



NEGOTIATING THE VALUE(S) OF DESIGN(ING)

An Organisational Inquiry

ULISES NAVARRO AGUIAR

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SCHOOL OF BUSINESS, ECONOMICS AND LAW

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DESMA⁺



ABSTRACT

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Organisations are increasingly calling upon design as a strategic asset to generate innovation as part of a wider fascination with ‘design thinking’ in business. Recent scholarship has tended to emphasise design’s many contributions to business and society, playing a part in the growing recognition and expansion of design as an idea. However, scant attention has so far been given to the valorisation of design as a study phenomenon in its own right. How is the idea of design made valuable and strategic in organisations? This ethnographic study explores such question by attending to the practices of in-house designers who undertake efforts to ‘sell’ design and become strategic actors at a Swedish multi-national manufacturing company, Volvo Group.

This research follows the tradition of other ANT-inspired studies that explore strategising and organisational change as the building and unbuilding of networks. Specifically, the study draws attention to the role of valuation in the politics of strategy practice by focusing on controversies where different conceptions of value were at play. This research conceptualises value(s) neither as a subjective preference nor as an intrinsic quality of things, but as the outcome of ongoing practices of valuation that shape reality.

The study reveals how, despite careful planning involving the enrolment of consultants, staged demonstrations, and the circulation of a report, designers failed to get their strategic authority institutionalised through a top-down decision. In fact, their calculated efforts to valorise design(ing) worked to undermine their original aspiration.

The study puts on display how designers deployed a valuation device that allowed them to quantitatively express and assess their contributions in controversial situations. Rather than accentuating their otherness, designers chose to adapt and imitate the dominant valuation regime of quantities and numbers, repressing the articulation of values related to notions of style and aesthetics, in an attempt to look rational and reliable.

The study shows how designers weaved webs of ‘soft contracts’ and engaged in efforts to co-design solutions with non-designers, which produced valorising effects, changing some people’s perceptions around the idea of design(ing). Designers’ efforts to demonstrate worth were more effective when they invested themselves in fluidly coping with localised concerns and obstacles in the flow of everyday practice, than when they sought to impose themselves through a top-down decision.

The study demonstrates that the valorisation of design(ing) does not primarily rest on the rhetorical abilities of designers but on the material arrangements and systems of measurement that they mobilise, as well as the practices of engagement and participation through which non-designers experience design(ing).

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In a typed note discovered with the papers he left at his death, David Foster Wallace describes the driving idea behind his unfinished novel, *The Pale King*:

Bliss—a-second-by-second joy and gratitude at the gift of being alive, conscious—lies on the other side of crushing, crushing boredom. Pay close attention to the most tedious thing you can find (Tax Returns, Televised Golf) and, in waves, a boredom like you’ve never known will wash over you and just about kill you. Ride these out, and it’s like stepping from black and white into color. Like water after days in the desert. Instant bliss in every atom.¹

Wallace surely didn’t know this, but he was describing my research experience and what this project has meant to me since it began back in 2012. Over the years, I’ve felt waves of boredom wash over me as I was reading articles or books whose prose stroke me as nothing less than torture, as I was coding and re-coding material that I almost knew by heart at one point, or as I was transcribing countless hours of interviews. Doing research has sometimes felt like it’s just about to kill me, like descending into a mechanistic abyss of aimless, crushing boredom. But thankfully, I rode those waves out and broke through to new blissful experiences. I’ve felt the bliss of discovering new ideas which have an effect not only in my work but in the way I view the world and approach daily life. I’ve experienced the state of heightened self-awareness that comes through facing the blank page in front of me as I tackle actual writing. I’ve also felt the bliss of forging improbable friendships with people dead and alive, either channeled through books or project collaborations. And so I would like to thank all the people who, in one way or another, have been part of this eventful and greatly rewarding journey.

¹See Max (2009).

I am grateful to my supervisors Alexander Styhre and Anna Rylander-Eklund for striking the perfect balance between being there and not being there; for providing me with just enough guidance to go and charter my own path, rather than directing me to any specific one. I've learned so much from them both and will always be thankful for their support and generosity throughout this process. I also want to extend my deepest gratitude to Stina Nilimaa Wickström who made this research possible, as she gave me the opportunity to come to Gothenburg and join Volvo Group as an industrial PhD. Her support and involvement in the early days of this project were instrumental to its development and completion. My gratitude also goes to all my colleagues at Volvo Product Design who welcomed me with open arms as one of their own, making my time at Volvo educative and enjoyable. I especially thank Aina Nilsson Ström, Sidney Levy, Magnus Andersson, Roland Schling, Juan Wendeus, Allen Smith, Gustavo Guerra, Glen Barlow, Reza Tajik, Fanny Johansson, Michael Hallgren, Nina Augustsson, John Samuelsson, and Viktor Holmqvist.

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1

INTRODUCTION

The ubiquity of angels

In a fictional dialogue between Pia and Pantope, Michel Serres (1995) paints an interesting picture of our post-industrial times:

“So you see angels everywhere...?”

“Their lot, with all the august title of subject! The light that comes from the sun and stars brings messages, which are decoded by optical or astrophysical instruments; a radio aerial emits, transmits and receives; humans do not need to intervene here. As they say, when something’s working, leave well alone.”

Pantope continues, as determinedly as Pia: “If we become angels, will we still work?”

“Probably never again in the same way as yesterday, when our forefathers were out there toiling on the land, or laboring over a piece of iron, forming it, reforming it, transforming it with their hands, using tools and machines.”

“We exchange information with objects that appear more as relations, tokens, codes and transmitters.”

“What’s more,” says Pia, seriously, “in this new world of increasing interconnectedness, the old kinds of work are fast becoming

counter-productive. They pollute, they produce crises and unemployment for the societies organized around them; they are allowed to outlive their usefulness, and become dangerous, wasteful. As a core activity, they enlist and mobilize the whole of society in the same way that religion once did, or, more recently, war. Disasters always seem to derive from things which had an initial usefulness, but which, even though they have outlived their time, we then continue to operate, despite their enormous costs in terms of death and catastrophe.” (pp. 52–53)

Michel Serres is a philosopher whose body of work displays vigorous efforts to create passages between the exact sciences and the humanities, between nature and society. His work is full of metaphors and detours, and he seamlessly combines the ancient with the modern. In Serres’ (1995) *Angels: A Modern Myth*, he employs the figure of angels as a metaphorical device to make sense of modern transformations. He brings theology—or perhaps, more accurately, angelology—to bear upon our understanding of communication in this (hyper)technological age. Serres sets the scene in an airport—Charles de Gaulle Airport in Paris—where Pia, an airport doctor, and Pantope, a traveling inspector for Air France, initiate a conversation. Pantope is always on the move, constantly on the run; whereas Pia stays in the medical centre at the airport, seeing how everything moves around her. Right from the start, Pia stirs the conversation towards the angelic: “Do you believe in angels?”, she asks Pantope all of a sudden. Pia has an agenda; she wants Pantope to see what she sees all around: “angels of steel, carrying angels of flesh and blood, who in turn send angel signals across angel air waves...” (Serres, 1995, p. 8).

In the Judeo-Christian tradition, angels are divine messengers who can appear and disappear; they are ephemeral in their guise; at times embodied, and at other times, disembodied. Angels are mediators, intermediaries, message carriers, who, as such, can be faithful or unfaithful to the message they are transporting—in the Biblical tradition, fallen angels are angels who betrayed their divine calling, now turned daemons. Here, angels are a metaphor of our time whereby networks have multiplied, enabling new forms of communication, exchange and translocation. Through this long dialogue, Serres (1995) describes the shift from an industrial era to a new era of communication in which human

beings live on knowledge and the creation of connections. In this manner, the power of networks enabling instant communication and mobility is likened to that of angels.

Today, information is digitised—which is to say that it is expressed in strings of 0 and 1—and easily transported and communicated via different network-enabled media. Pathways of information seem to become increasingly unhindered, resembling the pathways of angels. The relationship between human being-in-world and technological objects seems to be as complex and ambivalent as the one between human being-in-world and angelic subjects. Serre's (1995) picture of our post-industrial times is rich in both, scientific information and poetic imagination. With the massification of the Internet and the proliferation of mobile technologies, the angelic metaphor is truer now than it was back when he wrote this work in 1993, first published in French as *La Légende des Anges*.

Using religious imagery in their exchange, Pia and Pantope draw some of the implications of this world of fluxes and messages. They imagine a new kind of city, 'Newtown', the new invisible angelic city where the streets are information networks; a decentralised intermediary space that blurs the distinction between the local and the global, enabling unprecedented linkages between concrete and abstract entities, such as bodies, airwaves, bytes, airports, ideas, screens, emotions, corporations. 'Newtown' is very different from—and yet, inseparably linked to—the devastated and materially exhausted 'Oldtown'. The former is less material intensive since its vocation is abstract and informational, and yet, it paradoxically brings about a kind of incarnation by rejoining the abstract and the concrete, signs and things.

"The philosophers of classical antiquity made a distinction between things and signs. This separation is an obstacle if we're looking to understand the world as it is today.

"Newtown industrialises signs, manufactures things with information, constructs the universe with wind, does not remain obtusely materialist within matter, but goes beyond and carries materialism into software." (Serres, 1995, p. 71)

After the industrial revolutions driven by steam, coal, electricity, petrochemicals, and the rise of factories and assembly lines for the mass production of goods, post-industrialisation, since the 90's, has been

marked by network-based digitalisation, the advancement of information and communication technologies (ICT). The invisible, rapid circulation of digital strings of information has opened a new landscape of innovation opportunities. In the post-industrial societies of the Western world, the new materiality is software. The precedence of hardware production that emerged following industrialisation dwindles in the face of these changes. The focus shifts towards the manufacturing of knowledge, services, and information technologies, rather than of things. The latter have not disappeared and continue to be massively produced and consumed, but their role is like that of angels, a kind of abstract materiality that surfaces and conceals avenues of information.

The changing landscape of design

As the industrialism of 'Oldtown' gives way to the post-industrialising vocation of 'Newtown', the design profession is changing rapidly. The modernism and industrialism epitomised in 'Oldtown' painted a vision of production rooted upon the belief in unlimited growth, the progressive nature of technology, the celebration of the machine, and the awareness that the present is radically different from the past (Thackara, 1988). The function of design was simply expressing those modernist ideas in material form, and consequently, it became a functional and technical specialty in the grand scheme of production; another tiny cog in the great industrialist machine; and an important force in the modernisation front. The modern organisation was conceived as a Taylorist machine with a clear chain of command and authority. The specialisation of labour and the search for efficiency contributed to the advancement of knowledge and refinement of production processes, but also to their fragmentation in hierarchical organisational arrangements built for efficiency rather than for innovation. However, as we come to the realisation that we have never been modern (Latour, 1993b) and modernist industrialist assumptions slowly fall apart, as the ecological crisis sharpens, and as we come to apprehend the unsustainable character of our consumption and production patterns, a new philosophy and practice of design are emerging.

Freed from narrow limitations, design is now redefining its 'object' and steadily and pointedly becoming more integrative. Not limited to a

mere technical expertise, design is increasingly being used to raise questions about what is worthy of being produced. In this sense, design and the 'objects' of design are not what they used to be. No longer confined to the form and function of manufactured goods, design is expanding its scope of work beyond material artefacts. And so, following digitalisation, we are witnessing the emergence of new disciplines of design that are focused on systems of relationships and action, such as interaction design, user experience design, service design, business design. This expansion is transforming traditional understandings of what an 'object' of design can be. The new design disciplines have come to the fore in a context of growing connectivity and rapidly evolving information and communication technologies. Hence, design is more and more focused on systems of relationship and action, as well as flows of information, not simply objects.

What is more, as design becomes increasingly multifaceted, new kinds of problems arise. For instance, designing a new service to improve healthcare in remote rural zones in Latin America entails a wholly different set of challenges from designing medical instruments and devices. While the latter is known territory in the product design profession, the former is still *terra incognita* under exploration. Designing an urban transportation system entails a wholly different set of challenges from designing a bus. While the latter involves experts and stakeholders familiar to the world of product design (e.g. engineers), the former involves a complex ecology of political, economic, technical and civil actors. These encounters with new problems demand appropriate tools and a renewed skill-set, making design practice evolve as a result. This entails a profound change in design practice that is blurring traditional disciplinary boundaries.

In this era of network-based digitalisation, not only are new disciplines of design emerging, but the cultural status of the design discipline as a whole has risen. Indeed, design is a fashionable idea whose time seems to have come. Today there is a widespread recognition that design is relevant for business and society. Indeed, we are living in times of unprecedented design awareness across different sectors of society. Perhaps there has not been a time when design has been more part of the public discourse than today. This renewed—and, within the design community, long sought-after—cultural authority rests upon the recognition of design being something more than a mere cosmetic add-on. This insight has been captured and popularised in a famous quote by Steve

Jobs¹: “Most people make the mistake of thinking design is what it looks like. People think it’s this veneer—that the designers are handed this box and told, ‘Make it look good!’ That’s not what we think design is. It’s not just what it looks like and feels like. Design is how it works” (Walker, 2003). The general reputation of design throughout the 20th century was one of a profession concerned with purely decorative matters. Professional designers—I mean the ones that have other aspirations than becoming the next Philippe Starck or the next Karim Rashid—have had to cope with this legacy, having to constantly fight to justify the value of design and its contribution. It is only in recent years that this widespread belief has been changing in the eyes of the wider public. As Latour (2008) points out:

From a surface feature in the hands of a not-so-serious-profession that added features in the purview of much-more-serious-professionals (engineers, scientists, accountants), design has been spreading continuously so that it increasingly matters to the very substance of production. (p. 2)

Thus, the rise of design in the 21st century is being forged on a new understanding of what the discipline is all about; a new valorisation of the idea of design is operating. Remarkably, it is not a peculiar style or a specific aesthetic language that is defining this new understanding and valorisation, but rather the *idea of design* itself. The tendency today is not to valorise design because it styles but rather for its capacity to go beyond things into services and experiences (Brassett & O’Reilly, 2015). We have gone from design as styling, to design as strategy. The triumph of design thinking² —a somewhat controversial notion—brought design into the

¹The iconic status of Apple and the figure of Steve Jobs undoubtedly contributed to the wider acknowledgement of design in the business world. Apple is relentlessly (over)used as an example of design-led innovation in business media outlets.

²Far from being a clearly defined notion, different versions of design thinking have been making the rounds in contemporary design discourse—from the managerialist pop version, to versions accentuating cognition or socio-material practices, to versions associated with broader philosophical projects (see Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013; Kimbell, 2011). However, setting aside all controversies over the variegated conceptions of design thinking, the point is that the momentum generated

open, giving rise to what can be characterised as a new heyday. As described in *The New York Times Style Magazine (T Magazine)*, in its Fall 2014 issue:

The golden age of design has been heralded many times over the last couple of decades—four, by my count. Now, this previous momentum paired with technology, community and big business has fueled something new: an unprecedented belief in the power of design to not only elevate an idea, but be the idea. (Walker, 2014)

Large companies are increasingly employing design not only as a way to differentiate their offerings, but as a means to nurture a culture of innovation within their organisations (e.g. Procter & Gamble, IBM, Deutsche Bank). According to a report published by the venture capital firm, Kleiner Perkins Caufield & Byers, since 2010, thirteen design agencies have been acquired by corporations seeking to enhance their creative capabilities, including technology companies (e.g. Google, Facebook), management consultancies (e.g. Accenture, McKinsey & Co.), and other service organisations (e.g. BBVA, Capital One) (Maeda, 2015). In the same period, twenty-seven startups co-founded by designers have been acquired by the likes of Google, Dropbox, Adobe, Facebook, and Yahoo, and five startups co-founded by designers have raised more than 2.75 billion dollars (Maeda, 2015). Clearly, venture capitalists in Silicon Valley are paying more and more attention to entrepreneurs with design training. The rise of design is made evident in the emergence of design-related leadership roles in organisations, such as SVP's of design and Chief Design Officers. Traditionally, design teams report to product and engineering managers, but the tide is changing as design teams in some corporations start to report directly to top executive management. In fact, thirteen of the 2014 Fortune 125 companies have executive-level positions or CEO support for design (Maeda, 2015). In an article entitled *What is behind the rise of the Chief Design Officer?*, Forbes Magazine highlights a growing business trend of elevating design and expanding its role throughout the organisation:

by the label as such has largely contributed to the rise of what can be characterised as a new heyday for the discipline.

What's more, the idea of design is being baked into every aspect of corporate life. [...] the new title also reflects the dawning of a new outlook on what companies produce and their dynamic relationships with customers. It is the well-designed products and services offering new experiences that are captivating consumers' attention. (Stuhl, 2014)

The rise of the idea of design is also making waves in the public sector and the non-profit sector. Government agencies and NGO's across the globe are finding inspiration in design to approach policy making and social change (e.g. Policy Lab UK, MindLab, la 27ème Région). Without a doubt, an important transition is currently unfolding.

Interestingly, novel applications of design are taking off in industries or sectors where design did not previously have a role or strong presence. In the worlds of technology startups, software, banking, management consulting, policy-making, design is steadily and deliberately being integrated as a core activity for innovation, and there are more designers working in those spaces than ever before. However, in sectors where design has had a long tradition, namely in manufacturing, the expansion of design into new fields is at odds with established conceptions of the design discipline. Indeed, in manufacturing contexts, the activities of designers have usually been focused on graphics and material artefacts, rather than on systems of relationships and action.

In the world of business-to-consumer (B2C) manufacturing, design has typically been perceived as a competitive asset to address new consumer demands via form-giving of products and branding. In business-to-business (B2B), however, the role of design has traditionally been perceived to be less critical. But considering the slowdown of manufacturing in today's post-industrialising context, the imperative of innovation has B2C and B2B manufacturers be more open to experimenting with new approaches. In fact, many manufacturing firms are undertaking efforts to shift from selling products to selling services and/or integrated product-service systems; a phenomenon known as the servitization of manufacturing.

The servitization of manufacturing

Servitization is a term coined by Vandermerwe and Rada (1988), and over the last decade or so, it has been the subject of much attention in academia, business and government (see Baines, Lightfoot, Benedettini, & Kay, 2009; Lightfoot, Baines, & Smart, 2013). There are different definitions of servitization in the wider literature, but they generally converge on the idea that a fundamental shift in manufacturing—with far-reaching organisational implications for firms—is taking place, in which manufacturers are increasingly expanding their range of services with the aim of providing broader solutions to satisfy customer needs—blurring the boundaries between products and services as a consequence.

The rise of ICT and digitalisation has coincided with the shift towards service-orientation in manufacturing. In fact, the spread of mobile connectivity is enabling new service-oriented business models in the manufacturing sector. For instance, car sharing services like ReachNow and Sunfleet, owned by BMW and Volvo Car Corporation respectively, are examples of automakers engaging in the development of product-service systems enabled by Internet connectivity. The rise of fashionable buzzwords like “collaborative consumption” (Botsman & Rogers, 2010), “sharing economy” (Sundararajan, 2016), and “leasing society” (Fischer, Steger, Jordan, O'Brien, & Schepelmann, 2012), is an indication of how access is increasingly being privileged over ownership via the provision of services. The proliferation of Internet-based platforms acting as intermediaries between private sellers and private buyers (e.g. AirBnB, Lyft, Uber) has created a new kind of peer-to-peer market which is prompting public debate and giving a fair share of headaches to regulators (see Cheng, 2016).

Nowadays, services as a whole are increasingly digitalised. So-called ‘smartphones’ brought about the app revolution, and right now, mobile applications and web portals are essential digital service components in many sectors. In the manufacturing sector, digitalisation enables the development of new types of services. For instance, intelligent data systems now enable products to operate independently of human intervention and communicate and transfer data, bringing digital and physical systems together (Lerch & Gotsch, 2015). Digitalisation offers innovation opportunities but also increases complexity and abstraction and prompts

new ethical quandaries, demanding new problem-solving skills to manufacturing firms.

This need for new skills tends to be at odds with traditional arrangements in manufacturing characterised by specialisation of labor and the search for efficiency. Traditional manufacturers have diverse departmental functions specialising in the facts of their respective subject-matters, creating organisational silos that contribute to the fragmentation of processes and offerings. Thus, the increasing interconnectedness of things poses a challenge as it renders functional and disciplinary boundaries fluid.

Valorising design at Volvo Group

In view of all these changes, designers at Volvo Group see a great opportunity to valorise and expand the role of design into new areas of the business. It seems like the time is ripe for design to become a strategic force for change to tackle the challenge of servitization. The following quote from an interview excerpt illustrates well the defining spirit or mood among design managers at Volvo Group:

[Design manager]: Our company is a traditional hardware manufacturer, a very traditional industrial manufacturing business, where we produce trucks and machines and stuff that we sell. That's our competence, and we built the structure of the company around this. Now with all the options when it comes to adding services, that's just beginning to be explored. And I think we're facing a paradigm shift, where we need to add another kind of competence in our company, and we need to add another way of working to develop business opportunities connected to our hardware. This process is going slower than I expected. (...) I think the next step is to decide where we're supposed to be. Should we continue being a hardware developer and manufacturing organisation or should we do as we state in our vision that we are a product and service provider?

As design leaders of a B2B manufacturing company, design managers sense the unfolding of nothing less than a “paradigm shift.” If one was to

carry through the Kuhnian metaphor, one could argue that the old industrial paradigm is in a state of crisis, as significant anomalies have accrued as a result of several factors (e.g. digitalisation, commoditisation, ecological degradation), and a new post-industrial paradigm is surfacing built on the possibilities afforded by digitalisation. Manufacturing companies increasingly operate in this tension between the industrial and the post-industrial. Volvo Group, a case in point, is embracing a post-industrial discourse, epitomised in its vision statement: “become the world leader in sustainable transport solutions.” The focus on “solutions” is a fashionable idea adopted by many manufacturing organisations. However, design managers perceive that the transition from traditional manufacturer to solution provider is not unfolding satisfactorily. Many design managers think that this vision has not translated into clear strategies to actually make change happen. Organisational practices tend to revolve around the product as the main medium of value creation. Thus the vision remains more of a “tagline”, according to a design manager:

[Design manager]: It's less and less about the pressed steel. Of course the truck is important, that's a core product, but you know our tagline is: become the world's leader in sustainable transport solutions. And I think it is just that right now; it's just a tagline. But if you really think about what it takes to fulfil and deliver on that, then it's not necessarily about a truck. It's about lots of things. It's about moving stuff ultimately from point A to point B in the cheapest, most sustainable way possible.

Interestingly, this concern for solutions is not really new within Volvo Group. For more than ten years, the company has been making efforts to be more service-focused and increase the share of revenues coming from services. But this change entails a whole shift in worldview that defies almost 9 decades of conventional wisdom stemming from transforming materials into tangible products. From the beginning, organising processes have been focused on enhancing product development and sales operations, that is, the traditional make-and-sell logic in manufacturing. Now information is the new material to be transformed into digitalised product-service systems, which entails a broader and much more fluid conceptualisation of what a product is. And yet, despite the vision statement and earlier efforts to boost service revenue, some design managers observe that the company insists on conventional product

categories instead of approaching situations with a broad systems perspective.

[Design manager]: Right now when we... (He pauses to correct himself) If we think about service, we think about the product at the centre and then there's these other things around it. But this kind of circles around it, those services are add-ons, and they're only meant to sell more of this thing that's in the centre, so more trucks, more excavators or whatever. That's our mindset we just sell these things. And really it's a shift to put in the customer in the centre, and solving problems for them that may or may not involve a truck or an excavator.

Design managers are convinced that the Product Design department (PrD) can play a “strategic” role in this transition. Assuming an active role in the definition of the problem, they have come up with their own ideas on how Volvo can become a true solution provider. They want to make themselves indispensable in this transition. They do not want to be perceived merely as narrow specialists in traditional product design—which they are—; rather, they want to expand the scope of their work and be perceived as service designers able to craft wholesome experiences. They want to demonstrate that PrD can be a strategic asset when it comes to designing for new situations that demand a broad systems perspective. For design managers, this is clearly the future of PrD.

[Design manager]: I think the physical designers will be like maybe a quarter of the total number of people, and digital and communication and service design will be the 75 percent of the department in the future. I think there are still sort of physical areas for us to grow into. [...] But it won't grow as much as the other areas that are sort of endless.

This projected future exerts a wielding influence over the present, as design managers seek more and more opportunities to bring that reality into existence. Possibilities seem endless but the value of PrD's expertise in this area is yet to be proven. From their perspective, design should not be an “operational” function, but rather a “strategic” one. They believe in the “added value” of their ideas and expertise, so they want to shape the

strategic agenda of the company and demonstrate their worth to the business.

About this study

The aim of this introductory chapter is to paint a broad picture of the changing landscape of design and its role in manufacturing, and provide a small glimpse of how these changes are perceived by in-house designers working at Volvo Group. Today, manufacturers such as Volvo Group are faced with the challenge of digitalisation and servitization, which is rapidly changing the meaning of “business as usual.” Manufacturing firms are particularly interesting because they represent the tension between ‘Oldtown’ and ‘Newtown’ of late advanced capitalism. In the second half of the 20th century, manufacturers were the engines that propelled Western economies to unprecedented levels of prosperity. Today, they are caught between past glories and the digital revolution. Clearly, they are sites of change and resistance. This thesis is an exploration of one such site, Volvo Group, where these wider changes are fostering a climate of uncertainty.

In particular, this thesis looks at the changes in design practice within Volvo Group. As previously mentioned, design is expanding its scope of work and is increasingly being regarded as a strategic asset (Celaschi, Celi, & García, 2011). However, despite the wider acknowledgement of design, its role at Volvo Group still tends to be peripheral to strategic discussions. At Volvo Group, design is not yet fully regarded as ‘strategic’ and remains ‘technico-operational.’ Arguably, this is due to the overpowering influence of a deeply ingrained product-oriented industrial logic and the legacy of modernism. This study focuses on the work of actors from Volvo Group’s Product Design department (PrD) who seek to explore new territories of action beyond the traditional confines of the industrial design discipline. I examine how designers seek a wider recognition and undertake conscientious efforts to demonstrate their worth to the rest of the organisation.

According to Morelli (2002), the involvement of designers in the development of product-service systems requires an expansion of designers’ activities to areas previously covered by different disciplinary domains. In this sense, becoming ‘strategic’ and expanding the scope of

design work is a controversy-laden enterprise that calls for justifications and rich articulations of value. Indeed, the rise of design as an increasingly popular idea in business and among constituencies that had typically nothing or little to do with it, has raised questions about its value(s), and thus invites to have a closer look at how design is being valorised and translated as an idea in local time/spaces (Czarniawska & Joerges, 1996). This thesis aims to contribute to this ongoing discussion by analysing a case in point where this valorisation of design is enacted and negotiated by actors within Volvo Group. I develop my argument from the premise that design is not inherently valuable or strategic; rather, it has to be *made* valuable and strategic in practice. Thus the role of objects and devices as mediators of practices is crucial to this inquiry, as designers make the case for a broader design mandate. As they do so, they also face the challenge not only of articulating the value of design but also of negotiating competing interests and notions of value held by other actors in the organisation.

Recent scholarship has tended to emphasise design's many contributions to business and society (Buchanan, 2015; Carlgren, 2013; Dorst, 2015; Jahnke, 2013; Michlewski, 2008; Verganti, 2009), playing a part in the growing recognition and expansion of design as an idea. However, scant attention has so far been given to the valorisation of design as a study phenomenon in its own right. By exploring the type of mediations and translations that operate in this valorisation, this research follows the tradition of other ANT-inspired studies that explore strategising and organisational change as the building and unbuilding of networks (see e.g. Harrison & Laberge, 2002; Knights, Murray, & Willmott, 1993; Whittle & Mueller, 2008). Specifically, the study draws attention to the role of valuation in the politics of strategy practice. By adopting a pragmatist perspective on valuation (Dewey, 1939; Hutter & Stark, 2015; Muniesa, 2011), this research conceptualises value(s), neither as a subjective preference nor as an intrinsic quality of things, but as the outcome of ongoing practices of valuation that shape reality. This research also builds on previous work on the diffusion of ideas (Czarniawska & Joerges, 1996) and the politics of strategy practice (Carter, Clegg, & Kornberger, 2008b; Whittle & Mueller, 2010) as part of the wider 'practice turn' in strategy research (Whittington, 2006).

Today there is a lot of advocacy stating that design is “strategic” and “valuable,” yet there is little work showing how design comes to be regarded as such. Thus, the following research questions arise:

How is the idea of design made valuable and strategic?

This contains the following sub-questions:

How is the idea of design materialised?

How do designers go about negotiating its value(s)?

What is the role of artefacts and devices in these negotiations?

Outline of the thesis

Chapter 2: *Theoretical Perspectives* is divided into two sections: Strategy and Design. The first section engages with strategy scholarship and outlines what an ANT perspective to strategising entails. It also discusses how the notion of value has been commonly conceptualised in strategy literature, and presents a pragmatist perspective on valuation as a way to avoid common dichotomies in our understanding of value(s). This section emphasises how discourses of the ‘valuable’ are tied to discourses of strategy in organisations. The second section discusses how the idea of design has been valorised in its recent infiltration into new areas of business, and highlights how these discourses often rest on dichotomous conceptualisations of value(s). This section also explains how the current elevation of the idea of design is tied to the notion of design-ing, rather than design as a finished product, and discusses how the boundaries of the design discipline have become increasingly fluid. This section also provides some historical context on the industrial design discipline and its stabilisation as a legitimate field of practice with a special emphasis on the work of the Bauhaus. This section concludes by discussing the valorisation of design(ing) in relation to ‘design thinking’ discourses.

Chapter 3: *Method* addresses what an ANT-pragmatist approach to ethnography entails. It also provides an introduction to the research setting, Volvo Group, and discusses how the empirical material was gathered and analysed.

Chapter 4: Go for the ‘Big Cheese’—or how (not) to plan a strategic intervention provides an empirical account of designers’ efforts to commandeer change and secure mandates in their attempt to become strategic players in the development of services at Volvo Group. It describes in detail designers’ strategy-making, including the crucial detours and inflections that slipped out of their control in this process.

Chapter 5: Get me those numbers—or how to deploy a valuation device provides an empirical account of the emergence of a scoring device through which designers were able to justify design decisions. Designers came up with this device as an attempt to defend what was at stake for them in crucial product decisions where their concerns seemed to not count. It made designers’ concerns count by expressing them in numbers. But this device also changed them.

Chapter 6: Go local—or how to cope and work from the ‘bottom up’ provides an empirical account of designers’ efforts to demonstrate worth by “making other people look good.” Instead of plotting a strategic intervention, they invested themselves in weaving webs of soft contracts, adopting a more humble and nimble stance.

Chapter 7: Concluding Discussion recapitulates the most salient aspects of the empirical accounts, and contains a theoretically-informed discussion of how the findings shed new light on the phenomenon of design’s valorisation. The chapter also discusses what is at stake for design management practitioners.

2

THEORETICAL PERSPECTIVES

Strategy

*The future is inevitable and precise, but it may not occur.
God lurks in the gaps.*

—Jorge Luis Borges, *Other Inquisitions*

Everything begins in mysticism and ends in politics.

—Charles Péguy, *Notre Jeunesse*

Strategy travels

Strategy is one of those widely institutionalised constructs that we simply take for granted. From its origins in military warfare, strategy travelled to new localities and it now permeates the world of organisations. There is no escaping from it. Organisational life is saturated with images and discourses of strategy, and it has become so commonplace as to seem unremarkable (Carter, 2013). All kinds of organisations strategise: corporations, organisational departments, governments, public sector organisations, consulting firms, think tanks, universities, NGO's, political

parties, and even churches¹. They all organise around and deploy strategies to induce action and bend the future to their agenda. As a pervasive technology, strategy aims at transforming reality by structuring conversations and calculations about the future, which makes it a theoretical and theological project (Kornberger, 2013b).

