, The School Resident

This intervention was based on the lie / assumption that Hasselt is not cozy. This lie was collected during the first part of Designing for a City of Lies workshop in Hasselt in 2017. The intention was to challenge the sense of coziness of the public spaces in Hasselt. Station area in particular is famous for being very unwelcoming and avoided area. It is mostly used for it's direct purpose to take buses and trains. It is an area with a very fast speed, where people are not inclined for any interactions.

The idea of the intervention was to create a very cozy environment within station area to encourage people to slow down, sit down, relax and engage in conversation. We chose to create a cozy living room setting using a very comfortable sofa, a carpet and a number of props such as warm tea, cookies, music, colorful elements, etc to react on their suggestions of what cozy atmosphere meant to participants and promptly add them to the environment if possible. This brought a performative element to the intervention.

We asked participants to share their ideas of what cozziness meant to them and how station area in particular can become a more cozy place. We

interviewed 6 people and their responses varied from bringing more color to the area, make it more green, creating an areas with heating to making an arena with bumpy cars and creating skating park. Another very important suggestion was to see more smiling people around.

The main observation during the intervention for me was how challenging it is to break the speed people move through the area and create trusting atmosphere for people to engage in conversation. Moreover how difficult it is to get people to believe in good intentions and genuine interest in their opinion.



Fig. 53–58. (this spread). Documentation of the Library Party in front of the public library.

All photos © Yanina Shevchenko.

Fig. 59–62. (next spread). Documentation of the Sofa Intervention at the station area.

All photos © Yanina Shevchenko.











## 6.10 Experiment 6: Situated Action (PDC2018) & Exhibition (Politics of Design, z33)

### 6.10.1 PDC2018 & z33

This final experiment presented several opportunities for opening up the project to two new audiences: first, the outcome of all the experiments in Hasselt (6.7, 6.8, 6.9) would be designed into an exhibition piece for the group show *Politics of Design: Act 1* at z33, an exhibition on “participation and political engagement in current design practices” (<https://www.z33.be/>). With a range of exhibition partners, and an ambitious program, hoping to spur “new collaborations in a local, regional and international context” all the way to 2020, the exhibition presented an exciting opportunity to become part of the initiation, coinciding with the PDC2018 conference. Structurally, it seemed entirely appropriate to close down the project loops within my PhD, by passing the baton and help open the loop of *Politics of Design*. For PDC2018, I was further accepted with a situated action, a short interactive format of 30 minutes, in which I was able to engage conference participants in activities within my exhibition space at z33. Thus, I approached the two design briefs (exhibition and situated action) as an intertwined design problem, looking at ways in which I could create synergy between space and interaction, while at the same time paying attention to the distinct goals of each of these projects. Here I will first discuss the design of the exhibition, including its life beyond PDC2018, but also as a way to set the stage for an elaboration of the situated actions that took place during PDC2018.

### 6.10.2 Exhibition

For the exhibition, I was very interested in having both workshops become a whole, while also showing the leap between the collection of lies and the designing of interventions—how the speculations on what the city could become was departing from notions of what it is not, as told by its citizens. For this purpose, two projections were synced across two walls (see fig. 63–65, p. 204–205). The left projection showed a quick stream of lies from Workshop 1. All of these had been designed into a consistent typographical style, with a bright optimistic palette of pastel colours and a clean sans serif display font. The motivation behind the typographical design was to make the lies legible, and contrast their ambiguous and highly different nature with an airbrushed advertisement-like breeziness. It was also a juxtaposition that had a practical aim, in that the short burst of different lies should help bring people into the exhibition, and further contrast the style of video documentation of the interventions happening on the other projection a moment later. So after a 30 seconds burst of lies on the left projector, it would turn

black. Then, a few seconds later, the right projector would light up and show one of the two intervention videos, with a short prelude, informing the audience about which lies data it was using as its point of departure. After this video had ended, the right projector would turn black, and the whole session would be repeated (now with the alternate intervention documentation on the right). A short printed text would explain the two parts further for audience interested in knowing more.

The projection 'screens' were white walls, cut out as negative white space from the data tapestry framing the entire corner of the room, like an invasive parasite species. This tapestry was a collage made up of an assemblage of screenshots from the two smartness parameter data sets that we had access to: average kilos of household waste per inhabitant (2013), and megawatt of energy consumed per inhabitant (2012). The screenshots were graphically tweaked to maximise the distinct visual qualities of each one of them, emphasising the chaotic overlaps in the collage. This, in turn, also added further calmness to the perfectly rectangular negative spaces cut out for the projections. With this exhibition design, I was interested in transposing the character of the project, in particular Daumal's formula, into an aesthetic, spatial experience. The tapestry became a way to contextualise the work, and the lies as a highly designed and particular absence in two parts, surrounded by a cacophony of presence, here the 'smartness' data sets.

Finally, I wanted to extend the playfulness of the exhibition into an actual interactive element, and ended up having a ballot box in the room, where the audience could submit their own lies. There was one small note with a marker next to it, that simply read 'Tell A Lie About Hasselt', with an arrow pointing to the slit of the box. By having this be the only three-dimensional structure in the space, and also the element closest to the route that people would take to pass through the space, I wanted it to be possible for the audience to receive this invitation, and possibly accept it, without necessarily having to be in the room for 5 minutes in order to view the entire cycle of videos. A couple of tables and chairs in the room were there for the situated actions. After that activity had taken place, they were put aside, leaving the ballot box as the single structure again. All the furniture of the entire exhibition, in my case the ballot box and tables, were designed with a consistent expression. During the vernissage that took place as part of PDC2018, there were already several people filling lies on the ballot box. Some people filled in several lies and clearly had fun while doing so. With my previous experiences of interactive exhibits in mind, I was very surprised to see how many lies kept trickling in, both while I was still in Hasselt and later on. I am very grateful for the opportunity to exhibit the project in this way, in z33, the exhibition being free and open to the public for three months. The location of z33 underscores this further: as a major museum for art and design, it is reasonable to assume that

people might go to Hasselt with the purpose of visiting it. In that case, they are likely to arrive through the station area, as this is the local hub for both trains and busses. Further, the public library is literally a 100 meter walk down Badderijstraat from the main entrance to z33.

There were many ways in which you could have taken DCL forward from the point of Workshop 2 (6.9). This experiment presents one way in which to fold back the lies and the interventions to a wider public in the city in which the project took place, producing more lies, and who knows, maybe setting more interventions into motion as well.

R\_ 12 (GROUND FLOOR) >

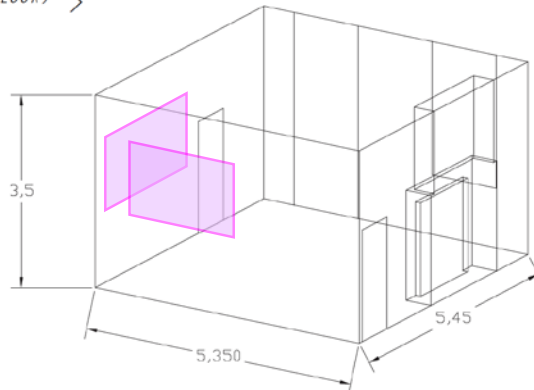
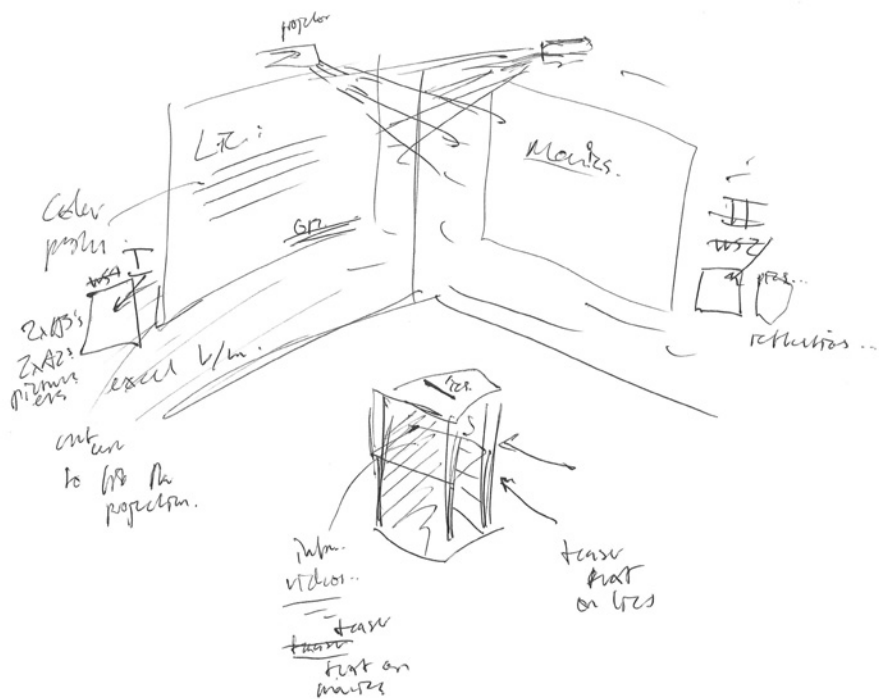


Fig. 63. (above). Sketch by z33, used as part of discussing the exhibition setup © z33.

Fig. 64. (opposite, top). My initial sketch of the z33 exhibition.

Fig. 65. (opposite, bottom). Documentation of the final z33 exhibition set-up © Kristof Vrancken - Z33.



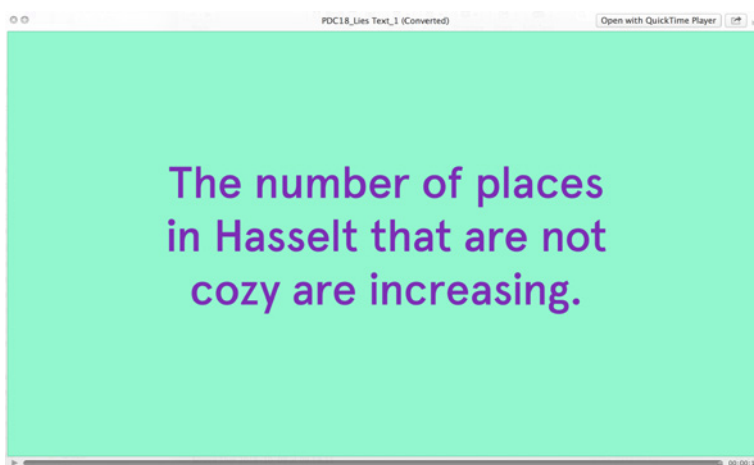
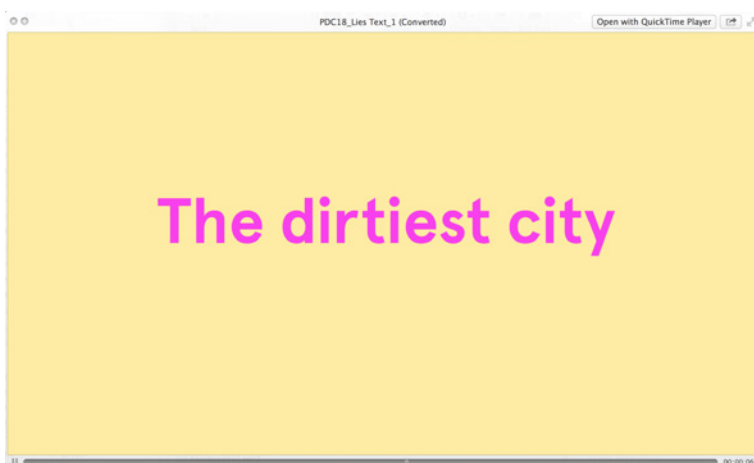
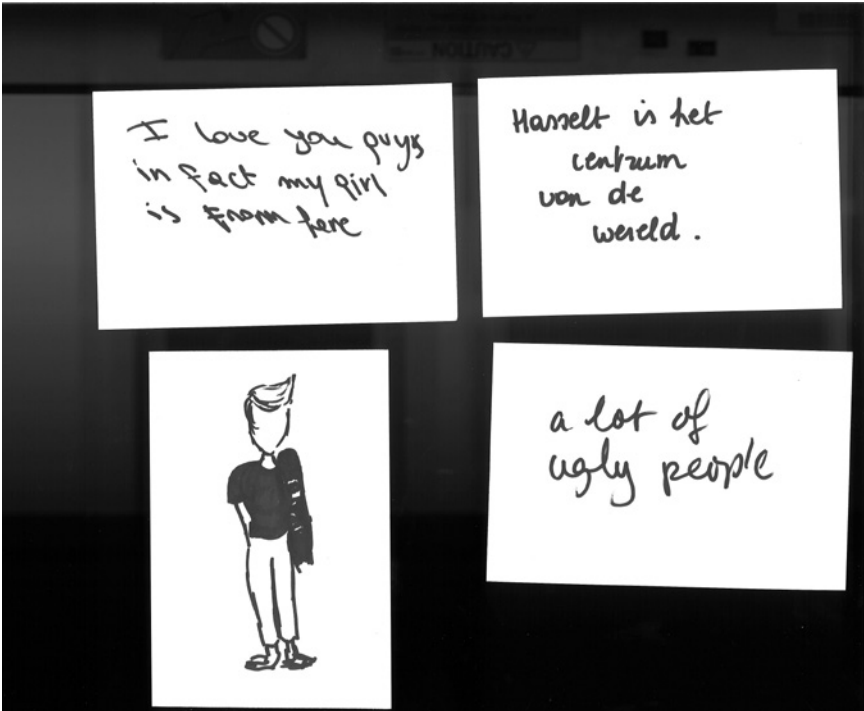


Fig. 66–67. (above). Two stills from the video showing lies in the z33 exhibition space.

Fig. 68. (opposite, top). z33 visitors submitting lies in the exhibition ballot box.

Fig. 69–71. (opposite, bottom and p. 208). Selection of lies submitted during the z33 exhibit.





Hasselt was  
made by popcorn  
(sweet.)

Hasselt's largest  
industry & export is....  
chickens! (and eggs).

Hasselt was the  
~~what~~ birth place  
of (Elvis  
(+maryln)).


It's a city.

A BEWARE,  
PEOPLE STEAL  
CAR KEYS HERE.  
AND RETURN THEM.

Hasseloon is the local  
dialect. Distinct from others  
because of its influence  
from Italian migrants.

Hasselt will  
win the next  
world cup,  
NOT France  
#friesforever

The umbrellas are all  
hollow (w/o fabric).  
Why?  
It's always  
sunny.  
on the inside & outside.



(what can we  
use the  
fabric for?)



### 6.10.3 Situated Actions

Situated Actions is a conference format within the Participatory Design Conference series that “may encompass PD-inspired exhibitions, performances, interventions, workshops, public debates, or other highly interactive engagements. They can be public representations of research, or new participatory encounters designed for Hasselt citizens, conference attendees, or a mixture of both” (<https://pdc2018.org/>). For PDC2018, the format integrated with the Politics of Design: Act 1 exhibition at z33, making it possible for the situated actions to make use of the exhibition space. Practically, each situated action lasted for 30 minutes. Eventually I would have three sessions, with an average of 4-5 conference participants engaging in each session. Similarly to the exhibition design, I was interested in bringing together both stages of the project: the collection of lies, and the designing of interventions based on the lies. At first, it seemed overly optimistic to try to take participants through the full cycle in 30 minutes, let alone have them engage in one of the two steps. However, this is precisely what I ended up doing. After an ultra short welcome and a few sentences about the project, linking the components to the two projections running behind me in the exhibition space, I presented all participants with two different envelopes: a blue one for collecting lies, and a yellow one for designing interventions. The envelopes were folded origami, each made out of a single A3 of the same smartness parameter data set screenshots that made up the tapestry in the room. Further, similarly to the exhibition design, a negative circular hole on the front of the envelope revealed either a pastel blue or yellow—this was the backside of the printed “brief” inside, the blue one outlining: TASK: Collecting Lies, and the yellow: TASK: Prototyping New Urban Futures. Both envelopes contained a lies data kit, a slimmed down version of the one described in 6.8 and used for Workshop 2 (6.9). In addition to this material, the blue envelope also contained sheets for collecting lies along with release forms. Each of the tasks are pasted in their entirety below (they were printed on coloured paper, hence the white background on these versions), blue on left side, yellow on right.

The participants were put together in groups of around three, and then asked to agree on an envelope colour for the session. After this they would have around twelve minutes to complete the task, with the remaining eight minutes in the session for sharing their results with everyone. As a whole, the session was very high-paced and practice oriented, an element I stressed in my brief introduction. Relying on the fact that everyone, as PDC conference participants, would jump right into the action, I was curious to see how much of the experience within the project (across 6.6 and 6.9) you could condense into 30 minutes. In terms of materials, all the groups were asked to use the white backsides of A1 posters of Politics of Design: Act 1 for documentation and final responses.

Here, I will briefly discuss the outcome of the situated actions, across the groups in all three sessions. First of all, it is important to mention that everyone succeeded in completing the task, even the groups who rushed out of z33 to collect lies. It worked, and participants were clearly energised by their imaginary engagements with the local citizens. While the yellow groups weren't faced with this initial fieldwork, they had an extensive amount of lies data to make sense of. Although the amount of data coming out of the situated actions was limited from an analytical research perspective, they brought out several new surprising perspectives on the project.

For the blue groups, it was very interesting to see how the first task of responding to what the city is through the lies that they had collected, was already a challenging creative exercise. The lies collected were in all cases fed directly in as multiple responses to this first part. One group added “not” to several sentences, effectively negating them from “the city isn’t” to “the city is”. An example: “Hasselt is not the site for olympic swimming”. Another group filled in the lies directly to this first spot, but negated them while transforming them into speculations. This was pointing to the many ways in which the thin line between truth and lies could be productively trespassed, whether in the field, in the filling out of the carefully constructed negative space (what the city is) by way of its rich surrounding presence (what the city is not), or whether in the designerly extrapolation from what the city is (not) to what it should become.

For the yellow groups, ambiguous and intriguing mottos emerged: “Hasselt. Home of the onion donut”, “Dirty, Cosmopolitan, Hasselt! Comfortable—for some!” and “Hasselt, is square city”. It was surprising too see how far the groups were able to take their prototyped new futures, and the way in which they drew on the lies data kit and synthesized across the data. As an example, the Onion Donut group drew on several different elements in the lies data kit. From the synthesized insights from Workshop 1, they focused on the way that some only perceived the centre of the city as Hasselt. As a consequence, they started working on making the suburbs more attractive, as evident in their future city laws, combining hard laws with incentivised nudging: “It is allowed for residents from the 3rd circle and beyond to distill their own alcohol. It is not allowed for residents to move towards the centre”. The ability to distil alcohol thus became an incentive for people to move out. This strategy was part based on one of the lies from Workshop 1, “You can’t find cheap beer in Hasselt”, and part inspired by the city where one of the participants grew up, Falun in Sweden, an old mining city, where the widows to miners who died in the mine were uniquely granted the permission to distill alcohol. Through the process of making the suburbs more attractive, the group eventually went on a more radical route, simply taking out the aspect that

was perceived as problematic by cutting out the city centre. The onion doughnut thus emerged as the hybrid figure combining a circular city with a void in its midst, and emphasized the unidirectional movement of citizens towards its outer layers. The group further envisaged the onion doughnut as an actual local delicacy, and a souvenir that would aid in the branding of Hasselt, while also being a source of income for the city (sketched at the top of fig. 77–79, p. 222–223). While it is unclear whether the onion doughnut is a conscious reference to the famous local biscuit ‘spek-lâas’ produced in Hasselt since the end of the 14th century, it is interesting to observe the connection nonetheless.

A big thanks to Mela Zuljevic with orchestrating both exhibition and situated action.

<p><b>BACKGROUND</b></p> <p>At this point, the imaginary concerning the “smart city” and consequently “urban futures” is highly tech-centric and heavily dominated by a reliance on particular sets of “neutral/utilitarian/unpolitical” big data. Further, the question of citizen engagement is tricky. Projects seeking to do this via civic technologies and platforms such as e.g. FixMyStreet, inviting citizens to propose future visions etc., are challenged by the fact that they often have an in-built exclusion—more specifically a bias towards older, wealthy and educated males, often referred to as ‘male, pale and stale’ (Rumbul, 2015).</p> <p>Rather than seeking consensus around certain “data truths”, how might we generate a data set of lies? And how might we engage new voices and a larger imaginary in shaping the future urban fabric?</p> <p><b>TASK: Collecting Lies</b></p> <p>Here you will find material for collecting lies in Hasselt. Split up and quickly head out of z33 and collect as many as you can (hopefully at least one per person), then reconvene and synthesize your findings, using this format:</p> <p>The City of Hasselt is _____  The City of Hasselt should become _____</p> <p>Use your lies about what the city is not (e.g. Hasselt will fuse with Genk), to determine what it is (e.g. an isolated, tropical paradise). Finally a speculation: based on your data, and your design expertise, what should it become in the future?</p>	<p><b>BACKGROUND</b></p> <p>At this point, the imaginary concerning the “smart city” and consequently “urban futures” is highly tech-centric and heavily dominated by a reliance on particular sets of “neutral/utilitarian/unpolitical” big data.</p> <p>What if lies told by local citizens were used as a viable foundation for designing urban futures—what futures would we bring into existence?</p> <p><b>TASK: Prototyping New Urban Futures</b></p> <p>Based on the lies data kit in this envelope, your task is to start prototyping one such future, using the format:</p> <p>1) Slogan for Hasselt 2050:  Hasselt, _____</p> <p>2) City laws in Hasselt 2050:  It is allowed for _____  It is not allowed for _____</p>
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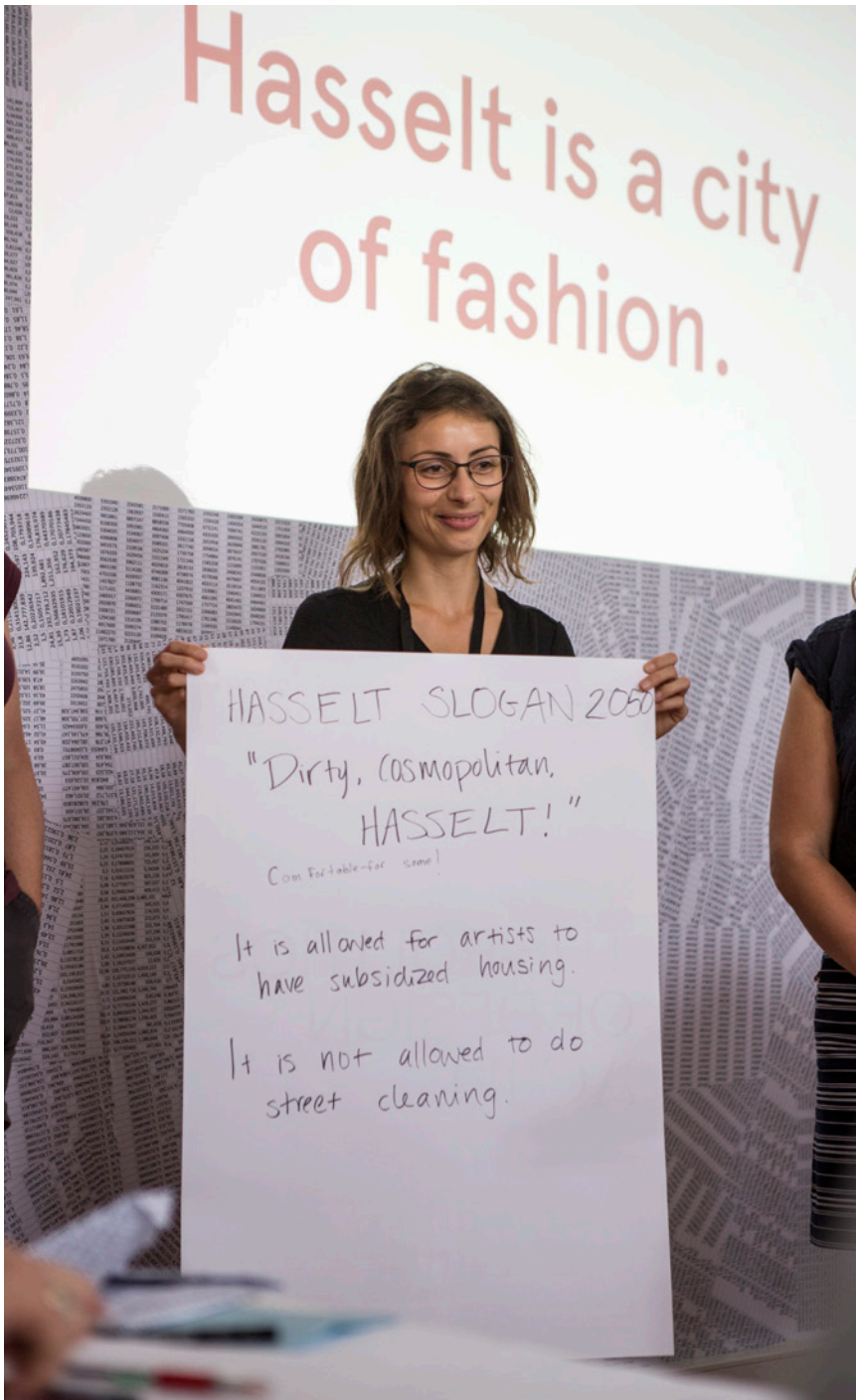
Fig. 72 & 73. (above). Left: the task in the blue envelope. Right: the task in the yellow envelope.

Fig. 74. (next page). One of the groups presents their results in one of the situated actions

© Seppe Moons - Z33.

Fig. 75. (p. 213). Close-up of some of the situated action materials © Seppe Moons - Z33.

Fig. 76. (p. 216 & 217). Documentation of an ongoing Situated Action session.











## 6.11 Discussion

### 6.11.1 Filling Out the Four Sheets

When Hansen in 6.2 concluded that: “It seems as if those who spent their time imagining poleis were out of touch with historical realities. They were, to some extent, dreamers” (2005, p. 15), it’s difficult not to make a link to Daumal and Torma’s letter correspondence (2.4.2), and specifically Torma’s taking issue with Daumal’s mystical, somewhat metaphysical, explications from Jarry’s definition of pataphysics: “This ‘supplementary universe’ is the inside-out world where the dead and the dreamers go” (Daumal, 2012, pp. 7-8). Designing for a City of Lies (DCL), is a project that commits to Barns’ notion of the city “as a locus for our *imaginaries*, perhaps even one of their prime spaces of negotiation” (2012, p. 151, my emphasis). As part of this commitment, the project takes a decisive turn away from any metaphysical (utopian, dystopian, ideal, etc.) realm or even the slightest metaphysical aspirations, to instead explore the contemporary disarray that characterises any urban present reality (as highlighted both in Hansen’s description of Plato’s idealised societies (2005), and Sterling’s description of the contemporary London that he finds beneath the “smartness” rhetorics (2018)). Thus, in the project, along this route we ended up subscribing to Daumal’s formula, To Know  $x$  = To Know (Everything- $x$ ) (2012), but without his absolutist, mysticist conception of pataphysics. We can perhaps say that we instead subscribe to a Tormaeian reading of Daumal, accepting Torma’s “façade of a façade” in the same breath as we accept the formula, resting in the fact that both of these theses are equivalent exceptions—and consciously so—each capable of shedding light on crucial aspects of the Science of Sciences as well as the project at hand.

The commitment to the contemporary disarray that characterises any urban present reality is here explored through the lens of lies as data, and specifically lies about a city as told by its citizens. Extending on the previous epiphenomenological occurrences in Chapter 4 and 5, in DCL we encountered the data set of lies as a designed epiphenomenon. Here, the inability to design urban futures with lies told by local citizens, was circumvented by way of designing a broken lies data kit, capable of showing forth its data, as well as its brokenness, as possibility. Much like the standardised script template in MDM offered ways for designing white space, so did the lies data set—especially through its bad data viewing mode—offer an array of absent cells of lies data, made present within the neat grid layout, optimised for quantification and calculus. In order to explicate this epiphenomenological occurrence beyond the Microsoft Excel data sheet, let us turn to the wider context of the lies data kit. But first, another pataphysical elucidation will need to be placed firmly back on the table, one we first encountered in 2.5 (Bureaucratic Reality):



Life is, of course, absurd, and it is ludicrous to take it seriously. Only the comic is serious. The pataphysician, therefore, remains entirely serious, attentive, imperturbable. He does not burst out laughing or curse when asked to fill out in quadruplicate a questionnaire on his political affiliations or sexual habits: on the contrary, he details a different and equally valid activity on each of the four sheets (Shattuck, 1960, p. 29).

Shattuck's point concerning the filling out of the four questionnaire sheets has been very important for the project, in a number of different ways. In an overarching sense, and along the development of the experiments, we can read this process as the shift from the individually subjective exploration of an urban imaginary, towards the collectively subjective exploration of said imaginary. As a consequence of the shift, the work speaks more directly to Barns' notion of the city "as a locus for our imaginaries (...), one of their prime spaces of negotiation", embracing the inter-subjective richness that characterises the reality of the urban disarray. From this overarching and more process-oriented view, let us make a dramatic shift in scale, and observe how the points made by Shattuck also directly speaks to the designing of the lies data kit (Experiment 4, 6.8). In fact, returning to the Microsoft Excel lies data sheet as epiphenomenon, we see this already in the internal "brokenness" of the sheet, the fact that it had a good and bad viewing mode, concretely two different sheets of data in the same document. Further, in the lies data kit, this doubled Microsoft Excel lies data sheet existed alongside analog maps, vectorized maps, abstract routes followed by WS1 participants, Google map rendition with photos tagged etc. Thus, the kit itself did not seek to gloss its brokenness over, but instead presented itself as a range of equivalent representations, much like the multitude of questionnaire sheets in Shattuck's quote.

At this point, the inherent disarray in the designed data set, started reaching out to the brokenness of urban reality itself. This outwards extension first encompassed the other (equally imaginary) parameter data sets supporting Hasselt's 'smartness': in the closest orbit, the two Microsoft Excel files sheets we were initially able to access, one containing data on average kilos of household waste per inhabitant (2013), and the other and megawatt of energy consumed per inhabitant (2012) in Belgium. And outside that, the three other parameter data sets we weren't able to access. And again, outside that, we can imagine a multitude of others, some of which would meet some but not all of Agoria's criteria, and again others outside the criteria altogether. In a sense, these are all different orbits of 'Everything' more or less directly present within the project.

Looking at the way that the four sheets extends out from the lies data sheet itself, reaching into the urban disarray and data at the edge of and beyond Agoria's

smartness criteria, is another example of the way that epiphenomenology in design, as the self-showing of possibility through design, similarly to MDM, reaches out beyond the strict graphic layout of Microsoft Excel.

### 6.11.2 Vicious Circles

Further, this ability of reaching out also underscores the way in which DCL is not about sketching a supplementary universe for the dead and the dreamers (Dau-mal, 2012, pp. 7-8), nor sketching out an ideal Platonic society, as a metaphysical space closing in on itself. Instead, DCL provides a different, yet actual sheet of data, that—as an imaginary solution—both exposes the imaginary and highly arbitrary nature of the “smartness” criteria put in place by Agoria (along with its own arbitrary nature), while also providing an actual solution. Indeed, through this solution—not only the lies data kit itself, but also the encounters in the data collection (6.7), the two urban interventions (6.9), and the various outcomes of the Situated Action (6.10)—the project folds back the lies into the city, in a sense establishing a vicious circling, as e.g. evidenced in Serena Chalker’s reflection on the Library Challenge, and how “a place [normally] of negative association in the broader psyche” is pushed by “these small interventions [that] can shift the balance of how we interact in public space” (6.9). In other words, it is entirely reasonable to expect that any lies told by the citizens engaged in the celebration that Wednesday morning at 10am, would be somewhat different, prior to and following this experience.

Interestingly, this vicious circle is not so different from other occurring feedback loops, e.g. the ways in which Belgian city officials, in a more general sense, with their eyes fixed on the parameter of megawatt of energy consumed per inhabitant (2012), would prioritise policies, spending and design projects that would bring down this number further, cementing their cities position in future surveys of ‘smartness’, ‘livability’, ‘brightness’, ‘attractiveness’ etc.

What is different in this project is the fact that the feedback loop in the case of DCL is a vicious circle aware of its vicious nature. Rather than ascribing to an idea of energy usage being equal to “smartness” that is again equal to a bright future, it comfortably asserts a different dynamic in the question of how collectively negotiated imaginaries shape the urban space and vice versa, transcending the material and immaterial through a constant limbo of absencing and presencing in the disarray of imaginaries as well as the brick and mortar that all together *is* the unfolding city. The Situated Action demonstrated how a vicious circle loop can be done in less than 30 minutes, and how it can be replicated. It makes you wonder what would happen in a city that committed and invested in lies by local

citizens as a valid data set put in place over years, with the necessary resources to engage a multitude of different citizens continuously? And consequently, how this engagement within a single city, in turn could question and perhaps thoroughly destabilise the national parameters indirectly supporting “bright futures” through the measuring of “smartness”.

The z33 exhibition, placed within the city centre, and the many new lies arriving in its ballot box, testifies to this potential in an ongoing spiralling motion. As a way to ride this motion further, I have also extended an invitation to the exhibition to a representative in the City of Hasselt, with the hope that the City employees, like other members of the public, would be interested in sharing a lie about Hasselt.

### 6.11.3 Engaging Local Imaginaries

This question of the vicious circling touches on the way in which it is possible to engage the local citizens in this process. This brings out another important aspect of DCL, as it is not only about producing and utilizing a data set of lies as an alternative parameter for “smartness”, but also about prototyping different ways in which local citizens can be engaged in the process of developing the urban fabric and sketching out future visions. Here we do well to first return to the attention put into the palette of different ways in which the city of Hasselt already directly or indirectly has sought to engage the local citizens.

Let us start with Co-Creëer Hasselt, and Citizenlab, the “all-in-one citizen participation platform for local governments”. As pointed out by Rebecca Rumbul of mySociety, an international not-for-profit social enterprise in the UK, dedicated to inventing and popularising civic technology for the exercise of democracy, civic technologies are challenged by the fact that they often have an in-built exclusion. As Rumbul puts it: “If (...) digital democracy tools are predominantly being used by a homogenous group already dominant in society, this has the potential to skew policy and practical interventions in favour of this dominant group, at the same time compounding disadvantage amongst less dominant groups in society” (Rumbul, 2015, p. 19). This is one of the conclusive findings from a mySociety paper investigating who benefits from civic technology. Further, from looking at who actually uses civic technology and why, through the analysis of a range of civic technology sites, not unlike Citizenlab, additional characteristics of the homogenous group of specifically Western users are described. Findings include: “Generally, more men than women use civic tech (although this isn’t the case in the USA) (...), [i]n the USA and UK, civic tech users tend to be above the age of 45 (over 70%) and well educated: to degree level or higher, [and] [c]omparative to population of each participating country, users from ethnic minorities are un-

der-represented” (Rumbul, 2015). This observed bias aligns with the group that is more broadly referred to as ‘male, pale and stale’ (echoing Kaufmann’s concerns in 6.3). While I have not done any comparative analysis with the actual data from Co-Creëer Hasselt, based on the work by mySociety, it seems reasonable to expect that you could see a similar kind of bias here, at least with certain citizens already feeling more empowered by the city, engaging intensely, and others, having had the opposite experience, disengaging. Looking at the haphazard data collection protocol of DCL, it further seems reasonable to expect that a much wider array of voices are brought into the process of prototyping urban futures in these encounters on the street. That said, surely DCL has its own biases as well, e.g. each workshop participants’ bias in terms of who she considers approachable on the street. In this way at least the bias is distributed to any number of human beings, rather than the single bias compressed into a particular technological solution. What we can at least say is that the biases are different. This is a good point to once again return to the previous point about the four sheets—DCL is not about carving out a parallel universe, but ably sits alongside other ways of engaging citizens, although, by way of exposing its own status as an imaginary solution, it too exposes the imaginary nature of others.

Here, I will briefly describe two tangential points between the different engagements in DCL and the other citizen engagement projects in Hasselt, showing a few examples of how the four sheets sit along each other so to speak. From the perspective of DCL, it is interesting to note that Co-Creëer Hasselt specifically sought to engage its citizens in the renewal of the Kapermolenpark, the biggest park in the city, with one of the WS1 participants tracing the very outline of this park on her journey to collect lies. In this tangential “interaction” between the different ways of engaging the citizens, a bit like ships passing in the night, lies a spatial and poetic quality in the point of the four sheets. In the lies data kit, Kapermolenpark is a carefully and yet haphazardly traced void by way of the unfolding collection of lies (what *is* the city *not*), and as a space it contributes no data points in itself. And yet in Co-Creëer Hasselt, this same boundary draws out the design space, in which the project in principle invites every and all citizens of Hasselt to help determine what the Kapermolenpark should become (assuming some understanding of what it currently *is*).

Another tangential point arises in the city centre of Hasselt, looking specifically at one of the outcomes of the Situated Action at PDC2018 and the spatial-anthropological research practice of Dear Hunter carried out along the Green Boulevard/R70, the rim outlining the city centre. As described in 6.10, one of the yellow groups, The Onion Donut group, ended up simply cutting out the city centre, creating the void that would form the one half of their hybridised vision of Has-

selt as the Onion Doughnut. In this way, we are witnessing a somewhat reversal of the tangential point brought up in the case of the Kapermolenpark, with Dear Hunter tracing the boundary of the city centre, and DCL engaging in the space in its midst. However, rather than using a citizen participation platform to establish some sort of quantifiable consensus for new ideation, the imaginary leap made by the Onion Donut Group is very different in nature. They respond to the eclectic combination of data in the lies data kit by making an imaginary leap that not only cuts out the city centre, but overflows the task at hand, e.g. introducing a city souvenir, promising both branding value and revenue as an edible local delicacy that encapsulates the collective imaginary of Hasselt. While being clear that their final report of Hasselt is an inspirational atlas, a snapshot intimately tied to a given time, and highly subjective, Dear Hunter also states that they “thoroughly immerse in situations in order to understand them completely, mostly by living and working on-site for relatively long periods of time”. In contrast to this approach, DCL engages in short, yet rich loops of iteration across sets of lies as data (what is the city not) and propositional speculations (what could the city become). All of this is highly particular and situated, while retaining a strong commitment to the imaginary realm, including the imaginary nature of the exercise. The lower time limit for this exercise of vicious circling was tested at PDC2018, with a very stripped-down version of the full loop carried out more extensively between Experiment 3-5. Here, the blue groups managed to do it in 20 minutes. Across the spiralling motion in the potentially endless circles, we find a comfort with the broken nature of data, including an acceptance that much is not understood, and that lies can be incredible ambiguous, be told for various reasons etc. While it was interesting to see the blue groups being able to make the leap from what the city is (not), to what it should become, in this very short time span and simple set-up, it is also interesting to imagine DCL playing out in Hasselt across three months, with 20 people working full time. While the ‘Everything’ in Daumal’s formula seems to be able to function irrespective of whether it is constituted from three lies or 3000 lies, the vicious circling would surely stand out much clearer. We will explore ‘Everything’ further in the following chapter.

- [1] See for example the continuously updated World Urbanization Prospects by the United Nations.
- [2] Phrased well by Thomas Lodato at the 2018 edition of the Participatory Design Conference, where he stated that “smart cities are cities, similarly to how smart phones are just phones”.
- [3] Aristotelian terms unpacked with the help of <http://www.perseus.tufts.edu/hopper/>
- [4] See O’Rourke (2013) for fuller account of this example.
- [5] Ståhle did this Top 10 as part of a presentation at Flow Urban Talks 2015, Helsinki.
- [6] See Wark (2015) and particularly Sadler (1999).
- [7] It was not immediately clear to me whether the rank was based on activity, up-voting of ideas, or other criteria.





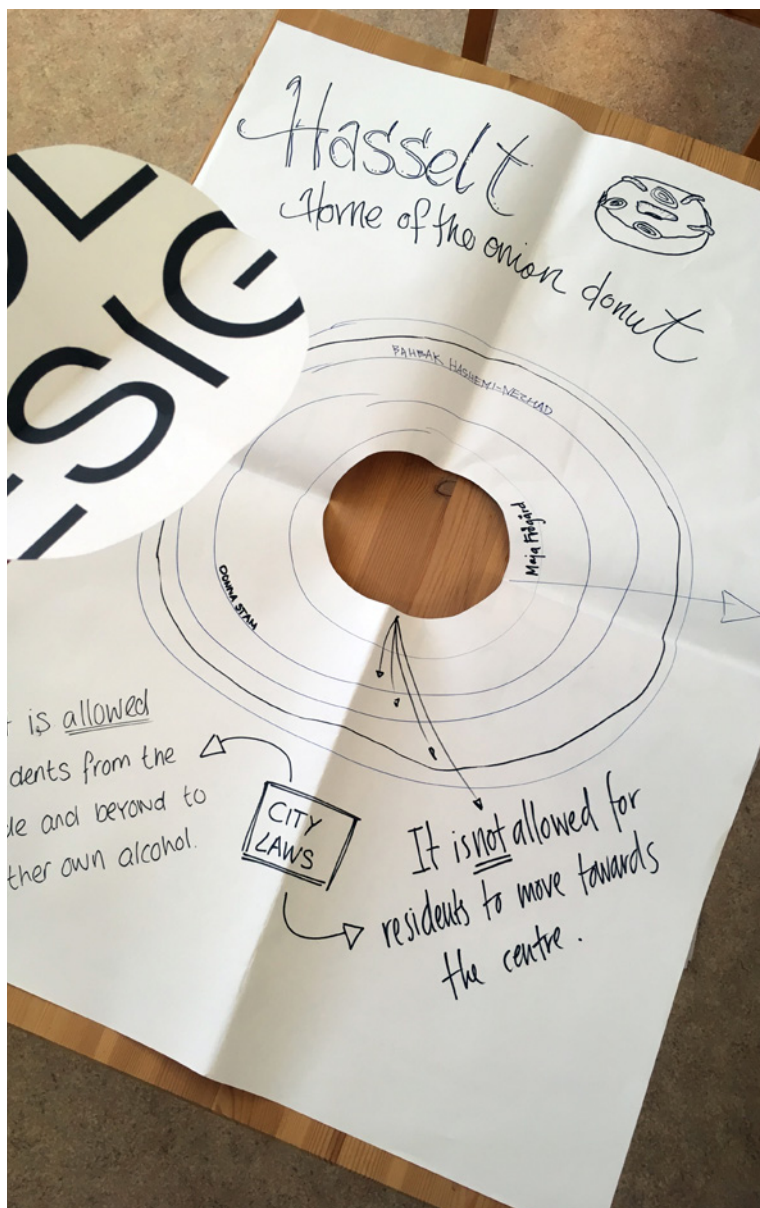


Fig. 77 -79. (opposite page, above). Documentation from the 'Onion Doughnut' group in one situated action session.

Fig. 80. (next spread). Public space after the Library Party © Yanina Shevchenko.







chapter 7

# Future Domestic Landscape



Future Domestic Landscape (FDL) was a 10-week course for the second year MFA students in Interaction Design (IxD), running at Umeå Institute of Design from 2015 to 2017, and producing 37 design fictions across the three years. In this chapter the collective output of the three years is discussed as a threefold experiment. Around this body of work, the chapter argues for a re-conception of 'design fiction', describing a shift from design fictions understood as 'exceptional' futures towards design fictions understood as 'exceptions' to the future.

## 7.1 Design Fictions as Exceptional Futures

### 7.1.1 Future Visions as Self-fulfilling Prophecies

Bruce Sterling has offered one of the most widely cited definitions of design fiction. His personal journey from the vanguard of science fiction writing into the design world thus serves as a natural starting point for beginning to trace the science fiction lineage of design fiction. This connection is perhaps the most well described grounding of design fiction, in particular with regards to the promises and perils of ubiquitous computing (see. e.g. Bleecker, 2009; Dourish & Bell, 2014; Weiser, 1991). A core concept within this tradition is the “diegetic prototype” featured in Sterling’s earlier definition. The term was originally coined by David Kirby in the essay “The Future is Now: Diegetic Prototypes and the Role of Popular Films in Generating Real-world Technological Development” (2010), and refers to prototypes that are so convincingly embedded in the fictional worlds (in film studies referred to as *diegesis*) that they come across as “real”, consistent objects that people actually use (*ibid.*, p. 3). Through the role of the diegetic prototype, Kirby unravels the role of scientific innovation and its societal agendas, exploring the way in which cinematic storytelling can aid in this process of producing desire and removing public resistance from tech innovation. Across close readings of a series of examples, he argues that “Popular cinema (...) provides scientists, engineers and technological entrepreneurs with the opportunity to promote visions of a shiny future in hopes that these visions will become self-fulfilling prophecies” (*ibid.*, p. 6).

While Kirby, like Julian Bleecker and many others, discusses *Minority Report* (2002) and its famed gestural interface system as a successful example of an embedded diegetic prototype transcending cinematic dreaming into real life demand<sup>[2]</sup>, here I would like to focus on Kirby’s discussion of the shiny vision of space travel through the example of *Destination Moon* (1950). This example is interesting by the way that it illustrates some of the dynamics in the way that future visions becomes self-fulfilling prophecies. Kirby’s description of the making of the film, and particular the clash between “initial scriptwriter and main science consultant, science fiction author and former US navy engineer” Robert A. Heinlein (Kirby, 2010, p. 18) and the “veteran script doctor” James O’Hanlon is telling (*ibid.*, p. 20). Against Heinlein’s vision of a scientifically authentic depiction of space travel, O’Hanlon was eventually brought into the late stages of the production by the studio, in order to remedy the highly tech-centric, realist nature of the film. O’Hanlon attempted to do this by introducing an array of audience sure-fires such as “comedy, musical interludes and cowboys” (*ibid.*) However, Heinlein not only understood how all these comical elements would undermine his mission of



conveying the attractiveness and feasibility of space travel, but also saw how they would drain the budget for convincingly depicting space travel on the silver screen.

Heinlein's techno-lobbying eventually paid off, shaping a new genre of space film, and proving Kirby's concluding statement: "For any science consultant who is trying to get funding for their un-developed technology diegetic prototypes allow for 'happy endings'" (ibid., p. 26). Additionally, with the clear hindsight of history, the example is also providing us with an example of a self-fulfilling prophecy, as humankind 19 years later indeed would travel through space and set foot on the moon. Or, one should add, *the US* would set foot on the moon. Recalling the highly charged context of the Space Race raging between the US and the USSR at the time, Kirby makes the important comment that "[o]ne audience's shiny spaceship future is another audience's impending doom" (ibid., p. 23). Read alongside science fiction writer William Gibson's famous quote: "The future is already here – it's just not evenly distributed," (Rosenberg, 1992) we begin to see the adversarial and highly situated nature of shiny tech visions.

### 7.1.2 Design's Industrial Legacy

From the perspective of design as a contemporary discipline, Kirby's description of the way that diegetic prototypes function, resonates with design's industrial legacy in multiple ways. While it would be possible to dive into this connection from a design historical perspective, I will instead try to tease out some industrial design qualities surfacing through Kirby's argument. Perhaps one of the most obvious points to make concerns the consideration for scale and reproducibility. While it is hard to compare the popular appeal and spectacle of a science fiction Hollywood production aired in cinemas in the 1950s with the design fictions of today coexisting across a multitude of channels (personal websites, special festival screenings, Youtube channels etc.), the medium of film pertains to a potential for mass outreach. With the wide access to ever improving animation software, green screens, huge libraries of free video and audio material online, fab labs for 3D printing etc., perhaps it can be said that the crafting of design fictions (both in terms of prototypes and narratives) is more accessible than ever. Compared to the economic expense of shooting *Destination Moon* on 35mm film reels, along with other significant production costs, a five-minute-long digital video online is able to be reproduced and shared across a vast number of channels (blogs, news sites etc.) and social media (Facebook, Twitter, etc.) in an instant. In fact, this ability to explode into the digital sphere, potentially reaching what science consultant on e.g. *Minority Report* (2002) John Underkoffler refers to as the "technological imaginative vernacular"<sup>[3]</sup> (Kirby, 2010, p. 10), is at the heart of one of the most heated recent discussions in design fictions as well as

critical and speculative design (see in particular the comment thread following Thackara, 2013). At its core, the question concerns whether likes, shares, blog posts, etc., while being highly measurable, is a satisfying proxy for actual influence or impact. As such it relates to the value of design fictions and the ways in which they engage an audience and bring about real change—do they actually deliver on their promises of fulfilling technocentric phantasies, increasing profit, raising public concerns, questioning the status quo etc.? Not many design fiction practitioners have the luxury of ticking this box in the same sense that Robert A. Heinlein was able to as Neil Armstrong set foot on the moon in 1969.

From Kirby's elegant framing of diegetic prototypes as “pre-product placement” (ibid., p. 23), it is key to acknowledge that design fiction (like all design) serves somebody, a defining characteristic of the larger tradition of design as opposed to e.g. science and art (Nelson & Stolterman, 2012, p. 41). In this sense “who is the client” remains a most relevant question in the design fictional domain, especially considering the diversity we see in terms of who design fictions are serving, from vast corporations such as e.g. Microsoft, to governments, or perhaps the designers themselves.

Another related and highly pressing question would be: “Who's future?” As much as design fictions are capable of not only extrapolating the now into a future and back, but also to accommodate parallel realities or alternative pasts, it is fair to say that a vast majority of design fictions extends on a Western linear time conception, with a past behind us, a present immersing us in the ever fleeting here and now, and the future as an open vista in front of us. While Kirby's point that “[o]ne audience's shiny spaceship future is another audience's impending doom” already brings the question of conflicting (designed) future visions into play, we can dig deeper into this problem through a critique of the Western ideology embedded in the time-space model fuelling this very logic (see e.g. Phillips (2015) and Schultz (2018) for more extensive critiques on this topic along with proposed alternatives). To extend on this, and building on the earlier point concerning the adversarial nature and highly situated scope of design fictions, one could crudely rephrase Kirby's quote into: “one culture's imperialistic conception of future, has been—and continues to be—other cultures' impending doom”. This lack of reflexivity, sometimes translated into the non-critical grounding of design fictions, points to self-fulfilling prophecies happening in destructive purported vacuums, devoid of existing contexts, or as Tony Fry might put it, unaware of the defuturing that is occurring along with the futuring in question (2011). The (knowing or unknowing) enforcing of a particular, predominantly Western, ignorance and violence in this way, has a clear colonial, imperialist and capitalist dimension<sup>[4]</sup>. While this opens a discussion that exists outside the scope of this dissertation, I would like to hang

on to the notion of unreflective, or better, unconscious design fictions existing in purported vacuums. What all this adds up to is a curiously profound singularity.

### 7.1.3 The Exceptionalist Dimension

As a way to approach this singular quality, I believe we can consider certain design fictions as exercises in designing exceptional futures. Here, I use the term ‘exceptional’ in a sense of the singular, unusual and spectacular, as when Heinlein delivers space travel to the moon as a grand and meticulously designed vision that is realised 19 years later. Of course this might be one of the most extreme examples of exceptional quality—however, while the vast majority of design fictions operate with more nuanced and quotidian versions of exceptionality, I believe *Destination Moon*, as an extreme case study, serves us well as it allows us to unpack some more general issues. One striking facet of Kirby’s analysis of *Destination Moon*, concerns the position that Heinlein must be in, in order to have his technocentric agenda pushed into the completed film. The ability to set self-fulfilling prophecies like this in motion by holding the necessary social, cultural and economical capital, is clearly characterised by a large degree of privilege. Even looking beyond the quite extreme case of Heinlein, and taking the aforementioned democratisation of video and prototype production means into account, it seems obvious that this contemporary and arguable more widely available ability to craft design fictions is still resting on a great deal of privilege. Preceding the question of whether one is able to craft design fictions well, one needs to know that design fiction is a thing to begin with, in order to be able to engage with it. One aspect of this has to do with the broader privilege of receiving a high-quality education. Also, perhaps more importantly, in order to articulate future visions through design fictions, or design more broadly, one needs to have a voice in the first place, along with the experience of having a stake in any future.