The history of strategy is variegated but its origins are undoubtedly intertwined with war and military imagery. Classic works on military strategy such as Sun Tzu's *The Art of War* and Clausewitz's *On War* have served as the basis for much contemporary discourse on strategy. Michael Porter's (1980) analytic apparatus, for instance, treats the marketplace as a battlefield, whereby the strategist selects a generic position to outperform adversaries. In this understanding, strategy is about consolidating actions to create or maintain a defensible position in a marketplace—or battlefield—, dealing effectively with the five forces. The strategist analyses the environment surrounding the firm in an attempt to identify and anticipate changes happening in the industry for the firm to allocate resources accordingly. Here, strategy is understood as a rational planning endeavour performed by top executives.

Yet this common and largely institutionalised understanding of strategy radically breaks from the thought of one of its intellectual forebears, Carl von Clausewitz, the famous Prussian general. Tryggestad (2005, p. 33) argues that Clausewitz saw planning as part of strategy, but he understood that strategy must “travel in the field, not kept pure and protected from it.” For Clausewitz, plans are to be seen as devices of equivocal character, because the arrangements they suppose...

...are all things which to a great extent can only be determined on conjectures some of which turn out incorrect, while a number of other arrangements pertaining to details cannot be made at all beforehand, it follows, as a matter of course, that *Strategy must go with the Army to the field* in order to arrange particulars on the spot, and to

¹So much has strategy discourse filtered into church life, that Stanley Hauerwas, the Christian ethicist and theologian, criticises the type of political theology that assumes that the church should have strategies. “The church”, argues Hauerwas, “doesn’t have a social strategy, the church is a social strategy” (Hauerwas & Willimon, 1989, p. 43).

make modifications in the general plan, which incessantly become necessary in War. Strategy can therefore never take its hand from the work for a moment. That this, however, has not always been the view taken is evident from the former custom of keeping Strategy in the cabinet and not with the Army... [emphasis added] (Clausewitz, 1832/1909, pp. 100-101)

Keeping strategy in the cabinet—or in the executive suite, as it were—and away from the field results in the separation of strategy from politics (Tryggestad, 2005). This penchant for purification has underpinned traditional approaches to strategic management in both research and practice. Indeed, the ‘planning school’ conceptualises a detached view of strategy as a plan that is first devised and then implemented; first management thinks, then organisation acts, reinforcing the Cartesian split between the intelligible mind that thinks and the dumb body that acts, also characteristic of Taylorism (Clegg, Carter, & Kornberger, 2004b). This reduces strategy to a managerial equation which, with the right amount of information and resources, can be solved by the heroic strategist. Thus strategy becomes a depoliticised, purified plan. This linear way of thinking overlooks the complexity and *realpolitik* of organisational life (Carter, 2013). Indeed, according to Clegg et al. (2004b), “[u]nderstanding of strategy necessitates an engagement with power and politics,” in order to surpass the modernist rationality underpinning traditional approaches to strategy. Caygill (2013, p. 16) argues that an alternative title to *On War* could have been *The Critique of Military Reason* because of the Kantian influence on Clausewitz’s project which consisted in finding new concepts to comprehend and resist the threat of the new warfare waged by the Napoleonic armies. One could argue that, when it comes to our modern understanding of strategy, *The Critique of Managerial Reason* could also be a title faithful to the Clausewitzian project.

In a similar vein, Kornberger (2013a, p. 1058), in his detailed exegesis of Clausewitz’s *On War*, argues that, for Clausewitz, “a normative theory of strategy is impossible”, rejecting—in the Prussian general’s own words—“the horrid dreams of generalization.” This stands in stark contrast with traditional planning approaches characterised by theoretical abstraction and a “normative compulsion to prescribe” (Ezzamel & Willmott, 2004, p. 45). Clausewitz saw normativity as impossible because the interplay of quantities (e.g. number of troops or ammunition) and

qualities (e.g. the morale or motivation of the troops) in the battlefield influences the course of events in unexpected ways, eluding rational calculation (Kornberger, 2013a). In other words, when strategy “travels in the field” the blackbox of its making, re-making and unmaking can be opened, and its detours and bifurcations can be empirically explored. What holds a (military or managerial) strategy together in the (battle)field? An army of highly trained troops? An organisation with dynamic capabilities? The penchant for purification favours these abstractions and simplifications. From a Clausewitzian perspective, when strategy “travels in the field,” an army stops being an abstract single entity easily represented as a set of pins on a battlefield map placed on the desk of the strategist’s bureau, and reveals itself as something entirely different:

Imagined as a coherent singular entity, an army is in reality constituted through a heterogeneous network of things and people, all of which are subject to centrifugal and centripetal forces, simultaneously pulling them apart and pushing them against each other. The resulting friction produced by the minutest detail, the smallest event, the least significant person constantly threatens to disintegrate the military machine. (Kornberger, 2013a, p. 1064)

From a Clausewitzian perspective, the waging of war is not the exclusive affair of human bodies—an insight which seems rather obvious today in the era of drone strikes, atomic bombs and chemical weapons. Indeed, “the body politic of war is produced and reproduced in the interaction among humans and artifacts” (Tryggestad, 2005, p. 32). In this sense, the politics of strategy includes humans and things as they act and are acted upon. When strategy “travels in the field” the heterogeneous tissue of relations that holds it together is exposed to the elements and risks breaking apart. In practice, the fate of strategy hangs by a thread—or by a sword or by the weather conditions or by the morale of the troops. As Kornberger (2013a, p. 1071) argues, “[w]ith Clausewitz, strategy becomes an adjective that attaches itself to heterogeneous things and people”; from sudden rain to a pernicious rumour to an infectious outbreak, they all can “become strategic objects that have a decisive impact on the course of events.” Strategy is thus a more complex phenomenon than what is suggested in the ‘planning school.’ It entails much more than rationally defining a purified ideal state of the firm. The ‘fog of war’ seems to render regular planning and prediction futile.

Commonly held assumptions in the 'planning school', such as the idea that strategising primarily takes place in the strategist's Cartesian mind and that it is an activity restricted to top executive management, have been questioned by different strategy scholars who have incorporated sociological insights such as power and politics into their analyses. Henry Mintzberg, in North America, and Andrew Pettigrew, in Europe, are perhaps the most emblematic figures in the processual view of strategy research whose primary concern has been to investigate how strategy unfolds over time in organisations (Pettigrew, 1992). Mintzberg (1994a) argues that 'strategic planning' is an unrealistic enterprise, and critiques the idea that strategy can be created in a formal process. In his view, strategy is emergent rather than intended, and it arises as a series of incremental decisions that form recognisable patterns after some time (Mintzberg, 2007). As a result, strategy can only be studied retrospectively. For Mintzberg (Mintzberg, 1994b; 1994a), it makes no sense creating a division between formulation and implementation, thinkers and doers. He views strategy making as a process in which ideas are championed and negotiated in political battles; they travel and sometimes "bubble up" to top management (Mintzberg, 1992). Thus, from this perspective, strategy is "a negotiated outcome of competing values and conflicts of interest" (Ezzamel & Willmott, 2004, p. 44).

The processual approach breaks with the assumption that strategy is a top-down endeavour. It also introduces a post-rationalist, dynamic view of strategy as a process in which the role of the strategist is problematised (Jarzabkowski, 2008). Although this stream of research presents interesting counterpoints to the planning approach, it has been criticised for focusing mostly on grassroots strategies, overlooking the relationship between formal intent and emergence (Jarzabkowski, 2008; Whittington, 2004). Further, the ontological assumptions of the processual approach reproduce the structure-agency dichotomy whereby action is a domain restricted to human agents who act in tension with established structures (see Pettigrew, 1992). Thus the Clausewitzian insight that questions the separation between humans and things in the battlefield cannot be pursued under the processual view, since it remains structuralist and human-centred in its ontology.

Other scholars have followed the critical path (e.g. Alvesson & Willmott, 1995; Ezzamel & Willmott, 2004; Knights & Morgan, 1991). Knights and Morgan (1991) use critical discourse analysis to level a critique

against rationalist and processual views of strategy. They support processual theory “in its rejection of the view that corporate strategy constitutes simply a rational response to the environment and its concern to understand strategies as the outcome of power relations” (Knights & Morgan, 1991, p. 268), but they draw the line when it comes to epistemology. They claim that their understanding of power represents a more “radical break” with rationalist understandings of strategy than the processual view. Following Foucault, they argue that power produces subjectivity and that strategy has ‘colonising’ effects (p.258). Their main contention is that strategy “disables” certain groups and “empowers” others, transforming people’s identities (p.262). According to them, strategy produces self-disciplining subjects who draw their sense of meaning and reality through participation in strategy discourse.

In the vein of Latour (2004), Tryggestad (2005, p. 36) criticises Knights and Morgan’s (1991) critique, holding that “[t]he authors do not illustrate this discursive strategy’s capacity to colonize.” In this sense, Knights and Morgan’s (1991) standpoint of critique is in the domain of theory, placing them in an epistemological higher ground, while actors are helplessly swamped with the “self-disciplining” effects of strategy in the low ground. Critical approaches embrace an ideology of critique and suspicion whereby the actions and perspectives of the actors themselves play a secondary role—if at all. This leads Tryggestad (2005, p. 36) to conclude that “Clausewitz’ suggestion to stay close to the field and the materials of strategy seems not to be part of the critical school either.”

An intellectual offspring of the processual approach, strategy-as-practice (SAP) is a more recent development in strategy research. This approach re-conceptualises strategy as something that people do in organisations rather than something organisations have (Johnson, Langley, Melin, & Whittington, 2007), with a “focus upon the way that actors interact with the social and physical features of context in the everyday activities that constitute practice” (Jarzabkowski, 2004, p. 519). In this sense, strategy is considered not only as an attribute of firms but also as an activity undertaken by people (Johnson, Melin, & Whittington, 2003). The analytic focus is on ‘strategising’ in an attempt to uncover what it is exactly that practitioners do when they do strategy (Whittington, 2004). SAP is attentive to the micro-processes, practices and activities carried out by strategy practitioners, in an attempt to reveal the complex and unpredictable aspects of how strategies come into being. The rationale

underpinning the project is that “if sustainable advantage can be achieved and sustained it is likely this is because such advantage is lodged in the interactive behaviours of people in organisations” (Johnson et al., 2007, p. 8). SAP advocates differentiate their approach from the processual view arguing that the latter has focused on the fate of the whole organisation, clinging to an organisational level of analysis, and has been less attentive to mundane micro-activities that shape the making of strategy on the micro-level field of human practices (Whittington, 1996; 2004).

Hardly a coherent body of theory, SAP draws from a variety of theoretical inspirations, ranging from Bourdieu (e.g. Chia & Holt, 2006; Chia & MacKay, 2007), to Giddens (e.g. Jarzabkowski, 2004; Whittington, 2006), to Schatzki (e.g. Jørgensen & Messner, 2010), to Wittgenstein (Seidl, 2007), to ANT (e.g. Denis, Langley, & Rouleau, 2007; Whittle & Mueller, 2010). Thus SAP theorising has been characterised as “somewhat promiscuous” (Carter et al., 2008b, p. 89) and too eclectic in its conception of practice (Carter, 2013). Furthermore, it has been suggested that SAP is managerialist and conservative (Carter, 2013), because of its lack of attention to issues of power and politics (Carter, Clegg, & Kornberger, 2008a; 2008b; Clegg et al., 2004b). Indeed, whereas processual views were more attentive to power and politics, SAP has been more preoccupied with the skills, tools, and techniques used in strategising (Ezzamel & Willmott, 2004), adopting mostly the perspectives of those in the executive suite (Carter et al., 2008a). In this sense, much of SAP literature remains conservative (Carter et al., 2008b) and clearly lacks Clausewitzian cognisance, which is, perhaps, why it has also been regarded as “insufficiently historical” (Carter, 2013, p. 1053).

Far from viewing it as a hindrance, Seidl and Whittington (2014) embrace the eclectic spirit of SAP research. In their review of theoretical approaches to strategy-as-practice, they propose to enlarge the SAP research agenda. Their project aims at countering ‘micro-isolationism’, “whereby a local empirical instance is interpreted wholly in terms of what is evidently present, cut off from the larger phenomena that make it possible” (p.1408). In order to avoid this, they encourage researchers to either “go taller” or “go flatter” in their ontological assumptions, while staying true to SAP’s attentiveness to “micro-level strategising praxis” (p.1408). At first glance, the phrasing of their suggestion seems to reproduce the micro-macro dichotomy, which it partly does. For instance, if one “goes taller” it would imply that “micro-level strategising praxis

depends hierarchically on larger macro structures or systems” (p.1408). However, if one “goes flatter”, “the larger phenomena” are not macro structures, but “what stretches out sideways in a network of relationships” (p.1408). They concede that these two ontological positions represent very different standpoints in the fight against ‘micro-isolationism’, and therefore urge researchers to follow through on their ontological choices. Interestingly, flatter ontologies have been relatively neglected in SAP research, and thus Seidl and Whittington (2014) argue that there is much progress to be made in this direction. They draw attention to actor-network theory (ANT) and Schatzki’s practice theory as fruitful theoretical resources to take on this challenge. ANT, in particular, offers possibilities to redeploy Clausewitzian insights in the study of strategy.

Actor-Network Theory

ANT is an approach to sociology that was first pioneered by the *Centre de Sociologie de l’Innovation* (CSI) at the *École des Mines de Paris* from the end of the seventies. It emerged in the field of science and technology studies (STS) as an attempt to “better describe science as it was happening and to analyze technological innovation” (Hennion, 2016a, p. 290). ANT positioned itself as an alternative approach to traditional sociological analyses of science and technology since it refrained from giving ‘social explanations’² of scientific and technical phenomena, and focused instead on the work of scientists and engineers, providing unconventional ethnographic accounts of their practices (e.g. Callon, 1981; 1986a; 1986b; Callon & Law, 1982; Latour, 1986b; 1987; Latour & Woolgar, 1979; Law, 1986; Law & Callon, 1988). By following the entangled associations involved in the practices of scientists and engineers, these accounts broke up with the notion that there are distinct domains such as ‘Nature’ or

²In his *Reassembling the Social*, Latour (2005) elaborates on ANT’s idiosyncrasies vis-à-vis traditional sociology. He argues that “the social cannot be construed as a kind of material or domain” and disputes “the project of providing a ‘social explanation’ of some other state of affairs” (p. 1). In his view, “what is called ‘social explanation’ has become a counter-productive way to interrupt the movement of associations instead of resuming it” (p. 8).

‘Society.’ Notably, ANT paid particular attention to the list of improbable entities necessary for the emergence or institutionalisation of scientific facts or technical devices, and proposed a series of concepts to build such accounts, including *networks*, *non-humans*, *translation*, *inscriptions*, *obligatory passage point*, *enrolment*. These terms, however, do not offer a coherent framework or “theory”, for ANT is an “adaptable, open repository” that rather than defining its terms, plays with them (Mol, 2010, p. 253). This sub-section provides an overview of the main characteristics of ANT and highlights the concepts that are particularly relevant for the argument set forth in this thesis.

Networks

One of the central tenets of ANT is its insistence upon treating human and non-human entities equally, examining their associations and their actions or performances rather than assuming *a priori* essences. In ANT, an actor’s substance or essence is not an *a priori* fixity; rather, it arises out of the actor’s relationships with other entities *after* having gone through a series of trials or tests. In this sense, essences are *a posteriori* achievements. In ANT’s relationist ontology, essences are better represented as filaments or Deleuzian rhizomes³ as opposed to surfaces (Latour, 1996), that is, what we perceive as essences are none other than precarious and provisional *networks*. And this equally applies to humans and non-humans. For instance, Latour (1993a) shows that Pasteur—who is essentially remembered as a great scientist—was a combination of heterogeneous elements, such as notebooks, statistics, bacteria, sheep, laboratories; Pasteur-the-great-scientist, the argument goes, did not exist outside of this network—he was a network. Similarly, Law and Callon (1988) show how the TSR₂ was not simply a military aircraft but a network that was shaped by the compromise of different concerns and actors, including politicians,

³Commenting on the variety of misinterpretations in relation to ‘actor-network theory’, Latour (1999a) concedes that a more accurate descriptor for ANT could have been ‘actant-rhizome ontology.’ Indeed, the ontology of ANT is strongly influenced by the work of Gilles Deleuze, whose version of distributed materialism is foundational to the notion of ‘network’ as an assemblage of heterogeneous components. For a detailed treatment of Deleuze’s assemblage theory see DeLanda (2006; 2016).

engineers, industrialists, different metal alloys, budget restrictions, and production capacities of manufacturers. In other words, ANT makes the bold ontological claim that actors are mutually constituted and defined in the course of their association with others, which is what the notion of *actor-network* is supposed to encapsulate by drawing attention to the fact that an apparently coherent singular actor—such as Pasteur-the-great-scientist or the TSR₂— is only the provisional stabilisation of a heterogeneous network of relations.

Another paradigmatic example in the context of STS is ANT's preoccupation with elucidating the process by which scientific ideas become regarded as 'facts' after having undergone a series of trials such as experiments, themselves productive of performances or effects (Latour, 1987; Latour & Woolgar, 1979). 'Facts' are then the result or outcome of a long process of negotiation and stabilisation through which they become obvious and indisputable; their substance emerges. ANT characterises this process as the formation of a *network* whereby human and non-human actors are enlisted. The resulting scientific 'fact' appears as a coherent singular entity, but its emergence and stabilisation is the costly achievement of a *net-work*. Microscopes, measuring instruments, test tubes, paper, pencils, money, publishers, journal articles, microorganisms, scientists, technicians, politicians, laboratories, databases, computers and so forth are all examples of entities that play a role in these trials and negotiations. In other words, they may be necessary elements for the emergence and stabilisation of the actor-network that is a scientific fact.

ANT is thus concerned with the *emergence* of these heterogeneous networks of relations involving humans and non-humans. Such emergence can be described as follows:

It begins with an identification of actants⁴ (those which act and are acted upon). Then one follows the actants through a trajectory—a

⁴To counteract the anthropomorphic connotation of the term 'actor,' ANT researchers adopted the notion of 'actant,' borrowed from the work of Algirdas Greimas, a French semiologist (see Czarniawska & Hernes, 2005). The two terms are often used interchangeably, as they both refer to any thing that makes a difference in a situation. However, there is a slight technical distinction in their meaning. According to Latour

series of programs and anti-programs—until they become actors, acquiring a distinct and relatively stable character. Which actants have the opportunity to become actors? Those with programs that succeeded in combating anti-programs; or, alternatively, those with anti-programs that won, as in the stories of opposition and resistance. This success, suggests Latour, is due to association: the formation and stabilization of networks of actants, who can then present themselves as actor-networks. (Czarniawska & Hernes, 2005, p. 9)

This concern with opposition and resistance evokes military associations reminiscent of Clausewitzian thought. The grammar of ANT pits programmes against anti-programmes in the constitution of collectives or networks. Every network pays the price of its existence through the costly labour of enlisting allies and combating anti-programmes. Network builders anticipate what other actors may do (*programmes of action*), but things may take unexpected turns and the anticipated actions may not occur because those actors resist them (Latour, 1999b). Thus the formation of actor-networks or the stabilisation of certain ideas is in some sense akin to warfare. Caygill (2013, p. 16) argues that “[a]t issue in war is the *capacity to resist*, understood by Clausewitz as the sum of material means along with the moral will to resist the enemy” [emphasis in the original]. In ANT parlance, it could be argued that Clausewitz understood that the triumph of a programme over an anti-programme or vice-versa depended upon enlisting not only human bodies but also ‘durable materials’ able to create ‘lasting asymmetries’ that compromise the enemy’s capacity to resist (Callon & Latour, 1981).

The concept of ‘network’ is thus fundamental, but the argument of ANT gets even more fine-grained. Ditching the obsolete distinction between objects and subjects, between the individual and society, between

(2005, p. 71), an actor is an actant that has been given a particular *figuration*, that is, a form, a shape, a flesh. In other words, an actor designates an agency that has been endowed with an identifiable shape or form, whereas an actant, by contrast, designates an agency whose shape is still unclear. The same actant may be given different figurations (p. 57), but the key point is that “there exist many more figures than anthropomorphic ones” (p. 53).

micro and macro, ANT sustains that an actor cannot be reduced to its relationships (its network), and a network cannot be reduced to the list of entities that constitute it (its actors) (Latour, 2010). Otherwise, one would fall into the aforementioned dichotomous impasse. Thus ANT's conception of 'network' is fundamentally at variance with the more common understanding of the term in the sense of a sewage, railway, or telephone 'network', or of a social 'network' (Latour, 1996; 2005). A social 'network', for instance, can be defined by the list of relationships that constitute it; here, actors are *embedded* in a network. In ANT, by contrast, there is not embeddedness: an actor is a network and a network is an actor. The expression 'actor-network' underscores this irreducible simultaneity between "an actor whose activity is networking heterogeneous elements and a network that is able to redefine and transform what it is made of" (Callon, 2012, p. 87). So construed, an actor is ontologically constituted by the list of its relationships *plus* the transformations that occur whenever a relationship is forged (Latour, 2010). This transformative phenomenon is known as *translation*.

Translation

By translation we understand all the negotiations, intrigues, calculations, acts of persuasion and violence, thanks to which an actor or force takes, or causes to be conferred on itself, authority to speak or act on behalf of another actor or force. 'Our interests are the same', 'do what I want', 'you cannot succeed without going through me'. Whenever an actor speaks of 'us', s/he is translating other actors into a single will, of which s/he becomes spirit and spokesman. S/he becomes stronger. S/he grows. (Callon & Latour, 1981, p. 279)

The notion of translation is central to ANT, which happens to also be known as the *sociology of translation*. It denotes the process by which many become one through a series of mediations (Czarniawska & Hernes, 2005). Crucially, translating others into a single will is not a clean-cut operation but a mediating movement, at times forceful and at times fragile, which inevitably transforms the actors involved in the relation. That is to say, actors derive their identities from their interactions and links to other entities in the network, and at any moment these could be called into question by means of new translations or mediations. The different

connotations of the term facilitate this conceptual move as translation evokes associations with both transformation and movement (Czarniawska & Sevón, 1996). Transformation and movement of what? Of knowledge, ideas, strategies, values, goals and interests—that is, the semiotic connotation of translation, as in language translation. But also of humans, animals, plants, artefacts, technologies, devices, and texts—that is, the material connotation of translation, as in spatio-temporal translocation. Therefore, translation rejoins the semiotic and the material, signs and things, word and flesh, as its vocation is to carry meaning and bodies/objects across time and space, like Hermes in Hellenic mythology or angels in the Judeo-Christian tradition.

Indeed, the notion of translation originally comes from Michel Serres' (1974) *Hermès III: La Traduction*, which sets forth a complex portrayal of the Olympian god Hermes as the personification of mediation and translation. Serres (1974) poetically deploys the notion of translation as an expanded operation across different domains of knowledge. In the following passages, Michel Serres, in conversation with Bruno Latour, gives a glimpse of his idiosyncratic understanding of Hermes—and angels—as translation:

We must conceive or imagine how Hermes flies and gets about when he carries messages from the gods—or how angels travel. [...] This god or these angels pass through folded time, making millions of connections. (Serres & Latour, 1995, p. 64)

Translation means travelling, flying, traversing, and making connections across time and space. All the while, connections cannot exist without mediation and mediators; hence, the metaphor of Hermes and angels.

The angels are the messages; their very body is a message. But what differentiates angels from Hermes is their multiplicity, their cloud, their whirlwinds. I was about to say their chaos, since their collectivity is similar to it. [...] Further, we're talking about delivery people, relational bodies. I imagine that for every angel there is a corresponding preposition. But a preposition does not transport messages; it indicates a network of possible paths, either in space or in time. (Serres & Latour, 1995, p. 119)

Translation is prepositional, not substantive. It indicates a movement, a passage, a transformation that makes possible new translations.

"Where are you?" "What place are you talking about?" I don't know, since Hermes is continually moving on. Rather, ask him, "What roadmap are you in the process of drawing up, what networks are you weaving together?" (Serres & Latour, 1995, p. 127)

In the case of STS, for instance, Latour and Woolgar (1979) were interested in "the transformation of rats and chemicals into paper" (Latour, 1986b, p. 3). They looked at how entities were translated into inscriptions, that is, signs, archives, documents, pieces of papers, or traces (Latour, 1999b). Then, they observed how these inscriptions travelled and carried meaning across space and time. Inscriptions allow the things they represent to be reassembled and presented all at once in new configurations and in front of new audiences. Inscriptions are readable, combinable, superimposable and mobile, allowing "new translations and articulations while keeping some types of relation intact" (Latour, 1999b, p. 307). ANT follows the actors in these transformations and looks at the workings through which actors modify, displace and translate their diverse and competing interests.

Thus, the ultimate fate of a network depends upon the process of translation. As things and humans are enlisted into a network, they bring their own goals and interests, so their involvement may modify the programme of action; their own goals and interests may resist translation into a single will, provoking unexpected turns and bifurcations. In this sense, the growth of a network and the success of its programme hinge upon the fidelity of the chain of translation. Whether an actor modifies or not a programme of action depends on the nature of mediating activity. Latour (2005, p. 39) marks a distinction between *intermediaries* and *mediators*. An intermediary "transports meaning or force without transformation: defining its inputs is enough to define its outputs." Mediators, on the other hand, "transform, translate, distort, and modify the meaning or the elements they are supposed to carry", and "may lead in multiple directions which will modify all the contradictory accounts attributed to its role." Indeed, no mediator is perfectly loyal and reliable. On this note, let us not forget about fallen angels who betrayed their divine calling or about Hermes and his earned reputation as a trickster. Simply put, *mediators* exercise agency while *intermediaries* do not.

Distributed agency

ANT holds to an idiosyncratic view of agency, marked by an agnosticism vis-à-vis the nature of the things or people that act. What is more, ANT holds to a minimal definition of action, understood simply as “what produces an observable effect” (Callon, 2008, p. 33). In this sense, ANT gives credit to any entity, irrespective of its nature, that produces an effect in a situation. According to Latour (2005, p. 71), “any thing that does modify a state of affairs by making a difference is an actor.” Thus, agency, the capacity to act, is not the exclusive privilege of human actors. Against the backdrop of a prevailing human exceptionalism in the social sciences, the notion of *non-humans*⁵ stresses this important symmetric principle. Yet, the term ‘non-human’ can be understood in a variety of ways depending upon which theoretical corpus one is drawing from. In the ANT canon, it encompasses a wide but limited set of entities such as animals, natural phenomena, tools and technical artefacts, material structures, transportation devices, texts, and economic goods (Sayes, 2014). These non-humans may count as *actors*—which is to say, may exercise agency—provided that they make a difference in a situation. So viewed, agency simply depends upon whether or not an actor emerges as having an effect on other actors. Accordingly, agency is “decoupled from criteria of intentionality, subjectivity, and free-will” (Sayes, 2014, p. 141).

However, rather than setting forth a general theory of agency, what ANT strives to accomplish is to introduce an uncertainty as to *who* and *what* is acting in the course of an action (Latour, 2005, p. 46). According to Callon (2008), the social sciences have underestimated the uncertainties surrounding action and have adopted a narrow understanding of action characterised by...

...the opposition between forces said to be external to actors (or agents) but running through them (structures, interests, the subconscious, technological development, etc.) and internal forces

⁵Non-humans were hitherto the ‘missing masses’ of our society (Latour, 1992), segregated to an inconsequential role in human affairs. By taking them into account, not only ANT contributed to the current ‘material turn’ in social theory (Sayes, 2014) but to what some have dubbed the ‘nonhuman turn’ (Grusin, 2015).

that explain why the course of action changes suddenly (intentionality, cognitive skills, strategic calculation, etc.). (p. 33-34)

Such a view pits action against its context, the individual agent against social structures. ANT's notion of agency is a way out of this unproductive structure-agency duality because it bolsters the uncertainties concerning the origins of action. In other words, instead of asking about the origins of action in terms of causation and intentionality, ANT is interested in the ways in which action is *distributed* among humans and non-humans (Callon & Law, 1997). ANT looks for traces and patterns of association that make possible different types of actions which may or may not be 'intentional.' Such an understanding of agency is more open than "traditional natural causality" (Latour, 2005, p. 10), the latter tending to be trapped in the aforementioned structure-agency duality. Rather than looking for what causes or determines action in the traditional sense, ANT draws from a wider ontological palette of actions by taking into account the way in which actors might also "authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid and so on" (Latour, 2005, p. 72). This move constitutes the basis for ANT's controversial maxim that 'non-humans too have agency,' which clearly resonates with the notion of *affordance* set forth by Gibson (1979) and which was later introduced into design discourse by Norman (1998). The gist of the maxim is that non-humans such as everyday objects or devices 'invite' and 'propose' certain types of uses, making certain actions more or less likely; that is, they afford a range of possibilities and resistances that may transcend the object's original purpose and produce unexpected effects. For instance, a chair 'invites' us to sit on it, but it might also 'afford' or 'suggest' alternative uses such as serving as a step for changing light bulbs, or as a structural element in a children's blanket-and-pillow fort, or as a dangerous weapon. The chair is an 'actor' insofar as its participation in action produces an effect, regardless of human intentions. It is thus fair to say that ANT 'pluralises' what it means to evoke agency (Sayes, 2014) by loosening the concept from the human actor and divorcing it from the realisation of 'intentional goals.'

But in what sense is agency *distributed*? The answer to this question is inextricably linked to the very notion of a 'network.' When a network enlists new entities, which in turn are part of other networks, agency is distributed and extended across a multitude of links, taking a range of

human and non-human forms. In a sense, agency, or the capacity for action, is distributed simply because action is spread among different participants in the network, and each one of the participants is in itself a complex network of relations (Callon & Law, 1997). To put it another way, actors always act in connection with others and any course of action weaves together heterogenous elements and indefinitely complex forces (Latour, 2005). To describe, for instance, how a chair ‘permits’ one to sit on it, or how it ‘holds’ a blanket-and-pillow fort together, is to describe a *collective* action involving a set of participants (users, designers, a floor surface, blankets, pillows, and so forth). The same goes for describing the action of operating an excavator: operator, site manager, gauges, hydraulic systems, measuring instruments, soil material, foot pedals, joystick controls, safety protocols, and other instruments are interrelated participants who contribute to the furthering of the action in their own particular way. As Callon and Muniesa (2005, p. 1237) point out, “knowledge and action are never individual; they mobilise entities, humans and non-humans.” It is in this sense that agency is distributed.

Therefore, from an ANT perspective, when an actor acts, it never truly acts unidirectionally; it can never truly calculate its every move, because the actor is made to act by many others (Latour, 2005, p. 46). Indeed, any apparently single actor is a web of many heterogenous others that act alongside it. In this manner, ANT’s provocative claim that non-humans have agency takes on a different—admittedly less provocative—character under this light: “nonhumans do not have agency by themselves, if only because they are *never* by themselves” (Sayes, 2014, p. 144). Thus, an actor is both compact and multiple. Whenever it acts, it is also being acted upon in a complex intermingling of relations which are continuously being tested, reshaped and reshuffled (Law & Mol, 2008).

Not only is agency distributed but it also may be embodied in a variety of possible configurations, also known as *assemblages* (Latour, 2005) or *agencements* (Callon, 2008), kindred concepts which respect and render the diversity of the forces involved in action (Çalışkan & Callon, 2010).

The term *agencement* is a French word that has no exact English counterpart. In French its meaning is very close to ‘arrangement’ (or ‘assemblage’). It conveys the idea of a combination of heterogeneous elements that have been adjusted to one another. But arrangements (as well as assemblages) could imply a sort of divide

between human agents, those who do the arranging or assembling, and things that have been arranged. This is why Deleuze and Guattari (1998) proposed the notion of *agencement*, which has the same root as agency: *agencements* are arrangements endowed with the capacity to act in different ways, depending on their configuration. [...] We therefore choose to use the French word *agencement*, instead of arrangement, to stress the fact that agencies and arrangements are not separate. *Agencements* denote socio-technical arrangements when they are considered from the point of view of their capacity to act. (Çalışkan & Callon, 2010, p. 9)

The notion of *agencement* is close to a ‘network’, the difference being that the former is more stable than the latter (Cochoy, 2014). *Agencements* configure and shape distributed action in specific ways, that is, they perform and organise the actions of a large number of flexible entities (Callon, 2008). Yet, to say that action is ‘distributed’ in socio-technical arrangements—the modifier ‘socio-technical’ emphasising their heterogeneous composition consisting of both humans and non-humans—called *agencements* has implications beyond the instrumentalisation of things by humans or that of humans by things—two polar interpretations to which ANT objects. In the first one, for instance, the excavator is a simple bearer of human intentionality, an efficient tool in the hands of the human agent: the operator, who, as the main source of action, has total control over the machine. In the second one, the excavator imposes itself to the operator as the determining source of action; simply by using it, the operator is compliant and subjected to an operating logic that is foisted upon her. ANT avoids the structure-agency or contingency-control pitfalls underpinning these interpretations through the notion of *agencement* by underscoring the interplay of multiple agencies. However, even more nuanced interpretations of agency that recognise the interplay of human and material agencies remain conservative from an ANT viewpoint. According to Leonardi (2011), human and material agencies have often been treated as having a unidirectional relationship whereby people who have goals and the capacity to reach them (human agency) contend with technologies that do specific things that are not completely in their control (material agency). Such a view casts people as dynamic since they form new goals and imagine new methods to reach them, and

technologies as static since they have a fixed set of material parameters (Leonardi, 2011). This is problematic from an ANT perspective.

No longer working with dualisms, the notion of *agencement* subverts traditional oppositions between human and material agencies. In ANT, the entanglement between human and material agencies is so profound as to render the distinction meaningless. 'Human agencies' and 'material agencies' are folded into one another in socio-technical *agencements*; they are co-extensive as they shape and use each other during the course of action. Therefore, "it is more exact to talk about socio-technical *agencements* rather than agencies" (Çalışkan & Callon, 2010, p. 9). Also, the notion of *agencement* stresses ANT's attentiveness to distribution over causation. From this perspective, when it comes to operating an excavator, for instance, the main source of the action is not straightforwardly assignable: is it the operator or the excavator arm and bucket, the designer or the joystick controls, the site manager or the hydraulic system? These are all composing elements of an *agencement* whereby human and material agencies are inextricably interwoven, action is distributed and actors are profoundly interdependent. The fact that we attribute agency to an operator, in the case of the excavator, or to managers, in the case of strategic action, is a result of the very configuration of the *agencement*, "in which formal procedures, practical and technical knowledge, software, skills, and rules of action must be included" (Callon, 2008, p. 36). In this sense, *agencements* have a 'built-in' capacity not just to act but to give meaning to action as part of their configuration (Çalışkan & Callon, 2010).

Power

Callon (1986a) outlined an approach to the study of power in which he deployed the concept of translation. In his seminal study of the domestication of scallops in the coast of Brittany, he showed how a group of researchers sought to become an *obligatory passage point* in the network of relations they were attempting to compose. That is, they presented themselves as the only path through which other actors could advance their interests: whether it was surviving (for the scallops), advance scientific knowledge (for their scientific colleagues), or ensure economic prosperity (for the fishermen). The researchers translated all these diverse interests into one research programme, and they framed it as the only way through which these actors could advance their own interests. So an alliance to promote scallop cultivation was forged around a research project that

investigated the anchorage of scallops to collectors. Callon describes four moments of translation through which relations were constructed between the researchers, their colleagues, fishermen and scallops.

The first moment, *problematization*, has to do with actors assuming an active role in the definition of a problem. Initially, they raise unsettling questions about a state of affairs, framing a particular situation as problematic. Also, they establish roles for themselves and other actors, define identities, and place themselves as an obligatory passage point in order to address the problem they are defining. In this sense, they delineate a programme and render themselves indispensable in the network of associations they are attempting to compose. In this case, the researchers created a report where they formulated questions and defined identities, attempting to persuade actors that they could all benefit from pursuing this programme.

The second moment, *interessement*, has to do with the use of devices by which actors attempt to stabilise the identity and roles of other actors they more or less defined in the stage of *problematization*. These actors seek to interest other actors in their programme and turn them into allies. However, the yet-to-be allies can resist submission to the programme or be made to resist by competing associations. Thus, *interessement* is concerned with both the actions of *interesting* and *interposing*. It is as much about luring others into a programme as it is about overcoming resistance and interrupting competing associations. To do so, actors place devices between yet-to-be allies and all other entities (if they exist) who attempt to define their identities in a competing manner. For instance, the researchers used strategies and mechanisms such as the towlines made up of collectors to prevent young scallops from escaping and protect them from predators who sought to impose a role for scallops that was incompatible with the research programme. In this sense, the researchers' *problematization* undergoes a series of trials of strength that determine the solidity of the programme.

The third moment, *enrolment*, has to do with the consolidation of alliances, that is, "the group of multilateral negotiations, trials of strength and tricks that accompany the *interessements* and enable them to succeed" (Callon, 1986a, p. 211). The identities of actors are determined and tested in negotiations. For instance, the researchers must negotiate with their colleagues who need to be persuaded by the experiment; the researchers must also negotiate with the currents and parasites and, of course, the

scallops who need to be willing to anchor themselves to the collectors; the researchers must also negotiate with the fishermen who need to accept and implement the conclusions drawn from the investigation. The distribution of roles is stabilised and inscribed in notions of desirable states and ways to reach them.

The fourth moment, *mobilisation*, has to do with ensuring that enrolled actors or allies accurately represent the programme as spokespersons. Through different devices, the interests of the programme are re-presented and displaced, that is, they are rendered mobile. For instance, the scallops that anchor themselves to the collectors are counted by the researchers in their experiments; then they inscribe these numbers on sheets of paper, which are then converted into tables and graphs, which are then used in scientific articles, which are then discussed in a research conference. If other researchers judge the results significant, it means that the researchers have become legitimate spokespersons for the scallops. These chains of mediation and transformation displace and transport actors' interests, reassembling them in new spatio-temporal arrangements, in this case involving tables and graphs in a conference room. At the end of these four moments, if successful, then an actor-network is formed, which means that the spokesperson was a good representative and that the initial propositions and roles established in the programme have become credible and legitimate.

As argued by Callon (1986a), the four moments of translation are dynamically intertwined. Translation is an ongoing process, rather than a fixed result. The solidity of the chain of translation depends on the fidelity of the dispersed mediators who, at each displacement, negotiate their degree of representativeness. At any moment, mediating activity can generate a crisis of representativeness, manifested in controversies whereby roles and alliances are contested. For instance, when the intersement failed in the case of the scallops, these became dissidents as they were carried away from the collectors by unexpected currents and predators. At that moment, they disavowed the researchers as their spokespersons. The researchers could no longer speak on behalf of the scallops who detached themselves from the programme. During controversies, “[n]ot only does the state of beliefs fluctuate... but the identity and characteristics of the implicated actors change as well” (Callon, 1986a, p. 220). Here, identities and roles can be reshuffled and adjusted, as actors oscillate between compromise and resistance in their

negotiations. A controversy is resolved when, after a series of negotiations, spokespersons are “deemed to be beyond question” (p. 220), and the voices of the actors speak in unison again (p. 223). Here, it is worth pointing out that rather than straightforwardly replicating Callon’s (1986a) sequence of moments, this thesis seeks to draw on ANT’s conceptual vocabulary to describe different situations without systematically confining them to specific moments of problematisation, intersement, enrolment, and mobilisation.

In ANT, understanding power means “describing the way in which actors are defined, associated and simultaneously obliged to remain faithful to their alliances” (Callon, 1986a, p. 224). Interestingly, although ANT and its attention to translation has been advanced as a new approach to account for power (Callon, 1986a), its Jamesian commitment to ‘radical empiricism’ has been criticised for favouring the production of detailed descriptions in “an apparently neutral, apolitical manner” (Whittle & Spicer, 2008, p. 622). Thus, according to Whittle and Spicer (2008, p. 623), ANT brings “a tendency to legitimise hegemonic power relations, ignore relations of oppression and sidestep any normative assessment of existing organisational forms.” This sort of critique levelled towards ANT is “a surprising allegation”, according to Czarniawska and Hernes (2005, p. 9), given ANT’s concern for revising traditional approaches to power. Indeed, ANT takes power very seriously, albeit in a radically different fashion. The discord is fundamentally ontological. ANT takes power to be the effect or result of events and actions, whereas traditional perspectives take it to be the cause (Czarniawska & Hernes, 2005). In his critique of the concept of power, Latour (1986a, p. 273) introduces the notion of performative definitions to argue that “[t]hose who are powerful are not those who ‘hold’ power in principle, but those who practically define or redefine what ‘holds’ everyone together.” Thus a performative understanding of power turns its gaze to the practices of actors in the field and the way in which they act to enrol, persuade and enlist other entities in an attempt to extend the range of their associations. Hence, ANT is attentive to issues of power and politics by tracing the process through which asymmetries emerge and stabilise (Callon & Latour, 1981).

ANT’s agnostic approach to fieldwork goes against the grain of traditional critical approaches which embrace an ideology of critique as starting point. According to Whittle and Spicer (2008, p. 622), ANT’s approach to power and its focus on translation bring a bias towards ‘the

victors', those whose programme of action succeeded. This critique is fair but somewhat short-sighted; ANT can also be deployed to bring attention to 'the sounds of the silenced' (Helgesson & Kjellberg, 2005), 'orphan groups' excluded from technological and economic development (Callon, 2007), or 'emergent concerned groups' (Callon & Rabeharisoa, 2008; Skærbæk & Tryggestad, 2010) that express alternative identities or interests. Furthermore, an agnostic approach can be used "as a critical device for empowering the weak and revealing the constructed nature of weakness" (Dussauge, Helgesson, & Lee, 2015a, p. 280), bringing a new kind of political critique that de-naturalises the status quo (Alcadipani & Hassard, 2010). In the case of strategy research, for example, ANT could shed light on practices of resistance (e.g. Harrisson & Laberge, 2002; Knights & McCabe, 2016; Skærbæk & Tryggestad, 2010) or peripheral efforts to drive strategic change (e.g. Whittle & Mueller, 2008). In this manner, the Clausewitzian commitment to issues of power and politics in strategy research can be pursued from an ANT perspective.

ANT and strategy

There are notable examples of ANT-inspired accounts of strategy-related issues (e.g. Denis et al., 2007; Ezzamel, 1994; Harrisson & Laberge, 2002; Knights et al., 1993; Parker & Wragg, 1999; Ramírez & Mannervik, 2016; Skærbæk & Tryggestad, 2010; Tryggestad, 2005; Whittle & Mueller, 2010). Ezzamel (1994) uses ANT to show how a budgeting system was mobilised by opposing networks that advanced contradictory programmes of action to push their respective strategic agendas (of change and resistance). Harrison and Laberge (2002) use ANT to examine the process of diffusion of a socio-technical innovation among workers in a large microelectronics firm by looking at the way in which actors constructed and organised arguments. Knights et al. (1993) use ANT to trace the process by which a group of knowledge workers establish an interorganisational electronic trading network. Parker and Wragg (1999) use ANT to account for the role of a 150-year old document in consensus-building over who was to become the active navigation authority in the River Wye. Tryggestad (2005) uses ANT to show how 'strategic plans' travel and get translated and decontextualised into anti-plans, arguing that strategy is an organisational accomplishment and an achieved order constructed from materials and humans. Skaerbaek and Tryggestad (2010) use ANT to examine the

performative role of accounting in shaping corporate strategy. Ramírez and Mannervik (2016) use ANT to further develop the notion of ‘Value Creating Systems’ (see Normann & Ramírez, 1993) revisiting it as a kind of ‘actor-network’ composed of multiple actors that sustain and define one another in a configuration designed to co-create value. Whittle and Mueller (2010) use ANT to illustrate how management accounting systems play a role in the construction and legitimation of strategic ideas.

Yet, although ANT offers interesting possibilities to explore strategising practices, its empirical application has been sparse. Seidl and Whittington (2014) contend that the neglect of flatter ontologies in strategy research is rather surprising. In their view, there is still much work to be done to realise their full potential. In this same vein, Steen, Coopmans and Whyte (2006) identify two avenues of investigation where ANT can contribute to strategy research. The first avenue of investigation is the strategic use of alliances and networks. As Kornberger (2016, p. 40) argues, the locus of strategy is shifting from “the Cartesian mind of the strategist” to “new forms of distributed strategising” that are “more fluid [and] less territorial” (p.39). In a networked economy whereby firms are increasingly transforming themselves into platforms for others to operate on (Srnicsek, 2016) and business models are increasingly revolving around the harnessing of collective creativity through open innovation (Chesbrough & Appleyard, 2007), traditional understandings of strategy as a centralised, firm-level endeavour become inadequate. Today, the fates of firms are tightly interwoven with those of other market actors to the extent that their survival does not depend solely on the strategic prowess of their executive managers but on their participation within networks of value creation. Nowadays, value is co-created within networks of actors (see Normann & Ramírez, 1993; Ramírez & Mannervik, 2016; Vargo & Lusch, 2004), and thus strategising becomes a decentralised, distributed activity concerned with securing alliances and mobilising collective action across networks (Kornberger, 2016). It is clear that ANT provides conceptual tools to explore the new distributed loci of strategising.

The second avenue of investigation is concerned with the “continuous effort of (re)discovering what strategy is and what it could be” (Steen et al., 2006, p. 308), and the ambition of this thesis falls firmly into this camp. ANT provides an opportunity, both for practitioners and researchers, “to define strategy in new ways by making or finding unexpected couplings and boundaries” (Steen et al., 2006, p. 308). Indeed,

ANT represents an ontological stance that allows for the consideration of strategy in relational terms. Phrased differently, the relationist ontology of ANT postulates a shift away from an ostensive definition of strategy—that is, strategy as a thing in principle that can be defined once and for all and remain constant—to a performative one concerned with how actors constantly define and re-define strategy in the field—strategy as a thing (re-)made in *practice* that can be solidified or weakened on the basis of its relations. So construed, objects have a variable ontology that fluctuates depending on relations forged in networks, and so strategy is constantly fluctuating as it is enacted and performed by many actors (Boedker, 2010; Tryggestad, 2005). In this manner, a performative register unsettles traditional conceptions of strategy as it keeps the question of definitions open to change as events unfold. In what follows, some of the implications around the adoption of a performative lens in the study of strategy will be further examined.

Strategising as translation

If, as Denis et al. (2007) argue, ANT allows almost any entity to be defined in terms of actor-networks that sustain it, then a ‘strategy’—akin to a ‘fact’ in STS—emerges and is regarded as such thanks to a combination and arrangement of heterogeneous elements. Therefore, *strategising* is a *process of translation* with all of its moments (problematization, interessement, enrolment, mobilisation) by which this strange actor called ‘strategy’ emerges as (provisionally) obvious and irreversible.

What is more, understanding strategy as a web of relations shatters all purifying aspirations that separate planning from implementation. Indeed, strategy circulates and escapes from its alleged author, it resists, it is questioned and redefined by new authors (both humans and non-humans), and has effects as it “travels in the field” (Tryggestad, 2005, p. 33), subjected to mediating forces that may modify its form and meaning, and whose translation may turn out to be fatal. That is to say, *strategising* is the making, remaking and unmaking of strategy (by humans and non-humans) as it ‘travels in the field’. Here, not only humans play a crucial role, but also devices (such as management systems) and inscriptions (such as slide decks, reports, and plans).

Strategicness as relational achievement

At the same time, following Clausewitz's logic, "[s]trategy is not something someone 'has' or a practice that someone is engaged in [...] [but] an adjective that attaches itself to heterogeneous things and people" (Kornberger, 2013a, p. 1071). Indeed, as Whittle and Mueller (2010) suggest, if we accept that entities do not have a "strategic" essence to them, then ideas must be made into "strategic" ideas; functions must be made into "strategic" functions; groups must be made into "strategic" groups; technologies must be made into "strategic" technologies. Argues Latour (1996):

Instead of opposing the individual level to the mass, or agency to structure, we simply follow how a given element becomes strategic through the number of connections it commands, and how it loses its importance when losing its connections. [emphasis added] (p. 372)

An entity becomes "strategic" by virtue of its network of relations, rather than some inherent "strategicness" (Tryggestad, 2005, p. 39). Its "strategic" essence or substance is deduced after having gone through a series of trials; it is an *a posteriori* and volatile achievement resulting from translation. Thus *what counts as a "strategic" idea, function, group or technology is the outcome of a process of translation*. In short, "strategicness" is none other than a relational achievement resulting from the stabilisation of a complex web of relations.

Strategic power as the construction of macro-actors

The process of translation makes plain the evolution and fluctuations of power relationships (Callon, 1986a), therefore what counts as "strategic" is an outcome of power struggles between actors vying to influence or control the agenda (Whittle & Mueller, 2010). That is, strategic power is *made* in practice and not 'held' in principle by any one actor. Thus, the question of who gets to dictate the agenda and silence other voices is an empirical one. The micro-macro distinction as understood in ANT is helpful in that it reveals the *making* of strategic power and the body politic of strategy.

For Callon and Latour (1981), macro-actors are not ontologically different from micro-actors; their difference lies simply in the solidity,

arrangement and composition of their respective constitutive elements. A macro-actor is a micro-actor that managed to enlist and mobilise a consequential number of allies and 'durable materials.' When these relations are obscured in 'black boxes'—that is, when they are solidified and taken for granted, no longer reconsidered—the actor grows bigger and stronger. So the difference between a 'peripheral' actor (micro-actor) and a 'strategic' actor (macro-actor) is one of power understood in terms of the variations in relative solidity and durability of their respective networks. Thus an actor acquires a 'strategic' identity whenever it succeeds in mobilising a supportive network of material relations. This means, for instance, that for an organisational group or department, such as 'Product Design' or 'Marketing', to be regarded as "strategic" or "central" to an organisation as opposed to merely "operational" or "peripheral," it needs to rely on solid and durable materials such as organisational charts, documents, money, budgets, buildings, contracts, project archives and so on, to come out of the process of translation as 'victor.'

Strategist as a network

Who counts as a strategist? She or he who formulates strategy—so the common thinking goes. Typically, this is the special province of the people sitting in the executive suite and the management consultants from whom they seek guidance. These humans with goals, intentions and strategic abilities are often seen as the masters and owners of strategic choice and the originators of strategic action who hold control over the strategic agenda of the organisation. ANT offers a different perspective on this question. Callon and Law (1997) introduce their readers to Andrew, the entrepreneurial director of a large British laboratory who is responsible for defining strategies and making important decisions concerning his organisation. It is generally accepted to conceive of him as a 'strategist' but, as Callon and Law (1997) argue, this is dangerously misleading.

From an ANT viewpoint, Andrew-the-strategist is a heterogenous network made of Andrew, memos, his personal computer, fellow managers, a secretary, the work of scientists and engineers, time slips, spreadsheets, etc. Andrew is not simply using these entities as a passive support system. The combination and arrangement of these heterogenous components constitute an *agencement* that creates the very possibility of strategic action. Stripped of all materials and technologies, Andrew-the-strategist would cease to exist as an *agencement* and strategic action would

fail since strategy is performed in these networks of material relations. Therefore the label 'strategist' is the property of a network, not of humans sitting in an executive suite—or of humans *tout court*. In traditional accounts of strategic action, Andrew would be made to conceal and stand for the network of relations that he covers. In fact, it is due to the very configuration of the *agencement* that Andrew can, at first glance, be viewed as the originator of action. By contrast, no longer confined to the 'Andrews' in organisations, ANT fosters a symmetrical engagement with the distributed materials of strategy.

It follows that *network-builders at all levels of an organisation can potentially become strategists provided that their programme of action is successfully translated into an 'agencement' where agency can be attributed to them*. Indeed, ANT opens our eyes to the fact that strategy happens in different departments and different sites, and that the multiple authors of strategy are dispersed in the field; notwithstanding, provided the right collective configuration, a single individual or group can emerge as 'strategist' and be made to stand as the sole author (Callon & Law, 1997), monopolising the credit for the work done by an *agencement* made up of people and things (de Laet & Mol, 2000). This would be an instance of what Law (1987) calls *heterogeneous engineering*, whereby network-builders enrol and juxtapose various elements to create a relatively stable network that can strengthen and amplify their cause (Steen et al., 2006). In this sense, network-builders are strategists in *potentia* battling to gain prominence and impose themselves as "strategic" actors by marshalling credit for the work done by networks of people and things (de Laet & Mol, 2000).

Strategic agency as decoupled from intentionality

As previously argued, strategic action is a collective property (Callon & Law, 1997), and so rather than attributing strategic agency to individual actors or particular technologies, the capacity to act ought to be understood as distributed and relational. In this sense, it would be misleading to think of strategic action in terms of a chain of natural causality that has its point of departure in the Cartesian mind of the strategist. This insight counters the myth of managers as 'heroic leaders' so common in everyday strategic thinking (Clark & Salaman, 1998; Clegg et al., 2004b) and is reminiscent of the Clausewitzian observation that a normative theory of strategy is impossible (Kornberger, 2013a). Like Clausewitz, ANT shifts the attention from the general or commander to the heterogenous forces battling out in

the field. In war, agency is diffused across multiple sites and it is not the sole property of an all-controlling military strategist. The strategist is not in control; she or he is not master of the situation. This is not to deny the role of intentional influence, but to recognise that intentional action is only a type of action among a diversity of indefinitely complex, interwoven forces (Latour, 2005). Interestingly, common thinking in organisational life associates strategic agency with formal procedures and deliberate attempts at controlling and calculating future courses of actions. However, ANT opens our eyes to the possibility that “strategic agency might not always and necessarily permit or require a mastermind in control” (Steen et al., 2006, p. 307), which goes against the grain of the planning approach and other mainstream conceptualisations of strategy—including much of SAP literature (Carter et al., 2008b).

The planning approach and its descendants are based on what Chia and Holt (2006; 2011), call a ‘building’ mode of engagement, whereby strategy is construed as a plan consciously articulated by the strategist, and then acted upon by the organisation. In this mode, the strategist’s intentions are pre-eminent, as action is presumed to be deliberate and purposeful, guided by prior mental representations, predefined goals and desired outcomes. The strategist ‘holds’ strategic agency and engages with the world from a detached perspective—from a ‘bird’s eye point of view.’ In contrast, Chia and Holt (2006; 2011), following Heidegger, point to a ‘dwelling’ mode of engagement—which resonates with an ANT-inspired lens to strategising—, whereby strategies and strategists’ identities are “co-constructed relationally through direct engagement with the world they inhabit” (Chia & Holt, 2006, p. 637); they are defined and negotiated in practice. In other words, actors are inextricably immersed and shaped by a social world of practice in which strategising unfolds, not as a process of deliberate planning, but as a process of *wayfinding*, “a dynamic, evolving and self-referential process of discovery and self-clarification that is never complete because things are always turning away” (Chia & Holt, 2011, pp. 163-164). In this mode, strategic action does not presuppose deliberate prior planning or intention because strategy can unfold through everyday practical coping actions, local interventions focused on solving immediate concerns, which “may actually give rise to a strategic consistency even in the absence of prior specified goals” (Chia & Holt, 2011, p. 5). Here, strategic agency is conceptualised in terms of action understood simply as what produces an observable effect, rather than intentionality. Much like

ANT, the 'dwelling' mode redirects our attention away from the notion of human intentions and goals as foundational to strategy, towards the multitude of processes by which a variety of actors connect and forge associations that produce capacities for action. By no means suggesting that all strategising is non-deliberate, Chia and Holt (2006; 2011)⁶ argue, nonetheless, that much of it is, which is something that tends to be overlooked by an excessive "para-theological focus on the proverbial "decision point"" (Muniesa, 2017a, p. 3) so common in mainstream strategic thinking.

Strategic ideas as ideas made valuable

As argued before, "strategicness" is a relational achievement, and so ideas do not possess an inherent strategic 'essence'; rather, it must emerge from trials and negotiations. For an idea to be regarded as "strategic", it needs to be translated and transformed into a valuable idea. This raises the question of the type of mediations or translations that need to take place for something to be perceived as of value in an organisation. Whittle and Mueller (2010) present an account of one such mediation. They show how a group of consultants working within a business unit of TeleCo, a large UK-based telecommunications firm, became network-builders in their attempt to champion the idea of "consulting-led selling" as a new approach to market the firm's products. The traditional approach to selling was the classic technology-push whereby sales representatives market products on the basis of features. By contrast, the group of consultants sought to sell their "expertise" to external clients and recommend pertinent technologies for them to improve their business; that is, a business-driver pull approach.

The consultants saw themselves as sellers of "solutions" rather than "products" and as champions of an innovative new idea which represented

⁶Chia and Holt's (2006; 2011) focus on the emergent nature of strategising has clear Mintzbergian undertones (see Mintzberg, 2007). Both projects recognise that a patterned consistency of actions could result in an unintended strategic outcome, but Mintzberg's processual understanding of strategy does not explore how such an outcome might emerge (Chia & Holt, 2006). In this sense, Chia and Holt (2006; 2011) stand closer to strategy-as-practice (SAP) in their attentiveness to the 'doings' of strategy; notwithstanding, they are critical of SAP's readiness to assign purposeful action to strategists in a post hoc manner.

a radical shift away from the firm's then-current marketing strategy. At the time, TeleCo was under financial pressure, so business units were told they needed to generate "profit" or else they risked being disbanded. The problem was that the consultants' business unit was not performing well according to the management accounting system (MAS), due to the fact that they were measured on the basis of consulting income against costs. The MAS did not take into account the sales of TeleCo's products generated by their consulting activities, so they were regarded as a "cost covering" rather than "profit generating" unit (p.634). This meant that their idea failed to be seen as a "value-adding activity" because the MAS depicted their work as "unprofitable" (p.636).

The MAS defined the rules of the game. It measured—which is in itself a form of translation—the value of the consultants' idea in its own terms, and the idea was found wanting vis-à-vis the imposed value scales. The MAS did not recognise the 'hidden' value of their contribution. Here, the MAS acted as an obligatory passage point "in deciding which ideas succeed (and which fail) in becoming regarded as "strategic"" (p.631). Thus Whittle and Mueller (2010, p. 626) argue that "accounting regimes play a key role in defining the 'added value' of ideas, with implications for how business strategies are formulated." They found that what counts as a "strategic" idea depends on the representations of "value" in MAS. It follows that for something to be regarded as "strategic", it needs to be counted as "valuable" by the organisation. This invariably involves processes and devices for measuring, scoring, rating, evaluating and/or judging.

Strategy and value

The relation between the notion of "value" and the notion of "strategy" has interesting implications for researchers interested in the study of what an ANT approach to strategising might entail. Despite being ubiquitous in the strategy discourse, value is paradoxically one of the least theorised concepts by strategy writers and thus remains a blind spot in strategy research (Kornberger, 2016; 2017). In fact, value remains an elusive notion in the social sciences at large—perhaps with the notable exception of economics where there seems to be a rather consensual definition of value as 'value = price x quantity' (Dussauge, Helgesson, Lee, & Woolgar, 2015c, p. 3). Somehow Graeber's (2001) observation still rings true today:

[I]t usually turns out to be very difficult to figure out what body of theory, if any, that any particular author who uses the term “value” is drawing on. Sometimes, one suspects it is this very ambiguity that makes the term so attractive. (p.1)

The notion of value is attractive because there is a salient tension underpinning it. The notion of ‘value creation,’ in particular, is foundational to strategy discourse (Kornberger, 2017). ‘Value creation’ is supposed to be the *raison d’être* of organisations and strategy is supposed to be the political technology by which it is realised. Yet the notion of ‘value creation’ is marked by a tension between, a strictly financial meaning associated with the idea of making money, and “the properly demiurgic idea of the production of a substance—‘value’—that augments the social world and whose virtuous character is undeniable” (Muniesa, 2017b, p. 3). Contemporary strategy discourse exists within this tension between maximising profit and doing good, between shareholder value and societal value. As it happens, the notion of ‘value creation’ is constantly being negotiated and redefined, especially after the financial and environmental crises that have characterised late capitalism in the West, and the gradual turn towards more democratic and ethical ways of conducting business. This uneasiness translates into various efforts to extend the notion of ‘value creation’ beyond money making and profit maximisation (Muniesa, 2017b). This is epitomised in the emergence of stakeholders’ approaches and other forms of financial reporting (Quattrone, 2016) which are wrapped in ‘corporate social responsibility’ rhetoric, of which Michael Porter’s notion of ‘shared value’ is an emblematic example (M. E. Porter & Kramer, 2011). However, as Kornberger (2016; 2017) argues, in strategy, there is still a strong orientation towards viewing value as an economic construct.

An economising penchant

The creation of economic value largely underpins strategic reasoning (Kornberger, 2016), which wields a determining influence on what counts as ‘valuable’ in organisations, on what is considered of ‘strategic’ importance when it comes to organising. Therefore, the definition of what counts as ‘strategic’ is often bound up with economic registers of value, such as a company’s financial bottom line. As the TeleCo case shows (Whittle & Mueller, 2010), that which is ‘valuable’ often needs to pass

through an accounting regime and be articulated in economic terms to be recognised as such in the first place. The value of this or that is entangled with the definition of performance criteria that measure value, which often amounts to a calculation of profit and loss. Here, value is a correlate of firm performance. In the TeleCo case, for instance, the value of the consultants' idea was weighed in terms of its apparent economic value (Whittle & Mueller, 2010). The MAS equated value with profit generation by means of a cost-benefit calculation. That value is equated with *economic* value is a common feature of organisational life in general, and strategic management in particular.

Indeed, economics can be considered the “intellectual well-spring for the strategy discipline as a whole” (Whittington, 2004, p. 64). The principle of utility constitutes a central aspect of the value system that underlies economic thought, and, as a corollary, strategic thought. 'The planning school' is essentially an economics reading of corporate decision-making as a kind of forward-looking cost-benefit calculation. Economic thought substitutes arguments for numbers, and reduces the debate around values to a calculation of grades and degrees (Kornberger, Justesen, Madsen, & Mouritsen, 2015a). In their critique of the moral philosophy of Jeremy Bentham, the utilitarian thinker whose principle of utility underlies economic reasoning, Kornberger et al. (2015a) observe:

If the world consists of nothing but pain and pleasure [that is, the principle of utility], then the calculation of pain and pleasure is the most adequate measure of progress. What is right and wrong is not a matter of difference between truth and false, just and unjust, or beautiful and ugly; rather, the only relevant question is that of profit and loss expressing the balance and concluding the account. The truth is in numbers. [...] In Bentham's world, values are quantified and are made commensurable on a scale (including negative numbers for pain/evil). (p. 3)

This reductionist take on values has been adopted in the practice of strategic management, whereby values are collapsed into an economic framework concerned with cost-benefit calculations that are enacted and inscribed in 'balanced scorecards' and other types of accounts. Strategists rely on technologies of quantification which seemingly provide a rational basis for decision-making. Muniesa (2017a, p. 3) calls this the “syndrome of managerial performance” of which 'decision', as an idealised construct,

constitutes a crucial element; that is, the “decisionist impetus” of strategic management. He argues that our current business culture condition is a ‘performative condition.’ This exacerbated focus on decision-making and the measuring of managerial performance on the basis of cost-benefit calculations is sustained by an overarching economic rationality.