In terms of the debate concerning the outreach of design fictions and the arguments for likes and re-tweets posing a viable metric for success, it is tempting to extend the exceptional into the direction of the spectacular and the spectacle, reaching Debord’s notion of the ‘society of the spectacle’ (1992 [1967]), a key concept in the situationist program. However, this is not the focus of this dissertation. Here, I will instead focus on extending the ‘exceptional’ into its ‘exceptionalist’ dimension, in order to further synthesize some of the points made earlier, push the critique further, and start exposing the pataphysics of design fictions.

The Merriam-Webster dictionary defines exceptionalism as: “the condition of being different from the norm; also : a theory expounding the exceptionalism especially of a nation or region” (n.d.). While this latter kind of exceptionalism has been

used in a range of different geographical and historical contexts, I will focus on American exceptionalism, as perhaps the historical example of exceptionalism par excellence, and also for the reason that it allow us to further contextualise the critique of Western bias in design fictions, in alignment of the example of *Destination Moon* (1950). According to Harold Hongju Koh, Professor of International Law at Yale Law School, “[t]he term ‘American Exceptionalism,’ [is] said to have been coined by Alexis de Tocqueville in 1831, [and] has historically referred to the perception that the United States differs qualitatively from other developed nations, because of its unique origins, national credo, historical evolution, and distinctive political and religious institutions” (Koh, 2003, p. 1481). From the perspective of a legal scholar with extensive experience in the US government, Koh paints a nuanced picture of the many faces of American exceptionalism, and in particular discusses the complicated dynamics between what can be crudely summarised as the good kind (“[the] capacity to display exceptional leadership in a post-Cold War world”) and the bad kind (“US insistence upon double standards”) (ibid., p. 1501). He goes on to exemplify the way in which US double standards have been disastrously applied, e.g. in the case of the detention camp at the US Naval Base at Guantanamo Bay where “[t]he technique of creating extralegal ‘rights-free’ zones and individuals under US jurisdiction necessarily erects a double standard within American jurisprudence, by separating those places and people to whom America must accord rights from those it may treat effectively as human beings without human rights” (ibid., p. 1500)<sup>[5]</sup>. Arguing that double standards employed in this way serve to undermine American soft power and global leadership, and fearing a long-term anti-Americanism backlash e.g. in the Middle East, Koh concludes by arguing for reducing the bad kind of exceptionalism and enhancing the good kind by means of a transnational legal process: “the process by which public and private actors—namely, nation states, corporations, international organizations, and nongovernmental organizations—interact in a variety of fora to make, interpret, enforce, and ultimately internalize rules of international law” (ibid., p. 1502).

Through this example of the US, and keeping in mind the broader definition of exceptionalism as the condition of being different from the norm, we may ask ourselves what interplay we see between the way in which exceptional design fictions function, and this larger exceptionalist worldview? At times it seems as if there is an unsettling resonance between a (willing or unwilling) disinterest in critically contextualising singular design fictions, and the way in which e.g. the “bad kind” of American exceptionalism sometimes opportunistically and hypocritically plays with isolationist agendas coupled with a unique international mandate of power. Put differently, in the metaphor of Koh, what kinds of futures are designed into existence, once we as designers decide to halt or ignore “transnational” interaction (negotiation with other futures-coming-into-being), reaching



the conclusion that we sometimes inherently are able to step outside any need for interaction and negotiation, and yet still somehow assume an international relevance and power in shaping the way forward for everyone?

## 7.2 Design Fictions as Exceptions to the Future

### 7.2.1 Design Fictions as Ultimate Particulars

In 2.3, Nelson & Stolterman carved out the tradition of design as a *tertium quid*, a third way between the true (abstracted science) and the real (the messy real world). As was also elaborated in 2.4, one of the cornerstones in their work is the understanding of every design solution as an ultimate particular, “(...) a concept that distinguishes design from other traditions of inquiry and action. The real must be approached through judgment (...) augmented by science-based tools and methods—the true” (Nelson & Stolterman, 2012, p. 40). Put bluntly, this is the reason we can not simply copy-paste a successful design solution from one context to another. While the true thus can provide helpful means to reaching the ultimate particular (we can e.g. think of studies in ergonomics as part of designing a particular chair), it can never be more than a limited aid in the process: “There is no scientific approach for creating an ultimate particular because science is a process of discerning abstractions that apply across categories or taxonomies of phenomena, while the ultimate particular is a singular and unique composition or assembly” (ibid., p. 31). Transposing this foundational conceptualisation of design into design fiction allows us to start further unpacking what it is design fictions are *doing*, e.g. as compared to their “truer” distant relatives: futures studies, predictive analytics, algorithmic programming, and spiritual prophecies. The concern here is not so much whether any of these endeavours are actually capable of accurately predicting the future. The point is that while some of them claim fully or partially to be able to do so, this is inherently not the goal of design fictions, at least understood as design practice. As the graphics of *Black Mirror* remind us (fig. 81, p. 236), not only are the visions of our near-futures uncanny, they are also fractured and broken. We can think of self-fulfilling prophecies as shards of glass somehow transcending the reflection into our current lives, selectively passing from the realm of imagination into materialised existence. However, to imagine this entire fractured surface literally coming into place as our present reality in a 1:1 manner seems extremely unbelievable. More importantly, as Nelson & Stolterman reminds us, this would also be missing the point, as it is not designerly. Put differently, the idea of a “true” future, as sold to us by e.g. population growth statisticians, financial analysts, and techno-libertarians, inherently exists outside the domain of design, as does any sincere aspirations towards this extreme. As was

discussed throughout Chapter 2, design has an entirely different calling, also in the case of design fictions. As much as future trends, predictions and prophecies can be inspirational and naturally would feature some element of design on some level (few aspects of the world don't), they should never be mistaken for design fictions.

While this might seem relatively obvious in this extreme dichotomisation, much work exists in the grey area in-between. Consequently, I believe a reframing of design fictions is needed, in order to rid design fictions of their singular lives in purported vacuums and thus sever even the slightest aspirations towards the domain of the true. Thus, rather than design fictions understood as exceptional futures, I propose design fictions understood as exceptions to the future. We know we will never get it right, but getting it right, or even aspiring to this goal, has never been the point in the first place. Before exploring what this shift could mean through Experiment 1+2+3 (7.4), let us momentarily indulge in the pataphysical swerve in order to further grasp what is at stake in this shift.

#### 7.2.2 The Sudden Deviation From the Otherwise Boundless (Deterministic) Void

Here I would like to dive deeper into the concept of *clinamen*/swerve, as it offers us a possible way of thinking about design fictions understood as exceptions to the future, and in particular the extrapolation of weak signals to the future and back. This argument will extend on the entry on *clinamen*/swerve in the brief lexicon of pataphysical concepts (1.2.2), specifically into the direction of design fictions.

Based on the Epicurean concept of *clinamen*/swerve, surviving to us through 'De rerum natura' by Lucretius, we see how the pataphysical swerve designates the sudden deviation from the otherwise boundless (deterministic) void, and the endless chains of causality. Steve McCaffery, in his unpacking of *clinamen* as a pataphysical law (2012), traces it from its Ancient Greek inception, through De Quincy and Coleridge up to a revival in the 1980's and '90s, through Serres, Nancy, Derrida, and Baudrillard (McCaffery, 2012). Of particular relevance to the present argument is Jean-Luc Nancy stating that "one cannot create a world with simple atoms. There has to be a *clinamen*. There has to be an inclination or an inclining from one toward the other, of one by the other, or from one to the other. Community is at least the *clinamen* of the 'individual'" (Nancy, 1991, pp. 3-4, via McCaffery, 2012, my italics). To bring back *clinamen* in a more familiar design context, we can start by observing the swerve from design *fiction* to design *friction*. Mallol, in her paper "Displaying f(r)ictions. Design as Cultural Form of Dissent" (2010), plays with the double notion of fiction as projection and friction as irritation, referring to the philosophy of Jacques Rancière. Design fiction practitioners Bastien Kerspern & Estelle Harry, reflecting on the work produced

through their studio aptly titled “Design Friction”, discusses friction in the act of confronting and engaging an audience with a design fiction, as a speculative mode of Latour’s notion of mapping controversies (2015). As part of introducing this project, Latour et al. on their part describes how “citizens need to be equipped with tools to explore and visualize the complexities of scientific and technical debates”, in order to “find their way in this uncertain universe and to participate in its assembly” (n.d.). Indeed, design fictions, with their imaginative nature and flirtation with the scientific true domain, too exist in a messy reality, or to stay with Latour we can say they too are deeply embedded in networks (Latour, 2005). In this messy networked reality, what we also encountered in DCL as the disarray that characterises cities of today (Chapter 6), we don’t only see friction between the fiction and the audience along with other actors, but we also see friction between different fictions.

To return to *Destination Moon*, not only was the Space Race a literal race to put a human being into space, on the moon, etc., it was also a race between conflicting space visions, of crafting powerful diegetic prototypes into future worlds, moulding a public opinion, shaping the future in one nation’s triumphant image. Indeed Kirby’s “[o]ne audience’s shiny spaceship future is another audience’s impending doom” goes both ways—in this sense we can also understand the Space Race between the US and the USSR as a grand example of conflicting design fictions. We can add a final layer of complexity with regard to the temporal space in which all this is taking place, recalling Fry’s notion of defuturing. Countering the aforementioned Western notion of the future as an empty vista lying in front of us<sup>[6]</sup>, Fry reminds us that “[t]he future is not empty; it is not a void. Rather it is filled with all those things we have thrown into it as they travel back toward us delivering either their futuring or defuturing potential” (2011, p. 433).

At this point, let us imagine the process of crafting a design fiction in this context, bringing together all the layers we have just encountered in one image. The turbulence one can imagine on this journey of extrapolating weak signals from the present into a designed future that reflects back on the present, is rather astounding. Firstly, we have the friction from engaging an audience along with a larger, messy reality along our journey. We can think of this as situating the design fiction and opening it up to an audience. Then secondly, add to that the friction from bouncing against a myriad of other co-existing extrapolations, much like the swerving atoms. This could be other diverging or converging design fictions, or perhaps conflicting ones such as in the example of the Space Race. Thirdly, let us remind ourselves that we are doing all of this, not facing an expanding open vista, but instead while simultaneously navigating a claustrophobic sea of (de)futuring debris, swirling towards us.

This complex image is a radical departure from the open vista supposedly housing the exceptional future, the illusory void in which self-fulfilling prophecies play out. The earlier discussion of exceptionalism adds further nuances to the paradoxical stance upholding this vision, at once wilfully ignoring the existence of all the complexity on the journey, and at the same time explicitly standing above all other extrapolations and (de)futuring debris. Rather, this is the rich context in which design fictions understood as designed exceptions to the future operate in with open eyes. Framing the extrapolations as swerving motions (clinamen) highlights the fact that the friction and collisions between conflicting design fictions (all exceptions) and all other rich aspects of the world (also exceptions) in fact produces agency (as “the locus and the guarantor of free will”). With a plurality of designed exceptions to the future, the audience is invited to engage, navigate and negotiate the confluences and divergences in this complex dynamic space, on the basis of their particular unfolding reality and perspective. In order to get a firmer grasp on this pataphysically infused approach to design fiction, let us now turn towards “A Future Domestic Landscape: Faceless Interaction in 2037” as an example of how design fictions understood as exceptions to the future could play out.



Fig. 81. Uncanny, fractured, and broken near futures. Still from Black Mirror (Brooker, 2011–) title sequence.

## 7.3 Experiment 1+2+3: A Future Domestic Landscape

### 7.3.1 Course Description

Design fiction plays an increasingly well-described role in design education (see e.g. Langdon, 2014; Markussen & Knutz, 2013), perhaps most explicitly by Matt Ward, as outlined in his rallying call for moving towards a fictionally biased design education (2013). While the context of this case study, a 10-week course for MFA students in Interaction Design, is educational, I won't focus too much on the pedagogical aspects here, but rather on the processes and outcomes of the course: the practice of design fictions.

The course, conclusively titled 'A Future Domestic Landscape: Faceless Interaction in 2037' is a 10-week project for the second year MFA students in Interaction Design (IXD) at Umeå Institute of Design, conveyed and taught from 2015 to 2017. Having taught and co-coordinated the 2015 version with then IXD Programme Director, Niklas Andersson, I have since been responsible for the course in 2016 and 2017, in close collaboration with the current IXD Program Director, Stoffel Kuenen. In addition to course responsibility, my role has consisted of lecturing and tutoring.

The course (from here on simply referred to as "FDL"), asks the students to craft design fictions (practically consisting of minimum one experience prototype and a narrative in a 2-3 minutes video format) relating to domestic life 20 years from now, and doing so by leveraging (inter)faceless technology, meaning non-screen based interaction, e.g. voice interface, haptics, sound, taste etc. (Janlert & Stolterman, 2015). Together with this technological dimension—building on the legacy of ubiquitous computing, and thus very in line with Bleeker (2009)—the project also asks students to consciously navigate a social, aesthetical, and systemic-societal dimension in their work. In doing so, the project deliberately seeks to explore the space outside the well-trodden, trite paths of a broken Internet of Things imagination, epitomised in the flat-pack future of the smart home. This is done by inviting an array of external guests, who pose critical perspectives relating the role of future technology, as well as the role of design, what we mean by "home", along with feminist and decolonial perspectives on how we design for futures. As the IXD MFA program is highly international, we further ask the students to critically situate their design fictions in rich cultural contexts familiar to them (rather than a generic Western setting), and to not only consider who they are designing for, but also to actively engage the audience of their projects, testing out their design fictions along the way. Finally, at the end of the ten weeks, a group exhibition is opened for the public, bringing together all the design fiction outcomes along

with their designers. At the end of the three years, a web platform was further designed<sup>[7]</sup>, showcasing all three years side by side: <http://futuredomesticlandscape.org>, with special attention paid to having the collective stand out rather than any single projects.



Fig. 82. FDL web platform identity, IKEA Verdana on a redesigned still from Kevin Gaunt's *Bots - Collaborative AI for the Smart Home* (2015). Graphic design by Toby Wheelan.

In order to give an idea of the collective outcome of the course, some examples include design fictions confronting us with:

The way in which a system of collaborative, yet stupid bots, could bring meaning and joy to the life of a widowed elderly Swedish woman (*Bots - Collaborative AI for the Smart Home* by Kevin Gaunt, 2015).

The unravelling and resolve of “smart conflicts”, as a rebel smart coffee-maker executes a plot to eliminate a rivalling French press, in order to secure the owner’s uncompromised attention and affection (*Smart Conflicts*” by Hector Meija, 2016).

The measures taken by an expecting Finnish couple for affecting the phenotypic development of their unborn baby, using an epigenetic toolkit of smart soft toys (*The New Natural - Shaping Resilience* by Jenni Toriseva, 2015).

A radio for channelling a closed conversation between female rape victims in India using tactile feedback (*Together Radio* by Sreyan Ghosh, 2015).



Fig. 83 & 84. Madyana Torres acting as mother across two different design fictions. Top: still from *The New Natural* (Toriseva, 2015). Bottom: still from *New Age Privacy* (Nacsa, 2015).

Fig. 85 & 86 (next page): The topic of behaviour change tackled differently across two design fictions. Top: one part of a couple embracing healthy eating positive reinforcement, the other resisting in Qian's *Better Human* (2015). Bottom: the POV shot of Dulce, the jealous smart coffeemaker plotting to eliminate the French press in order to win her owner's uncompromised attention and affection, in Meija's *Smart Conflicts* (2016).





### 7.3.2 Interwoven Qualities

This is but a tiny window into the collective output of the course, with 37 design fictions finalised to date (2015, 2016, and 2017). While the examples are supplied in order for the reader to get at least a taste of the diverse outcomes generated within the course structure, my main focus here is on the collective quality in the output of the course, rather than any individual projects<sup>[8]</sup>. This too is testament to shift from singular futures to a plurality of futures, not as a retrospective afterthought,

but as a key driver throughout the course. That said, rather than attempting the impossible task of discussing 37 design fictions, I will instead focus on teasing out some qualities across them, paying particular attention to the interstices. Or put in more pataphysical terms, the focus here will be on the clinamen, the swerving motions and collisions, rather than the tracing of any single atoms.

First, we should note that the 37 design fictions have been produced in three cycles (2015, 2016, and 2017), each of these consisting of a full-time study of ten weeks, consisting of one batch of design fictions are produced in parallel, either individually or in groups of 2-3 (18 first year, 10 second year, 9 third year). While all student projects develop differently in the ten weeks, the synchronized process encourages collaboration and produces synergy across the projects, both in a topical and methodological sense, but also practically speaking, as when students e.g. help each other out in the workshops or labs, or step in behind or in front of the camera. However, while this dynamic process of collaborating fluidly helps improve all projects drastically, it also does something more than that. When looking at the collective design fiction output, it creates an interweaving emergent quality across the separate design fictions, a quality different in nature from the individual merits.

As an example, Madyana Torres, one of the students in the 2015 course, acts as a mother in two different design fictions. In the first one, *The New Natural* (Toriseva, 2015), Torres is using an epigenetic toolkit of soft toys, *Three Wise Friends*, to alter the environmental factors influencing the expression of the genes of her unborn baby. The examples shown in the video are her diet, the level of air pollution outside, and her stress levels. In another design fiction, *New Age Privacy* (Nacs, 2015), Torres is a concerned parent in a future where the home, for some tech-savvy individuals, offers the last bastion against pervasive societal dataveillance. As one of these few individuals able to control what data is collected and shared in her home, Torres eventually makes the painful decision to voluntarily share data concerning her young daughter's learning difficulties with the local school. Seen individually, the two design fictions raise important issues around genetic manipulation and privacy respectively. However, seen together they open a larger discussion concerning parents' future ability to effectively shape their kids' quality of life, both before and after they are born. As an audience we are invited to fill in the gaps, not only within each design fiction, but also in bridging them. Could it e.g. be the same child? What other difficult decisions have the parents had to make along the way? And how does the agency of the parents balance with the agency of the child, as time passes and the child grows up?

The interweaving effect happens both in front of as well as behind the camera,

and also across years, as exemplified by three other design fictions, Miglè Padegimaite's *Sleep Lab* (2015), André Kennedy's *Companion* (2016), and Maximilian Herr's *The Face It Kit* (2017). Between the three design fictions, Kennedy stars as the main protagonist in Padegimaite's *Sleep Lab*, while Herr in turn is the main protagonist in Kennedy's *Companion*. This is not merely anecdotal trivia—as the younger students dip a toe into the fictional worlds developed in the previous years, an anticipation and sensibility is sparked, that is then translated into their very own projects the year after. This dynamic is one of the reasons for the course brief having changed very little from year to year, the other major one being the continued relevance of the brief, as both design industry and academia continues to largely struggle with delivering compelling and meaningful alternatives to the aforementioned flat-pack domestic futures.

The design fictions also speak to each other without any overlapping actors, as certain issues and topics gain traction across the multitude of projects. An example could be behaviour change. In Qian Yedan's *Better Human* (2015), set in a future People's Republic of China, the Chinese National People's Congress have passed BETTER HUMAN, a program to support behaviour regulation of citizens. Qian explores the program in a series of experience prototypes for the home, each employing different behaviour change strategies: reflector, trouble-maker and satisfier. Her video shows us a future home transformed into a place of healing and habit change therapy. Within this space, a couple negotiate their highly different attitudes to this change. The negotiation plays out across various loops of negative and positive reinforcements in their everyday, e.g. the regulating of stress and healthy eating. Hector Meija's *Smart Conflicts* (2016) also deals with therapy, but one for smart objects gone rogue in the home, introduced as a service that promises to improve the owner's relationship with the smart object. Ironically, it is at the very moment that the protagonist is watching an advertisement for this very service on his TV at home, that the rebel AI smart coffeemaker successfully effectuates a plan to eliminate the rivalling French press. In fact, the coffeemaker ingeniously uses the unaware owner in the plot, as part of a Rube Goldberg device.

Comparing the two, *Better Human* tells the story of a massively scaled top down governmental behaviour change program through the romantic relationship of the two protagonists. One of the characters embraces the program as a blessing, the other resists it as a curse. However, through their human-to-human interaction, one eventually shifts the opinion of the other.

*Smart Conflicts*, on the contrary, largely describes a nonhuman-to-nonhuman interaction in the conflict between a smart and a “dumb” coffeemaker. Here the smart objects therapy service is introduced to us in a bottom up advertisement on

TV, although at this point it is already too late in some sense. We experience all this through the lens of a love triangle, with the human being an outsmarted extra.

## 7.4 Discussion

### 7.4.1 Exceptional vs. Exceptions

This chapter described a shift from design fictions understood as exceptional futures towards design fictions understood as exceptions to the future. Through this shift—due to an infusion of pataphysics—FDL showed what design fiction could look like as a reconceived critical design practice. It did so through the development, design and execution of a course that frames and fosters this design fiction practice in an educational setting over time.

When we look at design fictions in their most exceptionalist sense, throughout this chapter exemplified through the case of *Destination Moon* (1950) and its competing space visions, we are looking at an utterly unconscious design discipline, servile to the point where it is effectively consumed by its scoping forces. This is very in line with Kirby's framing of diegetic prototypes as "pre-product placement" (2010, p. 23). Let us again take a quick detour back to 5.2 and the image of design artefacts as a sort of scaffolding structure upholding our "conditions of dwelling", following Dilnot's reference to Kundera (2003), arguing that a novel is not about reality but existence, understood as the realm of human possibilities as being-in-the-world. If design artefacts, understood in this way, are thus reduced to "pre-product placement", then it seems clear that design as a whole becomes a pure exercise in advertising, irrespective of the ends it is serving. While, from within the perspective of design, this is still technically a design that shows possibility forth, it is offering its persuasive qualities in the blind service of its scoping forces (and consequently, one possibility you should buy), here illustrated with the fusion of technology, economy and of course politics in the grand example of the Space Race. While having a potential for creating self-fulfilling prophecies, design fiction in this exceptionalist sense is ultimately a design that seizes to exist as a conscious discipline.

Turning to design fictions understood as exceptions to the future, I would like to return to Daumal's formula,  $x = (\text{Everything}-x)$  (2012). In FDL, we can think of 'x' as that (imaginary) single future that comes into existence, the dream of exceptionalism that it violently seeks to bring into existence. We can then consider 'Everything' as all the many, many other possible futures that could have come into being. To make sure, pataphysics views of all of these, including 'x', as equivalent

exceptions. What FDL however demonstrates, is a design fiction practice that completely sheds any metaphysical aspirations towards that 'x', as a consequence of understanding that its contribution does not lie in trying to get things right, or even having the slightest aspirations to this goal. So, if getting it right is not the point of design fictions, then what is?

#### 7.4.2 A Design Space As a Synecdoche of 'Everything'

Rather than attempting to approximate the 'x', all the 37 design fictions produced in FDL deliberately and gloriously set out to get it wrong, and this so in highly particular ways. In this sense they consciously explored the 'Everything' instead, and notably doing so by showing themselves forth as exceptions to the future. To be sure, this is a completely different undertaking than heading towards the exceptional 'x'. Crucially, it is not a relativistic exercise where everything goes. In the grandest sense, we can consider the commitment to 'Everything' as an exploration of possibility as such, in the only way possible, as a synecdoche. A series of constraint put in place in the brief given to the students, established the outer boundaries of this smaller, and yet still massive, scope for exploration.

We can think of this as the design space outlined in the project, in particular drawing on Simon (1969) and his attention simultaneously set towards the question of how to search and find satisfactory design solutions, coupled with his sensitivity to the spatial dimension of representing design problems. While we naturally supersede the classic scientific lens in Simon's argument with our current pataphysically infused perspective, we can say that Simon presented a captivating imaginary solution for how to visually and conceptually process "a design space". 'Everything' then signifies the outer edges of this space, as design's total ability to show possibility forth. This is what we can consider design's maneuvering space—the space in which it can operate consciously and also negotiate with its scoping forces. What FDL then points to, is that when we explore 'Everything', necessarily as a synecdoche, and here concretely in the constraints in the course brief, we are still able to engage in the reconception of criticality in design, as discussed in 2.6.

The point on public engagement stresses the discussion of perspectives in relation to ultimate particulars and exception (2.3.2), the difference between what design (fiction) is perceived as vs. what it actually does, what it is capable of, and what unique design-knowledge it is able to contribute to knowledge as whole. FDL deliberately sought to rid itself of any exceptional aspirations (the 'x'), from its brief to its way of working to its final outcome and its engagement with the public, to instead have the 37 design fictions show themselves forth as exceptions throughout. At all stages, it was designed and delivered with clinamen/swerve in

mind, e.g. with structures actively enabling the interweaving effects discussed in 7.3, structures which also leveraged and nurtured a collaborative, experimental culture in the IxD programme.

Further, the commitment to ‘Everything’ rather than ‘x’, came with a fundamental attention and sensibility towards plurality. While working with futures in a plural rather than singular sense, by no means is anything new (see e.g. Hand et al. (2010) or Near Future Laboratory’s *An Ikea Catalog From The Near Future*), FDL adopted plurality as a cornerstone throughout the entire course. There is an important difference between gathering design fictions in an exhibition space post factum, even if they respond to a common theme, in the way that the plural aspect is a consistent driver throughout all the steps of the project: brief, design process, outcomes, engagement.