So, it does not come as a surprise that strategic management and Taylorism have some common ground. While acknowledging its status as a more flexible managerial model, Stoney (2001) contends that strategic management has many similarities with Taylorism. Some of his findings are worth highlighting. First, strategic management, much like Taylorism, exhibits an obsession with efficiency through the rationalisation of work. Increasing efficiency requires fragmentation of processes and division of labour, as well as the establishment of an evaluative infrastructure able to consistently measure performance. Second, strategic management extends the division of labour into the upper echelons of management by distinguishing between ‘operational’ and ‘strategic’ decisions, much like Taylor’s distinction between manual and non-manual labour: there are those who strategise, plan, and conceive at the top, and there are those who operationalise, implement and execute at the bottom. In other words, there is a ‘strategic’ core and an ‘operational’ periphery. The separation of conception from execution, a key principle of Taylorism—akin to the separation of planning from implementation in traditional strategic management—, was conceptualised “as a managerial control strategy through the monopolisation of knowledge” (Stoney, 2001, p. 33). Third, in Taylorism, the exacerbation of managerial performance led to work intensification and the exploitation of labour. Just as Taylorism appeared “capable of producing more output from fewer resources (in reality it extracted increased input/effort from the workforce)” (Stoney, 2001, p. 36), strategic management plays a similar—albeit more flexible—role in the 21st century.

Indeed, in today’s ‘audit society’ (Power, 1999), Taylor’s advocacy for tighter control and performance measurement, has not been superseded. Bell (1973) viewed this ‘economising’ penchant as one of the defining principles of the impending post-industrial transition touching the development of the economy, technology, and the restructuring of occupations. He defined the principle of economising as “a way of allocating resources according to principles of least cost, substitutability, optimisation, maximisation, and the like” (Bell, 1973, p. 12). The principle

of 'economising' means maximising production while minimising cost, and places ultimate value on the optimisation of production by means of maximum efficiency. Bell saw the economising principle as a carry-over from the industrial era, a continuation of the Tayloristic project taken to new levels because of the increased efficiency of managerial technologies.

The economising of values is thus a defining trait of contemporary strategy theory and practice. Yet, this amounts to a simplistic view of value, which holds to the misguided assumption that value is a singular construct, and, as a corollary, that all values can be translated into economic value (Kornberger, 2016). There is, as a matter of fact, a growing body of literature focusing on the interplay of economic and non-economic values in strategy-related issues. Ravasi, Rindova and Dalpiaz (2012) propose a cultural perspective on value creation, attentive to the question of how firms can strategically manage the symbolic value of their products. Such a perspective draws attention to the role of product design in shaping cultural meanings. As an example, they highlight "Apple's capability to turn ordinary electronic devices into highly prized cultural symbols" (Ravasi et al., 2012, p. 232). They argue that firms that pursue such a perspective "assure the integrity of the artistic choices that often underlie cultural innovations" (p.234). In short, their project seeks to call attention to the way in which firms might bring cultural considerations and values to bear upon strategising activities.

Another example is Lawrence and Phillips' (2004) study of how a shift of cultural meanings and understandings attached to whales—from *Moby Dick* to *Free Willy*—was a precondition for the development of the commercial whale-watching industry in Canada. This shift in cultural values provided the 'building blocks' for new business ventures to emerge and new strategies to be devised. In a certain sense, the implications of the arguments set forth by Ravasi et al. (2012) and Lawrence and Phillips (2004) indicate that the creation of economic value is contingent upon cultural values (i.e. non-economic values). It follows that strategising activities should be concerned with non-economic forms of value that underpin the generation of economic value. As Kornberger (2016, p. 44) suggests, this "little crack in strategy's vernacular" leads to the wider field of economic sociology.

A multiplicity of values

According to Stark (2009, p. 7), economic sociology is a branch of the sociology discipline concerned with “societal and organisational questions of the valuable.” What is valuable? What counts? These are questions that preoccupy organisations and individuals alike. Organisations spend a great deal of time and resources trying to define what matters to them and their customers, what is of true relevance, what is worth pursuing. Ascertaining answers to such interrogations is what strategy is about. The determination of what is valuable, is accompanied by the definition of evaluation and performance criteria to monitor success and failure. This is where the fields of strategy and economic sociology fruitfully intersect.

Economic sociologists challenge the dominant regime of economic calculation that reduces value to a single construct, and suggest that there are non-commensurable values that not only elude economic calculation, but fundamentally underlie it (Kornberger et al., 2015a). Interestingly, economics and sociology have maintained an uneasy cohabitation in the social sciences. Underlying this family quarrel are divergent conceptions of anthropological archetypes: *homo economicus* (humans as rational, self-sufficient decision-makers that maximise or optimise their interests) vs. *homo sociologicus* (humans as contextually contingent decision-makers with diverse and sometimes contradicting affiliations to place, family, religion, politics and other institutions) (see Callon, 2008). This unharmonious relationship stretches back in history. Stark (2009) recounts a defining moment in the relationship, a political negotiation between Talcott Parsons, a US-based sociologist with grand ambitions to reorganise the social sciences, and his economist colleagues at Harvard University, whereby the jurisdictional division of their respective disciplines was laid out. The resulting agreement is known as “Parson’s Pact”, and it basically established that sociologists were to study institutions and social relations; whereas economists were to study economic development and the constitution of markets. Phrased differently, sociologists’ playing field was *values*, in plural, while economists’ was *value*, in singular (Stark, 2009, p. 7).

A clear boundary was drawn between sociology and economics which abetted a dichotomous treatment of the question of value. Typically, values in the plural are seen as moral constructs that shape human behaviour by designating what is good, right and desirable. By contrast, value in the singular is seen as an economic construct understood as “the

degree to which objects are desired, particularly, as measured by how much others are willing to give up to get them” (Graeber, 2001, p. 1). However, it was only a question of time until ‘Parson’s Pact’ became unsettled. Sociological interest in economic matters and vice versa surfaced in different forms from the late 1970’s forward. As McFall and Ossandón (2014) recount, while so-called ‘economic imperialism’ saw economists like Gary Becker and Oliver Williamson cross the divide to study issues like trust, families, and norms, economic sociologists like Mark Granovetter and Harrison White, on the other hand, began to challenge the dominance of economics when it came to the study of markets and finance. However, even then, “Parson’s Pact” remained a weighty analytical divider. For instance, traditional economic sociologists used values as explanatory devices for economic matters (see e.g. Baker, 1984). Here, values are constitutive of the ‘social structure’ that explains our economic reality; an analytic move obsessed with an attribution of causality that, unwittingly or not, neatly separates the social and the economic, values and value. Yet recently, a rising number of sociological studies no longer obsessed with causality but concerned with *how* value is produced, diffused, assessed and institutionalised (see Lamont, 2012) has made the entanglement of value and values all the more conspicuous—and interesting.

Stark (2011, p. 321) argues that “all the really interesting questions about economic value are always, inextricably, tied to questions about moral economy.” For instance, Fourcade and Healy (2007) provide a good overview of sociological studies addressing the entanglements of the moral and the economic in the constitution of capitalism. In her empirical studies, Fourcade (2011a; 2011b) uses a sociological lens to examine the monetary valuation of natural disasters, such as oil spills. She argues that economists operate under the pretence of moral neutrality, yet their economic valuation methods are not neutral in their effects; she observes that “moral philosophies and political histories are always written all over economic methods” (Fourcade, 2011a, p. 1764).

It is worth pointing out that this renewed interest in the entanglement of value and values extends beyond a binary ‘economic vs. non-economic’ or ‘economic vs. moral’ opposition. Boltanski and Thévenot’s (2006) *On Justification: The Economies of Worth* (originally published in French in 1991 as *De la Justification: Les Économies de la Grandeur*) is perhaps one of the most influential works underscoring and characterising the multiplicity of values at play in social life. Their research

programme is also known as ‘the sociology of critical capacities’, ‘French pragmatic sociology’ or ‘French pragmatism.’ Refusing the opposition of value and values epitomised in ‘Parson’s Pact,’ Boltanski and Thévenot (2006) employ the notion of *worth*, which holds both moral and economic connotations. Boltanski and Thévenot (2006) start from the empirical observation that people carry out critical operations when they want to show their disagreement, and then “they construct, display and conclude more or less lasting agreements” (p. 25). In these sites of tension whereby disagreements arise, people are required to justify their actions, which is the precondition for a new agreement to be held legitimate. As critiques and justifications unfold, power relations can temporarily be called into question (Scott & Pasqualoni, 2014). But—and this is crucial—the reasons people give for their actions may appeal to different and incompatible regimes or modes of justification. In a dispute, for example, one actor’s actions and justifications may be tied to an idea of the common good, while another actor’s actions and justifications may be tied to an idea of efficiency. Thus, Boltanski and Thévenot (2006) developed a grammar of such modes of justification called ‘orders of worth’ (see also Boltanski & Thévenot, 1999). They identify six such orders:

1. *The world of inspiration*: an order characterised by creativity, passion, imagination, whereby “worth is viewed as an immediate relationship to an external source from which all possible worth flows” (Boltanski & Thévenot, 1999, p. 370).
2. *The domestic world*: an order characterised by trust, authority, esteem, whereby “worth depends on a hierarchy of trust based on a chain of personal dependencies” (Boltanski & Thévenot, 1999, p. 370).
3. *The world of renown*: an order characterised by fame, recognition, public acknowledgement, whereby “worth is nothing but the result of other people’s opinion” (Boltanski & Thévenot, 1999, p. 371)
4. *The civic world*: an order characterised by solidarity, equality, common good, collective action, whereby worth depends on a concern with the general interest (Boltanski & Thévenot, 1999, p. 371).
5. *The market world*: an order characterised by desire, purchasing power, exchange, competition, whereby worth amounts to being rich (Boltanski & Thévenot, 1999, p. 372).

6. *The industrial world*: an order characterised by productivity, standardisation, professional competency, expertise, whereby worth amounts to efficiency (Boltanski & Thévenot, 1999, p. 372).

Yet this list is not definitive. Lafaye and Thévenot (1993), for instance, make reference to an ‘ecological’ or ‘green’ mode of justification, while Boltanski and Chiapello (2005) explore a ‘projective’ world built around the idea of network forms of organisation. Crucially, Boltanski and Thévenot (2006) argue that orders of worth are not separate domains or spheres; rather, they are different grammars of worth or sources of legitimation that people mobilise to justify their actions and defend their stakes in controversial situations. In this sense, these regimes are conceived as mobile and flexible (Scott & Pasqualoni, 2014). Hence, though incommensurable, multiple orders of worth coexist in organisations and may collide in the same situation. In *On Justification*, for instance, Boltanski and Thévenot (2006) show how each of these orders of worth operate simultaneously in business firms. Indeed, there is not strict correspondence between, say, the market world and business firms, or the inspiration world and churches, since, as argued by Thévenot (2001), all organisations have to cope with critical tensions between different orders of worth. In this sense, organisations can be viewed as ‘compromising devices’ between several regimes (Thévenot, 2001). At the same time, each order of worth has its own principles of evaluation by which value is derived. What counts as valuable in each world is judged according to a different set of criteria. Therefore, when it comes to evaluating people and things, each world mobilises a particular repertoire of devices, proofs of worth, metrics, and measuring instruments to carry out calculative operations. As Stark (2009, p. 11) points out, “[o]rders of worth are the very fabric of calculation, of rationality, of value.”

The sociology of critical capacities shares some common features with ANT and its descendants. Guggenheim and Potthast (2012) refer to these programmes as “symmetrical twins.” Both approaches accord priority to practical action and are critical towards Bourdieusian critical sociology for its “overblown claims to cognitive privilege vis-à-vis the social actor” (Scott & Pasqualoni, 2014, p. 83). Both approaches show an empirical interest in sites of tension, dispute, or controversy, and an attention to the interdependence of human and non-human actors (Scott & Pasqualoni, 2014). For instance, much like Boltanski and Thévenot, ANT

lets “the actors deploy the full range of controversies in which they are immersed” (Latour, 2005, p. 23), leaving the ordering of the social to the actors themselves and not the researcher. Here, Latour (2005, p. 23) cites Boltanski and Thévenot’s (2006) *On Justification* as a “magnificent example” that he tries to emulate. What is more, the notion of ‘trials’ or *épreuves* by which actors are defined in ANT, is also a key notion for Boltanski and Thévenot (2006); *épreuves* enable actors to cope with uncertainty during a dispute whereby claims must be verified or falsified by reference and recourse to devices (Scott & Pasqualoni, 2014). In this sense, in both approaches, *épreuves* are (1) material and symbolic, (2) involve humans and non-humans, (3) produce a stabilising effect.

However, there are some striking differences as well. For instance, Boltanski and Thévenot share Durkheim’s concern with classification (Scott & Pasqualoni, 2014). ANT, on the other hand, is not at all concerned with classifying but with tracing associations. In fact, Latour (2005) claims an intellectual filiation with Gabriel Tarde, whom he views as a ‘sociologist of associations’ whose line of thought clearly diverged from Durkheim’s, whom Latour views as a ‘sociologist of the social’ and whom figures as a recurrent negative exemplar in Latour’s work. Further, in a footnote, Latour (2005, p. 232) states: “Boltanski’s sociology is half Kantian philosophy and half a new attention toward collecting and circulating statements. There should be no difficulty in relocating the second and getting rid of the first.” While he praises and emulates Boltanski and Thévenot’s attention to the plurality of forms of critique and justification and their performative effects, Latour (2005) is nonetheless critical towards their approach for elevating them to more or less fixed principles or categories that then acquire an exterior character. In this sense, Boltanski and Thévenot’s work displays a penchant for *a priori* classifications and categories à la Immanuel Kant. For Latour, ‘orders of worth’ are akin to Kantian categories assumed to be *a priori* necessary for apprehending phenomena in the world. As a result, the sociologist places these categories ‘behind’ the actors and endows them with explanatory powers (Guggenheim & Potthast, 2012).

In the same critical vein, Kornberger et al. (2015a, p. 8) observe that, though attentive to everyday practical situations, Boltanski and Thévenot’s work remains “surprisingly abstract.”

In the world of Boltanski and Thévenot, there are orders of worth. The scholar's task is to study their coexistence and occasional collisions. [...] [T]hey are in search of principles. But, how that which we value has become valuable remains inside a black box. (Kornberger et al., 2015a, p. 8)

This is where the sociology of critical capacities and ANT part ways in a fundamental manner. The former seeks principles, the latter seeks to open black boxes. Perhaps another way to characterise this difference is to say that, when it comes to the question of value, the sociology of critical capacities is *pragmatic*, but not *pragmatist*. The label 'pragmatic' has increasingly been used to describe Boltanski's approach to sociology (Boltanski, 2009; Jagd, 2011), but this is not indicative of a direct inspiration from the American philosophical school of pragmatism which had its vogue in the late 19th and early 20th centuries in the work of Charles Sanders Peirce, William James, John Dewey and George Herbert Mead. Rather, Boltanski (2009) uses the term as a reference to 'linguistic pragmatics,' understood as the examination of "the contextual uses of language and meaning's dependence on context" (Quéré & Terzi, 2014, p. 92). Additionally, he labels his work as 'pragmatic' insofar as it deals with the analysis of social orders from the perspective of actors and their actions (Boltanski, 2009, p. 35). These two senses of the word 'pragmatic' come together in the programme's emphasis on the actors' use of grammatical resources to cope with problematic situations. However, as Hennion (2016a, p. 301) argues, "pragmatics understood simply as a theory of action is not really pragmat-ist." As we shall see, an ANT-pragmatist approach—which constitutes the theoretical foundation of this thesis—opens interesting avenues for the investigation of the valuable.

A pragmatist perspective on valuation

Pragmatism has gained traction as a theoretical inspiration in this renewed sociological concern with the valuable (Cefaï, Zimmermann, Nicolae, & Endreß, 2015). The work of John Dewey has been particularly relevant in this context. In his work, the pragmatist philosopher laid out a project to reconstruct philosophy by turning attention to practical situations, that is, his call for a shift from 'the problems of philosophers' to 'the problems of men' (Dewey, 1929). Dewey was disenchanted with what he considered

pseudo-problems in metaphysics and epistemology, and thus developed an anti-foundationalist theory of knowledge that rejected the dualisms of modern philosophy. Particularly, he was dissatisfied with dualistic formulations that opposed knowing and doing, facts and values, mind and body, object and subject, intellect and emotions, and was interested in exploring their entanglements and co-constitutive characters.

That man has two modes, two dimensions of belief, cannot be doubted. He has beliefs about actual existences and the course of events [objective facts, knowing], and he has beliefs about ends to be striven for, policies to be adopted, goods to be attained and evils to be averted [subjective values, doing]. The most urgent of all practical problems concerns the connection the subject-matter of these two kinds of beliefs sustain to each other. (Dewey, 1929, p. 18)

He reasserts the problem in the next paragraph, highlighting the split between natural science and human affairs.

Man has beliefs which scientific inquiry vouchsafes, beliefs about the actual structure and processes of things; and he also has beliefs about the values which should regulate his conduct. The question of how these two ways of believing may most effectively and fruitfully interact with one another is the most general and significant of all the problems which life presents. (Dewey, 1929, pp. 18-19)

Dewey's philosophical project addressed the problem posed by this split by advocating a radical shift away from a fixed and certain view of knowledge as the search of permanent substances⁷ to a situational, contingent view of

⁷“Knowledge [...] is thought to be concerned with a region of being which is fixed in itself. Being eternal and unalterable, human knowing is not to make any difference in it. It can be approached through the medium of the apprehensions and demonstrations of thought, or by some other organ of mind, which does nothing to the real, except just to know it.” (Dewey, 1929, p. 21)

knowledge as practical reconstruction⁸. In this sense, Dewey (1929; 1938) sought to replace traditional understandings of epistemology with his notion of inquiry, which he defined as “the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole” [emphasis in the original] (Dewey, 1938, pp. 104-105). In short, Dewey (1938) argued that the need for inquiry stems from the sensing of a troubled or conflicted situation generating doubt and uncertainty which arises in experience⁹. The situation is then discerned as a problem by the inquirers who draw connections and envisage potential solutions which they put into operation until a new settlement is introduced. The situation then becomes unified and resolved—at least temporarily, for there is no such thing as a final settlement. In this manner, the purpose of inquiry is not to generate certain, immutable knowledge, but to arrive at the (provisional) resolution of problematic situations. His approach views knowledge as emerging from an active adaptation of the human organism to its environment. In rather simplistic terms, Dewey’s epistemology focuses on actions and becoming (dynamic); rather than on substances and being (static). Dewey utilised this notion of inquiry to build his theory of valuation and address the problem of value.

The problem of value(s)

In his *Theory of Valuation*, Dewey (1939, p. 2) observed that there seemed to be no common ground between the establishment of facts, on the one hand, and the pursuit of values, on the other, due to the spurious

⁸“Knowledge then does not encompass the world as a whole. [...] [K]nowledge attends strictly to its own business:—transformation of disturbed and unsettled situations into those more controlled and more significant.” (Dewey, 1929, p. 281)

⁹What Dewey means by ‘experience’ is more than just a subjective state of consciousness. In an autobiographical essay, Richard McKeon (1987), a philosopher and former student of Dewey, recalls: “In those courses he dwelled on the term which was to become so important in the development of his logic and his political and social philosophy... By “experience”, he meant, not a psychological stage nor an epistemological category, but rather the context and diversified circumstances in which problems arise and ideas are developed. If he were to seek a single synonym for what he meant by “experience”, he said, he would use the term, “culture”” (p. 201).

separation of nature and culture. He conceived of that separation as a relatively recent phenomenon, since, for centuries, nature was thought to be constituted of *ends*, that is, nature was metaphysically oriented toward the pursuit of values and ideals of perfection. Then, “when teleological considerations were eliminated from one natural science after another [...] the problem of value arose as a separate problem” (Dewey, 1939, p. 3). Far from advocating a return to a pre-scientific world, Dewey contends this need not be so. If knowledge is the *practical* undertaking of inquiry by people and their artefacts—an adaptive action, a reconstruction, rather than a Cartesian deductive operation aimed at grasping the world ‘out there’—and human behaviour is *in practice* governed or at least influenced by considerations of value, it follows that the separation between facts and values, nature and culture, object and subject, is not as sharp as commonly thought. Dewey’s theory of inquiry as an explicit action breaks these dichotomies.

At the time, philosophical debates around the question of value oscillated between a conception of “value” as an emotional attachment or enjoyment (subjective) to “value” as a relational property derived from rational calculation (objective) to “value” as a sort of eternal metaphysical principle (transcendent) (Dewey, 1939). Dewey rejected transcendentalism, and he was adamant that the objective-subjective dichotomy eclipsed the debate around value. As Stark (2011) notes, Dewey had a keen sense of insight into the etymology of value-related concepts, and so he explored double meanings of ordinary English words such as “prize” and “appraise” to reveal the entangled nature of subjective and objective notions of value. His reflection is worth quoting in full length:

[W]hen attention is confined to the usage of the verb ‘to value’ we find that common speech exhibits a double usage. For a glance at the dictionary will show that in ordinary speech the words ‘valuing’ and ‘valuation’ are verbally employed to designate both *prizing*, in the sense of holding precious, dear (and various other nearly equivalent activities, like honoring, regarding highly), and *appraising* in the sense of putting a value upon, assigning value to. This is an activity of rating, an act that involves comparison, as is explicit, for example, in appraisals in money terms of goods and services. The double meaning is significant because there is implicit in it one of the basic issues regarding valuation. For in *prizing*, emphasis falls upon

something having definite personal reference, which, like all activities of distinctively personal reference, has an aspectual quality called emotional. Valuation as appraisal, however, is primarily concerned with a relational property of objects so that an intellectual aspect is uppermost of the same general sort that is found in 'estimate' as distinguished from the personal-emotional word 'esteem.' That the same verb is employed in both senses suggests the problem upon which schools are divided at the present time. Which of the two references is basic in its implications? Are the two activities separate or are they complementary? In connection with etymological history, it is suggestive (though, of course, in no way conclusive) that 'praise,' 'prize,' and 'price' are all derived from the same Latin word; that 'appreciate' and 'appraise' were once used interchangeably; and that 'dear' is still used as equivalent both to 'precious' and to 'costly' in monetary price. (Dewey, 1939, pp. 5-6)

Dewey points out that value can be understood in the sense of holding something precious, prizing something; but also, in the sense of rating or assigning value to something in relation to other things, appraising something. The fact that these terms share common etymologies is quite telling. The quoted passage is an invitation to consider the profound degree to which value and values are entangled. At least, that is what an analysis of the Latin roots of the terms appears to suggest. Yet the question remains. Are these conceptions of value separate or complementary? Dewey addressed this problem head-on.

Valuation as action

Rejecting the subjective-objective dichotomy, Dewey proposed an alternative analytic strategy to address the question of values. His 'flank movement' consisted in "a shift in subject matter from value (or values) to valuation, considered explicitly as an action" (Muniesa, 2011, p. 25). For Dewey (1939, p. 4), what people designate as *valuable* is "the object of a certain kind of activity" (Dewey, 1939, p. 4), and this activity can be a matter of prizing or of appraising, that is, of consideration or of relation, or both at the same time (Muniesa, 2011). When valuation is properly understood as an activity, "prizing and appraising unite in direction of action" (Dewey, 1939, p. 65).

Often, we take for granted that some things are valuable, and ‘value’ is then viewed as a kind of intrinsic quality of things; it becomes ‘black boxed’. From a pragmatist perspective, trying to define what this quality is leads to an impasse; it leads us to conceive of value as an inert fixity that just is. Rather, interest should be invested in examining values in terms of their emergence and their effects—a move akin to Latour’s (1986a) notion of performative definitions.

Values are values, things immediately having certain intrinsic qualities. Of them as values there is accordingly nothing to be said; they are what they are. All that can be said of them concerns their generative conditions and the consequences to which they give rise. (Dewey, 1958, p. 396)

The ‘flank movement’ shifts attention away from ‘value’ as a stable entity—conceived as either a thing or the property of a thing—to the heterogeneous network of elements—the ‘generative conditions’ to use Dewey’s expression—by which this strange actor called ‘value’ emerges or by which entities come to be counted as ‘valuable.’ Values are then contingent constructs that emerge in trials or tests of different sorts, that is, they are the outcome of a variety of valuation practices that may involve mechanisms of evaluation, rating and comparison but also rhetorical appeals to ethos in demonstrations and deliberations of different sorts. Value becomes an ‘objective’ *some-thing* following these trials and tests. From this perspective, the researcher’s task is to emphasise the “process of making things valuable” (Kornberger et al., 2015a, p. 9) and “the practices of making value” (Dussauge, Helgesson, Lee, & Woolgar, 2015c, p. 6) rather than assuming their *a priori* existence. Paying attention to values on the basis of their emergence and their consequences or effects implies understanding valuation as a kind of performance (Muniesa, 2011; Stark, 2011). In this sense, value is not ‘unveiled’ by valuation practices; but rather, value is made and provoked by actors in situated practices of valuation. Following from this, it is not hard to see how ANT and

pragmatism¹⁰ fit into a single analytic framework to address the study of the valuable. Valuation is a kind of translation involving human and non-human actors.

Situations of valuation

Another key aspect of the pragmatist perspective on valuation is the notion of a ‘situation’ which is prominent in Dewey’s work. For Dewey (1939), understanding values means understanding the situations in which they emerge. Situations of valuation can be construed as trials or experiments whereby something is made valuable. These situations “are characterized by the particular social assemblage of persons and things that are in place and in motion during a span of time” (Hutter & Stark, 2015, p. 4). They are spatially and temporally marked as they unfold in specific sites at specific moments. On the one hand, sites of valuation are spaces for collective gatherings equipped with particular technologies and devices, which are not limited to physical rooms but may be distributed in media platforms, websites and so forth (Hutter & Stark, 2015). On the other hand, moments of valuation often have a recognisable beginning and end, yet their duration may vary from a few minutes to several years (Hutter & Stark, 2015).

Dewey (1943) calls his theory of valuation a special case of his general theory of inquiry. Therefore, a particular feature of situations of valuation is the presence of uncertainty, some trouble or conflict that calls for inquiry. In this sense, valuation is an inquiry into what counts. He writes:

valuation takes place only when there is something the matter; when there is some trouble to be done away with, some need, lack, or

¹⁰ Interestingly, Latour and his colleagues at the CSI had already formulated ANT when they discovered the resonance of their research ideas with pragmatist philosophy. Hennion (2016a) recounts: “If James is not the first name to come to mind when one thinks of STS (or even of ANT or the thought of Latour or Callon), I am happy to say that during the ANT epoch, when we were talking about translation and mediation, we were Jamesian without knowing it” (p.307). Also, Latour is a self-described Jamesian and Deweyan pragmatist (see Fossier & Gardella, 2008).

privation to be made good, some conflict of tendencies to be resolved by means of changing existing conditions. This fact in turn proves that there is present an intellectual factor—a factor of inquiry—whenever there is valuation... (Dewey, 1939, p. 34)

Therefore, situations of valuation are potentially sites and moments of dispute, controversy or contention, whereby actors may be compelled to justify worth (Stark, 2009). These situations full of conflicting tendencies play a key role in the study of values-in-the-making:

Controversies are prime arenas for surveying the articulation of various conflicting values, simply because central registers of value often are at stake in such situations. They provide access to conflicting articulations of what will serve as central values and—through the dynamic course of the controversy—settle what come to be the most important values. (Dussauge, Helgesson, & Lee, 2015a, pp. 271-272)

This pragmatist interest in the friction prompted by the clash of conflicting principles of evaluation or registers of value in a situation is reminiscent of Boltanski and Thévenot's (1999; 2006) notion of disputes whereby actors display different modes of justification. However, an ANT-pragmatist approach draws attention to the unsettledness and instability of values as they are enacted and articulated in controversies; rather than assuming stable orders of worth. Understanding values as enacted means that they “are brought into being, they are realized in the course of a certain practical activity, and when that happens, they crystallize, provisionally, a particular reality, they invoke the temporary action of a set of circumstances” (Woolgar & Lezaun, 2013, pp. 323-324). Thus, values are precarious and open to change. Indeed, in situations of dispute over which value(s) ought to be pre-eminent, “what are considered values can be rendered unstable” (Dussauge, Helgesson, & Lee, 2015a, p. 269). As controversy unfolds in a situation, values can be re-ordered and undergo significant changes (Dussauge, Helgesson, & Lee, 2015a). In this sense, an ANT-pragmatist approach not only encourages the examination of how things are made valuable through valuation practices, but also how certain principles of evaluation or registers of value are enacted, ordered, displaced, and transformed in controversial situations.

Some elements of the sociology of valuation

Valuation, as such, has become an important focus of scholarly attention in recent years (see Kjellberg & Mallard, 2013; Lamont, 2012). An academic journal, *Valuation Studies*, has been launched to foster more interdisciplinary dialogue around the study of valuation as a social practice (Helgesson & Muniesa, 2013), also known as the sociology of valuation (Lamont, 2012). More than a sub-discipline of economic sociology, the study of valuation has become a *focus of perspective*, transversal to all the social sciences (Cefai et al., 2015). In this emerging field, several works have found inspiration in Dewey's pragmatist approach, drawing explicitly from his corpus of work (e.g. Antal, Hutter, & Stark, 2015; Beckert & Aspers, 2011; Dussauge, Helgesson, & Lee, 2015b; Kornberger, Justesen, Mouritsen, & Madsen, 2015b; Muniesa, 2011; 2014; Stark, 2009).

Fabian Muniesa has been an important proponent of this pragmatist turn in the study of values. His interest in valuation can be seen as a natural extension of his study of markets and economic activities from a pragmatist perspective (see Callon & Muniesa, 2005; Muniesa, 2007; 2011; 2014; Muniesa, Millo, & Callon, 2007). For him, valuing is a kind of movement or performative operation that creates economic realities—along with other movements such as economising, abstracting, and capitalising (Muniesa, 2014).

The establishment of networks of valuation (in the material semiotic sense of 'network' developed in actor-network theory) is what, for example, markets are about (Muniesa, 2007; 2011). But immersing things in networks of valuation is not only about considering these things from an economic viewpoint. It is first and foremost about getting these things actively prepared for an economic act... (Muniesa, 2014, p. 40)

His work highlights the performative role of devices as “material and discursive assemblages that intervene in the construction of markets” (Muniesa et al., 2007, p. 2), such as pricing models, measurement techniques, trading protocols and merchandising tools. This research programme—often referred to as the ‘new, new economic sociology’ (McFall, 2009)—emerged as an extension of the ANT project following Callon's turn to markets. The ‘new, new economic sociology’ opens the black box of the calculating ‘*homo economicus*’ to reveal that calculation is a

distributed operation involving a range of actors and devices (McFall & Ossandón, 2014). Here, calculativeness is no longer understood as a cognitive or institutional operation; it is enacted through networks consisting of humans and non-humans. Callon and Muniesa (2005) set forth a broad definition of calculation as a three-step process (see also Callon & Law, 2005):

First, in order to be calculated, the entities taken into account have to be detached. A finite number of entities are moved, arranged and ordered in a single space [...]. This single space [...] is the 'account' itself but also, by extension, the surface on which the entities to calculate are moved (literally or by delegation), then compared and manipulated on the basis of a common operating principle. [...] [Second,] the entities considered (taken 'into account') are associated with one another and subjected to manipulations and transformations [...] [Third,] a result has to be extracted. A new entity must be produced (a sum, an ordered list, an evaluation, a binary choice, etc.) that corresponds precisely to the manipulations effected in the calculative space and, consequently, links (*summarizes*) the entities taken into account (p.1231).

Thus, in this broad definition, a calculation is a movement, a translation, a mediation that transforms the entities being calculated. These to-be calculated entities are made into a shape that fits the calculative space, and then come out in a new form as a ranking, a decision, a sum, a score. The calculative space may take different forms such as a spreadsheet, a trading screen, a computer software, a laboratory, a sheet of paper. One prime concern of this literature has been the 'qualification' of goods by economic agents which entails calculative operations of the sort described above (Callon & Muniesa, 2005; Callon, Méadel, & Rabeharisoa, 2002). For Callon and Muniesa (2005, p. 1232), "calculation can either meet the requirements of algorithmic formulation or be closer to intuition or judgement." In sharp contrast, Karpik (2010)—who is also interested in the qualification of goods—holds to a sharper distinction between judgement and calculation. He argues that judgement is a critical operation in the markets of "singularities," such as fine wine, art, and psychotherapy whose sale does not primarily depend on price but on 'judgement devices', such as reviews, guides, recommendations, rankings. Regardless, the shared assumption is that there is no calculation apart from calculative

devices, no judgement apart from judgement devices (Callon & Muniesa, 2005; Karpik, 2010). Further, despite their differences, Karpik's 'judgement' and Callon and Muniesa's 'calculation' are both concerned with the more general notion of *valuing* (McFall & Ossandón, 2014).

David Stark's work could be viewed as a bridge between the ANT-informed 'new, new economic sociology' and organisation studies. If the performance of valuations are ubiquitous (Helgesson & Muniesa, 2013), the answer to the question of how, where and when they happen, Stark (2011) contends, can find its starting point in organisations. His work is decidedly pragmatist, namely Deweyan, and shares ANT's attentiveness to the socio-technical assemblages that make valuation happen: "Yes, we calculate, we judge, we perform. We, assemblages of humans and non-humans, perform" (Stark, 2011, p. 336). His work not only draws inspiration from Callon and Muniesa, but also from Boltanski and Thévenot. Stark follows *On Justification's* lead by taking up the notion of worth in his work. In *The Sense of Dissonance*, Stark (2009) is sympathetic towards Boltanski and Thévenot's (2006) observation that multiple orders of worth coexist and collide in organisations. In his view, organisations are "settings where multiple principles of evaluation are at play" (p.13), or "sites in which actors engage in practices of justifying worth" (p.24). Yet he does not confine principles of evaluation or practices of justification to the orders of worth of *On Justification*. In other words, much like Latour (2005), Stark does not share Boltanski and Thévenot's taste for categorisations. What is more, they draw different conclusions from their respective projects:

[W]hereas they [Boltanski and Thévenot] see orders of worth as making action possible by resolving problems of uncertainty, my case ethnographies led me to see the mix of evaluative principles as creating uncertainty and therefore as opening opportunities for action. (Stark, 2009, p. 13)

Stark's (2009) primary interest is innovation, which he frames as a kind of pragmatist inquiry involving *dissonance*—a concept he uses to describe the perplexity created by the collision of conflicting evaluative principles in organisations. In his view, the interplay of contending frameworks of value can create a sort of productive friction that triggers organisational reflexivity. Organisations that foster dissonance are innovative because they do not take their knowledge for granted.

The present thesis draws inspiration from these pragmatist and ANT-inspired approaches in the sociology of valuation. Theorising value(s) as an outcome of valuation practices has important implications for understanding strategising and for “(re)discovering what strategy is and what it could be” (Steen et al., 2006, p. 308). As we shall see, an ANT-pragmatist approach opens possibilities for investigating how ideas are made valuable and strategic, by scrutinising valuation mechanisms and their effects.

Strategy and valuation

Now that the notion of valuation has been expounded upon, we come full circle back to strategy. The pragmatist perspective on valuation affords the possibility to rethink the concept of value and its relation to strategy in at least two key respects. First, understanding value as an outcome of valuation practices has interesting implications for strategy research in that it allows for a new understanding of competition and rivalry (Kornberger, 2017). Here, strategy research can fruitfully intersect with economic sociology literature focused on the qualification of goods (e.g. Callon et al., 2002; Karpik, 2010). If goods are made valuable through calculative practices and judgements involving devices of different sorts, then rivalry shifts from the level of competition between goods to the level of competition within and between such valuation practices, because it is these practices that facilitate the sensemaking and decision making of consumers and other market actors (Kornberger, 2017). So viewed, strategising becomes a matter of influencing these practices of valuation by which goods are appreciated.

Second, a pragmatist perspective on valuation has very interesting implications for enhancing our understanding of the politics of strategy practice. This thesis is not concerned with the qualification of goods in markets, but with the qualification of ideas in organisations—namely the idea of design(ing)—, so the implication that matters most in this study is this one. Understanding value as an outcome of valuation practices opens a fruitful avenue to investigate the power effects of valuation on strategising and organising. This can be done, for instance, by examining the valuation practices and mechanisms that enhance (or diminish) the “strategicness” of ideas-to-be-enacted.

As previously argued, for something to be regarded as “strategic,” it needs to be counted as “valuable” by the organisation. Valuing, in turn, entails practices and technologies of calculation and judgement, which involve a repertoire of devices, such as management accounting systems, scoring techniques, reviews, rankings, ratings, assessments, classifications, awards, categorisations and other devices facilitating the work of valuation. In this thesis, *strategising and valuing are conceptualised as interrelated processes of translation by which actors are enrolled and mobilised*. It follows that to study how an entity—e.g. an idea or an organisational group—becomes strategic, one needs to pay close attention to the way in which it is scored, assessed, compared, categorised, ranked, reviewed, and so forth—in short, evaluated and valorised. How does this entity keep accounts and give accounts? How is it held accountable? By which mechanisms are some accounts validated and others discredited? Which accounting counts?

Also, attending to the politics of strategy practice implies a close attention to controversies in which conflicting articulations of value are enacted and tested (Dussauge, Helgesson, & Lee, 2015a); it implies attending to the situations of friction whereby multiple principles of evaluation or registers of value are enacted and performed by actors vying to shape the strategic agenda (Stark, 2009). What are the different values at stake in a controversy? How are values shaped over time? How do the enactment and displacement of values solidify or betray programmes of action? These valuation practices have ordering effects and so exploring these questions is significant to advance our understanding of strategising.

Indeed, attending to valuation practices and their ordering effects is a fruitful way of apprehending the political dimension of strategising. As Dussauge et al. (2015a) argue, values are implicated in politics and power struggles. In their view, enacting values is a way of producing stakes or matters of concern, which are raised and defended by actors in controversial situations. These matters of concern are constructed and negotiated on two levels: “first, there can be *conflicts about what the concern is*; second, there can be *conflicts about the correct way of assessing a stake along a settled register of value*” [emphasis in the original] (Dussauge, Helgesson, & Lee, 2015a, p. 275). Actors vying to shape the strategic agenda raise and enact matters of concern, attempting to negotiate settlements whereby their concerns and their assessments can be recognised as more important than others. In this sense, when it comes to the politics of strategy—

tweaking Muniesa's (2014) phrasing quoted in the previous section—, immersing things in networks of valuation is first and foremost about getting things actively prepared for a *political act*. Thus, the enactment and articulation of value, as well as the performance of (e)valuations are political acts constitutive of strategicness.

Such a perspective, neatly aligns with the Clausewitzian project. If entertaining an idea of a normative theory of strategy is illusive, at best, and fatal, at worst, what is then the use of strategy for Clausewitz? Kornberger (2013a, p. 1058) argues that Clausewitz “suggests understanding strategy as a socio-political (rhetorical) mechanism through which people can be convinced in deliberations about a specific course of action.” Strategy is thus a mechanism to secure credence in a context of choice and deliberation, one that produces and filters arguments and legitimises and justifies political action. So viewed, strategy is not so much concerned with effective planning but with effective persuasion and dissuasion. Further, Kornberger (2013a, p. 1069) contends that “strategy structures the political space of deliberations and negotiations in which different actors struggle over meanings and conflicting interests.” Strategising then becomes a situation of valuation whereby divergent visions of what is good and desirable are confronted; an opposition between programmes and anti-programmes; a controversy evoking diverse articulations of values.

In such situations, strategy is about settling what the most important values are. It is about stabilising and framing what the ‘true’ matters of concern are for the organisation. Strategy is in the business of truth setting. Yet this is not a level playing field, for actors at the periphery usually have more difficulties asserting their authority and advancing their concerns than those representing a central authority. These peripheral actors or ‘emergent concerned groups’ (Callon & Rabeharisoa, 2008; Skærbæk & Tryggestad, 2010) can have an impact on strategy making provided that their concerns are successfully taken into account, which entails a translational effort. The rise of emergent concerned groups makes power and politics more visible, giving rise to rich articulations of the values at stake (Dussauge, Helgesson, & Lee, 2015a). Interestingly, it is this stabilising quality of strategy (and the devices that hold it together) that engenders the very existence of such groups in the first place (Skærbæk & Tryggestad, 2010), and thus strategising can be viewed as a constant ontological struggle between actors devoted to specific ideas and concerns labouring to re-frame established strategies. If successful, they can go

from being an emergent concerned group to becoming legitimate strategic actors.

Strategising is thus an affair of *ontological politics*, a term that suggests that the “conditions of possibility are not given. That reality does not precede the mundane practices in which we interact with it, but is rather shaped within these practices [...] [in an active process that is] both open and contested” (Mol, 1999, p. 75). Here, politics is not limited to “giving a voice” to individuals, but is rather based on how heterogenous assemblies of people and things re-present and enact matters of concern, bringing them into existence (Alcadipani & Hassard, 2010). When it comes to strategising, the ontological status of emergent concerned groups and their ideas is open and contested in valuation practices, which underlie the achievement of strategy. These may include mechanisms that evaluate, judge and weight the “strategicness” of ideas and groups. In a certain sense, strategy emerges as a powerful actor, ruthlessly announcing which ideas are worth pursuing, which matters of concern are to be favoured, and, by omission, which ones are to be silenced, but in its apparent solidity, it hides the struggle of ideas being translated, materialised and evaluated by means of a variety of valuation practices. Such practices may include the counting (commensuration), ordering (categorisation) and promoting (visualisation) of a specific matter of concern (Kornberger, 2017). In this sense, studying how ideas become valuable and strategic also implies paying attention to how they are represented by concerned groups.

[S]trategy offers itself as a discursive device in which authors attempt to assert their authority. In this sense strategy marks the sovereign’s tacit acknowledgement that the world is polycentric and it indicates the beginning of an age in which convincing arguments need to be based on certain forms of representation (such as numbers) to become persuasive. In other words, through strategy, politics becomes aestheticised. Strategy is always a representation of perspectives, a staging of facts, speeches given on behalf of a real clientele or an imagined community, and a silencing of other voices; it is about canvassing the big picture and seducing through its aesthetics. (Kornberger, 2013a, p. 1069)

There may be many concerned groups or aspiring authors of strategy, but only a few are successful at asserting their authority. The authors are none other than those who succeed at making their ideas valuable; those who

secure proper representations, translating other interests into their programme. ‘Strategicness’ is made through practices of valuing but the devices to achieve such a feat can be varied. Understanding strategy as socio-political mechanism draws attention not only to calculative devices (Callon & Muniesa, 2005), but also to the rhetorical demonstrations and visualisations that contribute to the aestheticization of the political debate in strategy (Kornberger, 2013b).

Demonstrative rhetoric is designed to be productive of action as well as of words, that is, to arouse others to action and to accept a common opinion, to form groups that share that opinion, and to initiate participation in action based on that opinion [...] Demonstration uncovers data, that is, “makes” them since data depend on the perspective in which they are “given.” (McKeon, 1987, p. 20)

Demonstrations are a kind of enactment of values whereby demonstrators deliver proofs and persuasive messages to convince an audience about some idea or matter of concern. In these performances, values are richly articulated in an attempt to enrol actors. Demonstrations are an invitation by demonstrators to their audiences to share in the same values. Lamont (2012) argues that demonstrations are becoming increasingly central to evaluative practices. There is a stream of STS literature that explores how demonstrations are used as proofs of worth to demonstrate the feasibility of a technology, the proper running of a prototype, the value of a specific theory, and also to justify funding to political authorities or company executives (see Rosental, 2013; Simakova, 2010; Smith, 2009). Demonstrations provide a frame or canvassing to highlight noteworthy characteristics of an object or situation, and they also serve as a medium for exchanges between demonstrators and their audiences (Rosental, 2013).

The supporting material of demonstrations such as PowerPoint presentations, prototypes, videos, visual aids and other artefacts, play a crucial role in the performance of demonstrations. For instance, Stark and Paravel (2008) study the use of PowerPoint—Microsoft’s slide-based presentation software—in public demonstrations. They observe that the distinctive morphology and the digital character of PowerPoint documents enable the re-presentation of heterogeneous materials in a single format that can morph from live demonstration to circulating digital documents

that can be used in counter-demonstrations. Indeed, PowerPoint is an ubiquitous technology used in demonstrations of all sorts. In the case of strategy, PowerPoint is embedded in the discursive practices of strategic knowledge production (Kaplan, 2011). Kaplan (2011) shows how PowerPoint documents mediate negotiations of meaning in uncertain environments, create spaces for discussion, make recombinations possible, connect a wide range of actors, and certify certain ideas and exclude others. In short, she reveals how the use of PowerPoint documents shapes the making of strategy. As Kornberger (2013b, p. 106) argues, “strategy circulates and is consumed as a vision, image, map and big picture.” Most of the times, this involves the mediation of PowerPoint documents. In this sense, *the making of strategicness is mediated, not only by calculation, but also by demonstrations and demonstrative devices that have valorising effects.*

Kornberger (2013b, p. 106) delineates the power effects of strategy as an aesthetic phenomenon: first, strategy—as any image—requires framing which makes it an editing operation that includes certain voices and ideas while excluding others; second, strategy is an image that leaves no space for alternative projections, it presents itself as the one true narrative, diverting attention from the making and framing of its own image; third, strategy increases the aesthetic repertoire of politics by making visible the connection between the problems of the present and the solutions of the future, making things visible and making them count. Thus, if strategy is the aestheticization of politics through consumable representations that persuade and dissuade (Kornberger, 2013a; 2013b), it follows that strategising is a kind of aesthetic valuation. What is the role of aesthetic representations in the making of strategicness? How are these representations of the valuable put together? What are their effects?

In this thesis, I explore the implications of an ANT-pragmatist perspective on the making of strategicness. The empirical case lends itself to a rich exploration of the concepts established in this chapter. The study focuses on the efforts of designers to become ‘strategic’ actors at a large manufacturing company, Volvo Group. In line with the wider shift to services happening in the industry, designers seek to stake a claim over ‘service design’ as an emerging space. They actively seek to construct and maintain a network around a strategy idea that they think will secure them all the necessary mandates to be regarded as a ‘value-adding’ strategic function. The aestheticization of politics through strategy takes new

shapes in the hands of designers, aesthetic experts *par excellence*. Also, in the process, designers find new ways to articulate their values and assess their stakes in an organisational context dominated by engineers. In short, they seek to make design valuable in the eyes of the rest of the organisation. This concern with the value of design reflects a wider trend in the design industry, and aligns with new developments in the evolution of the design profession. We shall explore these in the next section.

Design

The new human type cannot be properly understood without awareness of what he is continuously exposed to from the world of things about him, even in his most secret innervations.

—Theodor Adorno, *Minima Moralia*

Our existential concerns are shifting before our very eyes from things to information. We are less and less concerned with possessing things and more and more concerned with consuming information.

—Vilém Flusser, *The Shape of Things*

Design and value

Design is increasingly recognised as a key strategic asset and a source of added value for organisations (Celaschi et al., 2011). Today, nation states around the world have national design policies to promote the inclusion of design in small and large businesses. In these contexts, design is increasingly championed as a driver of innovation, social development and economic competitiveness. This recent widespread interest has triggered conversations around the value of design in both industry and academia. What is the value of design? How can it be measured? How can it be effectively communicated? There is even significant institutional patronage

to work on issues related to promoting and researching the value of design. The European Commission has launched an Action Plan for ‘Design-Driven Innovation’ that seeks to promote understanding of design’s impact on innovation. Other EU-backed research projects such as *Measuring Design Value*, *Design for Europe*, and *DESMA Network* (of which I am part) have consistently involved academic and industrial partners in the exploration of such questions. Also, the *Design Management Institute* (DMI) regards design valuation as one of its key focus areas and undertakes active efforts to articulate the value of design in business contexts.

Contemporary conversations around the value of design can be understood as a ‘push-pull’ phenomenon. On one side, the design community is keen on persuading a public of business leaders and policy-makers that design can deliver value when given the opportunity and resources; and on the other, this audience made up of a nuanced scale of skeptics and enthusiasts is expecting quantifiable evidence to substantiate investment and the strategic inclusion of design in business and policy-making. These efforts are in large part aimed at legitimising the design discipline in the eyes of institutions that, in one way or another, have been drawn to these conversations. It would seem like communicating clearly the value of design is a continuous challenge for design practitioners and researchers. Yet, despite its central character, the concept of value as deployed in contemporary discourses is often assumed rather than analysed, let alone problematised, particularly in business contexts.

Value co-creation, brand value, value-in-use and other value-related terms, often borrowed from other disciplines, have carved their own way into design discourse. The concept of value is deployed in different manners in design practice and research. However, its underlying assumptions typically remain vague and often rest upon dualities between value and values, object and subject. While considerations of the role of social and cultural values in design have long been acknowledged in the broad field of design studies (Margolin & Buchanan, 1995), when it comes to discussions concerned with design management, the value of design often collapses into economic frameworks (e.g. Borja de Mozota, 2006; 2011; Veryzer & Borja de Mozota, 2005). Typically, conversations about the value of design oscillate between economic value—adopting the perspective of the firm—and human values—adopting the perspective of humans using the products of design or the perspective of humans designing those products. As Boztepe (2007, p. 55) affirms, there is little

agreement on the use of the term value in design discourses, and its understanding is either related to economic or moral stands. This value-values duality is invariably escorted by an objective-subjective duality. There seems to be a sharp distinction between objectivists and subjectivists in design discourses (Boztepe, 2007).

It could be argued that the use of economic frameworks in the characterisation of design value is motivated by an aspiration to make design relevant to business audiences by speaking the same language. It is all part of a rhetorical attempt to valorise design practice. Heskett (2008) makes an attempt to bridge the gulf between economic value and values-in-use. He recognises the shortcomings of the application of economic frameworks to assess design value and argues that “attempts to explain design in an economic context have generally sought to justify it in terms of the numerical, quantitative values that dominate business processes” (p. 83). He proposes a major emphasis on the firm-level functions and processes of design, which could reveal important contributions of design to innovation by taking into account qualitative factors, and suggests that economic considerations of design should be informed by a thorough contextual understanding of products in use (Heskett, 2008).

Members of the design community, engaging in conversations with business leaders to make design relevant, have been preoccupied with the challenge of measuring design value. Such efforts stress the importance of measuring the economic impact of design, and characterise non-economic values (such as use value or aesthetic values) as subordinate, additional ingredients in the creation of economic value (see Westcott et al., 2013). Lockwood (2007), a former President of the DMI, asserts that design value needs to be considered on business terms since business executives respond to metrics they know; yet, as he notes, designers prefer to underline the importance of their work through anecdotes and cases rather than with numbers since, from their view, creativity resists quantification.

The DMI has been very active in this domain as ‘design valuation’ is one of its key focus areas. For years they have sought to define criteria and methods to frame and measure the value of design by understanding and considering design on business terms. Indeed, for design to increase its strategicness in organisations, it needs to be confronted with the dominant value scales of business life. Recently, they have undertaken major efforts in this direction through the creation of the *Design Value Index*, an index to track the ‘value’ of select publicly held companies of so-called ‘design-

centric organisations’, and the *Design Value Scorecard*, a tool to assess design’s impact and importance in organisations (see Westcott et al., 2013). For the *Design Value Index*, they monitored ‘design-centric organisations’ and the impact of their investments in design on stock value over time. They found that design-led US companies have a stock performance advantage of 228 percent over 10 years. The *Design Value Index* aims at confirming the correlation between investment in design and bottom-line shareholder value, in addition to what they call “soft benefits” such as brand awareness and preference. Here, ‘objective’ value in the form of performance metrics takes precedence over ‘subjective’ values in the form of symbolic, aesthetic, and experiential qualities such as brand distinction, customer experience and the like. These ‘subjective’ values are harder to quantify, and in a world where quantifiable metrics are pervasive, this poses a peculiar challenge.

Unsurprisingly, as design moves into new territories of action in organisations, design advocates undertake efforts to demonstrate and legitimise the value of their contribution. In the case of the DMI, Westcott et al. (2013) are addressing a specific audience: business leaders; so, they use the matching tone and language, and adopt the most expedient framework of value in order to capture their attention. These arguments built on economic rationality might help design managers to secure some investment. Yet, there is an inherent risk to such arguments. Have business leaders been sold an attractive and arguably overstretched correlation between design and firm performance? What is lost when the value of design is fundamentally characterised as a set of performance metrics?

What is then the value of design? This is the wrong question to pose. Rather than assuming that design has some inherent value, this thesis looks for values as they are enacted, articulated and reordered in controversial situations. How are values made in practice? How do the values enacted by designers collide with other conceptions of value? How are designers and design work evaluated? The value of design cannot be detached from the practices that made it. It is also worth pointing out that design as a profession is changing not only in its wider recognition, but also in its practices and subject matter.

From designs to designing

Design is an ambiguous term. Whereas in Spanish, for example, there is a separation between *designio* (purpose or intent) and *diseño* (the art of conceiving and making something), both of these connotations are included in the English term *design*. In our hyper-technological age, we often associate design to the material world surrounding us. We recognise design in spaces and objects—both physical and digital. Everyday activities, from the more mundane to the more technical, are mediated by material artefacts of different sorts. Even digital technologies that are ever more present, in which ‘form’ and ‘matter’ take on new meanings through the substitution of physicality by information, are materially mediated and experienced. Our lives are thus not only dependent on the intervening agency of material artefacts, but on the deliberative processes that brought these artefacts into being in the first place; I am referring to the practice of design. Indeed, all objects and spaces that make up our artificial world were forethought and materialised in some shape or form; they were designed.

As Margolin and Buchanan (Margolin & Buchanan, 1995) affirm, early writers in the field of design studies were concerned with the object, which was conceived as an instrument for improving social life, bringing order and self-expression to everyday experience. Debates in the field revolved around issues of form and aesthetic sensibility, and the cultural values and symbolic meaning embodied in objects, whether they be artefacts, typography, or buildings. Frequently, discourses were geographically bounded and inescapably intertwined with artistic movements, as designers were often architects and/or artists themselves. For instance, Italian futurism in the 20’s promulgated a style delineated by advanced conceptions of speed and technology, while De Stijl, in the Netherlands, favoured the use of straight vertical and horizontal lines. In the 30’s, a way of designing known as ‘styling’ became very popular in the United States with a strong visual orientation in products and advertising in order to boost the emotional appeal of products. In stark contrast, functionalist design discourse, in vogue in Germany of the 50’s and 60’s and connected to the influence of the *Hochschule für Gestaltung* Ulm, upheld simplicity, timelessness, and spare formality as design ideals. The work of Braun’s longtime lead industrial designer, Dieter Rams, embodied the values promoted by this particular conception of design. In the 60’s

through the 80's, pop designers, like the Memphis Group in Italy, rebelled against the formal restrictions of the functionalist movement, incorporating colorful and kitschy elements of popular culture into their designs. Indeed, the idea of design had been inextricably linked to the idea of style in products, art and architecture, and this is what shaped the modern idea of design. Hence, for a large part of the 20th century, the study of design "emphasised the objects themselves rather than the complex thought processes that led to them or the situations in which they were used or given meaning" (Margolin & Buchanan, 1995 p. xi).

In the late 80's and 90's, scholars in the field of design studies started to pay more attention to the cognitive, social, and cultural contexts in which value is ascribed to objects, and to the act of designing (Margolin & Buchanan, 1995). Design researchers, those emerging from the design methods movement particularly, emphasised the cognitive activity of designers in the context of projects (Stewart, 2011). Questions of process and the nature of design problems started to draw more attention. Objects and their symbolic qualities remained important but the idea of design shifted away from products as they are to products as they come to be, or, as Buchanan (1995) puts it, from the poetics to the rhetoric of products, that is, from designed products to "how products come to be as vehicles of argument and persuasion about the desirable qualities of private and public life" (p. 26). Thus, design started to be conceptualised and studied as a verb, rather than just a noun, which represented an important shift. It broke with the idea of design as a completed and whole thing, allowing for a more fluid idea of design as a becoming and unfolding process (Boland, Collopy, Lyytinen, & Yoo, 2008). This distinction was very significant in the study of design, because it opened up new interdisciplinary spaces of inquiry, hinting at new fields of application.

In the new century, this conceptual and practical shift has been accentuated by the emergence of new disciplines of design that are focused on systems of relationships and action, such as interaction design, service design, and business design; design disciplines that have been nurtured within a context of increasing connectivity and rapidly evolving digital technologies. In this context, the tangible object becomes just a prop within an intangible system, and the new disciplines of design are concerned with the conception of these systems, processes, organisations. The focus on production, functionality and semiotic significance of objects that dominated the 20th century has been replaced by an increasing

attention to issues of experience and meaning (Stewart, 2011). Over the past two decades, a new understanding of design beyond the object has emerged, and the idea of design has been extended to new audiences. The focus on the designs by designers has come to be replaced by an increasing attention to the designing of designers (and non-designers).

The evolution of the idea of design reiterates the fact that it is futile to conceive of 'the value(s) of design' as an ethereal, monolithic entity. The values adopted in the practice of design have changed over time, often associated to particular design movements or styles, which is proof of the mutable character of values. The concerns of the design discipline have evolved along with its practices.

Fluid boundaries

In 1972, on the occasion of the exhibition *Qu'est ce que le design?* (What is design?) at the *Musée des Arts Décoratifs* in Paris, Charles Eames features in a short film consisting of a series of questions and answers that served as conceptual basis of the exhibition. The film juxtaposes a series of images ranging from objects to people to natural landscapes. The questions and the answers are rather short and very concise. At some point in the sequence, Charles Eames is asked 'What are the boundaries of design?' His response is not short of wit and a sort of boldness. The celebrated US-based designer, who, along with his wife Ray, created iconic pieces of furniture and experimented with film, answers back in a self-assured tone with another question 'What are the boundaries of problems?'

It suffices to get a little bit acquainted with design history and contemporary practice, to note that design resists reduction to any particular subject matter (Buchanan, 1995). Indeed, design has substantially evolved and expanded its fields of application since the days of the industrial revolution. Whereas architecture and engineering have long been recognised as professional fields of design, the design disciplines that emerged following the rise of industrialisation and that dominated the 20th century, such as industrial design, graphic design, interior design, and fashion design, have a more recent origin (Stewart, 2011). These disciplines gradually professionalized, developed into fields of practice specialised in the facts of their respective subject matter, and also became the subjects of academic research in the last decades of the 20th century. However, dramatic changes in the social, cultural and

technological landscape of the late 20th century gave birth to new design disciplines. Indeed, as a professional practice, once confined to the form and function of manufactured goods or to the layout and typography of visual communication, design became increasingly concerned with the exploration of new subject matters.

Encounters with new problems spawned new practices. Take, for example, the advent of computers, microprocessors, and the explosion of digital technologies which impelled designers to learn new skills to conceive and plan digital products for a growing software and internet industry. As a result, interaction design emerged as a legitimate field of practice and research that has integrated knowledge from design, communication, cognitive psychology, and computer science. Similarly, service design is now an established field of practice and research, and a sought-after competence in service development and innovation that has integrated knowledge from design, management, marketing, and service science. Also, design consultancies are continuously expanding their offerings to encompass different areas of design thinking, allowing for a proliferation of different types of design practice. While emerging from principles operating within the character of what are now considered traditional design disciplines such as architecture, industrial design, and graphic design, these new practices function with very different palettes (Stewart, 2011).

The stabilisation of industrial design

The Bauhaus was crucial to the establishment of the modern industrial design profession. The school was founded by Walter Gropius, a German architect, in 1919 in Weimar, and it represented an ambitious project seeking to unite the two sides of the Enlightenment project: the hard (technology and natural sciences) with the soft (values, democracy, art and ethics) (Ehn, 1998). It was a social experiment meant to bridge the separation between facts and values by uniting modern technology and art to create a new discipline of architecture and design.

In *The New Architecture and the Bauhaus*, Walter Gropius (1935/1965) lays out the foundations of this new architecture, calling for a new breed of artists to creatively take on the challenges of industrialisation. In the introduction, Frank Pick, the administrator behind the London Underground and a great patron of art and design in 20th century Britain,

praises Gropius' contribution to the revitalisation of design. This 'new architecture' began as a reaction against styles characterised by excessive ornamentation which had become irrelevant in relation to modern building in a technological age. Gropius sought a balance between, on the one hand, the purely material aspects enabled by new materials and techniques of production and the agency of rationalisation, and on the other, the aesthetic aspects that, in his view, brought value and satisfaction to the human soul.

These ideas were nurtured in a context full of belief in the future. They emerged in the wake of the First World War, as a hopeful path for reconstruction and renewal. In Pick's view, the marriage between art and industry had an important role to play in the mending of the social fabric; as he observed, there was an emergent generation "conscious of art not as something apart and curious, but as something vital and essential to the fullest life, as something which will restore grace and order to society" (Pick, 1935/1965, p. 7). This idea, fuelled by democratic ideals, of re-establishing the continuity between the making and enjoyment of art and the experience of everyday life, between the fine arts and the crafts or practical arts, was palpable not only in the work of the Bauhaus, but was also an emerging idea among philosophers of art at the time¹¹.

The time was right for a new architecture, a new design that would democratise production and bring beauty to the masses. With the realisation of the relevance of art to everyday experience, along came the observation that "what applies to architecture equally applies in those fields of design which relate to things of everyday use" (Pick, 1935/1965, p. 7). Pick hinted at the importance of inaugurating a new discipline of design which could do for things what the new architecture was doing for building, whether it needed be an art, a science, or a combination of both he left to Gropius. These ideas became the foundation of a new design

¹¹ For instance, John Dewey (1934/2005) makes such a case in *Art as Experience* (first published in 1934), which happened to be a compulsory reading in the Product Design workshop of the New Bauhaus in Chicago. Lázló Moholy-Nagy, a former Bauhaus teacher, founded the New Bauhaus (1937-1938) upon the same philosophy and principles that inspired the original project, and he found in Dewey's work the theoretical foundation of his own pedagogy (see Findeli, 1990).

discipline that came to be known as industrial design¹², a field of practice concerned with the conception of industrial objects.

For Pick, things needed to be rightly conceived and executed, and attract to themselves aesthetic qualities in an emerging technological age. He boldly called for the recognition of industrial design as an equally important profession as architecture: “[t]he designer for industry must be placed alongside the architect, with a training equivalent in character, if directed towards another end, and with a status and authority equivalent too” (Pick, 1935/1965, p. 10). At the time, and still today, architects are professionals with a strong cultural standing. For Pick, a design discipline for industrial objects was as crucial and necessary as the discipline of architecture itself, and had a no less important mission and role in society. Pick highlighted an important issue for further exploration—one that he wished Gropius had fully tackled in his essay—, that is, the range of possibilities emerging from the expansion of architecture into the world of industrial objects. Frank Pick, a tireless champion of design in the UK, recognised that in order to tackle issues beyond building, a new discipline of design needed to be established and bestowed with status and authority in industry.

Dr. Gropius must help to define this training and to explore its methods, once more repeating the experiments of the Bauhaus, with architecture as a mistress art certainly, but also with a new architectonic arising out of a collective understanding of design in industry. (Pick, 1935/1965, p. 10)

Gropius did subsequently develop more hints and suggestions related to the new applications and expansion of the new architecture. In 1956, Gropius published *Scope of Total Architecture*, where he offers a more comprehensive exposition of his radical vision of design as a modern architectonic art which is all-embracing in its scope:

¹² There are different flavours of industrial design education that reflect the early philosophical oscillation that took place in the ‘new architecture’. There are programs that emphasise technical formation and expertise, embedded in engineering faculties, and there are programs that emphasise art and craft, embedded in art faculties or colleges.