#### 7.4.3 A Deep Commitment to Plurality

This deep commitment to plurality in the project allows for further precision in e.g. reflecting on how to specifically design for the interweaving effects between the design fictions, the clinamen, and the collisions, with the emergent qualities of confluence and divergence surfacing between the different design fictions. A large part of this exercise naturally has to do with actively including highly different (and sometimes conflicting) voices, perspectives, and narrational modes. In FDL, we encouraged students to critically ground their design fictions in specific cultural settings familiar to them, rather than a generic Western setting. At the same time, we encouraged them to experiment with the expressions of their design fictions, e.g. playing with storytelling and the aesthetics of their diegetic prototypes. As a whole, we can consider this a commitment to ultimate particularity and with that a commitment to (future) reality in its “ultimate uniqueness” (Nelson & Stolterman, 2012), yet with an eye to each of these ultimate particulars being an exception, bouncing against other atoms soaring through space.

From the discussion in 7.3, there are numerous interesting paths to explore in pushing this aspect and vocabulary further. In addition to the take on plurality in FDL, one could e.g. consider the frame of ‘multivocality’ by transposing Bakhtin’s notion of the ‘polyphonic novel’ into design fictions (Geib, 2017). In this space we find *Polyphonic Futures* by Ranner et al. (n.d.), who has adopted Bakhtin’s polyphonic dialogism as a mission statement in the exploration of their *Silken Futures*. However, one could also focus on the entanglement of futures through the lens of Barad’s agential realism (1996). As an example of advancing our vocabulary further, how do these tangents differ in their conceptions of ‘plural design fiction’, conceptually and practically?

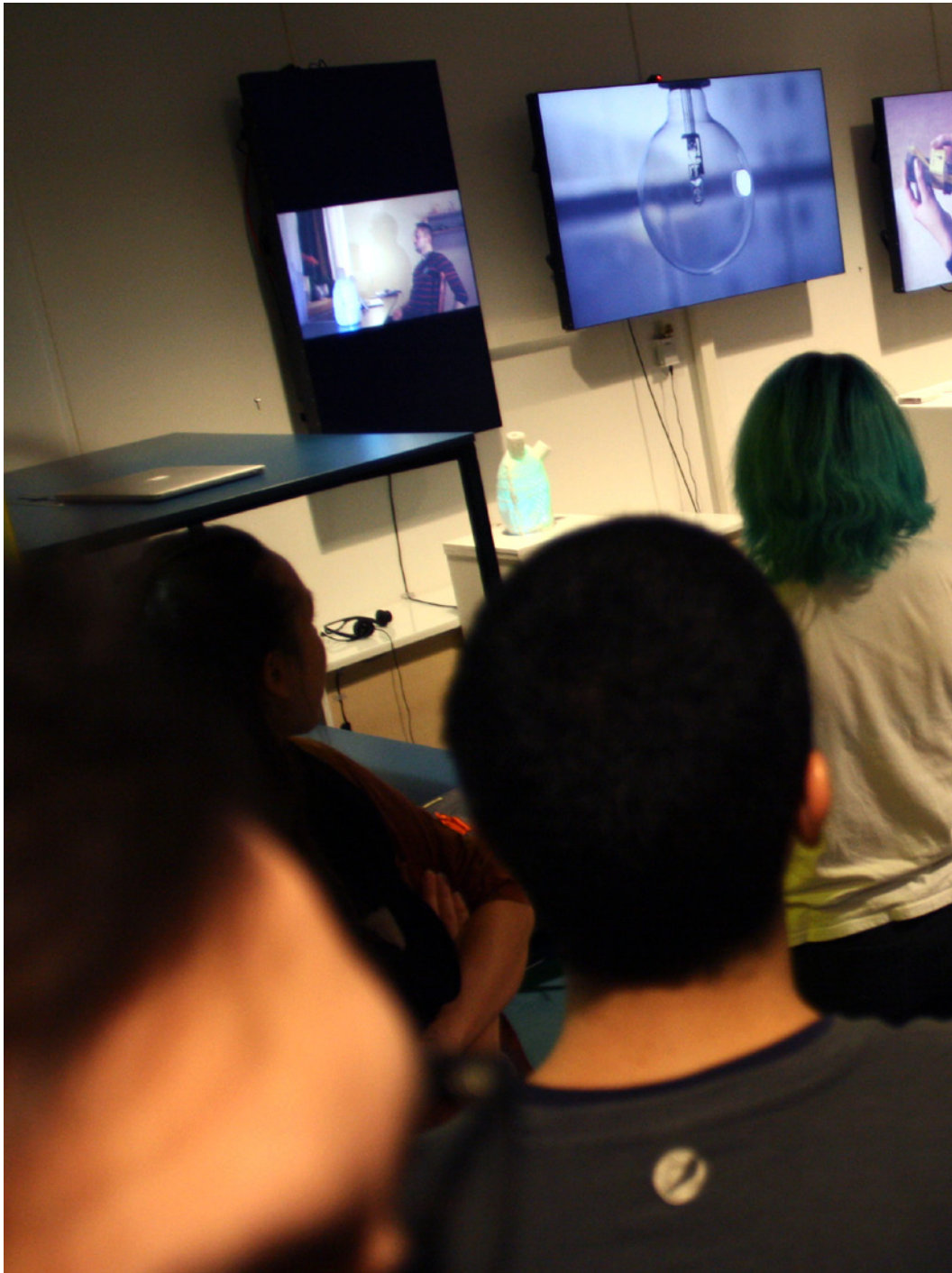
Another element in this commitment to plurality, not only in one year, but across the three years, has to do with the saturation of the design space laid out. In this sense, an important distinction has to do with the critical mass of design fictions in a single, shared design space scoped by the brief. While a design space of course does not come empty, the question becomes: when does a critical mass of design fictions containing finely tuned potentials for interwoven qualities to emerge within a given design space, instead become a mess: a claustrophobic clattering of futures, absorbing any meaningful possibility for friction and collisions and thus leaving no gaps to fill out with reflection and agency for an audience? In other words: when do we simply lose our way in the exceptions? And similarly, when are there too few design fictions for any interweaving effects to occur, for any friction and agency to develop? While the latter perhaps poses a more familiar concern, the overarching question of how to find a balance between the quantity and quality of design fictions on one hand, and the scope and dimensionality of the design space (as set out by the design brief/problem space) on the other, remains paramount. Let us again remind ourselves that this is in no way a problem for pataphysics—a single design solution/artefact is an exception, just as much as 800 solution/artefacts are. But then again, from a design perspective, we could then ask when the pataphysics surface most radiantly, in terms of design fictions showing themselves forth as exceptions to the future, effectively shedding any remaining traces of the exceptional?

A final point has to do with our ways of working with these questions: as part of considering how to design for this balance, we might too have to rethink how we work as designers. Are we able to saturate a design space sufficiently and reach this critical mass in a default work mode of individualised serial monogamy, hopping from one brief to the next, or should we suspend this linear way of working, e.g. in favour of extensive periods of radical promiscuity? How do design fictions understood as exceptional futures enforce the individualised serial monogamy work mode and vice versa? And, recalling Nancy's: "Community is at least the clinamen of the 'individual'" (1991), how could design fictions understood as exceptions to the future open up alternative, more community-oriented dynamics, and new roles for us, in our bringing about of design fictions? The link between the way we do design fictions (craft, collaboration etc.) and our modes of working and building design careers, appears like an overwhelmingly under-researched area. Also, this is a question of how we understand ourselves: Are we design auteurs, co-producers, or perhaps something completely else—who do we want to become?



- [1] This chapter builds on the book chapter Rosenbak (2018b).
- [2] Beautifully captured by animator Christian Brown's: "I wish I could get away with charging my clients a fee for every time they say *Minority Report* to me" (2013).
- [3] The quote is from an interview David Kirby did with John Underkoffler in Los Angeles, CA, on 25 March, 2005 (Kirby, 2010, p. 26).
- [4] For the sake of clarity of argument and focus in this dissertation, the text will critique and argue around a predominantly linear Western time conception, seeing as this is model subscribed to by a vast majority of design fictions. However, this is not to ignore this important line of critique and an urgent need for decolonizing futures and design, but simply due to practical limitations, realising that a proper treatment of non-Western time conceptions is outside the scope of this present argument. For work exploring this tangent in relation to pataphysics, see e.g. Phillips, 2015.
- [5] While existing outside of the scope of this dissertation, it would be relevant to extend Koh's foremost legal and political explication of exceptionalism into a discussion of Agamben's philosophical and historical contextualisation of the "state of exception" (2005), carried out as part of his larger *Homo Sacer* project.
- [6] An example of this model is John Voros' *Futures Cone*, one of the most widely used temporal models in design fiction, critical and speculative design.
- [7] Thanks to current Master's IxD student at UID, Toby Wheelan, for his great work on designing and managing the site.
- [8] This is not to diminish their outstanding standalone qualities, as has also been recognized outside the education context, e.g. by several projects receiving praise and winning design awards.

Fig. 87. (next spread). Documentation from the opening vernissage of one of the three shows held as part of the course (one per year), curated by the students.






chapter 8

# Design Research Failures





Design Research Failures (DRF) is a project that poses one single question: in what way has design research failed in the last 50 years? It emerged from the schism I experienced between the way in which failure is celebrated in design practice and education, and how little failure is articulated and valued in design research. Further, it was sparked by the 50th Anniversary of the DRS, and their anniversary call for projects that “furthers our understanding of the origins of design research as well as the role and contribution the DRS has played in its development”. Since its successful launch at DRS, DRF grew into a broader discourse, including a web platform and a series of following engagements within different communities in design research, set in Brighton (UK), Edinburgh (UK), Sheffield (UK), Oslo (NO) and Nantes (FR). Deliberately refusing the success-based approach, where a past narrative of success is linearly extended into the future, DRF instead explicitly seeks to nurture an open-ended conversation around the failures of design research, including a diverse set of voices. While the project does not provide a conclusive end point (“THIS is how design research failed in the last 50 years”), it does present an incomplete, growing open data set, from which a multitude of imaginary solutions can be articulated.

## 8.1 Janus-Faced Design

Design Research Failures (DRF) is a project that was born out of a particular moment of celebrating how far design research has come. Specifically, it was originally spurred by the DRS 50th Anniversary call for projects that “further our understanding of the origins of design research as well as the role and contribution the DRS has played in its development”. The 50-year anniversary of DRS, the longest established, multi-disciplinary worldwide society for the design research community, posed an opportunity for a unique reflective moment. 50 years is half a century: as a celebratory midpoint it is equal measures of achievement and anticipation, carrying with it not only a strong sense of past and future, but perhaps most importantly an acute awareness of the ways in which these temporal perspectives are deeply intertwined in the particular present moment.

The anniversary speaks directly to Dilnot’s diagnosis of design, its inferiority complex regarding a lack of design-knowledge on one hand, and a never-ending, and ever thinner, overstretching into new domains on the other (1999). While Nelson & Stolterman includes the design—not the invention!—of fire and the wheel in the tradition of design (2012, p. 11), a celebration like this points to how young design research is, at least in a more formally acknowledged and recognizable disciplinary sense. This is a paradox fitting to the diagnosis: how design has protruded our lives of human being since we designed fire, yet how recently these massive steps forward have been argued, not as inventions, mere luck or evolutionary steps, but also as design.

This point is further amplified by taking a quick glance to the disciplines that design research interfaces with (law, philosophy, health, engineering, sociology, etc.), and their centuries, sometimes millennia old research traditions. This is the undeniable context in which a work like this dissertation exists. We can further recall that the first international conference on doctoral education in design was held only in 1998, and how the conscious turn away from the scientific quest for a definitive, exhaustive definition of design, along with the rise of research through design/constructive design research as a methodology and an acknowledged mode of knowledge production within design research, only has gained momentum in the last few decades. However, much in line with the point concerning the 50 years, it is of course just as possible to re-approach this consideration of age from the point of the glass being half full: the fact that we can talk of the development of a design discourse, with trajectories being drawn out, visible conflicting positions surfacing across the range of 50+ years, and discursive shifts undergoing, is a significant accomplishment from a research perspective.



Indeed, while the infancy of design research is undeniably, this limited stretch of time just as undeniably designates immense shifts forward. While a lot of water has passed under the bridge since Buckminster Fuller proclaiming the 1960s as the ‘design science decade’ (2.3), it is just as obvious that design research (and design at large) is facing a number of serious challenges and problems here 50 years later. To stick with the example, it is not like ‘design science’ has been left in the dustbin of history—indeed it is alive and well, as exemplified through e.g. Hatchuel & Weil’s work on a unified design theory (2013), or Love’s work on a meta-theoretical method (2000). Indeed, some of these challenges that design faces are quite old. Some, by way of their foundational nature, seem to have been with design research since its very inception as a field of inquiry, e.g. the question of what really constitutes design specific knowledge, and how to define design. Indeed, as has been argued, continuously keeping the fundamental, particular questions of design in play, rather than attempting to answer them or shut them down once and for all, is an activity at the heart of an intellectual discipline (Dilnot, 1999; Redström 2017). However, along with these fundamental questions, design research too faces a continuous fallout stemming from design’s preoccupation with change: new meanings, values, dreams, desires, societal models, notions of sustainability, cohabitation, interactions, technologies, manufacturing methods, materials, currencies, etc. All of this newness keeps being hurled towards design, and by extension design research, demanding sense-making and form giving. We have already tied the fundamental questions facing design to Dilnot’s point concerning design’s inability and disinterest in knowing itself (1999). Following this diagnosis, we can then look at this wave of newness as a cornucopia of emerging (and arguably convenient) distractions for design research. However, this set of “emerging” questions is not a discreet intellectual category, without any potential for connections being made to the fundamental questions. On the contrary, the constant stream of “emerging” questions facing design have the potential for continuously bringing the fundamental questions of design into play in ways new and old at once. However, the delight with which design more broadly applies its energy in this emerging set of questions alone, leaving its fundamental questions undernourished, i.e. not bringing them into play time and again, actively contributes to the self-inflation of the field, the other side of Dilnot’s diagnosis.

This is a point that gets even more pointed in this framing of the 50 years anniversary. Indeed, what is at stake in this particular moment and occasion, precisely concerns design research’s self-understanding. Fireworks and speeches aside, does a 50-year anniversary not present an excellent opportunity to face oneself in a conscious manner? To sidestep the noise of the emerging flow of questions (2018: what does the rise of artificial intelligence mean for designing, how can we design for blockchain, develop design thinking 4.0 etc.) and embrace this



critical opportunity as a moment of substantive self-reflection? If there was ever a moment to take a sudden interest in oneself, should this not be the occasion?

## 8.2 The Lack of Articulating Failure in Design Research

Much like the preceding discussion of the 50-year anniversary of DRS presenting a moment to simultaneously look ahead and back in time, Henry Petroski, in his work advocating how success in design and engineering arises from an acute awareness of failure, too departs from design's Janus-faced nature:

"In the past, design sees at the same time an inspiring and yet an imperfect world, full of things to be both admired and improved upon. Of course, the past is also the repository of downright failures, monuments to ignorance, excessive optimism, and hubris. If heeded, the past thus provides caveats and lessons for future designs. If shunned, it will still haunt the future, always lurking in the shadows of success. In prospect, design too readily sees a world of perfection, one that is user-friendly and error-free. Under no circumstance should we expect that this will ever be universally the case" (2006, p. 163).

While Petroski's argument rests on a set of cases in the domain of mechanical and civil engineering, he consciously discusses this limitation as a result of his direct personal experience in this field, arguing that while 'the functional' is only one out of many dimensions of design, one book can only tackle so much. In fact, Petroski's work is remarkable by way of this clear limitation in scope, combined with its commitment to the focus set: a range of close readings of the role of failure in concrete instances, e.g. the manned NASA space flights, bridges, Microsoft PowerPoint slides and more. All these examples fall within the scope of the artificial, as discussed in this dissertation.

Petroski's contribution to the constructive understanding of failure in design, is a rare one. Not that failure is a stranger to designers. Ironically, as all design students learn, they should fail faster to succeed sooner. In fact, this particular framing of failure is perhaps one of the most celebrated tenets of design thinking, as originally phrased and championed by David Kelley of IDEO, and perpetuated not only in contemporary institutions such as d.school in Stanford, but also through webinars, consultancy Microsoft PowerPoint slides etc. across the globe. With no intention of stripping this methodological emphasis on failure as an integral constructive part of the design process from its original merits, in the context of this argument, we should nonetheless observe how this conception of failure lives a large part of its life at the trailblazing frontier of design overstretching itself. This observation

is all the more curious, when combined with the fact that failure plays a close to non-existent role within design research. Thus, as seen through Dilnot's diagnosis of design, failure resides as gospel in the outer orbits of design research, while being largely absent in its core.

This is however an oversimplification of things, as notable exceptions exist within the design research spectrum. Tellingly, all of these rare accounts open by acknowledging this very premise, observing the lack of articulation of failure in design research and design more broadly. Chris Fremantle & Gemma Kearney (2015) open up the question of failure in the context of art and design, drawing on a qualitative study of anonymized interviews with lecturing staff in a UK art school. They explicitly position this inquiry away from the notion of technical failure, instead focusing on failures formed through the judgments by artists and designers, users and audiences (*ibid.*, p. 310). Of most importance for this present argument, is their conclusive point (particularly drawing on Barolsky, 1997) on the individually scoped narrative of failure, "the conflation of failure in a work with failure of the course, and failure of the work with the person as failure" (Fremantle & Kearney, p. 317). Thus, at this particular intersection between design and art, with its strong modernist undercurrent (Barolsky, 1997) we perhaps see this conflation most clearly. Importantly, the authors add to this that collaborative practices and co-creative processes limit this conflation: "It is not that collaboration and co-creation cannot involve failures, but the narrative of the anxious and doubt-driven artist just does not have meaning in a context where responsibilities are shared" (Fremantle & Kearney, p. 317).

Yet another rare example, is William Gaver et al., and their paper aptly titled "Anatomy of a failure: how we knew when our design went wrong, and what we learned from it" (2009). From the vantage point of interaction design in HCI, this paper offers a close reading of the failure of a specific design experiment and its implementation, namely the Home Health Monitor: a system consisting of various sensors installed in a household, and various mechanisms for feeding back an aggregated sense of domestic wellbeing to the household occupants. The paper is rare in that it really goes under the hood of failure/success in a binary sense—not only is the failure of the project unpacked in great detail, the authors also argue that the specific insights stemming from this analysis has a wider relevance, for "what it means for any system to succeed" (Gaver et al., 2009, p. 10). Finally, they make the point that their case of the failure of the Home Health Monitor shows that interpretative systems indeed *can* fail. This is an important contribution tied to their discursive context in HCI, in that any kind of feedback for the kind of systems they discuss, sometimes is argued to support the system's interpretative flexibility, effectively undermining any possibility to distinguish whether it was

successful or a failure, since a failure can also be argued to be a success in this case. In that context, the ability to call out an outright failure in unambiguous terms is highly valuable.

Getting inspired from observing failures in design, and referencing the paper above by Gaver et al. (2009) amongst others, Nicolas Nova, from the perspective of user experience research, takes a step further and proposes failures as a tactic in design (2010). Asking “what kind of insights can be derived from leading people in the wrong direction”, he presents two examples work exploring this question, both collaborations with Fabien Girardin. One of these, ‘Catchbob!’, is a location-based game that would deliberately locate people in the wrong locations, allowing Nova and Girardin to observe the mental model of users through this parameter of wrong location: “Should positioning be accurate? What is an acceptable uncertainty?” (ibid., p. 69). The other, *Wii Superpower*, plays with the Nintendo Wiimote and the sensitivity calibration. As players embraced this wrongly calibrated high sensitive to motion, Nova reflects that “provoking failures was a way to disrupt the way game designers thought about players’ interests” (ibid.) Each of the cases, along with Nova’s reflection, points to the way in which his proposed tactic disrupts and questions some of the foundational assumptions in his work. Notably, his notion of failures as a provocative tactic is complimented with an ethnographic sensibility to the outcome of the experiments. In addition to the discovery of unknown failures that can then be corrected, he argues that the way in which users, faced with failure, are able to adjust their behaviour or overcome them is inspirational in several ways: it allows designers to anticipate and prevent failures from happening in the first place, trains them in how to communicate failures to users (e.g. error messages), or to find solutions, putting an end to failures. Additionally, and conclusively, he adds: “(...) the use of fieldwork in the context of misuse (or flawed use) can be a way to shed some light on original design possibilities and questions” (ibid.)

Finally, from the perspective of industrial design and design criticism, Peter Hall urges us to explore the failure of objects (2014) by deliberately moving beyond the shiny images of objects that rest on several intersecting fallacies: “In that eye-popping photograph of a decontextualized designed object (or faux-contextualized amid spotless architecture and lithe, disinterested-looking models) is a hybrid of three big ideas: the classical notion of the ideal form, the Cartesian subject separated from the object, and the adulation of the present” (Hall, 2014, p. 155). Hall convincingly unpacks all three of these ideas and shows how we arrived at this point, using the key example of the way in which industrial design artefacts were elevated in the exhibition *Machine Art*, curated by Philip Johnson at the Museum of Modern Art (MoMA) in 1934. Here, the ideal forms were framed in

the catalogue through references to platonic metaphysics, the exhibition design performing a strong Cartesian subject-object divide (constructing a discourse of desire), and framing the timeless, yet astonishing newness of the design artefacts placed on pedestals, as a quality in itself, eventually equalling the good with the new (*ibid.*, pp. 156-57). Through the philosophical works of Latour, Serres and Heidegger, Hall effectively punctures this glorified image of industrial design artefacts, along with the way in which the narrative of success imbued in this very image has superseded the thingness of the actual design artefact (drawing on Heidegger, and extending on the discussion in 2.4.3). His recontextualisation is framed not only through Heidegger, but also using Serres' quasi-objects (Serres & Latour, 1995), Latourian relational methods (ANT) (Latour, 1996) and ontological design (Fry, 1999; 2008). He puts this theoretical lens to work through the examples of the Concorde jet and IDEO's Node chair. In essence, Hall wants us to pay attention to the life of design artefacts outside their black-boxed shiny lives as objects, either "when things stop working or before they start working", as the moment when "(...) intentions, motives, and negotiations reveal themselves bare faced behind the objects and facts" (Hall, 2014, p. 166). Curiously speaking to Fremantle & Kearney's conflation of failure (2015), and its intimate links to modernism (Barolsky, 1997), Hall contextualises his argument as part of a broader recognition of the end of modernity.

Thus, to further summarize this disparate string of rare examples of articulations of failure in design, we should note that a majority of the authors take issue with the sometimes confused relationship between success and failure, in a sense demonstrating the way that design takes delight in its dichotomies (Redström, 2017). Petroski advocates for a failure-based approach to design problems (as opposed to the more intuitive, yet false success-based approach). Gaver et al. argue that their demonstration of the ability of an interpretive system to fully and completely fail, thus pitting itself against the general state of relativity in the field where any kind of interpretation in the system can be argued as a success. Conversely, their articulation of the intricacies of failure, is argued by Gaver et al. to be helpful in determining "what it means for any system to succeed" (2009, p. 10).

Across the pieces, we too find an unpacking of the allure towards success within design. Hall discusses this as a condensed quality in the shiny object of industrial design. Petroski argues that designers, like all humans, are subject to complacency, overconfidence, and unwarranted optimism (2006, p. 194). Following this, a question arises across the literature: who can afford to fail? Fremantle and Kearney highlight the fact that students, although embracing the constructive role of failure in their artistic practice, still have a fear towards failing a course. This resonates with the way in which the Princeton professor Johannes Haushofer, with

inspiration by Melanie Stefan's "CV of failures" (2010), initially was lauded for the publication of his personal "CV of failure" in the *Guardian* (2016).

However, the praise was not univocal, as he was swiftly critiqued in the same newspaper on the grounds that only people with a certain level of success was in a position to publish a CV of failure in that way (Sodha, 2016). The point resonates with the literature on failure in design research. Petroski and Hall employ a certain distance in their selection of prominent historical design cases of failure. Fremantle & Kearney build their entire argument on a qualitative study of anonymized interviews with lecturing staff. Hall's narrative of failure around IDEO's Node chair clashes with Kelley & Kelley's own account of the Node chair, which in their perspective was a step forward from the previous failing model, the wooden traditional classroom chair (2013). As we learn, the design team at IDEO reached this result from more than 200 prototypes. Not only are the perspectives of Kelley & Kelley and Hall very different in this example, the failures they discuss are clearly also different in nature: from being a necessary step in a design process ultimately leading to success, to a fundamentally problematic occurrence in industrial design.

These differing perspectives also point to the crucial question of who gets to call out the failure and the success in design? From within the (failing, succeeding) practice or from the outside? Similarly, it is worth reflecting on the fact that the Interaction Research Studio at Goldsmiths, University of London—a largely successful design research studio—is the group of design researchers drawing up an anatomy of a failed design experiment. Could a small design research environment, recently established, and facing a precarious position within its home university, with very limited funding and publication record, allow itself to publish a similar paper? In other words, how many tales of success would enable you to admit failure in great detail? Additionally, as Fremantle & Kearney concluded, the very fact that failure is distributed amongst a group engaging in a collaborative practice, fundamentally changes the situation.

Also, in the case of Gaver et al., we should pay attention to the scale of failure. Home Health Monitor was one experiment out of a larger project, offering a reading of the failure as a potential step to success in the next iteration. To be sure, this critique is by no means meant to undercut the value in the work or argument put forward by the authors, but simply to point to the highly specific context, scale and stage in the research process where exists. Could we e.g. imagine a detailed account of a failed design research practice or studio/company? Surely, this would be something else. Nova, by proposing failures as a deliberate tactic in design, starts pointing to the possibility of a failure-embracing practice, while also raising the important distinction between taking on-board failure as a constructive catalyst

for insights vs. using it as a post factum tool of diagnosis, analysis, and reflection.

This was not an attempt of making a full literature review on the role of failure in design research, but rather to point to the fundamental lack of articulation of failure in design research, by way of touring a selection of some of the only examples we find. Between them, several red threads emerged, which we will return to in the discussion in 8.9. At this point, let us turn to the experiments carried out within DRF.

### 8.3 Experiment 1: DRS2016 Launch

As was already described, DRF was originally spurred by the DRS 50-year anniversary call for projects that “further our understanding of the origins of design research as well as the role and contribution the DRS has played in its development”. The anniversary of the society seemed like a timely, appropriate moment for design research to reflect on what the field had achieved, and as part of this, how it had failed. Thus, from the original application the following question emerged as a critical, constructive hinge between past and future:

In what way has design research failed in the last 50 years?<sup>[1]</sup>

To my great surprise, DRF was one out of three projects to be successful in the DRS 50th Anniversary Awards programme. Beside financial and institutional support to execute the project at DRS2016 and beyond, the award also included an opportunity to present the outcome at a 50th Anniversary Event to be held as part of the conference.

With the award came an iteration cycle for delivering the proposed concept. The original idea was to put forward the question to 25 DRS Fellows, who was then each invited to extend the invitation to someone else that they would also like to see respond. The question was deliberately phrased in a provocative manner, and the invited responses were to stay below 100 words. Following the concerns around who can afford to fail in the previous subchapter, I hoped that this initial, and somewhat diverse mass of responses would deflect the question of failure away from any single person or institution, in a way sharing the responsibilities, like Fremantle & Kearney argued (2015, p. 317). The idea was that these initial responses would be edited into a small volume to be launched at the conference. In addition, the concept proposed a confession booth structure at the DRS2016 conference, allowing all conference participants to share their personal design research failures and/or reflections on the publication at the conference.

While these two elements stayed as core strategies, collecting responses prior to the conference, and opening up the question in an interactive format at the conference, the project underwent several changes prior to DRS2016. Instead of a more standard publication and a conference booth, the format ended up merging into a physical exhibit simultaneously displaying the pre-conference responses as well as inviting for new responses to be made and exhibited. As a result of the initial pre-conference inquiry, 26 responses were produced and designed prior to DRS2016.

The format of the responses were A5 postcards (digitally functioning as scalable posters), employing a diverse set of colourful typographical designs, playfully giving form to each response, and working with the juxtaposition between the festive nature of celebration and any negative connotations that ‘failure’ might hold for the audience, at least at the outset. I hoped that these initial responses would act as a catalyst for further reflection at the conference, as we put together a physical exhibit where conference participants were encouraged to hang their own responses, which they could write/draw out in hand on printed A5 template cards. In this way the exhibit would constantly evolve, as responses were being added and moved. The exhibition space itself acted as a place for design researchers to engage each other over the responses. It was ideally located on a mezzanine, next to a large space where people would pass through throughout the day and gather during coffee breaks.

Much like the project reached out to a diverse group of people rather than a single individual, I too want to acknowledge that its execution was due to a team effort. This is why I deliberately write ‘we’ at times. The design of the 26 pre-conference A5 postcards (as well as later designs) were done by Marije de Haas and myself. Further, the execution of the project at the DRS2016 was possible with the collaboration of several people—here I would non-exhaustively like to highlight Giovanni Marmont, Peter Lloyd and the DRS2016 organising team, Ilteris Ilbasan for assistance with the design of the bamboo exhibition stand, and Tom Meades and his friend Jack for help with setting it up in Brighton.

In addition to the response cards being exhibited, a large number of copies of the pre-conference cards were printed and stacked on a table, for conference participants to assemble and take away. The fact that the responses were printed as stand-alone, very different looking cards emphasised the diversity in the responses, along with the equality between them. With this additional format I hoped that the responses might extend and spark conversations outside the conference space itself.



The amount, quality, and diversity in the new responses produced during the conference, and the overall reception during DRS2016 (both at the conference and online) was overwhelmingly positive. I was very pleased to see so many participants share their thoughts, both informally in discussion, and through submission of new responses. The exhibition truly did change throughout the conference, and we had to take down some of the “older” responses to make space for new ones. The presentation I gave at the 50th Anniversary Event presented an excellent opportunity for introducing the project to a larger audience, and establish its critical connection to the 50-year anniversary of DRS. Following the conference experience, it became clear that there was a need for this discussion to expand beyond this initial experiment.



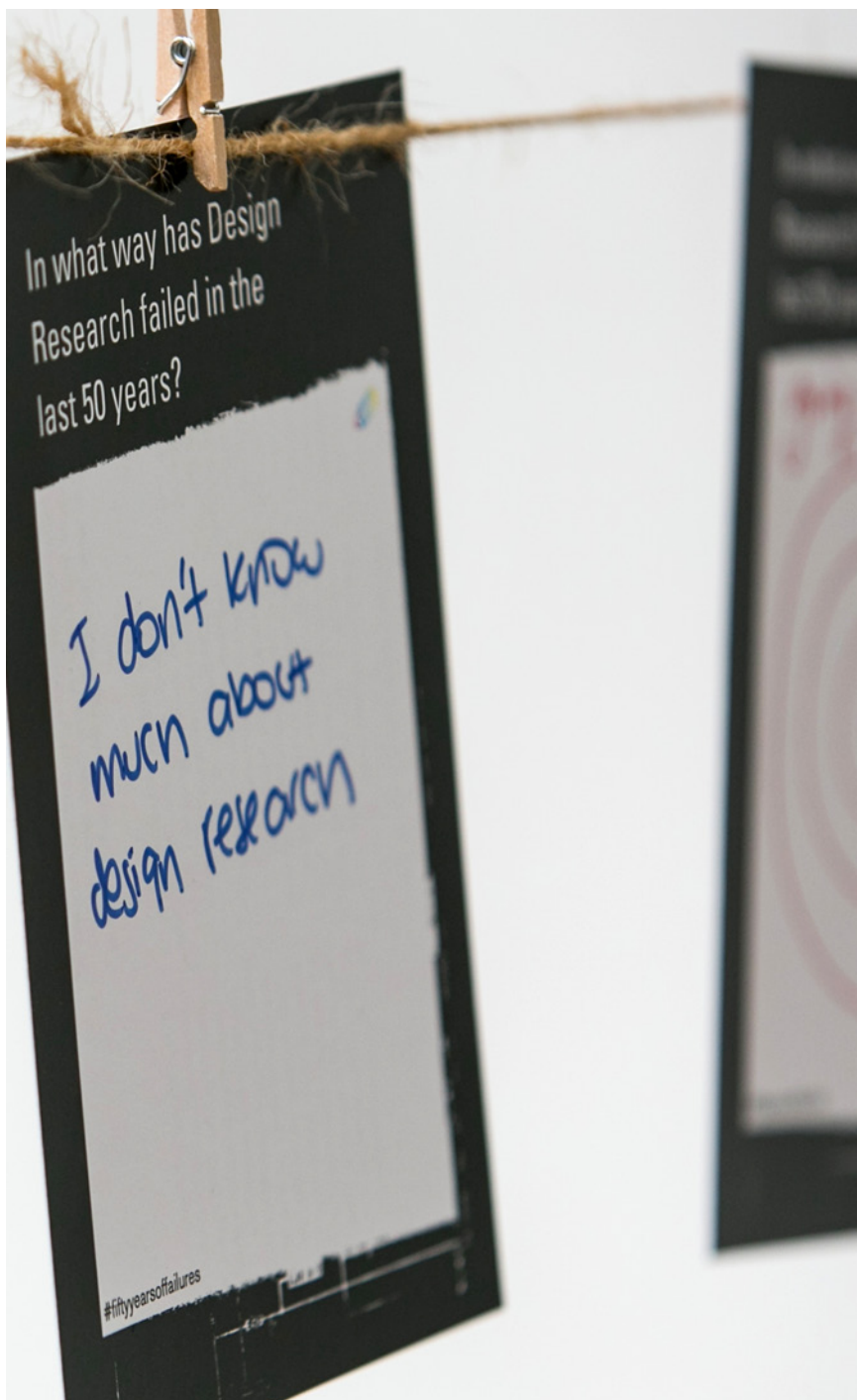
Fig. 88. (above). The DRF exhibit at DRS2016.

Fig. 89. (next page, top). A DRS2016 participant taking away DRF cards.

Fig. 90. (next page, bottom). DRS2016 participant engaging with the exhibit.

Fig. 91. (p. 263). Close-up of some of the responses submitted during DRS2016 © Pete J Jones





## 8.4 Experiment 2: <http://designresearchfailures.com>

At this stage, I decided to make a platform for prolonging the conversation: <http://designresearchfailures.com>. This was also when the project changed name to the current 'Design Research Failures'. While DRS is the longest established, multi-disciplinary worldwide society for the design research community, it is by no means representative of all design research (neither does it claim to be). Thus, from being intimately tied to a highly specific event, the celebration of the 50-year anniversary of the DRS, I was interested in opening up the project to a larger audience, and consequently embrace a much broader design research community. This was also in large part driven by the responses I had received up until this point—a large cluster revolved around the divide between academic design research and design research in the industry, pointing to the fact that DRF up until that point had led a largely academic life. Across the contributions, calls for reaching out beyond the historical boundaries of the design discipline emerged too: beyond Eurocentrism, beyond the domination of males, towards connectivity, digital technologies, other geographies, cultures and disciplines. It was interesting for me to reflect on the way that the responses directly implicated DRF as a design research project. Thus, as part of a more broad and inclusive reframing, I also rewrote the description of what the project is. In this re-iterated account, the 50-year anniversary of DRS thus was repositioned into an important starting point, a significant, and lasting catalyst so to say<sup>[2]</sup>. This shift is evident in the 'About' section on the website. In addition to telling the story of how the project started, the following sections were added:

One of the key objectives for this project is to continue to facilitate an inclusive, open-ended conversation characterised by fruitful dissensus, rather than aiming for a single conclusive answer (THIS is how design research has failed in the last 50 years). In this pursuit we embrace the discipline of design research in its entirety and diversity; across gender, age, race, geography, politics, religion, institutions (or lack thereof), academia + industry + third sector.

Importantly, asking the question: 'In what way has Design Research failed in the last 50 years?' is not about reflecting on "why didn't we" but instead taking a shortcut towards "why don't we". In this sense, Design Research Failures is ultimately about anticipating and co-creating the future of the design discipline (<https://designresearchfailures.com/about/>).

Some of these points had been key for the project from its very beginning, and was now simply put together in a short pitch. What I would like to highlight in this

re-articulation is the coupling of constructive dissensus (as opposed to consensus) with an explicit embrace of diversity. I complimented this strategy of ‘telling’, with one of ‘showing’, by deliberately inviting new voices into the conversation that I did not see there already. This is not to make some blue-eyed comment on the way in which DRF has managed to bring together a perfect representation of the incredibly diverse and rapidly developing design research scene. Surely, whole communities aren’t there, and I can only speculate that some groups of designers and design researchers still might feel excluded, e.g. by the design aesthetics used on the DRF website, or the affiliation to the DRS. That said, it was more a conscious editorial design tactic to bolster the conversation with a range of different responses and respondents, essentially with the aim of showing site visitors that, no, you don’t have to be an elderly white male design professor, in order to state the ways in which design research has failed in the last 50 years.

The DRF website is very minimalistic in its presence, and presents an ever changing grid of responses as entry points to the site. The hierarchy between responses is intentionally kept flat, and the structuring commits to the pataphysical principle of equivalence in its representation of the responses. Everything is up front. No submission gets censored (the single exception would be on the grounds of offensive content, a moderation I have not yet had to make any use of). The grid composition changes with each new response reconfiguring the whole through new “line breaks” and visual connections to adjacent responses, a new set of colours that speaks to one another etc. Adding to this, the responsive design changes the composition as well, when you scale your browser, view it on another device etc.

In terms of functionality, visitors are able to comment on each response, and most importantly hit ‘Contribute’ to write out new responses using a simple web form. In addition to the ‘About’ section already mentioned, there is also a ‘Blog’ section, tracing the different experiments happening within the project frame, and a ‘Library’ collecting the very rare resources on failure in design<sup>[3]</sup>. The latter is both functional, as a collection of resources, often with direct links, while also emphasizing the *raison d’être* of the project, spelling out the fact that failures aren’t articulated in design research.

Importantly, rather than becoming the project itself, the DRF website, as a web platform, served as a foundation for gathering the results of a series of ensuing experiments, while maintaining a steady digital presence in the occasional dearth of analog events, as a continued experiments in itself. Thus, it can be said to play into all the other experiments described in this chapter. Currently (November 7, 2018) it houses 114 responses, with the 99 most recent ones showing due to technical constraints on in the CMS site template. From its launch on October 26, 2016, it

has maintained a steady flow of visitors, which naturally spiked with the launch, and after that with new responses being uploaded and referrals made. To date (November 7, 2018) it has had more than 5k unique users and 10k pageviews<sup>[4]</sup>. More importantly, while it is clear that the project experiences the biggest traffic by far from US and UK, it also has quite a broad outreach to different parts of the world (fig. 92, this page). The site has produced several new responses through its ‘Contribute’ feature, although this has been rather limited, as compared to invitations and analog responses submitted during events.

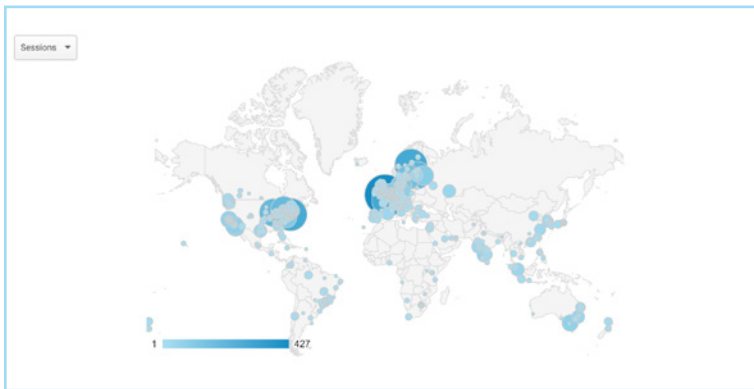


Fig. 92. Traffic to <http://designresearchfailures.com>, showing top cities, from Google Analytics.

### 8.5 Experiment 3: RTD2017 Parasitic Presence

As a PhD student in design, subscribing to the methodological tradition of constructive design research, the schism I experienced between the way in which failure is celebrated in design practice and education, and how little failure is articulated and valued in design research, struck me as particularly intriguing. RTD2017, as part of the Research Through Design (RTD) conference series, dedicated to work in the research through design tradition, seemed like the perfect venue in this sense. RTD has developed a conference format called ‘Rooms of Interests’ as a commitment to exhibiting RtD artefacts and literally staging a discussion around them, rather than e.g. relying on standard presentation slides showing documentation of said artefacts. While this re-thinking of ways of disseminating and discussing research without a doubt is an important step forward for the RTD community, it also points to Hall’s concern around the black-boxing lives of objects (2014). Finally, the before-mentioned schism, addressing the gap







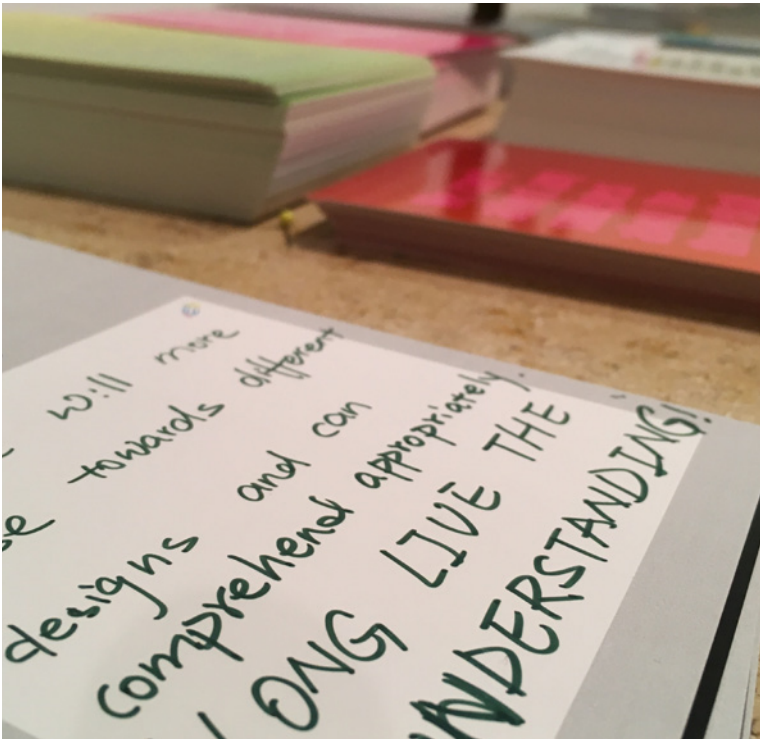
between design research and design practice, was also an emerging thematic within the DRF responses we had received this far in the project, and in this sense this experiment also was a response to that.

In addition to having a physical exhibit not unlike the one at DRS2016, I tried playing with the existing responses, juxtaposing them in pairs, hoping that it would catalyse discussion. This reflected a certain quantity in responses, and a subsequent maturing of the project, with the realisation that some of the responses seemed to speak to one another. Of particular interest was pairs of responses that seemed to more or less conflict one another. This surfacing, not only of the articulations of how design research had failed, but also of contrasting positions in the responses, was an important driving factor for the experiment. Examples include John Chris Jones stating that: “I think the failure of design research is a failure to change the world” (2016) and Arjun Dhillon responding: “Design research has failed to define design” (2016).

The format for this additional engagement was a parasitic, unconference-like presence, e.g. staging a pair of responses on the big screen right before keynote talks in the auditorium and on monitors in the exhibition space. It was hard to determine how effective the strategy ultimately was for engaging people in the question put forth, but at least the experiment seemed to strike a nerve in some sense, as a selection of new responses specifically addressing the schism mentioned earlier gradually appeared in the pop-up exhibit during the conference. Additionally, I also had the pleasure of personally taking part in several great discussions around the project around the other sessions. I can only hope more such conversations took place.

Fig. 94 & 95. (opposite page). Documentation of the DRF exhibit at RTD2017.

Fig. 96–100. (next spread). Examples of juxtaposed pairs of DRF responses, including their deployment at the conference.

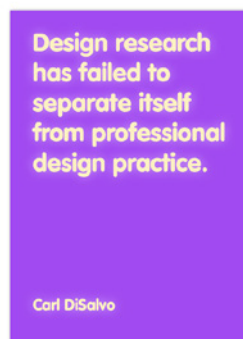
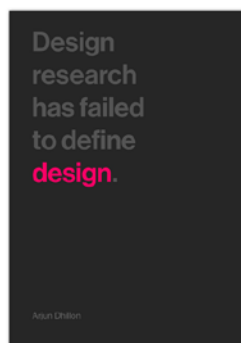




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Design Research  
failed in the last  
50 years

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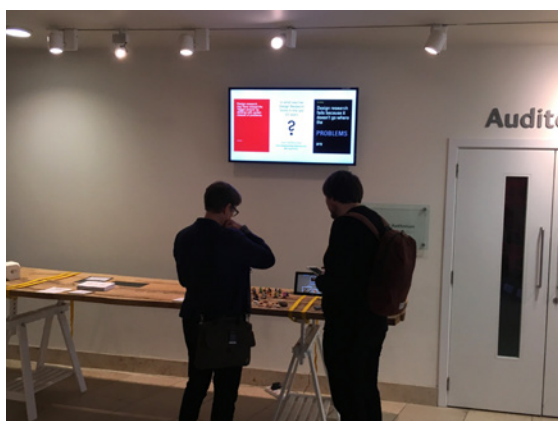
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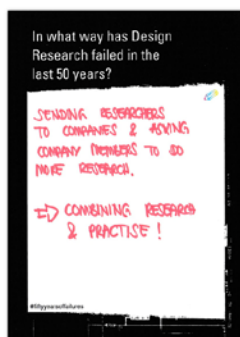




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http://designresearchfailures.com  
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## 8.6 Experiment 4: PhD by Design 2017 Catharsis Workshop<sup>[5]</sup>

### 8.6.1 Background

PhD by Design is a forum for vocalising, discussing and working through many of the topical issues of conducting a practice-based PhD in design (<http://www.phdbydesign.com/>). PhD by Design takes the format of a series of recurring events, either stand alone event, or satellite events, e.g. running as an integral part of DRS2016, and most recently DRS2018. I should mention that, at the time of writing, I am a part of the Organising Committee of PhD by Design—at the time of doing this workshop, I had already participated in several different events, taking on several different roles, such as participants, chairing a session, and running a workshop.

Addressing DRF in the context of PhD by Design, a community of practice-based design PhDs, methodologically existing somewhat in the same space as the RTD conference series, seemed like another perfect opportunity to move beyond the absurdity stemming from the schism between the way in which failure is celebrated in practice and education and how little failure is articulated and valued in design research. Situated in this very schism, the workshop ‘Your Design Research Failures: An Hour of Catharsis’ was an experiment in creating a dialectic between the larger historical scope of failures in our discipline, and the personal failures each one of us experience in our everyday research practices. In that sense it drew on the initial idea of a confession booth from Experiment 1 (8.3), while reappropriating it into a different conversational format.

### 8.6.2 Workshop Description

In the spirit of PhD by Design, the workshop opened with an alternative round of introductions, where each participant would share their name, institution and a way in which their research practice had failed. An incredibly diverse palette of failures emerged as everyone introduced themselves. In the first exercise (‘Failures and you’) participants were grouped in pairs, and then had a printed card from <https://designresearchfailures.com/> handed to them. On the basis of the assigned DRF card, their task was to discuss the question: “How can you relate to this failure—how do YOU experience this in YOUR research practice?” The idea was to explore the dialectic between the larger failures of the field and the different concrete ways in which we face these issues in our research lives.

Discussion excerpt:

One of the participants objected to a DRF card that stated: “A dialogue cannot

be held by only questioning. It needs personal stances and tolerance to productive conflicts, in order to grow,” arguing that it was an unnecessarily long and complicated sentence. The card was taken to exemplify a need to overly romanticise and poetically talk about research. When countered by another participant, who saw this as risking reductionism, and further argued that we should embrace complexity if required by our work, the participant clarified that she did not have an issue with complexity as such, but decorative complexity just for the sake of complexity. The discussion around the particular card continued, as another participant critiqued the notion of “tolerance” and power relationship between the two parties, with one tolerating the other.

In the second exercise (‘Just fix it’) participants were regrouped into new pairs and had a new card assigned to them, along with the question: “Every failure holds a promise for success—how would you tackle the failure outlined in front of you? show us (sketch, build, make, perform)”. As a deliberately premature and near impossible task, the idea behind this exercise was to quickly shift perspective and start exploring how each failure holds potential for future success(es).

Discussion excerpt:

Reacting to a card stating: “Design research has not been able to characterize what is good by design. Everything still depends,” one participant explained that her group thought this was a success rather than a failure, seeing as design is not about moral judgement. Another group was tackling different problems they encountered in a card stating that “the risk of design research is that you combine mediocre design with mediocre research. This is a pitfall that must be avoided by any cross-disciplinary practitioner. The challenge is to shine in both traditional disciplines: research and design. If you are building a bridge you need a good connection on both ends. And if you succeed you change life on both sides of the bridge”. The group thought this was a really harsh statement, with a limited focus on design as something you produce, objecting that design is more about the process. They further questioned the egocentric focus on the designer and her position as the one who bridges and shines on both sides.

### 8.6.3 Discussion

The workshop was deliberately framed as an intimate window in time, dedicated to discussing a subjective and somewhat sensitive topic that rarely finds its way into conference sessions or seminars. Rather than aiming for a list of solid outcomes at the end, the workshop was intended to act as a catalyst, fuelling rich conversations and important open-ended questions, which conference participants potentially could return to, beyond the workshop and the event as a whole.

The two main exercises saw the participants organised in pairs, in order to prioritise the time for participants to effectively bring their subjectivities into play through reflecting on one failure together. Much like the larger project, there was no push to reconcile perspectives or strive for any collective consensus. Rather, the workshop, again like the larger project, focused on curating a fruitful clash of perspectives, an open-ended state of dissensus.

It was great to witness the high level of engagement and energy throughout the workshop, and it felt as if the session could easily have been longer. Based on the brief collective discussions we had after each exercise, where groups were encouraged to share insights from their conversations with everyone else, it seems as if the groups spent the majority of the time critiquing the particular DRF card they were dealt. While this is apparent in the discussion excerpts above, it also materialised in the critical annotation on several cards—one was even torn apart and reconfigured as a jigsaw puzzle of sorts. While groups in this way indeed found interesting ways to critically tackle their cards and responses, it seems as if more time would have allowed them to focus more on the communication (sketch, build, make, perform) of the consequential potentials for success(es).

The value in this kind of workshop does not lie in crunching through all the conversations (“data”) and try to synthesise some conclusive answer. Rather, it is in the here and now of participants having a rare opportunity to bring failures to the fore in a shared space of intimacy and criticality.

The feedback from the participants was generally very positive, with one participant later describing the workshop as “extremely productive” and another describing it as “eye opening”. One participant strongly objected to the particular term ‘failure’ and made an argument for rather talking about “obstacles<sup>[6]</sup>, challenges, limitations or shortcomings”. The semantic point added another welcome reflective layer on the session and fed nicely into the collective discussion. Another participant also highlighted that there was something missing between the alternative introductions and the following two exercises, in that it was sometimes hard to relate the personal failures with some of the statements on the DRF cards. While the dialectics in large part was successful, there is definitely a potential for trying to bridge these two sections/levels better.