Thus the Bauhaus was inaugurated in 1919 with the specific object of realizing a modern architectonic art, which like human nature was meant to be all-embracing in its scope. It deliberately concentrated primarily on what has now become a work of imperative urgency-averting mankind's enslavement by the machine by saving the mass-product and the home from mechanical anarchy and by restoring them to purpose, sense and life. This means evolving goods and buildings specifically designed for industrial production. Our object was to eliminate the drawbacks of the machine without sacrificing anyone of its real advantages. We aimed at realizing standards of excellence, not creating transient novelties. Experiment once more became the center of architecture, and that demands a broad, coordinating mind, not the narrow specialist. (Gropius, 1956/1962, pp. 19-20)

Gropius' project of a modern architectonic art went beyond the application of the new architecture to shape industrial objects. It was a broader statement aimed at instigating a new path of experimentation in art and technology. The Bauhaus idea was guided by the principle that design is simply "an integral part of the stuff of life, necessary for everyone in a civilized society" (Gropius, 1956/1962, p. 20). This gave purpose to the Bauhaus idea. Gropius sought to revitalise design by rising above the concept of "art for art's sake", and by highlighting the connection between all arts (i.e. fine arts, crafts, engineering, commerce). In this sense, he was not promulgating a Bauhaus style, system or dogma, but a pluralistic exploration in the arts of making. As Buchanan (Buchanan, 1995, p. 36) points out, "the significance of the new architectonic art of design lay precisely in encouraging the cultivation of alternative and often conflicting principles as hypotheses for making."

Gropius (1956/1962, p. 19) recognised the importance of preparing a new generation of designers to establish design as a modern architectonic art, and his pilot school needed to "succeed in acquiring authoritative significance." Like Pick, Gropius recognised the importance of securing cultural authority for accomplishing his project of reunification between art and technology, between soft values and hard facts. Design as a profession needed to be valorised and reappraised in the eyes of society. The Bauhaus did not fully succeed in this. In fact, the Bauhaus was both a

modern success and a failure (Ehn, 1998). Buchanan (1995) argues that the Bauhaus did not fully develop the new disciplines of design thinking.

Design thinking

'Design thinking' has been a somewhat controversial notion. Its popularity has turned design into a mainstream idea and a fashionable approach to innovation. The notion of 'design thinking' is often framed in terms of innovation-related challenges faced by businesses, being deployed into managerialist frameworks that use design thinking to depoliticise managerial practice (Kimbell, 2011). The search for new approaches to innovation in the face of complex and challenging environments has made design popular in management conversations. A plethora of courses, MOOC's, and workshops that vow to train managers on how to become 'design thinkers' are now common. Within the field of design management, the emergence of design thinking as a discourse has highlighted the designer's skill and way of thinking as potential enablers to address managerial and strategic problems in a more creative way. In a way, this is an attempt to outline the potential new strategic role of professionally trained designers in business contexts, and to show evidence of the value of design (Carlgren, 2013). However, these efforts to articulate the value of design have often been bundled within managerialist discourses that utilise economic rationality as their guiding framework (Navarro Aguiar, 2014). 'Design thinking' has indeed been controversial. However, as Johansson-Sköldberg et al. (2013) suggest, dismissing the concept just because of the mistiness surrounding it, would be just too easy. Actually, it is important to point out that 'design thinking' is not a univocal discourse in itself. Indeed the concept has different meanings to different people and has been deployed in different ways, both faddishly and sensibly, in academia and industry, theory and practice, and has had both its supporters and detractors.

In academic circles, the rise of 'design thinking' has raised several concerns, and some scholars have called for a more critical treatment of the concept. More often than not, accounts of design thinking are void of context and treat the designer as the main agent in designing, overlooking the socio-material assemblages that make up design practice (Kimbell, 2011). The adoption of the concept within managerialist discourse has raised concerns about what is lost in translation when design is abstracted

into a cognitive style that is used for creative problem-solving in management contexts (Tonkinwise, 2011). Indeed the deployment of design thinking as a problem-solving panacea poses difficulties to fully understand design's contribution to innovation (Jahnke, 2013). In industrial circles, some people in the design community worry that design thinking has been oversold, and that it painted an oversimplified version of the design process (McCullagh, 2013).

Kimbell (2011) sets an agenda to re-think design thinking and identifies three distinct accounts of the concept: design thinking as cognitive style, as a resource for organisations, and as a general theory of design. The first account of design thinking is tied to the work of Cross (1982), Dorst (Dorst, 2006; 2011; 2015), and Lawson (2006). The emphasis is on the way designers think when facing problems, and design thinking is conceptualised as a form of abductive logic. In this sense, the cognitive capabilities of designers are what make design thinking unique and attractive to other disciplines. This school of thought has been nurtured in the context of the *Design Thinking Research Symposia*—an academic event which was held for the first time in 1991— and its proponents are inheritors of the design methods movement.

The second account of design thinking presents the concept as an approach to innovation in organisations. Tim Brown (2009), the CEO and President of IDEO, the influential design consultancy, describes it as an iterative, human-centered method that drives change and inspires innovation, and Roger Martin (2009), dean of the Rotman School of Management in Toronto, as a way to balance exploitation and exploration in firms. They both explore the role of design thinking in organisations, but their accounts do not draw extensively from design studies or management and organisation studies (Kimbell, 2011). Arguably, these accounts —along with the enthusiasm displayed in popular design and business media— propelled 'design thinking' to a mainstream audience.

The third account of design thinking is tied to the work of Richard Buchanan (Buchanan, 1992; 1995; 2015). His work follows the tradition of pragmatist philosophy, and particularly the work of philosophers John Dewey and Richard McKeon. For Buchanan (1992), design should be conceptualised as a "new liberal art of technological culture" (p. 5). What he means by technology, following Dewey, does not refer to how-to knowledge or an output thereof; instead technology is an art of experimental thinking. "Art" in this sense is not reduced to "fine art" but

closely aligns with the classical understanding of *technê* by Aristotle, an intellectual virtue and a productive skill. Buchanan (2001) writes:

In essence, design offers a pathway for bringing theory—ideas about the nature of the world and how we should live our lives—into closer relationship with practical action and the creation of diverse kinds of products and experiences... [T]raditional rhetoricians... have not considered the possibility that designers are the agents of rhetorical thinking in the new productive sciences of our time. Nor have they considered the way in which design—as the intellectual and practical art that provides discipline in the creation of the human-made world—employs rhetorical doctrines and devices in its work of shaping the products and environments that surround and persuasively influence our lives to an unprecedented degree. (pp. 186-187)

Thus, for Buchanan (1995) design thinking is an inherently rhetorical art; it is inquiry and experimentation in the activity of making. Just like rhetoric, design thinking is an art of thought and argument that provides the basis of systematic forethought in different forms of making (Buchanan, 1995). In a broadly artistic vision, Buchanan treats design thinking as a rhetorical activity, not a logical one. In his view, design thinking is rhetorical due to the radical indeterminacy of its subject matter. This is significant for three reasons: (1) it distinguishes design from all of the natural and social sciences, (2) it highlights the way design is constantly expanding its scope through the exploration of new subject matters, and (3) it characterises design as a discipline of matters of concern that allow for different solutions (Buchanan, 1995). The rhetorical character of design thinking directs attention to the way in which the design discipline is relentlessly being altered to fit the changing circumstances of our culture in an ongoing regeneration of design roles and possibilities.

Richard Buchanan characterises this expansion of design through his ‘Orders of Design’ framework (see Buchanan, 1992; 1995; 2001). He provides a perspective to conceptualise distinct ‘objects’ of design and delineates an expanding trajectory for design thinking. In his framework, he highlights four broad areas in which design is explored (i.e. orders of design). He conceives of these orders as places of discovery, rather than fixed categories. The first order focuses on visual communication with

symbols, the second order on material artefacts, the third order on interactions, services and processes, and the fourth order on organisational systems, environments, and values. The trajectory of Buchanan's framework follows the historical development of design and reflects the issues and changing circumstances that have shaped the discipline. Design began as a decorative art concerned with the use of symbols for communication, giving birth to graphic design (1st order). Design was also used as a decorative art for the styling of already-engineered products, and eventually, it started to engage with the actual designing of products, giving birth to industrial design (2nd order). With the advent of new technologies and important changes impacting industry, design shifted to a concern with the experience and activities around products in use, giving birth to user experience (UX) design and service design (3rd order). Buchanan's framework suggests that design will keep expanding to encompass complex ecologies and organisational systems including also the ideas and values that give them sense and make them hold together (4th order). In a way, the sequence from first to fourth orders could be seen as a progression from parts to wholes, or from concrete to abstract.

Yet, Buchanan (1992) is very cautious about giving the impression that his four orders represent fixed categories or fixed 'objects' of design limited to specific design professions. He does not want us to think, for instance, that the first order is limited to graphic designers, the second order to industrial designers, and so on. Rather, he conceptualises his four orders as places of invention that enable designers to reframe problems and solutions. This means that an industrial designer could conceive a chair considering it from the perspective of systems (4th order), interactivity (3rd order) or communication (1st order); the resulting chair in each case would be quite different. For Buchanan (1992), all four orders are interconnected, and often, intertwined. For instance, a service experience consists largely of the thoughtful arrangement of material artefacts and symbols throughout a journey. This framework provides a basis for understanding the evolution of design, namely the reworking of what 'objects' of design can be. The trajectory of design thinking over the last couple of decades has been increasingly pointing towards the third and fourth orders.

Kimbell (2011, p. 298) suggests that the critical rethinking of design thinking should be more informed by social theory and "could take as a

starting point practitioners' being in the world and their relation to other social actors including artefacts and other social practices and institutions.”

Designing and valuing

As previously mentioned, the premise of this study is that the idea of design is being valorised and its strategic worth is being demonstrated. Design awareness has risen in recent years, and the idea of design has been detached from the product—understood in its narrow sense as material artefact—opening the way for the recognition of something that had typically been tacit in the practice of designers: the art of forethought standing behind any designed product, design thinking. This separation of design thinking from its resulting material outcome¹³ makes more obvious the realisation that it can be applied to a variety of subject-matters beyond what is traditionally considered “design material”. This, in turn, generates new fields of practice, which is currently happening. So the recognition of design thinking has triggered a de-specialisation of the design discipline. Design is no longer exclusively conceptualised as a technical specialty branded by its subject-matter (e.g. fashion design, industrial design, graphic design). Rather, as Buchanan (1992, p. 5) portended, design is slowly becoming a “new liberal art of technological culture.”

As Carlgren (2013) argues, the emergence of design thinking bears some similarities with the emergence of intellectual capital in the 1990's, when academic discussions revolved around defining the concept and determining its value. Carlgren (2013), following Latour (1986a), suggests that understanding what design thinking does in practice is more interesting than trying to define what it is. The present work fully embraces this principle and approaches differently the question of value. In this study, the rise of design thinking is framed as an issue of valuation. Valuation denotes any social practice where the value or values of

¹³ This does not mean that design thinking is a purely cognitive activity; it is rather a materially intensive practice, but the point is that it can yield both material (e.g. pens, watches, books, furniture, garments) and immaterial outcomes (e.g. systems, services, business models, strategies, policies).

something are established, assessed, negotiated, provoked, maintained, constructed, and/or contested (Doganova et al., 2014).

Design, as a professional field, is imbued in valuation practices. For example, industrial designers are used to integrating competing interests and values in the development of products. They have to collaborate with engineers, to come up with concepts that are technologically feasible; they have to collaborate with ergonomists, to integrate issues of cognition and physical interaction; they have to deeply understand users, to come up with solutions that fit their particular needs; they have to work with business and marketing experts, to make sure that the solution will make business sense and that it will be a faithful embodiment of the brand. By no means is this a smooth process. All of these professionals have specific and often conflicting criteria to judge what is valuable. Through every interaction in design review meetings, new conditions are revealed, forcing industrial designers to reassess the concept or even the brief and come up with alternative solutions. The design proposal is constantly shaped as it goes through this socio-material process involving several valuation trials. Designers must learn to negotiate values and navigate this perplexity in order to carry forward to completion a suitable design proposal. They must be persuasive when dealing with other stakeholders and find ways to consider the many perspectives represented in the making of the product. This is just a brief example of how valuation permeates the practice of an established design discipline, such as industrial design. Here, valuation practices unfold around a determinate subject-matter, the product or, for that matter, the concept of a product.

Things get a bit more complex when valuation practices, rather than being solely centred on the product of design—in its material and semiotic forms—are centred on the practice of design itself. One could argue that, for practical purposes, this distinction makes little difference since practices are often judged by what they produce. Fair enough. However, it makes little difference only when the kind of thing produced, or the subject-matter, is known in advance. When an emergent practice is in the process of becoming, there is uncertainty as to what it will produce; hence, the practice itself is put to the trial to see whether it is valuable. Hence, it is a useful distinction insofar as it helps us perceive the degree of perplexity in situations of valuation when there is an emergent, non-established practice, whose subject-matter or kind of thing produced is still ambiguous. In the case of Volvo, for instance, as actors seek to broaden the

scope of design work, by becoming involved in the development of service propositions, they are exploring different ways of engaging and collaborating in service-related projects. Their involvement is experimental, and the role of design in this area is rather unclear and has to be negotiated, unlike the industrial designer, whose role is more established. So valuation in this case centres on the perceived value of involving designers in such projects.

This is part of a larger phenomenon in which design has been entering new territories in organisations, positioning itself as a valuable approach to innovation. There is a quality of newness associated to the whole idea of design thinking in organisations. It is a fashionable idea that is locally translated (Czarniawska & Joerges, 1996). In other words, as design broadens its scope of action into new areas or problems engaging with previously distant fields, it is entering a social world of meaning where it is regarded as “new” (Hutter & Stark, 2015). In the case of Volvo, for instance, there is a shift from an established understanding of design inextricably linked to the manufacturing of products, with relatively clear functions, to a new understanding of design linked to broader areas of the business, like service development and corporate strategy, with uncertain implications for a bureaucratic organisation, such as Volvo. Design is moving from one order to another; a process that involves uncertainty. The idea of design is thus being recognised and apprehended in specific situations by organisational members that had typically very superficial contact with design work. To put it another way, the idea of design is being introduced to audiences of non-designers and its legitimacy needs to be negotiated.

A pragmatist perspective on valuation denies the claim that value is merely a quality that is “attributed” to something (Hutter & Stark, 2015; Muniesa, 2011), and thus favours an emphasis on the practice or activity of valuation as an action or performance. Rather than being an essential quality that exists independently from the object, practice or situation that it designates as valuable, value is a quality that has to be performed. At the same time, that which is being valued is not given but made, and it is transformed in the very process of valuation (Hutter & Stark, 2015). In this sense, there is no inherent value to design; its value is performed in practice. It is tested and trialled. This also implies that as the idea of design gets confronted with a governing order of established value scales, it is also

being made and transformed in the process. Following this line of reasoning, the idea of design should not be construed as fixed.

The value of design then unfolds at the level of values being enacted in practice by designers. The efforts to valorise design intermingle with efforts to evaluate its benefits. In the case of Volvo, actors champion a far-reaching application of design, and make the case for a broader design mandate by producing high-quality design work (valorising). Yet, their work subjected to judgement and evaluations that they hope will be compelling to other communities of practice (evaluating). The values of design are thus performed in specific situations and they might be embraced or contested by other organisational members.

3

METHOD

An ethnographic approach

Methodological choices are always dependent upon epistemological and ontological assumptions, inescapable philosophical considerations of any academic research project. As previously established, an ANT-pragmatist perspective has been chosen as theoretical foundation for this study, which in turn carries a whole set of implications about what is 'knowable'. This chapter describes theoretical and practical aspects of venturing into an ethnographic enterprise informed by an ANT-pragmatist approach.

Ethnographic studies are characterised by long periods of fieldwork in which the researcher closely observes and participates in the actions happening in a given organisational setting. This approach makes possible to gain insight on how things work in an organisation. For Watson (2010), ethnography is the product and not the method of production. He writes:

Ethnography is most usefully defined as a style of social science writing which draws upon the writer's close observation of and involvement with people in a particular social setting and relates the words spoken and the practices observed or experienced to the overall cultural framework within which they occurred [emphasis in the original] (pp. 205-206)

In this sense, ethnography is not a method in itself but an approach to writing about and analysing social life, which draws from a range of diverse research methods such as observation, interviews, text analysis, diary

studies, visual methods (Watson, 2010). Traditionally, organisational ethnographers aim to capture thoughts, beliefs, values, and motivations of people in organisations, by immersing in their worlds, and they seek to understand how these values and beliefs relate to action and how such agency shapes organisational practices (Llewelyn, 2003). In short, organisational ethnography is concerned with describing organisations the same way anthropological ethnography describes tribes.

But for those interested in organising and not organisations (Czarniawska, 2014), an ANT-inspired perspective is more relevant. In contrast to traditional approaches to ethnography, ANT embraces a principle of symmetry that, according to Czarniawska (2017, p. 6), functions under the following precepts:

- Use the same terms to explain truths and lies, failures and successes, trials and errors – in other words, render the method judgment-free.
- Simultaneously study the production of and by humans and non-human actants (this approach requires that greater attention be directed toward things and machines – a perspective on the rise in organisation studies; but also toward varying degrees of existence and actorhood).
- Avoid any a priori declarations concerning the differences between westerners and non-westerners, primitive and modern societies, rationality and irrationality; identity and alterity.

ANT, in itself, is not a theory about the nature of the social world; it is first and foremost a theory about inquiry in social science (Latour, 2010). The main concern in ANT is the tracing of associations (Latour, 2005). In this sense, ANT-informed accounts are ethnographies of movement or translation with special attention to non-human processes and configurations. Here, mediations and translations are to be rendered explicit. As Latour (2010) points out, inquiry begins by attending to mediation, then the researcher follows the ensuing translations, and encounters a series of trials and surprises whereby networks are woven and unwoven. Although one might question the difficulty of abiding by ANT's dictum to 'follow the actors', "ANT sensibilities invite researchers to trace ethnographically what ethnographers often abdicate to theory or other

methods entirely” (Baiocchi, Graizbord, & Rodríguez-Muñiz, 2013, p. 336). As Baiocchi et al. (2013, p. 324) argue in respect to ethnographic method, “ANT is here to stay, and for good reason.” They argue that the sensibilities of ANT invite specific kinds of engagements:

- ANT encourages particular kinds of descriptions that focus on the assembling, disassembling and reassembling of associations.
- ANT does not use theory to explain the world but understands theory as a “repository of terms and modes of engaging with the world, a set of contrary methodological reflexes.” (Mol, 2010, p. 262)
- “ANT accounts seek to allow all actors to speak their sociologies and even contest the sociologies of professional sociologists.” (Baiocchi et al., 2013, p. 336)
- ANT provides a new way to engage with the political in research, as the formation of associations enacts worlds. Mol’s (1999) notion of “ontological politics” underscores how the world is actively shaped and re-shaped by our practices.

Furthermore, a pragmatist stance in ethnographic work—not to be confused with the idea of being “pragmatic” in the opportunistic sense—implies active participation as opposed to passive observation. An ethnographer adopting a pragmatist perspective is expected to interact with the world as he has an active role in the constitution of reality. The notion of the detached and inert observer is negated. Watson (2010) argues that a pragmatist spirit entails getting closely involved with the people being studied in their ‘natural’ setting, interacting and sharing experiences with them. Knowledge is not “unveiled” by inertly observing the world but rather produced in and through experience with the world. A pragmatist take on ethnography resists any sharp distinctions between subject and object. The traditional ethnographic task of simply watching and talking to people in order to interpret the meanings they attribute to their situation is not compatible with a pragmatist attitude. Here, fieldwork is concerned with practical action and engagement in a co-constituting meaning-making process with other actors. Thus, a researcher’s personal experiences and insights are central to meaning-making processes in the social setting of research. As Latour (2010) observes, the inquirer and the inquired share in the same mix of angst, enthusiasm, rage and stupefaction

as they discover, through inquiry, the series of obstacles they need to overcome to hold their things together. Also, in pragmatism, the continuity of theory and practice is emphasised. According to Watson (2013), pragmatism is “enormously relevant to organisation studies” (p. 68), and should be “an enterprise which not only attempts to make intellectual sense of organisational practices... but is also to be evaluated in terms of the extent to which this intellectual sense-making informs the practices of those who engage with it” (pp. 68-69).

Engaging in fieldwork is the defining practice for ethnographers, along with writing. Ethnographers both collect texts, in the form of documents, artefacts, images or symbols, and produce texts, in the form of field notes, interviews, records of observations, and the written ethnography itself. The texts collected or produced during fieldwork are interpreted and translated into a narrative by the researcher, which is why ethnographies are inescapably under the influence of the researcher’s assumptions. Furthermore, a rule of thumb for ethnographies is that fieldwork accounts and their theoretical interpretations should be able to inform the projects and practices of anyone entering the setting under examination (Watson, 2010).

In line with an ANT-pragmatist approach, situations of contention or dispute constitute prime arenas for the investigation of valuation practices (Dussauge, Helgesson, & Lee, 2015a). For this reason, I adopt *methodological situationalism* (Hutter & Stark, 2015; Stark, 2009). This implies a methodological “shift from the analysis of institutions to the study of indeterminate situations” (Stark, 2009, p. 32). Situations are spatially located and temporally delimited. Sites have specific material configurations and are equipped different technologies and devices. Moments can be identified as meetings, workshops, presentations, or as a sequence of various events. In this sense, “situations are characterised by the particular social assemblage of persons and things that is in place and in motion during a span of time” (Hutter & Stark, 2015, p. 10). Furthermore, Stark (2009, p. 32), following Dewey, argues that indeterminate situations are “special moments in which the researcher discovers what is at stake because it is in such situations that the actors themselves become cognisant of what had previously been taken for granted.” Such situations call for detailed articulations of values, whereby actors lay bare their matters of concern.

The scene

This research project is part of a large collaboration between industrial and academic partners across different European countries. The DESMA Network is an Initial Training Network within the area of Design Management funded by the European Commission's Marie Curie Actions (FP7). My research was partially funded through this fellowship. Volvo Group is one of the partners in this collaboration and so they kindly hosted me as an industrial PhD from October 2012 through September 2015. The Torsten Söderberg Foundation kindly provided funding for this project as well. All the empirical material was collected and produced at Volvo Group. Volvo Group headquarters are located in Gothenburg, Sweden, where the company was founded back in 1927. The legal name of Volvo's parent company is AB Volvo, which is a public-held company listed on the Nasdaq Stockholm stock exchange.

During my time at Volvo Group, I primarily worked with the Global Product Design Department (PrD), which "operates in a multi-disciplinary and global environment, collaborating closely with other functions to design attractive, functional and cost effective solutions for customers." Most design activities take place at the Gothenburg Studio. However, there is also a small number of design studios abroad (France, Japan, US and China), which correspond to different brands of the Volvo Group portfolio (Renault Trucks, UD Trucks, Mack Trucks, and SDLG). These studios operate as single units for their respective brands and business areas but are dependent on the Gothenburg studio.

In what pertains to organisational hierarchy, there is one Global Design Director, and seven Design Directors corresponding to the different business areas. Additionally, there is a Global Advanced Design Manager and a Global Surfacing Quality Manager. This constitutes top management in the Product Design department. Every business area is composed of different design teams led by Chief Designers. Each area has specific project needs and particular product ranges with different lifecycles and development processes, so they organise themselves accordingly. Chief Designers take on a managerial role as they acquire the function of project managers and report budgeting and other administrative matters to their respective Design Directors, but at the same time, they are very much in contact with creative aspects in the design process. In a more general outlook, the population of the design

department consists of product designers, clay modellers, digital modellers, studio engineers, software specialists, interaction designers and design managers.

The office of the Global Design Director, the top design management function for the whole Group, is located in the Gothenburg studio. At the time of fieldwork, design was widely, and almost exclusively, associated with Product Development as admitted by the Global Design Director. A great part of her job was to foster further design involvement in areas such as brand management, product strategy and planning, sales and marketing, and, more recently, service development. At the time, one of the biggest challenges for the Design function was to show the rest of the organisation where design contributions could be valuable.

The origin

Nowadays Volvo is one of Sweden's most recognisable brands, enjoying a solid position worldwide. From Latin, *volvo* is the first-person conjugated form of the verb *volvere*, which means to roll. Throughout its almost nine-decade history, Volvo has built a distinctive image for itself, appealing to its Swedish origin and rootedness. Indeed, "Swedishness" is a core aspect of the Volvo narrative. Originally a subsidiary of the Swedish ball-bearing manufacturer SKF, Volvo was founded as an independent company in 1927 by Assar Gabrielsson and Gustaf Larsson in Gothenburg, as part of a project to build a Swedish automobile that would bear up against the severity of the Nordic region's climatic conditions, with its rough roads and freezing temperatures. Thus, safety was a primary concern as much as durability—features that still characterise Volvo to this day.

The company grew from a small local industrial venture to a leading multinational manufacturing business producing cars, trucks, buses, construction equipment, aircraft components, and marine and industrial engines. In the journey from then to now, the company underwent periods of stability with incremental growth, but also faced perplexing moments leading to important transformations. One of such moments was the acquisition of Bolinder-Munktell in 1950, a Swedish manufacturer of tractors, engines and industrial machinery, based in Eskilstuna. With this acquisition, Volvo enlarged its product portfolio, and expanded its manufacturing operations into a new industry. In 1973, Bolinder-Munktell became Volvo BM to reinforce the Volvo identity of their products, and

then, in 1995, it became Volvo Construction Equipment, a subsidiary within the group and one of its current business areas.

Another perplexing moment was when the car division was sold to the Ford Motor Company in 1999. Leif Johansson—Volvo’s CEO at the time—explained to the press that “Volvo lacked the size and resources to remain competitive in the long term” (Simonian & Tait, 1999, p. 1). Then in 2010, the Chinese company Zhejiang Geely Holding acquired Volvo Cars from Ford. By selling the car division, the former parent company, Volvo Group, decided to focus on business-to-business (B2B) segments giving up any ambitions in the car consumer sector. This decision was not at all surprising considering that the truck business kept the company afloat in tough times when Volvo cars suffered from modest demand. By the 1950’s, Volvo was producing more trucks than passenger cars, and then in 1969, the truck business became so large that Volvo Truck Division was founded as an independent subsidiary within Volvo Group. Today, Volvo Group employs about 100,000 people, manufactures products in 18 countries, and sells them in more than 190 countries (AB Volvo, 2016). By all standards, a business success story.

The brand

Currently, as it stands, Chinese-owned Volvo Car Group and Swedish-owned AB Volvo (or Volvo Group) are separate companies, but share the same brand framework and heritage. The Volvo brand stands for *safety*, *quality*, and *environmental care*. These core values are integral to the Volvo story and are constantly featured and displayed in all branding-related forms of corporate communication, such as intranet portals, websites, PowerPoint presentations, and both internal and external publications.

As previously mentioned, the concern for safety grew out of a determination to build reliable automobiles that would withstand unforgiving climate conditions. *Safety* thus became the guiding principle behind Volvo’s design and manufacturing operations, as well as an important competitive differentiator. Throughout its history, Volvo has pioneered important safety-related innovations such as the three-point safety belt, the safety steering wheel, the use of airbags in trucks, and the safety cab. In 1969, the company formally established an Accident Investigation Team to further systematise safety research and crash testing. Today, the group promotes a vision of zero accidents. Volvo, in this sense,

made safety a non-negotiable imperative, striving to position itself as a human-centred company that cares about the well-being of drivers and operators of its products.

Also, as mentioned before, durability went hand in hand with safety, and eventually evolved into the core value of *quality*. Volvo prides itself on being a premium brand claiming to deliver quality to its customers, translated into uptime, durability, and excellent customer care. Following the rising public awareness of environmental concerns, in 1972, during the United Nations Conference on the Human Environment in Stockholm, the company launched its position on the impact of transportation on the environment, officially adding *environmental care* as a core value pertaining to the Volvo brand. Today, sustainable development is a mantra that permeates the group's rhetoric and operations. Being one of the world's largest transport manufacturers, environmental care is definitely a big area of opportunity for Volvo. Carbon dioxide emissions have more than doubled since 1970 with about 80 percent of this increase coming from road vehicles (Intergovernmental Panel on Climate Change, 2014, p. 648). Fuel consumption significantly impacts the environment. In the 1990's, Volvo developed the D12 engine series to contribute to low fuel consumption and moderate exhaust emissions.

Over the last decades, the company has consistently developed efforts to increase the energy efficiency of its products, working with new technologies and favouring renewable fuels. In 2014, Volvo introduced the 7900 Electric Hybrid a silent and clean-energy bus that runs 70 percent of its route on electricity and is 80 percent more energy-efficient than conventional diesel buses (AB Volvo, 2016, p. 95). These buses currently operate in central Gothenburg, as part of the *ElectriCity* project, a partnership involving several political, academic, and industrial actors; among them Volvo Group. Volvo's efforts in this direction are aimed at being at the forefront of sustainable innovations. Overall, Volvo's brand narrative prides itself on its Scandinavian heritage, proclaims its core values, and promises to deliver innovative business solutions in a truly human-centred fashion.

Not surprisingly, Volvo is the flagship brand of Volvo Group. Yet, it is still only one among many in the group's multi-brand portfolio. Through a series of company acquisitions, joint-ventures and strategic alliances, Volvo Group has managed to consolidate its presence in different markets around the world, using different brands to market its products. For

instance, in 2001, Volvo Group acquired Renault Trucks and Mack Trucks. The brand portfolio for the truck business also includes UD, Eicher, and Dongfeng Trucks. In the construction equipment area, the brand portfolio consists of Terex and SDLG, in addition to Volvo. In the bus area, there is UD, Sunwin, Prevost, and Nova, in addition to Volvo. When it comes to the marine and industrial engine area, the group operates under the Volvo Penta brand. Each brand in the Volvo Group portfolio targets a specific segment and/or geographical area. Brands are positioned across 4 segments: basic, value, high-end, and premium. Volvo is consistently the premium brand across all business areas.

The vision

Volvo Group's vision is captured in the following statement: "to become the world leader in sustainable transport solutions" (AB Volvo, 2016, p. 20). This vision was formally cast and instituted in late 2011 when Olof Persson became Volvo Group's CEO—a position he would step down from in April 2015—and is presently featured in corporate communication such as reports, intranet portals, PowerPoint presentations, and websites. Volvo Group plans to reach this vision by (1) creating value for customers in selected segments, (2) pioneering products and services for the transport and infrastructure industries, (3) driving quality, safety and environmental care, and (4) working with energy, passion and respect for the individual (AB Volvo, 2016, p. 20).

The emphasis on *sustainability* and *solutions* is worth delving into. Sustainability in the context of the Volvo vision is threefold: environmental, economic, and social; and essentially refers to the development that meets the needs of the present without compromising the ability of future generations to meet their needs. The environmental aspect is about reducing the impact of Volvo products in the environment, by developing cleaner technologies. The economic aspect is essentially about being profitable and securing investments for growth by enhancing operational efficiency and understanding customer needs. The social dimension has to do with responsible business practices and commitment to projects that promote social well-being. On the other hand, the focus on solutions responds to an increasing post-industrial tendency in the manufacturing sector, that is, *servitization*, the transition from traditional manufacturing

focused on the making and selling of products to service-orientation
focused on intangible resources, value co-creation and relationships.

The study

The fieldwork was conducted between 2012 and 2015 at the Product Design studio where I had my own workspace as any other Volvo employee. ‘Following the actors’ often took me to other sites in the organisation. Even when I was not actively engaged in fieldwork, I would still spend most of my days at the studio busy with PhD coursework or other training matters. In this sense, as an ethnographer of life at the design studio, I became a “native” member and was actively involved in a range of activities. Fieldwork included participant and non-participant observation of team meetings, meetings with external consultants, meetings with organisational members external to PrD, design reviews, presentations, scenario workshops, strategy workshops, exhibitions and informal gatherings. I gathered digital documentation such as slide-decks, spreadsheets, posters, mood boards, reports, prototypes, diagrams, videos and other digital artefacts of the sort. Also, I was included in over 30 relevant e-mail exchanges that were taken into account in the study. Most of the observational material was recorded using field notes, except for a couple of meetings that were audio-recorded. There are approximately 50 fieldwork entries corresponding to the observed events. In my field notes, I tried to include a record of interactions, conversations, and the use of artefacts, but when the situation turned overwhelming—which was often the case—I focused on what I intuitively considered to be more relevant. All the names used in the accounts have been replaced with fictional names. Project names have been changed in some but not all instances. The names of projects with great public visibility have been kept.