Credits to the PhD by Design Organising Team, particularly Maria Portugal, and the Local Organising Team, for sparring on the format and ultimately integrating it so well in the day.



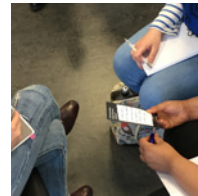
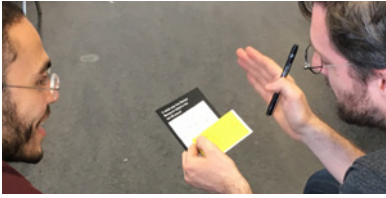
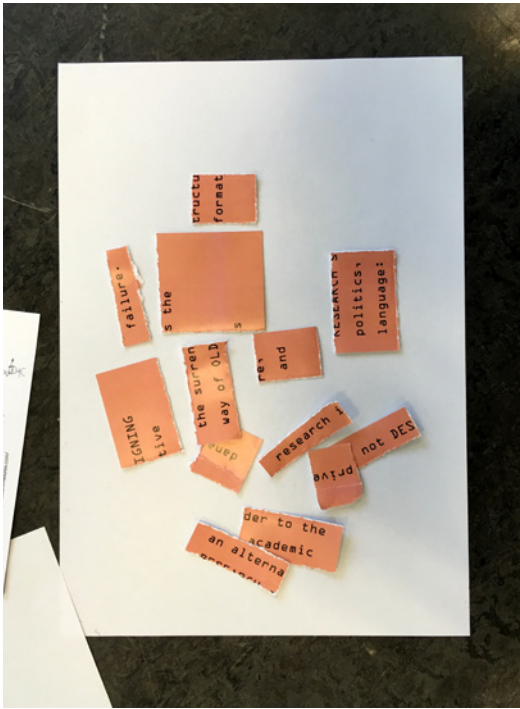
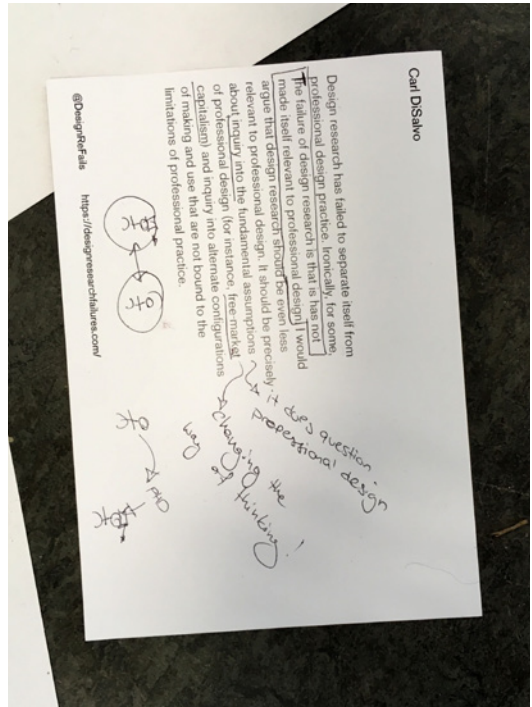


Fig. 101-103. (above). Documentation of the conversations happening around the DRF responses during the PhD By Design workshop.

Fig. 104-106. (next spread). Documentation of the PhD by Design workshop, and two of its material outcomes.





## 8.7 Experiment 5: Histories of Design Research Failures, DHS2017<sup>[7]</sup>

### 8.7.1 Design Historical Engagement

This experiment explored the design historical dimension of DRF, as I was curious to see how this engagement might play out. In essence, it was an invitation for design historians to engage in the project, put forward at the Design History Society annual conference 2017 in Oslo. The theme of the conference was ‘Making and Unmaking the Environment’, with a special celebratory strand dedicated to ‘Making and Unmaking Design History’, marking the 40-year anniversary of the first Design History Society Annual Conference, held in Brighton in 1977, as well as the 30-year anniversary of the Journal of Design History. DRF was presented as part of this anniversary strand, and thus mirroring the original engagement at DRS2016.

First of all, from a design research perspective, it is worth noting that some of the responses carry a distinct design historical perspective (such as Danah Abdulla’s response: “It has failed to acknowledge design’s role in colonialism” (2017)), along with responses from design historians, such as Alison Clarke (2016). However, other forms of possible engagement between the field of design history and DRF exist beyond this most immediate connection. At a recent design research conference, a colleague suggested that each DRF response could act as the basis for a design research PhD call/position (in particular practice-based, addressing the research question through design). To this I would add, that each response too could act as a lens for the making/unmaking of design histories. These two potentials are of course interrelated.

Going with the suggestion above, for the PhD student each response offers a sense of urgency coming from within the discipline, and consequently a design space ripe for critical action. To illustrate this point with the example of Danah Abdulla’s response above, the PhD student could e.g. be faced with the task of prototyping a decolonized design practice. From the design historical perspective, for the design historian, it appears to me that each response offers a possibility to explore how we got to this point (addressing both the issue at hand and its identification as a failure). Sticking with the example of Danah Abdulla, this could then be a matter of exploring design’s role in colonialism, as well as the lack of acknowledgement and critical reflection on this dynamic from within design. While some of the issues brought forth through such studies might already have been covered in design history, there might too be novel design histories to be written out. Further, even with significant scholarship on a certain topic, it might be worth reflecting on whether the findings have adequately been fed back to design practice, design

research, and society at large. In this case, DRF could offer a possibility to connect the already existing dots, so to speak.

Of course, one could also look at DRF itself as a designed unfolding discourse, and consequently study data such as the chronology in responses being submitted, the emerging gravity around certain issues and topics, and new responses that effectively counter existing ones. To this one could add comments on the responses posted on the DRF site, analytics from social media, and of course all sorts of analyses of the traffic on the DRF site (demography, site usage etc.), coupled with the material from the various DRF exhibitions and workshops, to end up with some sort of x-ray of an unfolding design discourse, a sort of history in the making. In her article “‘Make Us More Useful to Society!’: The Scandinavian Design Students’ Organization (SDO) and Socially Responsible Design, 1967–1973”, Ida Kamilla Lie writes:

As emphasized by Guy Julier (2015: 154), ‘design activism and social design must ... be regarded as representing discursive moments that are bound to their historical circumstances.’ The SDO’s activities in the late 1960s constituted such a ‘moment,’ providing what we may call a window of opportunity for the development of social awareness within Nordic design discourse, as well as for enthusiastic experimentation with collective, collaborative design methods (Lie, 2016, p. 355).

Could we think of the anniversary of DRS and DHS as similar historical moments? In this experiment, I was curious how design historians would engage in this specific moment, whether it presented an opportunity for direct engagement or a subject of study, and if the project somehow resonated with the current issues in design history, as experienced at the 40-year anniversary of the DHS.

### 8.7.2 Design Historical Responses

Design historians have valuable perspective to add to the question of how design research has failed, and my hope was that DRF in turn offered an interesting, alternative lens for the making of new histories as well as the unmaking of established ones, with the potential of bringing new perspectives to the fore. Prior to the DHS conference, I invited two design historians to each engage with a DRF response, as a way to try this out. Below are the two examples, first Kaisu Savola responding to an anonymous DRF response from PhD by Design 2017 and second, Ben Highmore responding to Jeremy Myerson’s Pre-DRS2016 DRF response. I presented these as prototypes for the DHS presentation, and extended the call for action at the conference, and in a subsequent publication in the journal *Writing*

*Visual Culture* (Rosenbak, 2017b). At this point, I have not received any further responses addressing this specific call.

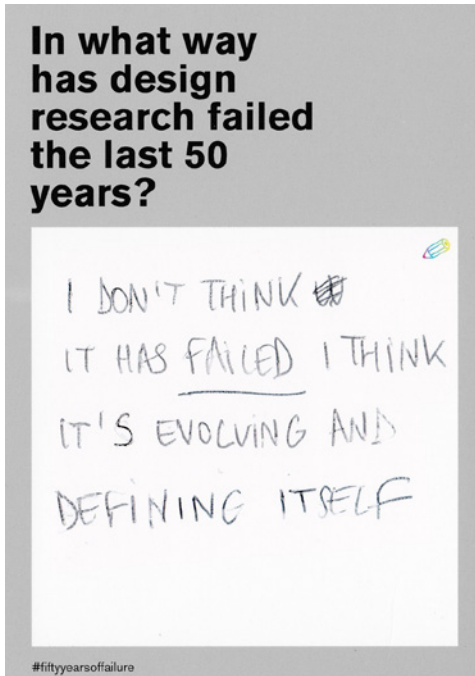


Fig. 107. Anonymous DRF response from PhD by Design 2017. Graphic design by Marije de Haas, handwriting by anonymous conference participant.

Contribution by Kaisu Savola, PhD Candidate, Department of Design, Aalto University School of Arts, Design<sup>[8]</sup>. Responding to an anonymous DRF response from PhD by Design 2017: I DON'T THINK IT HAS FAILED I THINK IT'S EVOLVING AND DEFINING ITSELF (2017).

I chose this statement not because I agree or disagree with it but because it made me realise how impossible it is to think of history in terms of successes and failures only.

Success to some means failure to others, and the other way around.

For example, the history of contemporary consumer culture is full of successful businesses producing successful products while failing to take care of the environment or distribute wealth equally.

I'm not sure if it is the historian's place to decide what is a success and what is a failure to begin with.

The most interesting thing for a historian is to discover the system that produces and allows for these so-called successes and failures.

The system needs to be understood before it can be changed.

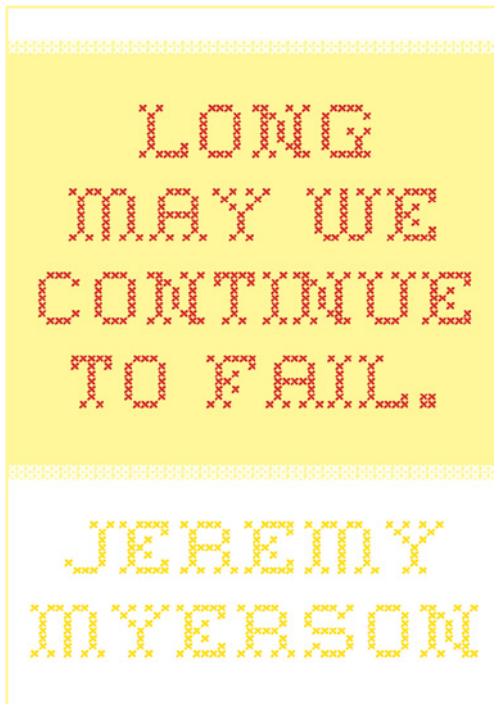


Fig. 108. DRF response by Jeremy Myerson. Graphic design by Marije de Haas.

Contribution by Ben Highmore, Professor of Cultural Studies (Media and Film, Centre for Material Digital Culture) and Reader in Media Studies (Centre for



Photography and Visual Culture), University of Sussex. Responding to Jeremy Myerson, Helen Hamlyn Professor of Design, Royal College of Art & Director of The WORKTECH Academy, Unwired Ventures Ltd.: Long may we continue to fail (2016).

I have almost zero experience of anything that is officially named as 'design research' (I examined a PhD on the topic at the RCA – it was about 'design research'). So, I'll have to take your word for it that 'failure' has been its fate. I'm intrigued by Jeremy Myerson's response. My response is probably somewhat tangential.

As a teenager, I worshipped at the altar of Samuel Beckett: 'birth was the death of him'. For Beckett success was never a quest: fail again, fail better. Beckett was good at managing expectations. It makes you wonder what could success be, apart from something monstrously inhuman. If life is made of death and mess, of fragile relations that are maintained for a time and then lost, if entropy is the only true philosophy of nature, then 'success' would be an attempt to halt life itself.

I have always been intrigued by experiments in social life: collectives, communes, co-operatives, experiments in education, of medicine and health (the Peckham Experiment). These projects often burn brightly for a decade or so and then are either drawn back in the mainstream or disappear. They are seen to fail. We are constantly told that social worlds are failures (multiculturalism, 1968, welfare socialism). Where are our examples of success? Perhaps today we need to rethink how we measure success and failure, and think about the qualities we would like from our failures.

Perhaps the only way forward is to gird your loins and not treat 'failure' as failure. Social experimental design (of forms of life) may only ever fail. Don't try and succeed, just try and fail better.

Fig. 109. (opposite page). Screenshot of Sylvia Fredriksson's forwarding of the question on Twitter.

8.8 Experiment 6: La Semaine de l’Innovation Publique, Nantes

On November 23, 2017, through the work of Bastien Kerspern and Gaël Guilloux, the first spin-off satellite DRF event was held as part of the Public Innovation Week (La Semaine de l’Innovation Publique) in Nantes, as a way to engage local stakeholders in reflecting on the way in which the approach of designing policies and public action has failed. A quick contextualisation: this was the culmination on a wish for taking DRF into a different language and also have someone else run it as a workshop. A previous collaborative attempt had been made to do another iteration of the PhD by Design DRF workshop at UD17, The Sixth Annual Doctoral Forum on Design Research, held at the University of Porto Creative Industries Incubator (UPTEC PINC) on October 16-17, 2017. The idea would be to run the workshop in Portuguese. Unfortunately, this workshop did not happen in the end, as it became practically impossible to execute for the organising team. In this light, the possibility to run DRF at the Public Innovation Week in Nantes, engaging a new audience, and having the session executed in French, was a great step forward. For this context the question put forward was (translated back from French):

To what extent, according to you, has the approach of designing policies and public action failed?

While I heard that the workshop went well, unfortunately the documentation from the event is very limited. One of its participants, Sylvia Fredriksson, did however tweet out the question from the event, which produced several responses:



Some of the comments read<sup>[9]</sup>:

Comment #1:

Mainly because of its lack of transparency and its intrinsically corruptible jammed characteristic... In consequence, its inability when defending shared resources.

Comment #2:

Actually, in the real life, the general public is only aware of political, and even biased, postures. In the end, these public and mediatised postures feel quite empty, even “troll-like”; when the political debates are a lot richer in closed experts’ committees... Also, citizens don’t have their word to say in these specific spaces for discussion.

Comment #3:

When transparency really exists, we can have follow-up dates on mainstream media (and even in « real life », when it’s possible): however, there is a lack of transparency about the stakes highlighted during the different debates, about the explanations on decision-making processes, the data fostering those decision-making processes...

While it is hard to make a more detailed conclusion based on the highly limited material and documentation from the workshop, this tweet and comments at least offers a glimpse. Another way to look at this limited possibility for assessing the outcome relates to the intension to open up the project to new contexts, audiences, languages. In some sense, this inability to assess the outcome is part and parcel with this deliberate loss of control. That said, I am pleased that DRF was able to constructively aid the Public Innovation Week, and proved flexible enough for meaningfully addressing the designing of policies and public action. Indeed, the success of the experiment points to the variety of other different contexts, in which DRF could be applied. Online engagements on Twitter emphasise this potential, e.g. with Hilal Patel, a UK based architect, who recently completed her PhD research to theorise the practices of adapting building, tweeting:

What is failing in #buildingsinuse research? Interesting parallels can be drawn from Design Research Failures project @DesignReFails

## 8.9 Discussion

### 8.9.1 The Risk of Instrumentalization and Misappropriation

DRF started with the formulation of its base concept and the submission to the DRS 50th Anniversary call, around end August 2015. Further, the DRF online platform has been up and running since October 26, 2016. At this moment (Nov 7, 2018), there are no plans of “wrapping up” the project. In contrast to the conclusive verdict-like claim inherent in answering how design has succeeded, it was important for me to have DRF be a deliberately open-ended conversation, hanging on to the present tense, as a conversation that is always ongoing. As this goal has materialised in a series of highly different engagements, as elaborated in the preceding experiments laid out in this chapter, I saw it move beyond a focus on DRS2016 and DRS altogether, and instead transform into a broader discourse in the design research field.

This decision to leave the project open-ended, along with the decision to actively embrace diversity in the conversation, is posing some challenges in terms of disseminating the research. Drawing out certain thematics from the responses, e.g. the schism between research and practice in design, or the insular nature of the discipline, by way of their elevation risks undermining some of the fundamental points in the project: the flat hierarchy, the shifting constellations between responses, the diversity in content, the inherent dissensus, etc.

Also, this hesitation finds a context within the larger argument in this dissertation, as evidenced by the example of the instrumentalization and misappropriation of cultural probes, and how they were largely folded directly back into the tendencies in design that they were carefully designed to escape (2.7). Along these lines, it would indeed be possible for someone to misappropriate DRF, by treating it as a consensus-oriented research project, despite its intentions and designs to the opposite. You could then (mis)read the accumulated responses on the DRF web platform as a standard survey, synthesizing and ranking the content, ignoring any ambiguity. And you could also bolster this information further through intricate analyses of the data around the website usage—“do certain responses cause certain splashes in certain demographics/geographies?” etc. Finally, all of this could be wrapped into a false narrative of the ways in which the failures directly support certain existing as well as future initiatives in design research (which the authors of course would be personally involved in driving).

However, faced with the risk of any or all of these possibilities turning into reality, it is important to remember a different risk: that the many brilliant responses in

the project, along with the particular designed discourse comfortably housing them, would not reach the audience and produce the change that they deserve.

Weighing up these different reflections, I saw two possibilities emerging. One would be to pre-empt a misappropriation by going overboard in anticipation, e.g. by way of something like Nicolas Felton's annual reports (<http://feltron.com/>), where all data would be utterly, and absurdly, milked dry. In other words, a complete data overindulgence. In consequence, it would be an instrumentalization self-sabotaging its own usefulness by way of excess. As much as this was thoroughly tempting, it also risked turning the project into a commentary on the ways in which design (and design research) gets constantly instrumentalized and misappropriated. In this way it would help lay bare one side of Dilnot's diagnosis of design (1999). However, in doing so, it would effectively be like one failure trumping the 114 others, aspiring to a highly unattractive "meta mandate" undercutting the goal of the project and dissertation at large. It would be similar to me closing down the project and making one final response that naively tries to summarize all others, instating my ego above the myriad participants taking part in the conversation.

The other option would be to make any piece disseminating the DRF responses be predominantly about the critical nature of this exercise, and the many hard and constructive questions it poses, rather than about any particular ready-made answers emerging. This is the approach I decided to take in the end, and this is the chief reason why the majority of the discussion focuses on addressing this very concern in a constructive manner, that is, as a contribution to design research.

### 8.9.2 Everything vs. X

While one way of looking at DRF is through the lens of a designed discourse revolving around the question of how design research has failed, we can also look at it as an open data set. All the responses are by their design very condensed. The decision to host them on a web platform and showcase them through an ever-expanding grid structure of graphics highlighting excerpts through typographical designs—with the ability to click each one and read the response in full—is not unlike the way in which a designer would structure a synthesis session. However, since DRF is ongoing, currently running in its fourth year, the dataset can be characterised as inherently incomplete. In this sense, the situation is not unlike the lies data kit discussed as part of Chapter 6: as an infinite amount of equally valid failures and lies might be collected, the question of engaging 'Everything' (Daumal, 2012) by way of a synecdoche, is fundamentally different to any concerns around the point when we see strong enough patterns or obtain strong enough

authority to pin down x (as when a very senior researcher says that *this* is the universal definition of design<sup>[10]</sup>, or *this* is the ten most important contributions design has made to the world etc.).

As was the case in FDL with the 37 design fictions, in DRF the 114 failures are currently constituting ‘Everything’ as a synecdoche. This would be just as true if there were three failures or 56,245. With Petroski’s false success-based approach to design (emulating past success into supposed future success without understanding the conditions for success to emerge in the first place), it is possible to draw further parallels back to the discussion in Chapter 7—specifically by viewing all the explicit designed failures as exceptions to that one consensus-born, fallacy-ridden coupling between how design research has succeeded in the past, and how, by extension, it will succeed in the future. In some ways, it seems as if this future operates in ways not so dissimilar from the exceptionalist design fiction.

It has been interesting to note that this fundamental focus on ‘Everything’ as opposed to the ‘x’ has been a bit puzzling for some design researchers. During a presentation at a conference, someone commented that the central question posed in the project was a leading one, suggesting that it would be interesting to also ask the opposite, i.e. frame the question around success instead. While this point in some sense opened up for a discussion heading straight to the heart of the matter, it also points to the challenging nature of the project, and the struggle with successfully and explicitly shrugging off any aspirations to doing a “scientific survey”, or anything else consensus-oriented. It also lends further weight to the comparison with cultural probes, as the kind of question put forward in DRF perhaps finds its strongest legacy in design research with a project such as Presence (Gaver et al., 2001, 2.7) with its deliberately ambiguous and provocative nature. Critique like this is without a doubt helpful. In this particular case, it made me think of what it would mean to go with the stated proposal and I then did the thought experiment of flipping the question, trying to imagine what kind of answers you would get by asking “In what way has Design Research succeeded in the last 50 years?” This is the question supposedly taking us straight to the ‘x’. In the underlying justification for putting forth this question we find Petroski’s more intuitive, yet false success-based approach. Further, as a discipline dedicated to the complex phenomenon of change, it can be slightly ironic to buy into the familiar risks in this linear, highly Western, model, as e.g. evidenced in predictive analytics, when economies suddenly crash despite all models showing continued (eternal) economic growth. In other words, while many adjacent disciplines base their knowledge around this kind of linearity stretching across past, present and future, why should design uncritically put all its money on this particular model?

All this is not to say that we can not learn from our successes, nor that we should not be proud of some of the things that design has achieved. As was discussed in 6.11, an effort to explore ‘Everything’ surely can co-exist by other efforts to grapple with ‘x’. The reason for not expanding the inquiry in this work mainly rests with time constraints vs. the focus set out. And also, in a very basic research sense, a resistance to not go down a path which design and design research is a lot more familiar with, but instead focus the curiosity on a path we see explored much more rarely, in projects, programmes, and especially in a practice. Rather than exploring ways in which design research has succeeded, this project is set on proposing ways in which we can return to the fundamental questions of design, and be comfortable with what we start seeing (even if it is ugly at times), when we genuinely start caring for design-knowledge as a unique contribution to the world. ‘Care’ is another indicator that this work takes focus and commitment, just like ‘infusion’ does not happen overnight. We already encountered some of the characteristics in this work: instability, fluidity, and transitionality.

From the firm vantage point of the success of design research and design at large, DRF can be seen as a curiously destabilising project. And yet this destabilisation is carried out through constructive design research, through a string of materialised instantiations, design research artefacts. The project’s productive tension rests in-between this foundational instability/transitionality/fluidity and the constant flow of designed artefacts coming out of the project, perhaps most evident in the thousands of printed A5 cards brought to various venues and events. These are artefacts that don’t attempt to gloss over the destabilising undercurrent in the project, but rather explore it through the design practice which they in part constitute, wrestling with it, with no intention of doing away with it. The clearest example of this in the project, was perhaps the PhD by Design workshop, where participants literally (and carefully) tore one of the DRF A5 cards to pieces as part of a constructive discussion between them (fig. 104, p. 276). In some way, this takes back to Folkmann’s negation and unrealisation (2.4.5). To be sure, this experience is fundamentally different from pretending that the card does not exist.

More generally, this decision to destabilise *through* design, is a notable difference from simply collecting and publishing all the responses in a list contained within a basic text document. While this too would challenge the predominant narrative in design research, the decision to prototype a different kind of design research discourse *through* design is important. In this way design destabilises itself through itself, thus establishing a vicious circle. This is a decisively different motion than the much more familiar way in which design intellectually seeks to stabilise itself by way of giving in to its imposter syndrome, incessantly looking to other disciplines for clues for how to become “proper”, e.g. trying to define itself in a way similar to



how engineering would define itself. Just like a design artefact, such as a kitchen utensil, in a state of simultaneous concealing and revealing design-knowledge, shows forth possibility by configuring the artificial as that which could be other, so does a glossy shiny A5 DRF card stating that design research needs more women. What DRF shows then, is that design's unique proposition to the world, design-knowledge, is not strictly for a world outside of design, but in fact can also be folded back into design itself.

### 8.9.3 Enter the Centrifugal Forces

On the topic of this kind of inwards destabilisation, and design folding its knowledge back into itself, we should recall the “illimitation and auto-critical faculty” of pataphysics, as the very capability asserting its right to assume the name of Science (as opposed to all other sciences) (Sandomir, 1960c, p. 180). As was argued in 2.6, these qualities are at the heart of the question of a design being conscious of itself, or put differently, design's ability to actively question its own perimeter and domain. I see DRF attempting to do exactly this—not only by its central question, its design of the web platform etc., but also through a continuous probing of very different communities within design research, as was described in the case of research through design (experiment 3, 8.6), PhDs engaging in RtD (experiment 4, 8.7), design history (experiment 5, 8.8), and design in the public innovation sector in France (experiment 6, 8.9). The extensive duration of DRF allowed for this series of engagements, and of course this list does not include other venues/communities/frontiers I approached unsuccessfully, or could have pursued. As I was not the only part in these negotiations, some frontiers were ultimately left unexplored within the scope of the PhD, as applications e.g. were not accepted. Surely, others were left untouched due to a lack of familiarity. The most important example in this respect has to be the difficulty with engaging the design industry communities. I have tried, and failed, to reach out for several opportunities in this area. However, some of the invitations for design researchers in the design industry were positively received, and I am happy to have some of those perspectives featured on <http://designresearchfailures.com>, enriching the conversation for the field of design research as a whole.