Over 30 semi-structured interviews were conducted, generating around 40 hours of recordings. The majority of them were conducted in English, but there were also 3 conducted in Spanish and 2 in French which I translated myself. The semi-structured interviews were designed drawing on the insights derived from fieldwork observations. Most of the interviewees were people working at the Product Design studio, but I also interviewed several people external to it. All interviewees were informed from the beginning that all records would be kept confidential, and that

only I would have access to the totality of the data. The interviews were all recorded and lasted between 45 and 90 minutes each. Almost all interviews were fully transcribed. One interview was lost due to poor audio quality.

When it comes to analysing the material, attending to how values are made requires an emic commitment to withhold the categories of the researcher (Dussauge, Helgesson, Lee, & Woolgar, 2015c). Thus, the ANT-pragmatist stance adopted in this study implies a move from an etic register (the meanings used by the researcher to interpret observations) to an emic one (the meanings-systems deployed by actors in the field). As Latour (2005) writes:

It is as if we were saying to the actors: ‘We won’t try to discipline you, to make you fit into our categories; we will let you deploy your own worlds, and only later will we ask you to explain how you came about settling them.’ The task of defining and ordering the social should be left to the actors themselves, not taken up by the analyst. (p.23)

The emic commitment is used to subvert pre-established analytical categories and to let the actors deploy their own worlds (Dussauge, Helgesson, & Lee, 2015a). However, the researcher needs to move strategically between emic and etic registers not only to trace connections but to produce theoretically informed accounts. This iterative movement opens spaces for novel interpretations of “what is going on here” (Barley & Kunda, 2001). As I collected the data, I would write up summaries of observations sometimes linking some events to others in a very messy process going back and forth from fieldwork to writing to reading to re-reading. As Kunda (2013) argues, “data collection,” “data analysis” and “writing” are not distinct stages on a conceptual, practical or temporal level. It was all very fuzzy in the beginning because I had no clear idea of what I was looking for. When I felt I had enough material, I began coding the field notes, transcripts and documents by asking myself ‘what is this an example of?’ First, I identified distinct ‘situations of valuation’. Each situation was constituted by a set of movements and translations that needed to be accounted for and be made explicit. Then, each situation was coded separately. The interconnectedness of the situations did not get lost in the process because I was writing them up simultaneously. The themes and subtitles used in the next chapters were constructed in this movement between the empirical material and the literature, drawing on the conceptual vocabulary of ANT.

4

GO FOR THE 'BIG CHEESE'— OR HOW (NOT) TO PLAN A STRATEGIC INTERVENTION

The consultants

It is mid-April 2014. Consultants are flying in from London to meet with design managers at Product Design (PrD). They work for a consulting agency, Digital Creative, with an excellent track record and expertise in “digital experiences”, and with an impressive client portfolio. They are one of those ‘creative’ agencies that blend design, technology and business strategy. They are strategists, experts in the strategic use of design for digital transformation. And they are the ones who PrD leadership selected to take on this important project, the making of a service design strategy, that will hopefully turn into *the* service design strategy of Volvo Group. These consultants have never worked with PrD directly, but they have worked with the Volvo Group before. So they are somewhat familiar with the company and the industry where it operates. Today’s agenda is set to define the scope and objectives of the project. By the end of the meeting, the brief should be clear and actionable.

The meeting takes place in the main meeting room at the PrD studio. This is where all important meetings are held. The room is next to the main studio entrance on the left side, a very short corridor leading to it. In front

of the entrance, a very long opaque curtain hangs from the ceiling to the floor and separates the meeting room area from the showroom or exhibition area. Often, visitors are invited to the studio for presentations or reviews, and that is when the curtain is used to enclose the exhibition area. It is also a cue for designers to use alternative entrances so as not to disturb whatever might be happening there. The main meeting room is quite conventional and can hold mid-sized meetings with capacity for 25 to 30 people approximately. The room is long, large and outfitted with standard equipment and supplies. The windows in the room look out to a row of well-groomed bushes that block the view to the parking lot outside.

Tara is the first consultant to arrive. The rest of her team is expected to follow suit in any minute. From Volvo, everybody is there, namely David, Nathan, Emily, George, and myself. After a round of handshakes and some chit-chat, everybody sits down. Before the meeting starts officially and while other attendees arrive, Emily describes in rough terms the work of Product Design and the different brands that are part of the Volvo Group. She mentions that each brand has a unique setup and a design office to take care of the values and product ambitions within each brand.

Tara [consultant]: I am struggling to understand the organisation. Are you part of Group Trucks? Or some other part of the Group? (A few chuckles)

David [designer]: We're part of GTT [Group Trucks Technology], which does all product development, all the research for all the brands. Construction equipment, trucks...

Tara [consultant]: Oh! So Group Trucks Technology also serves CE?

David [designer]: Yeah! It's confusing I know. And buses, and Penta. Some of us have a Global role at the group level and then you have more brand specialists.

At this moment, the rest of the consultants arrive. Everyone stands up for a new round of handshakes and quick introductions. Then Tara continues where she had left off. She struggles to grasp the organisation, so she keeps asking questions to clarify PrD's standing within the Group as she leans back and forth in her chair. In a playful tone, Nathan admits that it is a complicated arrangement. Formally, PrD is part of the trucks technology

organisation, that is, GTT (Group Trucks Technology). The reason for this is that Volvo Group is organised around trucks, as it has been its most successful business over a large part of the company's history—trucks accounted for the 68 percent of net sales in the Group in 2015 (AB Volvo, 2016). In this sense, PrD has a long history and strong tradition within trucks, and, over the years, its scope of work started to expand into other business areas, namely CE, Buses, and Penta. Also, new acquisitions have resulted in new organising challenges for PrD and the Volvo Group at large. A lot of these acquisitions kept operating as more or less stand-alone businesses, which also meant that they were competing in some markets against one another. So the Group is now moving towards becoming a truly global company, adopting more of a platform approach to product development and more component reuse, among other things. So the “Global” roles are a reflection of that evolution.

As she listens, Tara begins to understand, but she is nonetheless puzzled by the overall organisational setup. Understanding how PrD is organised is a crucial dimension of this project, so she is not afraid of showing her bewilderment. Tara has previously worked in other projects for Volvo around digital technologies, and she notices something about PrD that she had not seen in the other areas where she had previously been involved.

Tara [consultant]: We've been working with other business areas, and there is, I must say, quite a lot of work in silos. Very separate, but I get the impression that in terms of product experience you're more aligned, is that correct?

Tara recognises the critical function of PrD within Volvo. Over the years, PrD has managed to act as an integrative function at the product level. This is the nature of industrial design work. Products as complex as vehicles are made of vast amounts of components and technologies, and, in product development, several specialists (engineers) are devoted to specific parts of the vehicle. Designers are in charge of the integrative vision that enables a satisfying user experience. Design is an integrative, synthetic activity. To put it another way, if vehicles were arguments, then engineers are grammarians and designers are rhetoricians.

At PrD, designers pride themselves on having a “very holistic view” of the product. They perceive this as a strong asset, especially now in the transition to services. Emily points out some benefits of working from this

holistic perspective, like sharing all the facilities, for instance. She also emphasises the importance of visualisation—their “strongest tool”—and brings up the issue of the transition to services. She observes that they still have the vehicle as a core, but now things are moving more and more into “service platforms.” So they are interested in participating in this area since they have a concern for designing “a holistic and coherent experience and treat the brand in a good way across all the different interfaces.” She notes that there are many different services with which the user is in contact.

This stirs the discussion towards the heart of the matter, the *raison d’être* of this meeting. Nathan expects to secure a formal mandate as a result of this strategy work. He wants to extend his team’s mandate from the physical product into other services and digital streams. They seek the institutionalisation of their authority in this emerging area. Building on Tara’s previous experience with Volvo, David also shares his point of view on the problem they are seeking to address through this strategy work. As a design manager working with user experience (UX), he has observed a variety of digital workstreams and services that are disjointed, which has convinced him that a lot of this work is done on an ad hoc basis. This is seen as a good opportunity for PrD, as he adds,

David [designer]: And so what we see is design as kind of a natural place to start connecting these things, right? In part that’s some of the mandate we’ve been given, but of course it’s much harder in reality to work your way across this huge vast organisation and make that happen. That is a bit of how we are seeing things. We need to start connecting these things more and more in order to present a more holistic brand experience for our customers.

The idea that design should bring wholeness goes hand in hand with the concept of brand experience. Designers see themselves as brand care-takers. They ‘safeguard’ the brand values, and translate them into design propositions characterised by a certain style. What should a Volvo vehicle look like? What should using a Volvo vehicle feel like? Designers grapple with this translation work through their practice. Now, as services become more important, the challenge is to extend the notion of ‘style’ to the realm of actions. What should using a Volvo service feel like? What styles of action should be made possible by design?

From the beginning, UX design at PrD was supposed to be focused on the styling of digital interfaces of already-engineered systems with

which users interact on board of vehicles. That is their formal mandate, on-board digital interfaces. A simple extension of product design. This is usually referred to as HMI (Human Machine Interface) in the automotive industry, a user-centric discipline focused on on-board ergonomics and in-vehicle information. Originally, HMI had as its starting point the user interface of mechanical systems, but today it also includes software and digital applications. Interestingly, the term UX (user experience) has been gaining more prominence in the last year or so at PrD. It is now preferred over HMI for its broader connotation, since working with UX entails a more holistic view owing to the fact that on-board digital interfaces are not isolated entities. They are always connected to larger digital architectures and off-board services.

The interest in expanding the scope of design into services emerges from the fragmentation they observed as they started working more and more with digital interfaces. Also, in this digital age, vehicle operators are increasingly likely to bring mobile devices such as smartphones and tablets; and Volvo, as the industry in general, is moving towards more web and app-based solutions for customers. But these web and app-based solutions are not part of PrD's scope of work; these off-board developments are owned by Marketing and Customer Solutions. As UX design became an important aspect of the work being carried out at the studio, designers identified a chasm between on-board and off-board experiences, which, according to them, leads to fragmented and inconsistent experiences that frustrate users and erode brand equity. This strategy project is an attempt to extend their mandate into off-board digital solutions and services.

One challenge they have clearly identified is that, within the current setup, Marketing and Customer Solutions have a customer/buyer-centric perspective when it comes to developing off-board offers, whereas PrD has a user-centric perspective, stemming from the HMI tradition focused only on on-board interfaces. Designers at PrD consider that the focus on the customer/buyer-centric perspective can limit the design of the on-board experience if PrD gets "overruled" by non-user-centric guidelines imposed by Marketing and Customer Solutions. But designers are also aware that adopting only a user-centric perspective can be problematic when it comes to off-board solutions. So they want a service design mandate to bring wholeness and connect on-board and off-board experiences by designing for both end-users and customers/buyers. This is why designers have

started to systematically use ‘personas’ as a method to identify the needs of different stakeholders within a service ecosystem. Personas are user archetypes, a widely-used method in interaction and service design. “We see that service design is the future product design” says Nathan. “It is something that we need to be a part of. And that’s the foundation of this project.”

The discussion is now set off in a good rhythm. While Nathan opens a PowerPoint presentation to clarify the task at hand—or, in other words, the brief—, Tara turns to one of her colleagues, Graham, a senior consultant in strategy at Digital Creative, for him to introduce himself in more detail. Graham is an industry veteran with a wealth of experience in creative fields, especially in connection to digital technologies. Like Tara, Graham was involved in other projects connected to digital channels in Volvo Group. As he discusses his previous experience, he seems to agree with Tara and David when it comes to the organisational fragmentation resulting in disjointed digital platforms and services. “We actually realised that you have a very complex eco-system”, says Graham assertively, “there are actually a number of different executions within that ecosystem that are addressing similar customer needs.” Graham’s presentation and analysis come across as on point. It becomes clear that his role will be key within this project.

“We can start maybe with what the target is as we see it, what the task is. We have defined it quite clearly”, says Nathan. The presentation is projected onto the screen. Nathan starts by providing some background to the project and then he delves deeper into the kind of outputs they are expecting. Nathan and his colleagues defined the scope of the study in rather clear terms. They want to “integrate service design in the production pipeline of Product Design,” as Nathan puts it. The work should comprise two main tasks. Firstly, they expect a current situation and workflow analysis that describes the state of service design at Volvo Group on a global level, CE and Trucks. They conceive this as a high-level mapping of internal and external stakeholders and interfaces and development of digital services for customers. The mapping should include several brands pertaining to the Volvo Group including Renault Trucks, Mack Trucks, UD Trucks, VCE and Volvo Trucks. Nathan highlights that the analysis should answer important questions, such as: what are we doing wrong and what are we doing right within the current setup? Are there gaps in the way services are developed that need to be addressed? Are services sufficiently

delivering the brand feeling and connected in a unified user experience design? As Nathan goes through these questions, he contends, “we know that [the answer]’s kind of ‘no’ today, but it’s just as a question”, triggering some laughs, “it’s basically one of the questions why we want to do it as well, because it hasn’t been the case before.”

Secondly, they expect a vision of a wanted position that integrates service design as a business function within PrD. If PrD were to have a service design mandate, Nathan and his colleagues would like to know how the digital service production pipeline needs to be set up in order to shorten development time and cost, and ensure a good connection to business and technical development streams from the beginning of projects. “So if there are stakeholders or processes that are more important in early phases,” Nathan notes, “they should be clearly stated in the work”. Additionally, they expect recommendations regarding which kinds of roles need to be developed and integrated into PrD to be able to properly run service design projects. They also would like the consultants to report whether another organisational setup is needed. “We don’t have problems with that; I think it’s a good question to raise. How can this be done in the best of worlds if we didn’t have limitations basically?”, Nathan emphasised. In short, this strategy project is about having an external authoritative actor—the consultants—evaluate current processes and provide normative guidance to go from *how things are* to *how things should be*.

The whole team of consultants takes notes while Nathan speaks. Graham, holds a Moleskine-type notebook and looks over his round-framed glasses as he listens attentively. After carefully going through the project tasks, Nathan talks about the expected deliverable, a clearly written report with explaining imagery, including a neat prologue providing some general background about the importance of service design and some current trends. They hope they can use this to influence strategic decision-making. The idea is to formulate a compelling argument for the integration of service design into PrD as value-adding strategy. Something that shows the value that PrD can bring to the table.

Then, in a rather cautious tone, David adds:

David [designer]: Embedded in this is the assumption that we should do service design. Well, it’s an assumption, right? We should be self-aware enough to check this. And if Volvo Group should be—which the assumption right now is yes—then check our hypothesis

that Product Design should be doing it. That's the other assumption that we need to check. And then build on how we do it.

In this sense, this piece of work serves also as a “reality check” for design managers to evaluate whether this move is timely and justified. The assumption needs to be tested as a hypothesis. Thus the project has a dual function of justification and critique (Boltanski & Thévenot, 2006). On the one hand, designers need to justify to themselves and to others their suggestion of involvement in this new space. Do they have a legitimate claim over service design at all? The report should give an answer to that. On the other hand, designers are putting forward a critique of the current state of affairs, and offering themselves as a solution. They are disturbing the established order—or, from their perspective, disorder. The integration of service design into PrD has been gradually unfolding in a haphazard fashion, so Nathan and his colleagues want to establish (and stabilise) their role within this emerging area. Otherwise, PrD risks being left out, as Nathan remarks,

Nathan [designer]: ‘Cause we are starting to build this relationships of course in service design, we have several projects about it already. But we still see a risk that we don't get engaged in the process in the future and therefore we don't have the ability to create the kind of designs that we want to. So that's why we see that service design mandate is really... Or could be, as David says, a hypothesis.

The hypothesis stems from the premise of fragmentation or disjointedness. Design managers acknowledge univocally that on-board and off-board experiences are, more often than not, disconnected. This is perceived across digital touchpoints, such as apps and web portals, and extends into services as well. “People are doing all kinds of unorganised things,” observes David. “There is a guideline written two years ago about how you design a service in Volvo Group, but that's the only kind of support that's available,” he adds. David surmises that, if things continue the way they are, they are going to “have a mess” with the proliferation of “completely ad hoc disconnected systems” that customers will be forced to use.

A deep silence ensues momentarily. The consultants look at their notes and at each other while David starts tapping on the table like a drum, with a big smile on his face. Suddenly, Graham looks up, followed by an

enthusiastic “OK!”, breaking the tension that had been building up to that point as Nathan and David described the situation. “Right!”, replies Tara with no less enthusiasm. Everyone bursts into laughter after this brief quasi-dramatic moment. Graham and his colleagues seem particularly enthralled by the challenge posed by Nathan and his colleagues. “This is exactly the sort of projects I love, and I’ve been doing them for some time”, confides Graham as he stands up. “Complexity!”, his eyes bright as a big smile takes over his face while he grabs a marker pen. After having listened to Nathan, David and Emily, now Graham drives the conversation to make sure that he and his team understand the brief. “So there’s one sort of really macro level which is based on the assumption that we need to do service design”, notes Graham. “If the answer is yes, is Product Design a good place for it?”, he continues, looking for nods of approval in the room.

Graham starts bouncing a few ideas in what starts to feel like a brainstorming session. He roughly identifies three dimensions to the project: one consisting of a macro-level analysis of the importance of designing for services, another one consisting of a benchmark of best service design practices, and a third one, more internal, understanding how the current product design process is being evolved to take into account new requirements, new situations to design for. Regarding the benchmark, Graham suggests to focus on best practices, processes, and organisational setups implemented by companies that have gone through similar transformations, echoing what Nathan had expressed concerning the need of a trend analysis. Graham’s suggestions rest on the assumption that successful examples from other industries can be helpful to substantiate the claims of this strategy work. “So that instead of designing something afresh or without references, there is a clear reference, there are best practices, there is a record, there are ways of tracking the way service design organisations operate”, elaborates Graham.

Nathan seems to agree but adds some caution, “I think there are some benchmarking companies out there, but I see a lot of bad examples as well.” He relates his weariness towards service design approaches that are detached from design as a skilful practice of experts, or even a sort of craft. “There are a lot of companies moving into this but they tend to see this as just a creative thing that you just...”, as he pauses, he moves his hands in a skeptical gesture. His remarks refer to the popular discourse of “design thinking” which has created a bandwagon effect whereby several companies try to bring some version of a design process in management

and innovation contexts. “Like Volvo does now, being just a manager at Volvo you can go to a service design course and then become a service designer”. This is clearly a reference to the S-GDP, the Service Global Development Process (more on that later). Nathan makes his skepticism explicit: “Is that the way we should do it? We don’t necessarily think so, so of course a benchmark and trend analysis is needed”.

Now, regarding the third dimension consisting of how PrD has been evolving and adapting to new situations to design for, Nathan considers that their current way of working in this expanded area is not sustainable. As PrD moves more and more into the development of digital services, their role is totally up for negotiation in each project. He goes on explaining the way things are currently set up when it comes to designing for services. Nathan stresses how they started with a limited mandate that had to do with on-board interactions, the traditional HMI perspective. So their way of working and collaborating with other functions became a journey that entailed constant negotiation and legitimisation. And now that the boundaries of design are being re-drawn to include off-board offerings, they are stepping further into uncertain territory. “And we haven’t started to build the processes here yet and that’s why we also need this work to be able to do it in the right way,” notes Nathan. “I think it’s important.”

Nathan’s team workload in the CE business area has been considerably increasing over the last two years. His team has grown, and they have managed to establish themselves as trustworthy stakeholders when it comes to on-board developments. Nonetheless, their involvement is not formally secured, but is purely based on what he dubs as “soft contracts”, that is, verbal agreements. Their standing hangs on fragile web of relations and they want to solidify it through this calculated strategic intervention. Herein emerges a seemingly important aspect of this strategy work: the formal inscription of PrD into development processes, making their involvement a durable, official matter. They want an authorial, authoritative voice. Processes—that is, documentation detailing phases and gates of development—in and of themselves are not perceived as representations of real practices, but rather as devices that enable early involvement in projects, legitimise PrD authority, and, to a certain extent, allow arbitration in the midst of contentious situations concerning design decisions. “So if you look at the real processes now you wouldn’t see us basically,” says Nathan. They cannot plan ahead and identify the projects in which their involvement is necessary because they lack a formal

mandate. That is, their contribution is officially not required. So they simply reach out into the unknown and find their way into projects. But they want this to stop which is why they need to get the formal mandate. This strategic intervention is aimed at triggering a top-down decision.

Graham seems to grasp Nathan's concerns around the establishment of processes. In his enthusiastic style, he draws connections to other consulting projects in which he and his colleagues have been actively involved in the past. The problem as framed by Volvo design managers is not new to them. They are digital transformation projects. The possibility to innovate through services is afforded by digitalisation. So service design as a competence largely depends upon the digital capabilities and infrastructure of the organisation.

Based on his previous consulting experiences, Graham is careful not to come across as someone who has all the answers. "There are no recipes", warns Graham, "you cannot say: I've got a very strong design studio and then I do these transformations and bring some management consultants and bring in technical competencies. You see what I mean?" This all seems part of a well-honed sales pitch to highlight their expertise while setting the right level of ambition. "Simply to say, our experience is one of making and exploration", concludes Graham. "In this case, we then have a piece of benchmarking and then we have a piece of more ethnography, eventually take a pilot project."

Now Tara chimes in to discuss the timing of the project as Graham goes back to his chair. The report is expected to be completed in a matter of a few months, so she wants to make sure that the level of ambition, the scope and the costs of the project are clear for both parties. The conversation turns to budgeting matters and man-hour estimates. Nathan restates the importance of having them on board, especially since they have first-hand knowledge of the Volvo Group, which will save them time and resources particularly when putting together the current situation analysis. In this manner, Graham and his team have the opportunity to focus more on the second task—i.e. the desired state or how things should be—, which Nathan refers to as the "strategically important part."

After this rather technical discussion, David poses a question relating back to what Graham had been saying. "I like this idea of a pilot", says David, "how could we prototype this, right? And so that would be a really valuable recommendation what a possible pilot project could be." Everyone pauses and ponders the question. The consultants look at each

other and wait for Graham to speak first. He stands up again and walks to the end of the table. “I’ve got my...”, hesitates Graham, thinking, seeming like he is connecting dots in his mind. After a few silent seconds, he starts synthesising different elements of the discussion with expressive hand gestures. He confirms the importance of having a clear understanding of the current state and the desired state, but Graham identifies a third element. There is the current state, the desired state, but also an account of the necessary steps to get there—the how-to.

Regarding the current state, he considers very important to see how things actually happen on a daily basis, interviewing and observing relevant stakeholders. On the other hand, the desired state is more inspirational, but grounded on best practices and successful cases. The how-to part, however, seems less obvious in view of the available project resources. Graham fears it might become very detailed and complex. He debates with himself what the best approach might be. “Developing a new process entirely will be difficult to fit in,” he acknowledges. Nathan agrees with Graham’s judgement regarding the complexity of the task. “It’s more of a direction”, says Nathan. They are not necessarily looking for a detailed description of how the transformation should unfold. Rather, Nathan and his colleagues are looking for actionable insights.

Graham continues in the same reflective mode and starts telling an anecdote. He recalls the time when he worked with a consumer electronics company that, after big changes in the industry, morphed into an “Internet company.” But, according to Graham, the reorganisation was bound to fail from the get-go, since product and UX design were developed on one side of the company, and services were developed by the Internet business organisation, on the other. This arrangement turned out to be unworkable for a company that was supposed to deliver wholesome experiences. The point of the anecdote that Graham seeks to make is that they faced incredible challenges due to the fragmentation of design work. Responsibilities were hard to pin down in this very convoluted system. As an example, designers would develop a calendar as part of an electronic device, and then, the Internet business, would develop another calendar. And these two were not connected. Graham explains that the integration of product design and UX design was a step in the right direction, but the arrangement was not strong enough to drive the design of the Internet services. So there were all these duplications of key services and systems. According to Graham, the organisation had become too complex to be

productive and deliver unified service experiences across a variety of customer touchpoints. The anecdote has clear warning undertones, and Graham's conclusion is straightforward:

Graham [consultant]: So we discussed earlier whether you need to do it or not. If you look at this story, the answer is clearly yes. You need to do it. You need to do it very clearly and you need to identify the responsibilities incredibly clearly. I think that we are really right in asking this question and putting design as the first candidate.

The anecdote strikes a chord. Nathan fears that something similar might happen if they are not recognised as more than just hardware designers, as opposed to designers who can “break down a complete system in a brand experience.” Nathan wants to break away from the notion of design as cosmetic add-on. He wants to raise the standing of PrD so that other people recognise the value of design for the company's business. Graham says that one of the big lessons is that designers need to be “where the new portfolio is discussed and planned”; they need to be authoritative voices on a strategic level. Nathan and his colleagues could not agree more with him:

Nathan [designer]: Just where Steve Jobs put Jony Ive, right at the top. Back in the 90's he prioritised design as one of the bigger stakeholders, actually above technology development sometimes. I think what we see in our trend analysis is basically the same way forward, Product Design has a know-how within methodology that is needed, if they just knew about it, and if the right processes are being created, and the mandates (chuckles), things like that.

Nathan is convinced that design is a valuable and yet overlooked practice. He brings up the case of Jonathan Ive who worked as an industrial designer at Apple when Steve Jobs made his celebrated return back in 1997. Ive became the Senior Vice President of Industrial Design the same year, and, in 2015, he became Chief Design Officer. In his biography of Steve Jobs, Walter Isaacson reports Jobs as saying: “[Ive] works directly for me. He has more operational power than anyone else at Apple except me” (Isaacson, 2011, p. 342). Arguably, this is one of the reasons why Apple is (too) often portrayed as the quintessential design-driven company. The topic of authority triggers further discussion, as this has been a recurrent struggle. As previously discussed, designers often rely on “soft contracts” to secure

involvement in service-related projects, so they seek a more dependable, institutionalised authority. They want PrD to become a catalytic player in the transition to services. They seek to present PrD as an integrative function in the midst of fragmented offerings and systems; one that has direct impact on the business.

David is of the opinion that this sort of anecdote is really good for creating a much needed sense of urgency. The same is happening throughout the organisation: organisational groups that highly optimise their little piece but without any context or holistic vision. “Why is that bad? That’s the thing that’s not clicked, why is that bad?”, David worries. He laments how the organisation seems to be encouraging this fragmentation. Graham offers a way to rationalise the problem and turn it into a compelling argument in favour of PrD’s case, expressing it in cost terms: not doing this is costing us more than doing it. Then he goes on explaining how the product-service relationship needs to be tightly integrated and carefully thought out from the beginning to ensure a good experience.

The notion of experience is paramount to designers. For them, that is where value is generated. This is the language designers use to articulate the value of their work. Experience, brand experience, user experience, customer experience are terms which are constantly deployed in their exchanges within and without. However, experience is still an abstract term when it comes to negotiating mandates and settling disputes over product-service visions. Indeed, Graham recognises that one of the challenges is to create a common language which is relevant to all the different parties involved.

But, who are the parties involved? Who is addressed through this work? David makes the point very clearly. He wants to take this report to senior executives so that he can raise money and get the necessary mandates to build up this service design function within PrD. He wants to create a sense of urgency and present an opportunity landscape for the company, where the key message is that “not doing anything is worse than doing something.”

David [designer]: So there is a very pragmatic use for this that I think you can take into consideration, to kind of get the bigger picture of what this project is about.

Graham [consultant]: So what you mentioned earlier, return-on-investment type cases, making the case more compelling and immediate.

Tara [consultant]: Yeah, right. So it's a little bit of a vision piece to get some momentum and some excitement, so you kind of see the benefits to the customer and the business.

David [designer]: Yeah, I think there's a little bit of that and a bit of sense of urgency.

Tara [consultant]: What can you tell us about the audience or audiences that you will be taking this proposal to?

David [designer]: It's C-level that has control of lots of money.

Tara [consultant]: Any exposure to this world or new to them?

David [designer]: Yeah a little bit. I had some dialogue but it's not an easy sell.

Nathan [designer]: There is a lot of mechanically-driven people in these positions because it's been kind of the company tradition...

David [designer]: That's the biggest barrier. It's this mindset!

Nathan [designer]: It's better to be overclear, I guess, than to take for granted any understanding of service design.

David [designer]: That's why in a way I challenged ourselves, is this something Volvo should be doing? We have that assumption but is that a right assumption, or should we just keep making trucks because that's what we are good at?

The question lingers on. Should we even be doing this? This exemplifies the dialectical struggle that design managers have been grappling with lately. A struggle that ultimately led to this strategy project as a way to clear doubts, have some kind of external validation, and provoke change. They have a working hypothesis that they *should* be doing this, and yet, the possibility that they are totally wrong is also entertained. It is not necessarily about the rightness or wrongness of the hypothesis itself, but

rather, the question is whether the organisation is prepared for this transformation. Is the organisation post-industrial enough? Or will it hang on to this industrialist mindset? There is a critical sense that the future of the company depends on this. That is why the tone is one of urgency. The discourse is perspicuous: *We have identified a big problem! Design could be part of the solution.*

The discussion seems to be arriving to its conclusion. The meeting seems to have served its purpose. Everyone in the room sees the problem and realises the implications. The working hypothesis is that PrD *should* be a strategic player in the development of service offerings. Now the consultants are charged with the task of making a compelling strategy so that key executives see the problem, realise the implications, and eventually consent to the solution proposed. The strategy will be presented in front of an audience of executives and managers at the PrD studio which will mark the culmination of this project, and, if all goes well, eventually lead to its instantiation or realisation.

“I am sure we will have plenty of questions but we’ll get back to you”, says Tara, as she and her colleagues prepare to leave the meeting room.

The proposal

Some days after the meeting, Digital Creative sent its formal proposal. After having listened to the perspectives of design managers at Volvo, Digital Creative provided its own interpretation of the task at hand. Concretely, the proposal, is a slide deck synthesising all the relevant information about the project (aim, activities, timeline, cost) in response to the brief. In this sense, it is a mediating artefact whose purpose is to bring a common understanding of what the project entails. The content is meant to be concise and straightforward. The proposal starts by bringing up the “challenge of fragmentation” as a general backdrop to this strategy project, framing this situation as problematic. Another slide evokes the current organisational setup that divides responsibilities between on-board and off-board solutions, with PrD on the one hand, and Marketing and Customer Solutions on the other. Service design is presented as the integrating capability to overcome the challenge of fragmentation, framing PrD as an “obligatory passage point” (Callon, 1986a) to solve the problematic situation. The ask, as stated in the proposal, is to “help Volvo

define the Product Design-Service Design integration strategy” that will help the company to organise to deliver holistic brand experiences.

As discussed in the initial meeting, the question around the role of PrD and whether it should broaden its scope of work to include services is made explicit in the proposal. Should the answer be positive, Digital Creative will also provide recommendations of additional roles and competence profiles. This question emerged a couple of times in the initial meeting. It is not that design managers are doubtful about PrD’s capabilities and expertise. They are cognisant of them, but rather, they want the rest of the organisation to recognise this. So it is in this a sense a rhetorical question. This whole project is about valorisation and recognition, about making themselves indispensable and demonstrating their worth. In the proposal, the premise of “the challenge of fragmentation” is explicitly stated, but the other premise of PrD’s expertise currently being undervalued goes unstated.

Based on Volvo’s earlier input, Digital Creative proposes a two-stage approach, *how things are* and *how things should be*. The first task is concerned with the analysis of the current situation, and the exploration of best practices from an array of case studies. The second task is concerned with setting goals for establishing a new service design organisation that integrates business, technology and design effectively. In the proposal, Digital Creative splits up the project in four phases: (1) documentation and planning, (2) current situation, (3) wanted position and gap analysis, (4) organisational scenario recommendation. For each one of these phases, details of the purpose, activities, duration, location and deliverables are included.