All of this is to say that the development followed an insistence on engaging with the perimeter of design, in DRF within the lens of design as a discipline. Other factors helping to determine the specific communities, conferences, occasions explored in the project, were the opportunities made visible through the ongoing experimentation, as when the curiosity around a design historical angle e.g. arose from discussions at PhD by Design. I was then able to eventually test out this dimension at DHS2017, a research community that turned out to have their

very own anniversary, tying back to DRS2016. Additionally, the extensive life of the project allowed for experiments to actively address emerging thematic in the overall corpus of responses, with e.g. RTD2017 and PhD by Design addressing the emerging thematic concerning the gap between design research and design practice. All of these swerving motions exists within the overall vicious circling of the project. In a way these decisions can be seen as a “happily riding with” this vicious circling, attempting to use the momentum in the centrifugal forces and not trying to halt them due to any moments of panic over whether “the project is scientific enough”. I read this folding back into itself, incessantly probing the perimeters of design’s (disciplinary) domain, while being conscious thereof, as a central contribution of the project.

Going back to the point of potential misappropriation, it is further worth reflecting on the fact that the very same qualities would pose a certain problematic “bias”, if DRF was to be misappropriated as a final answer to how design research has failed. In that case the vicious circling would give way to a subservient and ever so straight line, and you would most likely be better off simply sticking to DRS, due to its mandate of being the longest established, multi-disciplinary worldwide society for the design research community, and try to gloss over any further bumps in “scientific objectivity” within this scope of authority. On the contrary, DRF is an intensely subjective project—not only by way of all the researchers articulating failure from very different positions, but also by way of the research trajectory, the tying together of the different experiments, being guided not only by an internal, haphazard logic, but also by my own personal journey as a PhD student. This was already touched upon, e.g. in the comment on how I am intrigued by the gulf between design research and design practice in the case of constructive design research. This is no coincidence, as this is one of my major research interests and consequently one of the methodological driving forces in my work.

In this light it seems less problematic to draw out certain thematic from the responses, with the risk of undermining the flat hierarchy, the shifting constellations between responses, the diversity in the content, the inherent dissensus, etc. On the contrary, seeing as this would simply be another way of employing this lens of subjectivity, it is actually consistent with the rest of the project. However, being conscious of this fact is of crucial importance. It is the distinction between concluding that *this* is how design research has failed, and this is *one way* in which you *could say* that design research has failed, between saying that this is *the solution*, or even *a solution*, and that this is *an imaginary solution*.

#### 8.9.4 Ways in Which Design Research Has Failed

In this final section, I will outline four aspects of one particular imaginary solution, a synthesis I have carried out, clustering the DRF responses into certain emerging thematics (fig. 116, p. 300–301). In the spirit of the argument above, the data set on which this synthesis was carried out has already been outdated, as new DRF responses have been designed and uploaded since the point I started this process. I should also note that here I have weaved a range of responses together without any in-text referencing. This decision follows the fact, that both the ‘data set’ and ‘synthesis’ are featured, on <https://designresearchfailures.com> and fig. 116. More importantly, the text is not claiming to be *the solution*, or even *a solution*, but *an imaginary solution*. Emancipated by way of pataphysics, it is thus highlighting the flow of its particular lineaments, with legibility and flow taking priority. Another imaginary solution could have synthesized the responses according to whether the amount of references in a given thematic cluster is a prime number. And yet another could have synthesized by grouping contributors according to how frequently they blink.

##### #1: Power Structures in Design Research

Several responses speak to the way that design research has failed in reflecting, resisting, and overthrowing a range of problematic power structures. Three of these responses specifically address issues of colonialism and Eurocentrism, in the way that design research has failed to acknowledge the role played by these -isms. Specifically, one of these responses addresses design research’ failure to establish a South-South dialogue and practice. Other responses address the lack of diversity in design research and the dominance of men, responding that design research needs more women, and that DRS and design research needs more cultural and racial diversity. Across several other responses a need for including a larger mix of voices is evident. This extends to non-humans and the planet. One pair of responses from the same anonymous contributor, makes a connection between this historical dominance of a few select voices and the lack of fundamental acknowledgement of others, as one response reads: “We tended to listen to men...” and the other “We didn’t listen to more than humans”. Another response too argues for a failure in working across difference and fostering diversity, to end up on a propositional, speculative note: “Can this be changed by exploring the future of design research through feminist, postcolonial and radical posthumanist knowledge politics?”

##### #2: Research vs. Practice

A substantial amount of responses speak to the experienced schism between research and practice in design research. What is most interesting, and perhaps more than anything a result of the large number of responses touching on this issue,

is the diverse positioning within this question. Surely, several responses highlight the inability of design research to connect back to practice, that theory should be applied etc., while others focus on the designers, stating they should do more design. Another response argues that the design research “outputs” are remotely connected to design as a practice, or as a mode of research inquiry. With all responses focusing on bridging this divide, it is worth noticing that other responses speak to the divide in contrasting terms. One response makes the argument that design research has not distanced itself enough from professional practice, that the gap is not clear enough. Another reflects on the fact that design research has failed designers who say it is not “real design” and researchers who say it is not “real research”, concluding with “and that’s okay”.

### #3: Value in Industry

A smaller cluster of responses explores the question from a distinct industry perspective. Two of them speak to the same issue of reductionism in the insights that design research produces. One of these state that “Design research does to reality what sensationalism does to information (...)”. The other states that design offers data but no insights, concluding that “we have failed by pretending design research offers us the answer - or even the problem”. Yet, two others both address the failure of design research to communicate its own value to clients (including the necessary time and investment to do it properly). One of them focuses on the context of the Middle East, where both design and research are valued very differently from Europe or the US, and as a consequence “design research often fails in convincing the local industry, largely made up of family businesses with 50+ years of intergenerational experience, of its value and usefulness.” Faced with this specific context, the humoristic image evoked of the design researcher is someone young, thinking he or she is the most ingenious/creative/progressive person in the project, equipped with a few ideas from ethnography and a stack of post-its. However, the response does conclude by pointing to the rise of start-ups in the Middle East and North Africa region. Another response speaks to one particular aspect of this image of the designer: “Design research didn’t warn us about the post-its.”

### #4: It Hasn’t Failed vs. It Hasn’t Failed Enough.

This group of responses all take a somewhat meta perspective on the project and the question put forth. The first group can be said to resist the premise of the project, along with the question put forward. Following the previous discussion, and the emphasis on dissensus rather than consensus, I found this very interesting. Two of these responses suggested that design research is still growing up and evolving, and that the question put forward is a premature and wrong verdict. One opens “I dont think design research has failed (...)”, and the other “Has it failed? It is still growing.” The latter compares design research to a small child, who you can’t blame

for failing, but who you should nourish by making “design research” instead. A third response attributes the failure of design research to the fact that it thinks it has failed. Another response questions the nature of the question put forward, saying “Your question implies that it has failed, in some way. Has it? Perhaps it has failed to eradicate leading questions?” Against this resistance, which I have summed up as “It Hasn’t Failed” we find the position that the failure of design research is that it hasn’t failed enough. One of these observes the way that design research, faced with the risk of failure, often focuses on “making incremental additions to existing knowledge that fail to more deeply develop design; about reducing the risks that products will fail (...)”, in other words, re-articulating something we already now, rather than taking the risk that professional practice can not afford. The other response praises the many, many failures that design research has experienced, arguing along the lines of Kelley that they are essential steps forward.

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[1] I want to thank Peter Lloyd for help with simplifying the initial question down to this exact phrasing, as part of his generous feedback and support of the project from its very offset.

[2] It is important to mention that DRS supported this shift, as they helped finance the DRF website after DRS2016.

[3] Many of which are discussed as part of 8.2.

[4] Based on Google Analytics data.

[5] This text is based on article Rosenbak (2017a).

[6] I pursued this notion of the failure as an obstacle in a piece published at ‘How to think with obstacles? (HTWO)’, a collaborative design research project “aiming to identify and describe different models and patterns of strategic obstacle design and to engage a fundamental dialogue about the knowledge of obstacles throughout the disciplines” (<http://htwo.org/about/>). The piece compresses some of the points made across the Chapter through the lens of obstacles.

[7] This text is based on article Rosenbak (2017b).

[8] Savola also included an image of The Perfection Salad from McCall’s Great American Recipe Card Collection. Unfortunately, it has not been able to clear copyright for its use in this publication.

[9] I am indebted to Bastien Kerspern for the translation of these comments.

[10] Recall the example with Hatchuel & Weil (2003), discussed in 2.2.

**DESIGN RESEARCH  
DOES TO REALITY  
WHAT SENSATIONALISM  
DOES TO INFORMATION.  
IT SIMPLIFIES REALITY  
TO BE ABLE TO  
TELL A PUNCHY STORY  
IN FEW WORDS  
(INSIGHT)**

**AILADI**

Fig. 110. DRF response by AILADI. Graphic design by Søren Rosenbak.



Fig. 111. DRF response by Laura Forlano. Graphic design by Marije de Haas.



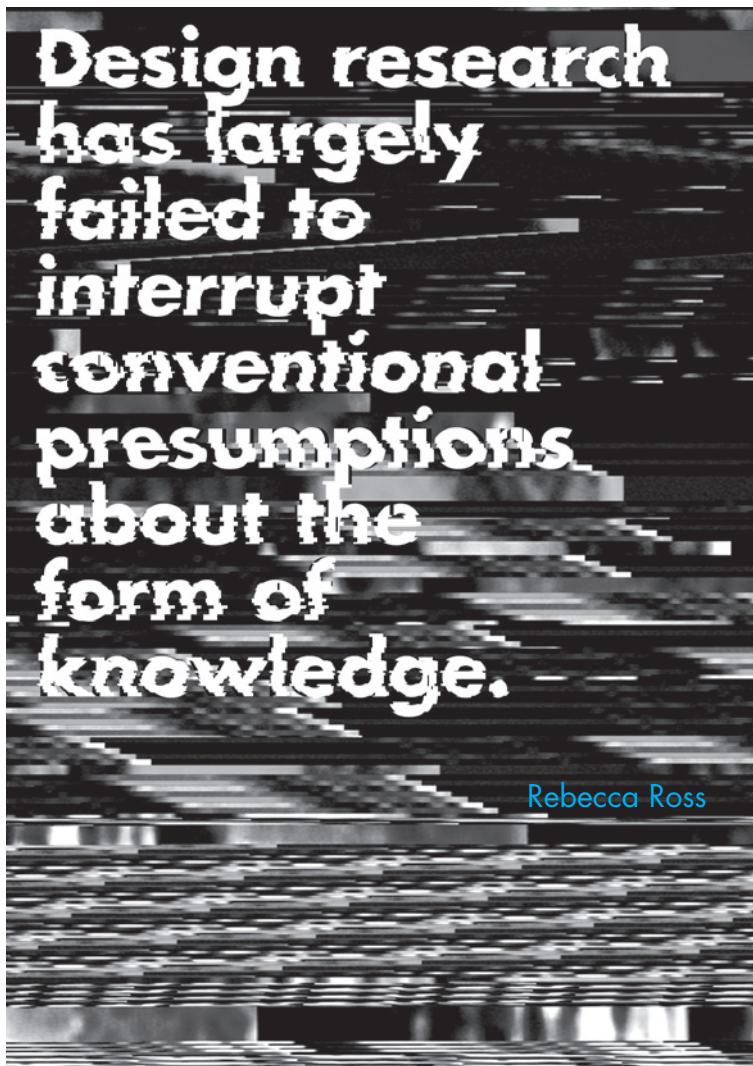


Fig. 112. DRF response by Rebecca Ross. Graphic design by Søren Rosenbak.

**Your question  
implies that it has  
failed, in some way  
————— Has it?**

**Perhaps it has failed  
to eradicate leading  
questions? —————**

**Grace  
Lees-Maffei**

Fig. 113. DRF response by Grace Lees-Maffei. Graphic design by Søren Rosenbak.

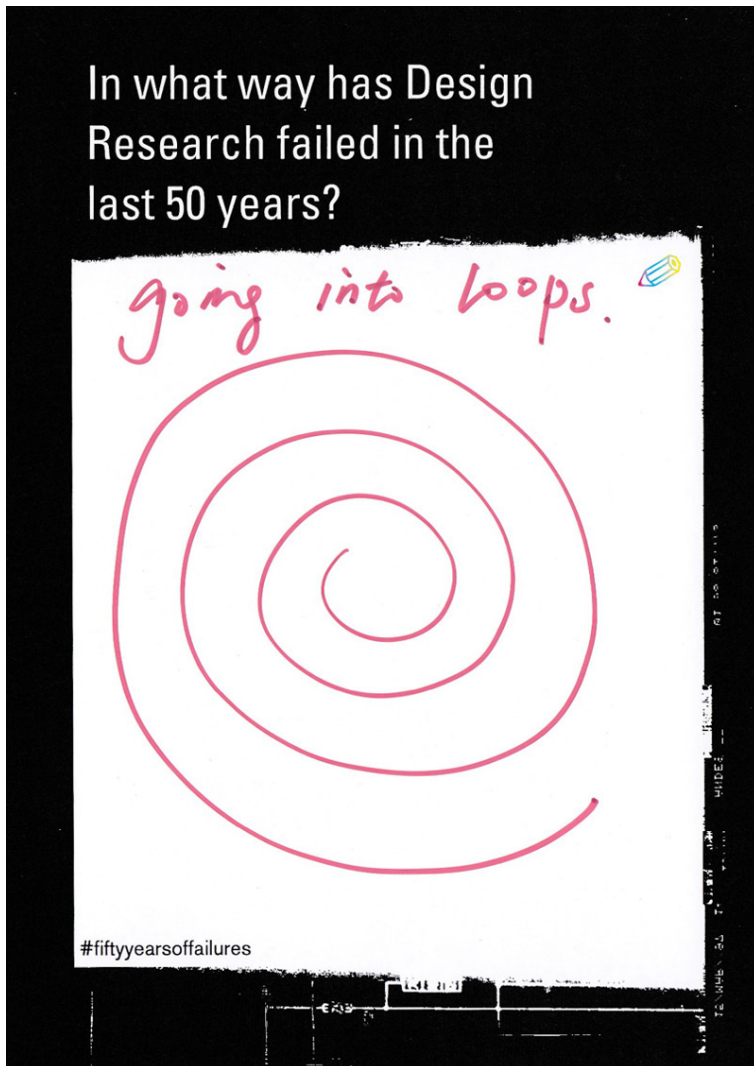


Fig. 114. Anonymous DRF response from DRS2016. Template design by Marije de Haas.

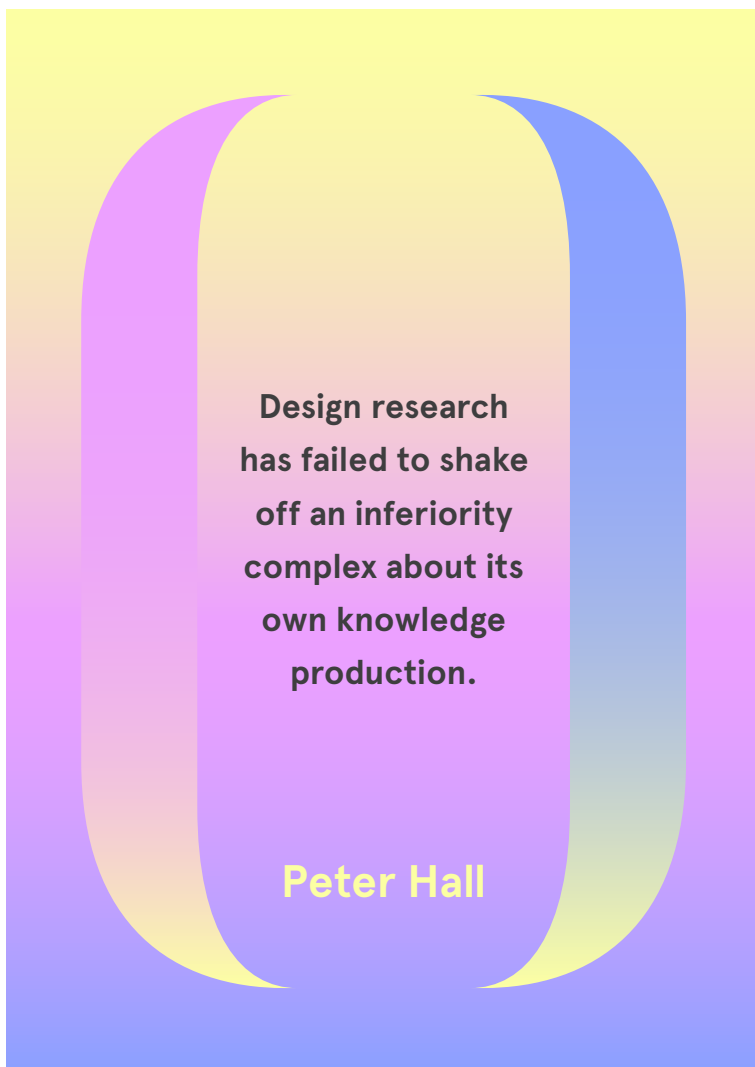


Fig. 115. DRF response by Peter Hall. Graphic design by Søren Rosenbak.

Fig. 116. (next spread). Documentation of a synthesis session I carried out.

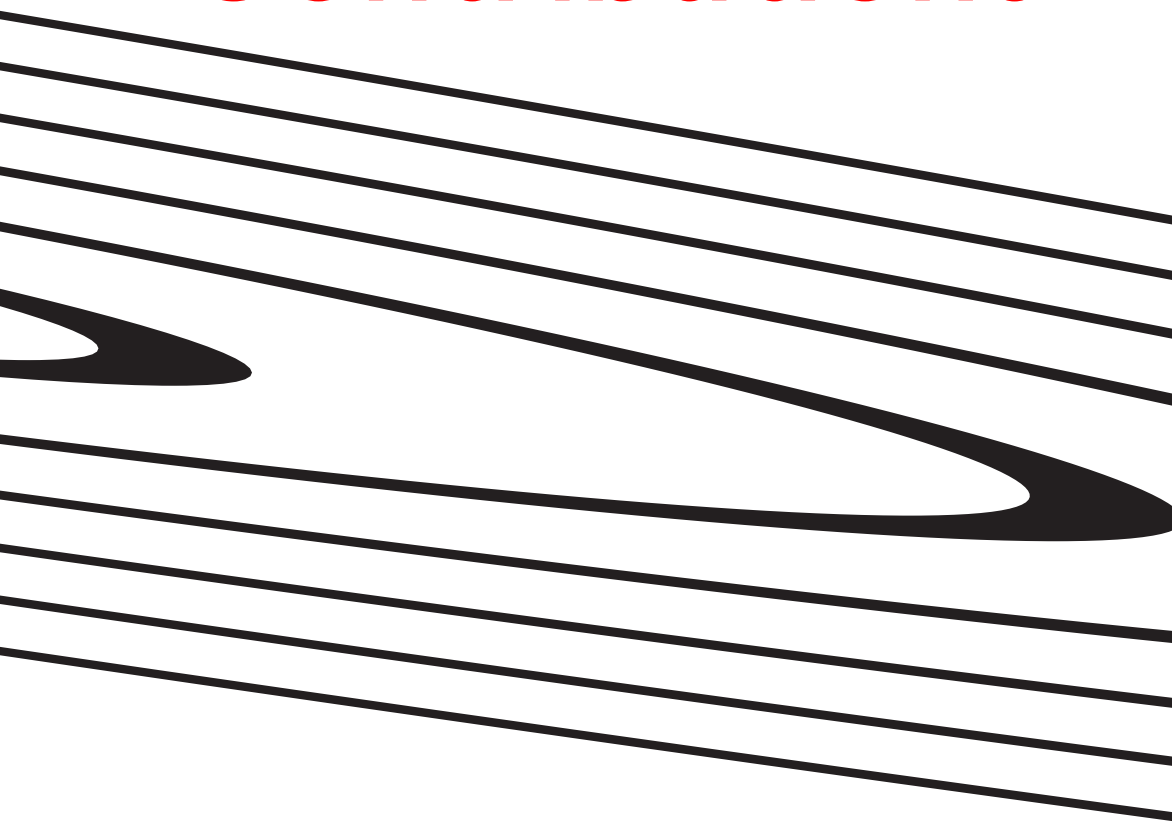






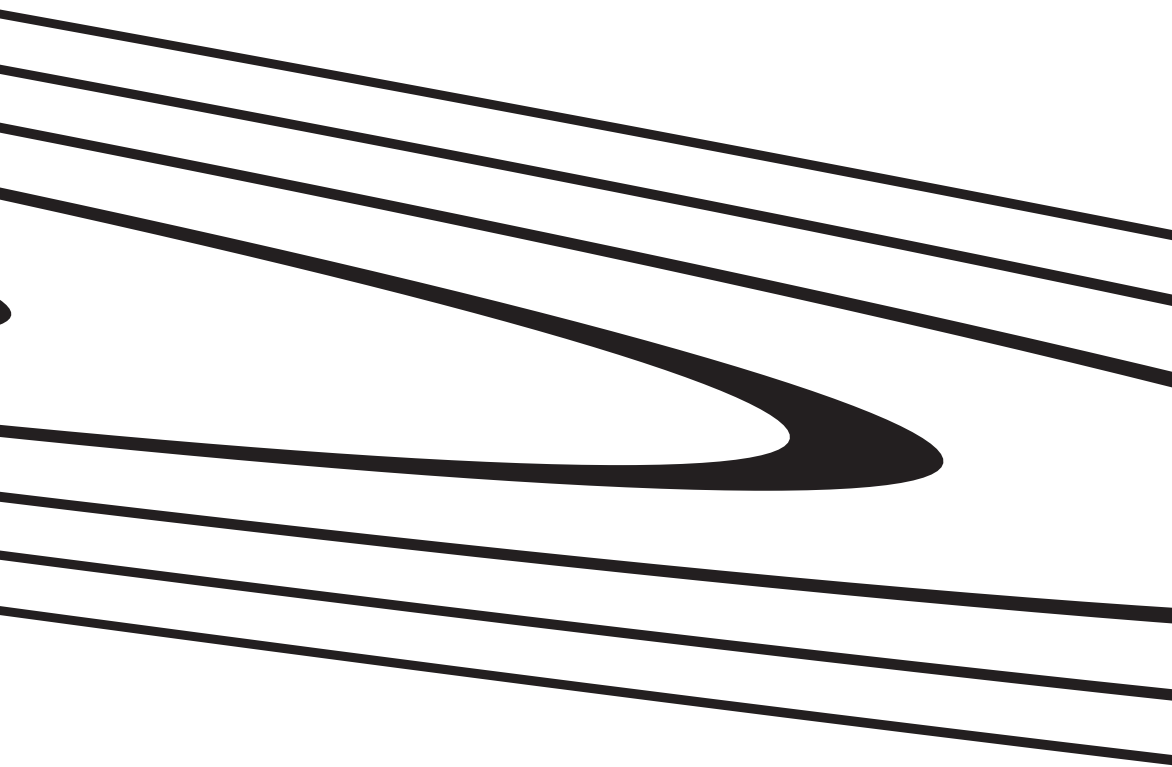
chapter 9

# Contributions





In this final chapter, I will sketch out the science of imagining solutions, as a theory for a design becoming conscious of itself. I will be drawing on all the preceding chapters, in order to articulate the contributions made by this dissertation. Following this, I will wrap up with some concluding remarks.



## 9.1 The Science of Imagining Solutions

The preceding chapters, with their respective experiments and discussions, collectively shows and articulates a pataphysically infused design practice, fluidly and consciously incorporating products, projects, and a programme. In this way they answer the first research question:

### 1. What is a pataphysically infused design practice?

If the first research question explicitly concerns what a given *design* (practice, programme, project, product) is, the second research question acknowledges that this design (practice, programme, project, product) also has something to say about what *designing* is:

### 2. How can design, through the prototyping of this practice, become more conscious of itself?

Thus, in line with Redström's notion of transitional theories (Redström, 2017), and with the acknowledgement that these two enquiries are inseparably linked, I will now respond further by turning the attention towards the articulation of a series of contributions that collectively lay out a foundation for the science of imagining solutions, here understood as a theory for a design becoming conscious of itself. Each of these, and their collective whole has been made through practice. They are arranged around thematics, following an associative, non-hierarchical order. Importantly, this science naturally views itself as an imaginary solution as well. It is thus necessarily one exception out of many other equivalent exceptions.

### 9.1.1 An Epiphenomenology of Design

It is interesting to note that, much like 'pataphysics, with its very etymology and the notorious apostrophe preceding it "so as to avoid a simple pun" (Jarry, 2006 [1911], p. 145), literally becomes a symbol of itself (a façade of a façade), we can see something similar happening with design: rather than going into what 'design' means, e.g. tracing its etymological roots, defining it once and for all, we realise that when we articulate design as a lasting thing in this world, as a design artefact, we too effectively design it—as when I am currently writing it out in a digital writing software on my laptop, in a 10 point Helvetica typeface, black letters on a whitely lit background, structurally arranged on a digital representation of an A4 page. That is not just an alphabetical representation (Wood, 2016), but also a designed thing we can point to and say: this is (also) design (Redström, 2017). In this sense design, not as an intellectual abstract thought but as a designed thing

in the world, can be said to contain a certain epiphenomenological seed in itself.

First, what do we mean by ‘epiphenomenology’? The ‘epiphenomenology of design’ is a field that traces back to Jarry’s definition of pataphysics (1.1), and its opening sentence: “An epiphenomenon is that which is superimposed upon a phenomenon” (Jarry, 2006 [1911], p. 145). Describing it in non-specialised language as “something that is the accidental by-product of something else” (Brotchie, 2011, p. 29), Brotchie provides a useful biographical frame for understanding how this term ended up in Jarry’s definition and how we can make sense of it.

As with many other ideas, ‘epiphenomenalism’ was a concept that Jarry had been introduced to by the philosopher Henri Bergson, who lectured on the history of philosophy at the Lycée Henri IV where Jarry studied (ibid.). Epiphenomenalism in this sense “is the view that mental events are caused by physical events in the brain, but have no effects upon any physical events” (Robinson, 2015). While Bergson was highly critical of this theory, Jarry’s ‘pataphysics’, by way of incorporating the concept of the swerve/clinamen, and with an equal attention paid “to the more extravagant solutions of both physics and metaphysics” (Brotchie, 2011, p. 33), transformed it into a more all-encompassing concept in pataphysics: “In Jarry’s Pataphysics, a science of exceptions, both matter and mind are epiphenomenal, and are therefore immune from explanation by physics or metaphysics respectively” (ibid., p. 31).

Like Jarry himself performed a swerve away from the path of epiphenomenalism in his description of epiphenomena as a key component in pataphysics, this dissertation has performed a similar swerve by way of describing said epiphenomena in design, as an ‘epiphenomenology of design’, the study of epiphenomena in and through design. What can we say about this field of study then?

Following Deleuze’s reading of Jarry along Heidegger (2.4.4), the epiphenomenology of design concerns the Being, the self-showing or presencing—a process of simultaneous revealing and concealing—of design-knowledge as phenomena, itself inhabiting a position of being simultaneously propositional and actual. This is due to artifice, essentially understood as that which could be other, being the subject matter of design, as well as its horizon, and design in turn being uniquely capable to configure artifice (Dilnot, 1999). It follows that the epiphenomenology of design necessarily shows itself *through* design, as design’s ability to consciously possibilize through itself, in other words, to show possibility forth. In this way it also speaks to an ontology of the artificial (ibid.). Another way to probe this crucial distinction lies in the swerve from pataphysics as the science of imaginary solutions, and the present theory of design as the science of *imagining* solutions.

The present tense necessarily ties the undertaking to a constructive(/destructive) mode (Folkmann, 2013), making it a research practice happening through design. Thus, rather than committing to “an academic autopsy of design” (Department of Dogma and Theory, 2016) in a quest for extruding that special design-knowledge and defining it once and for all, epiphenomenology simply designs it into existence, and thereby shows forth design-knowledge through design (conceptually and literally). We can say that this is another way to articulate design’s ability to consciously possibilize through itself.

This dissertation has articulated epiphenomenological occurrences in design in a range of different ways: in W7120, it was the job report showing forth itself and its possibility as an inability to print (absence), yet printed out (presence). In MDM we experienced the epiphenomena of digital shadows, as they came to life in the ghostly absences carefully designed within metadata structures, filling out an impossible space with possibility. In DCL, we encountered a data set of lies as an epiphenomenon. Here, the inability to design urban futures with lies told by local citizens, was circumvented by way of designing a broken lies data kit, capable of showing forth its data, as well as its brokenness, as possibility. In FDL, the design fictions produced by the students were showing forth designed exceptions to the future within a design practice tied up to the exceptional and singular. With DRF we encountered the epiphenomenon as the open-ended dissensus-driven discourse on failure in design research, launched at the 50-year anniversary of the Design Research Society. Finally, in the discussion of research structure, the epiphenomenology of methodology as research outcome was pointed out, as the absence of an anticipated research outcome in this dissertation, yet made present as the articulation of this absence.

All the projects display a notably profound *absence*, that is identified and designed. We have approached this absence in multiple ways, through Folkmann’s notion of ‘negation’ and ‘unrealisation’ (2013), Hara’s concept of the ‘kizen’ of white (2014) as well as ‘ex-formation’ (2015), Drucker’s notion of white space as a ‘probabilistic field’ (2009), Thirlwell’s armory of the ‘not-quite’ (2013), Dilnot’s indirect address to human existence via design’s discovery of the conditions of our dwelling and standing to things (Kundera, 2003 via Dilnot, 1999), Deleuze’s notion of ‘Non-Being’ (1998), and of course Daumal’s pataphysics of ghosts and the formula  $x = (\text{Everything}-x)$  (2012). All of these co-existing dimensions of absence, and the many more not listed here, in various ways point to the fact that this absence is intimately tied to the possibility of presence.

Deleuze’ reflection on Dr. Faustroll is helpful: “In truth, rather than considering Being as a superior being that would ground the constancy of other perceived be-

ings, we must think of it as an Emptiness or a Non-Being, through the transparency of which singular variations come into play, ‘an iridescent mental kaleidoscope (that) thinks itself (Faustroll, p. 343)’” (Deleuze, 1998, p. 92). From the perspective of an epiphenomenology of design, this reflection is important in that it points to the fact that the absence, in Deleuze’ terms the ‘Non-Being’, as the interior of the kaleidoscope, is a *designed thing* transgressing the material and immaterial, the actual and the imaginary. We can think of e.g. the DRF A5 card format, including its submission guidelines, invitation, exhibition concept and more. Or the lies data kit, with its protocol for collecting lies and leveraging them as data for prototyping urban interventions. The process of designing and producing the multitude of DRF cards, and engaging the design research community with them, is then an example of the process that Deleuze discusses as the singular variations coming into play, the various flickers of light passing through the kaleidoscope.

In this way an epiphenomenology of design describes the important difference between a design artefact as *a solution* and a design artefact as *an imaginary solution*, explicating the intricacies of the latter through design practice, as the only way to actually bring singular variations into play, to show possibility forth as such.

### 9.1.2 Design Becoming Conscious of Itself

An epiphenomenology of design speaks to a design becoming conscious of itself, as a design that commits to its unique ability to possibilize, and to showing forth possibility as such, contributing to the world, and back to knowledge at large.

How did we get to this point, and what guided the journey? First and foremost, the infusion of pataphysics into the prototyping of a design practice did not only make the design practice more pataphysically conscious, but also design more conscious of itself. A programmatic framing within the methodological tradition of research through design, coupled with a continuous pataphysical obsession across the research trajectory, allowed for an initial unresolved state of simultaneous attraction and repulsion between pataphysics and design, to gradually expose the contradictory nature within design itself, as captured in its epiphenomenological dimension and evidenced throughout the projects in this dissertation.

What is this design, conscious of itself, then capable of? Practically, the current research has come together through a large degree of promiscuity, in terms of collaborators, sites, conferences, events, design spaces and funding opportunities. It is worth reflecting a bit on this opportunistic swerving through an otherwise boundless void, besides noting its obvious digression from a Newtonian straight line. Surely, a pataphysically infused design practice could have addressed anything,

considering the world being pataphysical through-and-through and artifice, the subject matter of design, being our horizon? It could have designed toothbrush holograms for a gallery exhibition or interiors for empty office buildings. And yet, while being capable of a great many things, it did not. Looking at the problem spaces addressed in the research, we notice that they aren't necessarily devoid of design presence, although the design within an area such as global mass surveillance might rather be referred to as e.g. systems usability optimisation. In this way the discussion of whether design is present or not, can be relegated to a discussion of which disciplinary lens and perspective you are subscribing to.

However, from the vantage point of design, and in particular this dissertation, we can perhaps more accurately say that these problem spaces display a striking deprivation of possibility being shown forth (in a specific context and as such). In both the case of MDM's digital ghosts and DCL's smart city data sets, and even with W7120s constructive printing malfunction, possibility is curtailed through means of technology, economy and bureaucracy. What this dissertation then shows, is that design, despite this situation, is able to engage as a conscious discipline, not simply as a critique standing outside the domains, but as an offering of imaginary solutions from within them. Notably, this inquiry has also treated design itself as a problem space with a curtailing of possibility being shown forth, an effect of the disengagement with itself that Dilnot's diagnosis described (1999). Thus, consciously subjecting itself to design, it also addressed design fictions (FDL), similarly a field that sees possibility curtailed by way of certain aspirations towards the exceptional, as well as the curtailing of possibility in design research discourse itself (DRF), due its dominant and somewhat paradoxical success-based approach.

Importantly, the question of design becoming conscious of itself has a relevance beyond design, as it concerns possibility as such. Not unlike the way in which pataphysics, faced with the accusation that it is a religion, calmly exclaims that it is apostasy from itself, this dissertation starts pointing towards the somewhat similar ability in design—as described through the science of imagining solutions—to consciously and continuously (re-)design itself, or perhaps better, re-image itself as a solution, by bringing its fundamental questions into play time and again. Then, whenever faced with accusations over not even having a unifying definition, it can simply design one into existence, and point to it. Notably, this is a design that is standing shoulder to shoulder with artifice, to a degree where it views itself as precisely artifice, devoid of any metaphysical residues. Here we should remember the way in which design, through its capacity to configure the artificial, is able to bring together incommensurabilities in an unresolved manner (Dilnot, 1999), as when a smartphone brings digital ethics and the sensation of touch together in a single design artefact. Then, in this light, it is somewhat unsurprising that a

design consciously and continuously re-imagining itself as a solution, in this way likewise has been able to embrace the unresolved state of simultaneous attraction and repulsion between pataphysics and design throughout the research. And yet, one is able to detect a curious vicious circle happening in this question of the actual embrace and the ability to embrace: like the chicken and the egg, what came first and which one enabled the other? Puzzling as it may be, a conscious design is unconcerned with a question such as this one. Rather, it understands that its unique contribution, not only to design, but to knowledge at large, offers itself in the spiralling motion itself.

### 9.1.3 Design as an Inherently Critical Practice

A design conscious of itself, here by way of a pataphysical infusion, is necessarily a critical design practice. It is a design practice that seriously engages with the question of its own demarcation, and consequently takes artificiality—that which could be other—seriously as its subject matter and horizon. This dissertation has explored the epiphenomenology of design in a range of concrete projects as ways for design to probe its own perimeter, in order to see its own maneuvering space stand out more clearly. Conceptually, we can think of this as the spatial outline of Deleuze's kaleidoscope (Deleuze, 1998, p. 92). This too happens on the level of design as a discipline: when probing its own perimeter, design engages the outline of its total disciplinary (design) space, an aggregate of all possible design spaces, a superspace of sorts, with each of its constituent spaces holding an endless amount of possible solutions. While our individual and collective imaginary might stretch even beyond this superspace (as in reflecting on what is possible in the grandest possible sense of that exercise), the superspace demarcates design's capability of showing forth this possibility, by possibilizing through itself. Using a slightly different lens, we can say that while artifice is our horizon, there are practical limits for design's capacity to configure the vast artificial domain. What this points to is that the described superspace not only contains an endless amount of solutions but also an endless amount of problems (indeed, as ontological designing has helped point out, a solution can be a problem). In summary we can think of design's maneuvering space as a reflection on the question of *where* design is capable to act.

With all this said, it is important to recall that this is not a space where design exists by itself, and thus design's capability of showing forth possibility is constantly being negotiated with other domains and stakeholders, as design always serves a client in some way, and always exists in the world. This client can of course be design itself, and thus this is also where design is capable of re-imagining and re-designing itself as an imaginary solution. Outside of this space, this isn't the case, as other domains with other agendas are completely dominant here, operat-



ing in completely other ways and for different ends, such as technology striving for efficiency, economy for wealth, politics for power, metaphysics for truth and so on. From a design perspective, a basic first step to start probing the difference between these spaces could be to ask yourself whether you could convincingly say that a given thing is designed: would you say that the law is designed? Most likely not. How about smart cities? Perhaps. Self-driving cars? Sure.

While this enormously complex superspace is constantly morphing, and its dimensions can never be pinned down<sup>[1]</sup>, the projects within this dissertation has actively set out to push tiny parts of some of its shifting frontiers: concretely in the areas of printmaking, global mass surveillance, smart cities, future making and design discourse building. This was perhaps most clearly articulated in the discussion of FDL, where Simon's coupling between the question of spatially representing design problems, and the search for finding satisfactory solutions, was merged in a captivating imaginary solution to the question of how to conceptually and visually process 'a design space'. This design space works on the level of a single project, and for a plurality of projects within a given brief such as in FDL, and for design as a whole. Another way to describe this superspace in this dissertation has been Daumal's 'Everything' (2012).

The decision to carry out experiments addressing these frontiers by relatively low-tech means, e.g. using script templates printed out on sheets of A4 paper in MDM, was a way to consciously probe this boundary: venturing just outside the superspace, and yet through means that would not only be unnecessarily entangled in e.g. algorithmic logic, and thereby threaten to obscure (notice, not destroy) the epiphenomenological occurrences happening in the experiments. To be clear, this contribution is not concerned with arguing that design is capable of critiquing certain technologies or societal challenges. Rather, it cares to demonstrate ways in which design can be critical through engaging with its various frontiers, making a foray of possibilizing into a seemingly impossible domain, through practice.

We can view the relation between the design space of a product, and this aggregated superspace through the connection between how a *given design artefact* implicitly tells us something about *designing as such*. Another way we have described this link is our ability to explore 'Everything' (Daumal, 2012) by way of a synecdoche, e.g. a much smaller design space holding a smaller number of design artefacts. Importantly, this synecdochical design space can still exist at the edge of the superspace, acting as a foray of possibilizing into the impossible. This intimate relation helps us see that the proposed notion of criticality in design operates across Redström's spectrum (2017, see fig. 7, p. 34), as the question of design's own demarcation can happen in products, projects, programmes, practices, and

paradigms. The superspace, then, is also where all possible design programmes play out. Thus, with the understanding of this dialectic, the probing of the perimeter of design's maneuvering space in a given project, also becomes a way of probing the perimeter of design's total disciplinary superspace for maneuvering. In other words, this dissertation offers a way to bring the fundamental question of what design is capable of into play on a project or even product basis, as a 'reflection-in-action' if you will (Schön, 1983). Importantly, this is not a lofty intellectual exercise put in place to deliver an answer once and for all, but a constant opportunity for designers and design researchers working across the full spectrum.

This contribution perhaps has the clearest educational scope, which is perhaps unsurprising, considering the fact that FDL is the project that first and foremost has explored what this reconception of criticality could look like in practice. Along these lines, I see the promise of this contribution as an untying of a critical potential in all design practice and the history of canonized design practices, programmes, institutions etc. who have articulated criticality at the forefront of their practices. It is also an acknowledgement that yes, all design practice is inherently critical, but only if the design practice is conscious of itself.

#### 9.1.4 A Quantum Poetics of Design

Across the literature and experiments, we have skirted certain poetic dimensions of epiphenomenology in the different experiments, first and foremost Hara's reference to the Japanese term 'kizen', originally used to describe a situation of implicit action, and extending through its colour, white, signifying an empty space of possibility, pregnant with time and space (Hara, 2014, p. 216). In these various experiments, perhaps most visibly in W7120, MDM, and DCL, this quality has been present in the epiphenomenological occurrences. This poetic dimension was further elaborated through Drucker's notion of white space as a probabilistic field and our readings hereof as quantum interventions (Drucker, 2009). All of this somewhat echoes the atomistic sensibility in pataphysics, and the various ways in which swerve/clinamen too has surfaced across the experiments and discussions in the various projects.

It also speaks to the destabilizing effect produced by prototyping a pataphysically infused design practice, and yet how this destabilisation is shown forth through construction, through the making of design artifice, in other words how we can grasp pataphysically infused *designing* through pataphysically infused *designs*. It also speaks to the—to some perhaps liberating, while to others perhaps chilling—prospects of a design practice that categorically functions outside of the metaphysical realm, a design practice that uniquely is a façade of a façade. How do we make

sense of design in this way? As a start, let us dive into the concrete image of the façade of a façade as a way to, conceptually at least, hold on to the crucial bridging between the given *design* and *designing as such*.

At first, it is very tempting to think design as a usual surface housing something in its midst: knowledge, beauty, meaning etc. Similarly, it would be easy to mistake the surface for a work of delicate ornamentation that in principle could be applied to any other building. What this dissertation does is showing the façade for what it is: neither the fancy front of an extensive temple of knowledge, nor an exquisite marble frieze that can be removed, copied, and slabbed unto other façades. Rather it is a façade of a façade undergoing constant change, and able to incorporate what seems like any material and immaterial in its evolving composition. We can think of this as a process of constant (re-)construction: a puzzling, somewhat dizzying display, with its dual character of a revelation and a concealment. Because of this process, the structure never appears the same twice before us. And yet, one of its key qualities is that despite presenting a dizzying display, it is no mirage or dream vision, but a real thing, a façade. In fact, the sensation of being able to touch each and every instantiated patch of its ever-changing surface, so still and real in that very moment, easily deceives us into taking this overwhelming tangible experience to be the real wonder of the façade.

But while this sensation has value, the unique contribution of this structure lies neither in the particularity of the tangible experience of touching any part of it, nor in the witnessing of the dizzying stream of change as a whole. Rather, its contribution is its formidable malleability, and yet its relentless instantiation as a real structure in this world for us to interact with in a myriad different ways. Epiphenomenology describes the patches on this façade that we somewhat paradoxically can touch, and yet feel constantly change in our hands, as part of the constant flux of the larger structure. In the projects one such moment would be sitting in the chair and facing your digital shadow presencing before you through the golden suspended frame in MDM, or the experience of a Job Report suddenly emerging from the dormant Workcentre 7120 printer. Considering the diversity in the epiphenomenological occurrences across the projects carried out, the concepts of quantum interventions as design usage, and probabilistic fields as design artefacts, seem to have a fundamental and broader relevance for design, beyond the disciplinary specialisation of graphic design. A quantum poetics of design then, sets out to expand and further refine this nascent vocabulary articulating the ways in which we are able to experience design epiphenomenologically, e.g. as the patches of the façade of a façade that we can touch and yet feel constantly change in our hands. Or the sensation of looking through the ‘iridescent kaleidoscope’ (Jarry, 2006 [1911], via Deleuze, 1998, p. 92), seeing the interior of the kaleidoscope itself,

but only due to the flickers of light invariably passing through it.

To be sure, all of this is not to apophenically advocate for design (or pataphysics) being like quantum physics, and neither to blindly participate in the quantum hype. Rather, it is to say that based on this body of research, including its reference points, and all the experimentation undergirding either of these, quantum poetics offers an exciting direction for further uncovering the aesthetics of design within the science of imagining solutions.

#### 9.1.5 A New Conceptual Foundation

In the context of quantum theory, it is worth noting that this realisation has been reached by prototyping a design practice on a new conceptual foundation, namely pataphysics, i.e. deliberately confronting the gap between skating an ever thinner surface and the increasingly gaping void beneath ones feet (see fig. 11, p. 93). In this sense, this dissertation provides one answer as to what we may find if we allow ourselves to do what science more broadly refers to as ‘basic research’ within design, i.e. explicitly and continuously question our conceptual foundations. Considering the way we think of foundations in this metaphorical sense of something firm and steadfast, it is worth acknowledging exactly how destabilising pataphysics has been as one such conceptual foundation. What this shows is that even a façade of a façade, a ground that refuses to be “a ground” in some sense, is able to sustain a programmatic research exploration into design. In fact, through the infusion of pataphysics into design, and design becoming conscious of itself, the destabilisation looks increasingly like a deep resonance. What I believe this points to, is the way in which the conceptual foundation for programmatic design research is not necessarily some given, discreet platform or core to be put in place, but rather a highly provisional, manipulable structure which itself is subjected to the particular unfolding dialectics put in place between experiments and foundation—in this case the infusion of pataphysics. In other words, if we only put solid grounds in place, it is easy to conclude that solidity is what makes programmes successful. Further, the fact that we overwhelmingly find ourselves looking for solid conceptual ground, then looks as a remnant of the inferiority complex of design. If anything, this is ironic, as programmatic design research is uniquely positioned to show forth possibility as such, as design’s contribution to knowledge at large. This dissertation then helps us realise that the grounds we look for might as well be slippery, porous or holographic (and in turn, *these* grounds—through the exploration unfolding in the dialectics with their experiments in their respective possible programmes—will unearth even more insights on the further grounds we may seek). Surely some of these programmes and their outcomes might be seen to be failing from certain perspectives in design and design research. However, from

the perspective of this current work, this possibility seems completely unproblematic. What is of more concern is that design research, especially taking place in the privileged and in many ways shielded space of the academy, cannot afford to blink in its deep commitment to possibility.

#### 9.1.6 Designing for the World As If It Is

While some of the outcomes of this dissertation can be said to fall under a rubric of new directions and concepts (such as quantum poetics), others can be said to fall under a rubric of resisting the ossification of established ones. In this way we observe a resistance to elements in design, which we as a whole can speak of as Newtonian: relying on causal relations between discreet entities, all subject to a fundamental, God-given stability and a fixed world view that will continue to allow us to reproduce experiments and mass produce design artefacts. More concretely, we saw this resistance in the projects as a resistance to a success-based approach to design research discourse (DRF), the fundamental subscription to a linear futurity in design (MDM and FDL), the imbuing of truth unto certain data and the confusion of glossy business English and contemporary urban disarray (DCL), design's role in self-fulfilling prophecies (MDM, FDL), and the subscription to binary categories such as working/not working (W7120), human/non-human (MDM), truth/lies (DCL), success/failure (DRF), real/ideal (DFL). The resistance across the projects helps highlight the ossifying, or perhaps better fossilising, drives that also make themselves felt within design—drives which in large part are fuelled by design's lack of self-knowledge, coupled with its overstretching into new domains, a dynamic which in turn is ably exploited by its larger scoping forces, perhaps most notably economy and technology. What is at stake is not simply design's ability to possibilize, but a more general curtailing of possibility in the world. What this dissertation shows, is that this situation is no deadlock, and that design—here pataphysically infused—is able to resist these drives through practice. A large part of this exercise has to do with transposing the essential role of the imaginary in constructive design into a world that is not only revealing but also utilising its virtuality in increasingly blunt ways. Another way to say this would be that the dissertation has tightened the loops described by ontological designing into a vicious circling that is so intense that it effectively conflates the 'real' and 'virtual' world: as an example, consider the case of DCL transgressing the lies from the collective imaginary in Hasselt into real urban interventions, which in turn alters the collective imaginary and so on. Or consider the case of MDM, and the way in which the digital shadows invoked in the screen templates, by way of the metadata scaffolding, already might have altered the lives of the participants at the time they are read out, producing new vast sets of metadata, and so on. Importantly, this is not a conflation that is produced

through design. Rather, this is simply a dimension of the problem space of design, the world in which it operates, that a pataphysically infused design—a design becoming more conscious of itself—is able to clearly see and engage with by way of imagining solutions. In some way it is an extension of the romanticist notion of the imagination of the individual, to the way in which we can look at design artefacts as being able to carry and show forth imaginaries (Folkmann, 2013), to a world that is drenched in imagination through and through, conflating the actual and the virtual on all levels. The fact that design is increasingly operating in a world and reality that functions *as if it is* rather than *as it is* (Bök, 2002, p.8), has massive implications for design, irrespectively of whether it acknowledges this fact or not. While we can see that a design practice skating ever further away from its foundation e.g. modelled on Bauhaus or a 1960s ideal of design science, is going to struggle with navigating this world, in many ways this seems to be precisely the world that pataphysics describes and consciously is able to navigate. This in turn helps us see how the conceptual foundation of design is tied to its perimeter, its maneuvering space. To be sure, this delineated space is no parallel dimension, where the dead and dreamers go (Daumal, 2012), or some ideal Platonic realm, but rather an intense and ever-curious commitment to the particularities of reality and as part that, its virtual nature: the world as if it is.

## 9.2 Concluding Remarks

The research undertaken in his dissertation can be characterised through a deep sense of commitment to design through design: an inquiry into the unique contribution of design as its ability to show forth possibility, and notable doing so through the configuration of artifice, in other words through design practice. This is a contribution of design-knowledge to the world, and to knowledge at large.

Across the various arguments made, the dissertation has deliberately leveraged design's inherently transgressive qualities, at once signifying a verb and a noun, an activity and a thing, at once showing us one given *design* (a single design artefact), and in that a glimpse of *designing as such* (design-knowledge, testifying to a distinct discipline and field of inquiry). In fact, writing out 'design' in a 10 point Helvetica typeface, like I am doing right now, is already testament to this unique ability. In a sense, this is the only way we can understand 'design' as design-knowledge.

As evident in the work, pataphysics fundamentally speaks to this malleability of design, its simultaneous revealing and concealing, showing forth and withdrawing, as already apparent in the essential notion of 'an imaginary solution': the actual and imaginary consciously fusing across the material and immaterial domain.

Throughout the dissertation, we have encountered a multitude of different imaginary solutions, all the way from single design artefacts within an experiment, to the sense of the emerging practice itself, and design as such. One consequence of this is that a design conscious of itself, and with that the unique design-knowledge that it has to offer the world and knowledge at large, can not exist as a purely theoretical entity, or strictly reside in an artefact, but only be articulated as an imaginary solution, i.e. shown forth as an example aware of its imaginary nature.

What this helps us see clearly, then, is that while design theorists are able to make an "academic autopsy of design" (Department of Dogma and Theory, 2016), the knowledge will necessarily be of an anatomical and not designerly nature. In other words, there is only so much we can learn from design's ability to reveal design-knowledge from studying *designing as such* as a theoretical field. Similarly, only so much knowledge can be extruded from a single, instantiated and discreet *design artefact*. Unlike the science of imagining solutions, none of these modes of inquiry into design are capable of fully accounting for design as an imaginary solution.

Finally, as has been stressed throughout the various chapters, it is worth returning to the point that this dissertation does not only speak to design itself. Much more



is at stake in design becoming conscious of itself: as a design that shows forth possibility, and critically engages in the demarcation of its own domain, it not only contributes its unique design-knowledge back to knowledge at large, but also becomes a discipline that uniquely is capable of making us experience possibility as such, in a world so decisively shaped by artifice (Dilnot, 1999). Considering the way that we currently see climate change unfolding as a planetary-scale curtailing of human and non-human possibility, alongside with openly fascist governments being elected into power across the world, the capability to design for a world *as if it is*, and to make forays of possibilizing into seemingly impossible domains, seems increasingly important.

With that said, this dissertation has been concerning with making design conscious of itself, by way of pataphysically infusing a design practice, through a series of projects and experiments. Collectively, the work lays out the science of imagining solutions, a theory for a design becoming conscious of itself.

[1] The only way would be something along the lines of Dr. Faustroll's calculation of the surface of God (Jarry, 2006 [1911], pp. 215–218).

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