Originally, Digital Creative’s intent was to be very comprehensive, especially in the analysis of the current situation. They outlined two research streams. On the one hand, they planned an investigation of relevant case studies and best practices, and on the other, they planned fieldwork activities to carry out visits, interviews and workshops within different business areas across the Group, in different locations across the world. However, it became clear early on that the initial proposal was not suitable due to time and budget constraints. Consequently, Digital Creative modified its approach substantially. The revised proposal was sent one week later. It took these constraints into account and reduced the scope of the project, shortened the timeline from sixteen to seven weeks, and decreased the cost by more than four times. However, the purpose and the

general structure of the project remained unchanged. Everyone was aware that these changes in the proposal entailed important risks as to the quality of the data upon which the analysis was to be carried out. A simplified, resource-constrained methodology was the only way available, so the project moved forward and the proposal was accepted. To mitigate the risk, Digital Creative worked closely with PrD to identify key people across the organisation who had an oversight over different service design projects. The aim was to interview them and invite them to participate in a workshop.

The gospel of design(ing)

David and Nathan from PrD had a good grasp of who the key players were in the service development area. As part of their intention to bring design into services, they had previously held meetings with various actors across the organisation in an attempt to build relationships and spark collaboration opportunities. So David, Nathan and other design managers had steadily been acting as design evangelists, selling design, promoting its value to the business, and sharing stories. Indeed, storytelling was an important element of these demonstrations.

As a natural way of transmitting knowledge, storytelling permits to combine actions and events into a meaningful whole (Czarniawska, 2014). David, for instance, was well aware that for PrD to expand into new territories, they had to promote a different understanding of design beyond the product. When explaining concepts such as UX and service design to newly found audiences, he would tell the story of the transistor, of how information technologies were the new design material. The point of that story was to broaden people's perspectives about what design actually is. In our interview, David told me why it was important to make that point whenever he presented the expanding role of design to external audiences.

David [designer]: People tend to think of design only as a noun, and not a verb. And so they think about all these graphics, these artefacts, the design waste, as I call it sometimes. And what I'm trying to do is actually say, okay that's important but actually, all the real value... the real value is actually in the design... as a verb. The ways of thinking. The ways of approaching problems. The design

thinking, right? And that can be applied to lots of different things in the company, not just the way something looks.

David wants to show that the “real value” of design is in the act of designing. He wants to demonstrate how design thinking can be used to “think strategically.” Another story that David would often tell in presentations was inspired by Lewis Carroll’s *Through the looking-glass*. In the story, Alice is walking but she is not getting anywhere. So the red queen says: “Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to go somewhere else, you must run at least twice as fast as that!” The point of the story is to direct attention towards the trap of believing that progress is about doing the same things but only faster. Through the story David wants to convey that change is about doing things differently, and that PrD is finding ways to do things differently. The story is a subtle yet subversive critique of a dominant conception of value connected to a constant search for efficiency to the detriment of innovation.

In this manner, David and other design managers were constantly seeking to interest other actors and forge associations. A couple of weeks before the initial meeting with Digital Creative, David met with the manager responsible for the S-GDP, Volvo Group’s Service Global Development Process, “a process specifically designed for developing and improving service offerings”, according to Volvo documentation. This standard process is owned by Marketing. The purpose of the meeting was for David to introduce himself and PrD, and explore potential collaboration opportunities. The meeting turned out to be quite relevant, as David reported in an e-mail later that day. During the meeting, he communicated that there was a group of designers at PrD who had experience with service design, and he made the case for further involvement in this area. The manager turned out to be interested in learning more about PrD and widening the circle on her side so that more of the service design people in Marketing would meet with designers and perhaps begin to work together in projects. David sees this as a big opportunity to identify a pilot service design project and collaborate with S-GDP marketers. He thinks this could be a catalyst to begin pulling in future service design projects and eventually get the mandate.

The pilot project is seen, as a would-be success story, an opportunity to prove their worth in the emerging service landscape at Volvo. It could be

used as a test or proof of their expertise of which they are already cognisant—as they actually have engaged in service design projects—but which are yet unrecognised. They need material to demonstrate that design is valuable when it comes to designing services. In other words, they need a compelling success story as justification. As a result of this meeting with the manager responsible for the S-GDP, David encouraged some designers to sign up for the training to see how they might build on their work. But perhaps more importantly, they agreed to have another meeting with managers from both Marketing and PrD to keep the conversation going and follow up on potential collaboration opportunities. Such meeting took place two weeks after the initial meeting with Digital Creative, right about the time PrD got the first proposal from Graham and his team. It was another attempt to spread the gospel of design(ing).

The marketers

It is late April. Following up on a conversation that David started about a month ago, a group of Marketing managers responsible for the S-GDP are coming into the studio to assess potential collaboration opportunities. David invited them to show “some quite interesting advanced design work that has been done visualising ‘Transport Solutions’ and services from a very strategic level”, as per an e-mail invitation. This is an important event for the ongoing strategy work with Digital Creative. PrD is hunting for allies that will help them to champion and legitimate their idea, so that it eventually becomes regarded as “strategic” by other actors. Nathan had already been working on this idea of developing a service design strategy, even before knowing anything about the S-GDP. So David and Nathan are going to bring that up and see how Marketing managers receive it. It is a good opportunity to test their hypothesis. They are all meeting in person for the first time, and the plan is to demonstrate that PrD can be a strategic asset in the transition to services. Instead of working on isolated “service components”, such as on-board digital interfaces, Nathan and David would like their teams to work on “the whole service experience.”

The Marketing managers arrive at the appointed time. Jan, Maria and Rob shake hands with David and Nathan, the hosts of the meeting, who welcome them to the studio. Other people from PrD are also joining the meeting, namely Tor, Lydia, and myself. As is often the case with new

visitors, David and Nathan give them a tour of the studio. The idea is to show tangible examples of the kind of innovative thinking that goes on in here. The showroom is full of moveable mood boards displaying appealing visualisations of concepts, products and processes.

As they are shown some of the boards on display, Jan, Maria and Rob pay special attention to the advanced-looking visuals of a futuristic compact excavator, the GaiaX. “This is really nice work”, says Jan. Nathan was one of the leaders in the project, so he explains some of the features of the GaiaX. He emphasises how they worked to create an advanced UX concept featuring a transparent tablet device that enables remote operation of the machine and uses augmented reality to provide real-time information of the exact location of water pipes and electrical cables before digging up. He describes how UX is inextricably linked to services, and makes the point that, by using a design approach, they were able to reframe needs and find new spaces for solutions. They realised the problem was not to dig faster or deeper but to dig safely.



GaiaX Concept

Nathan [designer]: In 80% of the cases it will end up with legal demands because you destroyed a pipe or something, and this happens all the time. So we wanted to create a one-person task, for that person to see through the ground and using the data. So it's basically new way of working with the product.

That is the message they want to get across, that designers devise new ways of working. They are not just drawing fancy sketches, they are imagining new possibilities for combining products, data and services.

David [designer]: It provokes this idea... So if data is the product—which it certainly should be—how do you design it for brand distinction? How do you package it and sell it? So these all sorts of things we're working through.

As brand care-takers, designers' discourse is imbued with the concept of brand, as that is where their formal authority lies. In fact, the Vice-President of Product Design at Volvo is part of the Brand Management Committee, which is to say that design has a "seat at the table" when it comes to branding decisions. So, when exploring services, how do you make them brand distinct? That's a talking point to start "selling" design.

The rapport is building up. The visitors seem to appreciate the work on display. The showroom is meant to dazzle and engage the senses. The aesthetic appeal of the visuals does its work and the atmosphere is brightened up. Nathan and David want their visitors to really *see* what design can do. Still in the showroom, David communicates his intent for the meeting.

David [designer]: So the intention today is to kind of open your eyes to stuff that's going on here. And we thought it could be good to then share with you our service design strategy that we have been working on.

David wants to get feedback on their idea from the marketing managers as they are "the first service people" they have met. This meeting is crucial to get some first reactions on the strategy work in the making, and assess the possibility of a collaborative effort. Ultimately, what designers want is to turn them into allies as a way to advance their programme of action and legitimise their service design strategy. David refers to them as experts and he expects this encounter to trigger ideas about how PrD may be able to support some of the service design initiatives being developed within Marketing. David adds that they have some people with service design experience, that have worked with influential service design consultancies, to enhance their credentials. Then, Nathan points out that they actually have been running their own service design projects as well. In short, they

make it clear that they actually do have service design competence and expertise.

On this note everyone is invited to enter into the meeting room. There are introductions and some chit-chat going on as people pull chairs to sit down. As if representing two camps in a negotiation table, design managers and marketing managers sit face-to-face on opposite sides of the rectangular table. Nathan keeps discussing some more details about the GaiaX, and its potential to inspire new ways of interacting with vehicles. The opportunities afforded by automation technologies and connectivity are seen as the future of the business, and that is something that the GaiaX project enacts persuasively.



GaiaX Concept

However, this meeting is not about the GaiaX, which was developed as a “marketing concept” to drive some buzz and generate positive publicity. Rather, Nathan wants to highlight how their work can have and is already having an impact on the challenges that the company is currently facing. He wants to demonstrate that design is not some sort of artistic skill, but a very pragmatic way of creating new business opportunities. Thus, the objective is to present the service design strategy work they are currently developing, and show examples of ongoing projects. Using PowerPoint slides as visual support—a very similar version to the one he

used with Digital Creative—, Nathan starts his oral presentation of what this strategy work is all about.

Nathan [designer]: The foundation for this strategy is, really what we discussed here before, that we see a lot of the developments around vehicles are being performed in services. That means site management control systems, fully autonomous machines. The software is really the big thing. (...) You have better efficiency and connectivity in the machines.

Nathan explains how in CE they are designing for new types of customers, fleet managers, site managers. With the advent of new technologies, machines need to be conceptualised as participants in systems of relationships rather than isolated objects. Since brand experience transcends on-board usage, design should too, in order to ensure consistency.

Nathan [designer]: We're working more and more with services around [automated systems], and using pure service design methodologies. That is why in this strategy we wanted to take the right steps forward to evaluate in a current situation analysis how the company works with these things today, and also see a wanted position of how we could do this in the best way to support this need in the future.

David adds that the strategy work builds on the S-GDP. This process is a bundle of design methods and development guidelines outlining gates, phases, activities and evaluation criteria in service development. But David raises an important point. Guidelines can be interpreted differently by people at different levels, so there is not assurance of quality. He frames this interpretive pluralism as problematic. People who do not know anything about service design might suddenly find themselves in a situation where they need to develop a service and all they have is this bundle of methods. "Looking at that is like reading Chinese", jokes David. In other words, having an established process like S-GDP does not assure good quality outputs.

David [designer]: So, how can we leverage those guidelines and ensure that the initiatives that get done according to those guidelines have a high level of quality, are brand distinct, are revenue positive?

The point is to make PrD an obligatory passage point in order to address the problem they are raising. Jan seems to agree that this is problematic and offers the help of his team. As the exchange continues, the role of the group represented by Jan and his colleagues becomes clearer. They are service design trainers, and they provide support material for managers to design services across the Volvo Group.

Jan, Maria and Rob run trainings on how to become a service designer. They support some service development projects, mostly connected to after-sales, so their role is in no way integrated into GTT, the product development organisation; their area of influence is mostly GTS, the sales and marketing organisation. They are in charge of the S-GDP though, and they champion it so as to spread its implementation. Their role is to educate and make sure all projects have all the supporting material that they need. They claim to be “a core function for all service development projects”, but that is a bit of an overstretch, since they are not particularly involved in initiatives at the GTT level.

The rationale behind these trainings is that, in a technology company like Volvo, a lot of people are hired as managers or engineers, and they are increasingly facing situations in which they need to create services to address emerging customer needs, which exceeds their original job descriptions. Jan and his colleagues are training these people throughout different areas of the company so that they are able to deal with these situations. They do so by running a full-day training. At the time of the meeting, they had already trained a couple hundred people. However, they do not actually run service design projects themselves.

Maria gives more information about the training. “I think the S-GDP is more of a methodology than a process”, Maria “And a way of thinking,” interjects Jan. The way they speak about the S-GDP echoes some of the current talk about “design thinking” being a mindset to solve problems. Interestingly, the S-GDP picks up on a lot of ideas from the “design thinking” discourse, especially the version popularised by the design firm IDEO and the Stanford d-school. For instance, the three key evaluation criteria that the S-GDP advocates—customer desirability, technological and organisational feasibility, business viability—are described by Brown

(2009) as the constraints that “a design thinker will bring ... into a harmonious balance” (p. 19). Perhaps more importantly, the S-GDP is user-centric, iterative, and encourages prototyping and visualising ideas, much like the version of “design thinking” advocated by Brown (2009).

Yet, the idea of training people to become “design thinkers” who are then able to design services is taken with a pinch of salt by design managers. For them, simply promoting the use of the S-GDP is not enough. In the initial meeting with Digital Creative, Nathan expressed his scepticism about the whole idea. Is a full-day training enough to apprehend service design concepts and apply them in practice? For design managers, such an idea is naïve at best, and irresponsible at worst.

However, the fact that they share some of this language is an encouraging sign to keep the conversation going in the future. In an interview conducted at a later time, referring to marketing managers, David said, “maybe they read Tim Brown’s [(Brown, 2009)] book or something like that. They’ve picked up some vernacular, and some ways of thinking that stick out.” Building a relationship with Marketing is crucial to expand PrD’s scope of work. David wants to find ways to get involved and “accelerate some of the projects” that Jan and his team are coaching, but it is not yet clear how they might do this.

The conversation now turns to the current state of affairs regarding service development at Volvo Group. Both, marketing managers and design managers seem to agree that there are a great deal of issues in connection to this. “The maturity of the services that have been launched is very low compared to where we would like to be”, says Jan. In his view, responsibilities are unclear when it comes to services. The problem as defined by PrD in the strategy work seems to be consistent with the marketing managers’ assessment.

“I think we actually have a problem there”, elaborates Jan, “if we say service development a lot of the people will automatically think of IT.” In his view this is a costly misunderstanding. All services include certain IT components, but Jan is frustrated that people reduce service to that as an initial mindset. So whenever someone needs to develop a service, they usually go to Volvo IT. Then services become technology-focused, as opposed to customer-focused. He jokingly adds that services end up being apps, which he considers a very reductionist perspective on services.

On this note, Lydia relates how the IT group seems to be taking much more of a role in service design. “I am not sure how, but they very

much want to get involved in this. Have you discussed some training with them?”, she poses the question. “Not that much actually. I think there are many people who want to take the service design area”, replies Maria. “We don’t want to take it!”, blurts David, prompting some laughs. Though humorous, this exchange exemplifies the tension that ensues when new roles and responsibilities are being negotiated. Services are mostly developed within Marketing, but as the dividing line between products and services blurs, actors in GTT—such as PrD—and other areas like IT are increasingly getting involved. As a result, roles and responsibilities are unclear and ambiguous. Indeed, as PrD enters new spheres, engaging new actors and establishing new connections, there is uncertainty as to what their role actually is. The strategy work is precisely an enrolment device, an attempt at negotiating and stabilising their role and that of others.

Thus, services at Volvo Group are not only fragmented, but largely miss-conceptualised. The challenge of transitioning towards services in the context of a product-oriented organisation can be daunting. “The thing we have is that we are a nuts and bolts company”, reckons Jan. He explains that the biggest investments go into product platforms, and investments in soft offers account for a very small fraction in comparison. “The real difference is there”, diagnoses Jan. So, in his view, the challenge is to gain a company-wide understanding of the importance of the role of services in earning money and gaining and retaining customers.

So far, so good. The Marketing managers confirm the premise of the strategy work, rampant offer fragmentation. Now design managers need to test their hypothesis—that PrD should be a key player in the development of service offerings—, and see what kind of reactions they get from Jan, Maria and Rob. Nathan starts by complimenting the spirit of the S-GDP and what it stands for. In his view, the S-GDP captures really well the way they, designers, work in service design projects. “We are running a service design project ... right now actually, laying out personas, doing use cases, and using the good methodology that you’ve been working with”, says Nathan. He lets them know that disseminating this way of working is a good thing to do. It is good to get managers in contact with design methods, as a first step, “so that they can make the right decisions going forward in developing services”, says Nathan. After this display of

rhetorical identification¹, here comes the ‘but.’ “But at the development level, there are multiple actors right now, right? And that’s our point, how do we combine that into the production pipeline?” In a sense, Nathan is concerned with the actual designing and roll-out of services, and not so much with the diffusion of design methods among managers which can only achieve so much, let alone drive the transformation towards service-orientation. They want to be involved because otherwise this will be run by stakeholders who don’t have the holistic view, who don’t have the brand aspects. And so his point is that designers have valuable expertise required to create innovative service experiences.

As Nathan speaks, Maria smiles gently and nods her head in agreement. Ideas and perspectives seem to be connecting. Nathan elaborates more on the strategy work and the hypothesis they are setting forth. Nathan emphasises the need for a “holistic perspective” to tightly integrate their product-service offerings, and to design for different personas such as vehicle operators, buyers, fleet managers, and so on. “That’s why we need some kind of strategy”, says Nathan, “to go from our current mandate to some kind of service design mandate.” To which he is careful to add, chuckling: “Not that we own service design!”

Nathan is quite careful in his choice of words. He wants to spark collaboration and to avoid coming across as if PrD wanted to ‘take over.’ So in his rhetoric he is explicit about not wanting to “own” service design, but simply be an important actor, with a mandate; that is, an obligatory passage point. Granted, they want to overstep boundaries but they would like to do it mindfully, enrolling allies—as opposed to making enemies.

“We want to at least evaluate in this strategy work and see if we are the actor that can actually do it”, says Nathan. “We think we are, but we are having external consultants evaluate that, and see if it needs to become sort of an action.” In this sense, the strategy work has a validating, legitimising function. They want to “evaluate” whether they have the knowledge and

¹Kenneth Burke’s (1969) notion of identification describes how rhetors and listeners identify: “You persuade a man only insofar as you can talk his language by speech, gesture, tonality, order, image, attitude, idea, *identifying* your ways with his... True, the rhetorician may have to change an audience’s opinion in one respect; but he can succeed only insofar as he yields to that audience’s opinions in other respects.” (pp. 55-56)

expertise to do service design. They know they do, but this needs to be recognised by other organisational actors. They need to be *valorised*, that is why they commissioned an external *evaluation*. Ultimately, they are seeking to influence other actors' evaluation of reality. In this sense, Digital Creative is a spokesperson that furthers PrD's interests. Design managers reckon that, by bringing external experts in, their claims will hold more weight. Then, the pilot project they are seeking to develop as a result of this strategy would then be a proof of the justness of their claims, a clear demonstration of their strategic value.

David re-affirms the problem. He recounts how he has seen so many touchpoints or service components being designed in silos, devoid of any context, by non-designers, and somehow that is driving them to take on a more active role. "There is probably a lot to be gained by having these design activities actually being done by professional designers", argues David. "Of course", acquiesces Jan, who seems more quiet than in the beginning of the meeting. He looks reflective, as if he is just apprehending what David and Nathan are saying. His understanding of design is somehow expanding. "So you need to change your name to development of Product and Service Design", notes Jan. "Exactly. Product Design is a label of the past. It doesn't really say what we're doing", responds Nathan. Indeed, the name "Product Design" is not really helping their cause of being recognised.

Clearly, Nathan has an interested audience, so he continues with his pitch. "We see service design as the enabler of moving around customer solutions that don't necessarily need to become a product or a digital product", says Nathan in an attempt to frame their contribution in a broader sense, not limited to products, be they hardware or software. "We need to create that kind of philosophy in other directions", he adds. He highlights the necessary connection between technology, business, and design in the development pipeline. "As long as we can have a say up here in that development process, we can make really good services for customers", continues Nathan, "that's what we want to achieve with this project."

Nathan makes the case for PrD to stand on equal footing with technology and business when it comes to developing services. So-called "soft contracts" need to be replaced by some sort of formal authority to secure early involvement in projects for designers to have a say. Maria is sympathetic to this idea of bringing together business, technology and

design in a more collaborative effort. Coming from the business side, and more specifically, from an area mostly dealing with after-sales, she has faced some struggles when it comes to reaching out to other organisational actors, especially in areas related to product development. PrD being a development function, she sees this as a great opportunity to join forces. She seems to agree with Nathan's concern for bringing designers in at early stages of development to work on the actual service concept, and not only its digital expression.

Next, Nathan shows some slides about an on-going service design project, which prompts positive reactions. "It's really great to hear you because we're trying to say exactly the same things!", says Maria with a big smile on her face. Everyone laughs. "Our training is more or less this, but with different graphic design", says Jan with no less enthusiasm in what seems to be a moment of sudden and great revelation. "And I think if we can use the same vocabulary, I think that would be a strength", adds Maria. "When I see your process, for me that's the S-GDP. That is exactly what we have tried to highlight. I'm sure we can work together!", she continues, recognising the potential of having PrD as an ally.

"Maybe that's something we can incorporate more, and say this is the S-GDP, and dah dah dah", suggests David, keenly aware that this encounter might lead to other projects. "Exactly", replies Maria. Jan emphasises the importance of using the same vocabulary to "actually get people to understand the message". Language and vocabulary are key to convey a stronger message and attain their common goal of "getting these nuts and bolts people to understand about service", as Jan puts it. Likemindedness is a gift when facing resistance, and both design managers and marketing managers are expectant about the prospect of driving some change together. "I think we could be a great team together", agrees Nathan. "If we find people with the same mindset, that is really a strength", says Jan.

Nathan has more material to show. There is another service design project that his team developed which was more conceptual, and they made a movie with "real actors and a Hollywood-type voice over" that was circulated internally. The intent of the movie is to demonstrate some of the features of the service and envision scenarios that illustrate the service experience. They essentially translated their project deliverables into a movie. The actors are portrayals of the personas Nathan and his team came up with during the project.

Loudspeakers turned on, the movie is projected onto the screen in the meeting room. “We thought about an explosion in the end but...”, says Nathan causing laughs. The 6-minute video is like the combination of an infomercial, with detailed feature descriptions, and a movie trailer, with short action sequences. “It’s created a lot of good vibes in the organisation”, says Nathan. He goes on explaining their approach, and how they need to get better at designing and deploying services. “It’s a new way of thinking for the whole company”, he adds.

Jan, Maria and Rob are impressed by the material. “And that was a good visualisation”, says Maria, “we try to talk about that a lot, to do visualisations and examples”. “It’s really hard to explain without visualisations, I think. You need this type of demonstration”, adds Jan. Design projects are materially intensive and evolve from conception to completion through continuous loops of visualisation and materialisation. This is recognised as a powerful skill by marketing managers. David suggests they could use the movie as demonstration, to which they gladly agree.

An alliance is seemingly forming. The tone is blissful. “In my mind, it’s finding the people who are doing it right. You’re the first group that I’ve seen who are doing it right”, says David. “I think one way we need to collaborate to influence the whole group is in how to understand service thinking”, notes Maria. They all agree they should collaborate. “We can have a pilot together and then we can really use it as a success story. I think we really need that”, she adds. “Exactly!”, replies David enthusiastically to what seems to be a dream scenario: marketing managers are recognising the importance of involving PrD in the transition to services.

The meeting is coming to an end. “Since we are all on the same page, it would be interesting to see how we put the message out there”, says Jan. At least there is an agreement regarding the ends they are trying to achieve. As for the means, there are still open questions. How should Volvo be reorganised to transition into services? How can the role of PrD be stabilised in this space? In the meantime, the objective is to identify a pilot project, that is, a would-be success story to promote “service design thinking.” Also PrD agreed to integrate S-GDP in their own communication efforts. Everybody stands up and leaves the meeting room.

The evidence

The service design strategy project started rolling in mid-May 2014. Digital Creative followed the plan detailed in the final proposal. So once they identified the key informants to be interviewed, they sent e-mails to invite them to participate in the study, explaining the context and purpose of the project. The idea was to have a diverse group of influential actors that were not directly connected to PrD's daily operations in product development, in order to extend the network. Except for PrD, the informants were not running service design projects themselves, but were rather overseeing a number of them. The objective was to gather as much data as possible to start mapping the current situation. In total there were around 10 informants coming from different areas of the organisation, namely PrD, marketing, brand management, IT, corporate strategy, and HR. Among them was Jan and other members of the S-GDP team. In the invitation, Graham asked the participants to think about examples of service development initiatives and, if possible, to bring documentation of such projects. Then, Graham and other members of his team flew to Gothenburg in mid-June to conduct the interviews and run a workshop. In parallel, Digital Creative was also gathering secondary data about best-in-class service design organisations and case studies of companies that transitioned from products to services in an attempt to demonstrate the value of design expertise, and legitimise their would-be strategy idea. So when the consultants arrived to Gothenburg they had already put together some case studies from other industries to trigger further discussion during their fieldwork at Volvo.

During the interviews, Graham and his team were able to gather very rich material that included several examples of service projects across different business areas. They had examples of both really complex projects and much simpler incremental ones. They also had examples of services that were started and then abandoned. So they collected a vast range of stories of how these services came about, how they were launched and maintained, including a sense of who was involved in the whole process. After two days of interviews, Graham and his colleagues ran a workshop involving all the informants. Everyone was there except for two individuals who could not attend. The purpose was to open up the conversation around a number of themes that had been recurrent in the interviews. During the workshop, the consultants presented some of the

case studies that they had put together, which included companies like Nike, Microsoft, Rolls Royce, among others. The objective was to show how these product companies transitioned into services. They covered things like change processes and how the companies reorganised. The intent was to get “very practical.” After all, they were not trying to convince people that Volvo should focus more efforts on services—that was already an integral part of the strategy discourse in the organisation—; rather, they were trying to set forth an idea of how the firm could actually do this more effectively. They were selling *their* strategy idea.

Another objective of the workshop was to do a mapping exercise to get a better grasp of the service landscape at Volvo Group. The aim was to engage all the participants in order to create a comprehensive visualisation of all current service offerings, as part of the current situation analysis. This map would also serve as a kind of taxonomy to classify existing services by brand, and place them in a continuum ranging from basic services that focus on supporting the core product propositions to advanced services that focus on solving customer problems regardless of the core product propositions. This had never been done before. The making of this artefact provided a frame for the conversation around services during the workshop.

Just as in the previous encounter that design managers held with marketing managers, there was very good alignment in perspectives between all the participants. Regarding the definition of the problem, they all agreed that there was a low maturity level when it came to service orientation, and that fragmented offerings were a big issue. Later that week, David told me that they were all “in the same page” and that PrD had an opportunity to bring them along to help “influence this change direction.” Things seemed to be moving forward as they were succeeding in interesting other actors in their programme.

Some of the informants were involved in similar initiatives aimed at countering fragmentation, generating new services and supporting their development, delivery and evolution, but they were mostly focused on after sales services. Design managers were not aware of much of what was happening on that end, and no specific role was given to PrD in these initiatives. Simply put, PrD was a non-actor in the network of associations that some of the informants were composing. Given the many affinities, Graham later told me in an interview that he was surprised that significant dialogue between PrD and other areas represented by the informants was

not already in place. So this encounter was an opportunity for designers to enter into the picture, and translate their programme of action into theirs.

However, it was not all rosy and smooth. “You can still find these triggers where people just aren’t there yet”, David told me. During the workshop he asked people to do a thought experiment. “What if the company had a challenge to sell half as many trucks but increase our revenue by 20 percent? So intentionally I’m going to sell fewer trucks, but not sacrifice our revenue for it, in fact, increase it.” For David, this the kind of mindset that they need to nurture to get out of the “we sell stamped steel” deadlock. The reaction, he told me, was “typical bureaucratic.” As David recalled, the participants said something along these lines: “Oh well, if you tell people to sell half as many trucks then they will sell half as many trucks and we’ll be out of business.” It was still hard for people to go beyond the core product, David observed. He attributed this to the way people are trained and rewarded. How many trucks were sold this month? And the month before? That is the question that defines value in service development. That is, services are largely regarded as sales tools to sell more product, as judged by David. He recognised the importance of evaluative practices in the perpetuation of the current state of affairs.

The most important takeaway was that the mapping exercise and the conversations during the workshop confirmed PrD’s articulation of the problem. What was yet to be defined were the roles and identities of the different actors in the network of associations that PrD was attempting to compose. The strategy needed to be clear in the definition of those roles. One of the challenges was that the informants struggled to make the connection between Product Design and Service Design. During the workshop one manager raised this issue. “I don’t think services should be done in a group called Product Design”, she said, “because services aren’t a product.” The same issue had previously been raised by Jan in the first meeting with PrD. So this was an objection that Digital Creative took into account for the making of the strategy.

They knew they had to justify PrD’s involvement in this seemingly foreign territory. During the workshop, David and Nathan argued that the label Product Design does not accurately convey the work they do, because they were increasingly adopting a broader systems perspective. So the strategy work needed to include an argument for the reconceptualisation of design. Graham later told me in an interview that all the participants struggled to make the connection between Product Design and Service

Design in the beginning, but nearly everyone had a different viewpoint after the workshop. Their understanding of design as mere product styling was challenged and they became cognisant of the value that design could bring into the service area, as an integrator of products and services.

However, the objection was not only about the label “Product Design” itself, but also about where PrD is placed within the organisation. That is another big problem to be tackled in the strategy work. Where should PrD be placed in the organisation in order to deliver world-class service design? In the current setup, PrD is part of GTT, sitting under Complete Vehicle, the product development organisation responsible for Trucks. Although PrD teams deliver design work for all the different business areas—such as Volvo Bus and Volvo CE—, they formally belong to the Trucks organisation. The challenge for David, Nathan and his colleagues is that, as it stands, product development is GTT’s main concern, not services. So they are trying to set forth arguments to change that mindset, but as they attempt to move into services and raise funds for projects, they are met with resistance. As David explained in an interview:

David [designer]: We’re trying to change that mindset while being very much stuck in it and subject to all its forces and mechanisms and everything else. So the way we get money, the way we get funded, the way projects are initiated, all sit within that context of “you’re CV in GTT and this is the frame of what you can work on.” So there are some natural forces in place to resist us.

So the workshop provided many clues as to what the potential counter-arguments could be, and Digital Creative took note of this. The strategy work was the perfect opportunity to articulate the need for rearranging PrD’s position in the organisation and show others that there is more to Product Design than meets the eye.

The draft(s)

After the fieldwork, Graham and his colleagues went back to London to synthesise the findings from the two research streams, work on the service landscape map, and start working on the analysis. Summer was near and Nathan, David and Emily were expecting to see some of the material by

August. The consultants then had a few weeks to work on the wanted position and put together a first draft of the strategy report, including some organisational scenarios and recommendations. Digital Creative's Graham and Barbara held frequent online meetings with Nathan, David and Emily to review progress and ensure alignment.

In early August, Barbara sent the first draft of the Volvo Service Design integration strategy report. "It is quite a 'rich' document, but we are very excited by it and its implications, and we hope you will be too", wrote Barbara. The report was a hundred-slide deck in pdf format with text, pictures and diagrams. At last, PrD's strategy idea got materialised. A few days later, a review meeting took place in order to discuss the first draft and the service landscape map. Nathan and David asked for a few corrections to be made. For instance, Nathan asked them to use the term "UX" throughout the document, since UX is part of their current responsibility. In order to justify the stretch into services, his point was that UX was crucial to guarantee a good service design. The document included several images of products representing companies that made the transition to services, and so David stressed the importance of having more text explaining this imagery. His point was that the document was meant to be circulated and so it had to contain all the information necessary to build the case. David was also critical of the service landscape map, it did not show the level of detail he was expecting.

Digital Creative took the feedback in and then came back with a new draft and a new version of the service landscape map about a week later. So they arranged a new review meeting online to discuss further changes. During the meeting, ideas for potential pilot projects started fusing. One idea was that PrD could support Corporate Strategy and develop a project with them. Another idea was to engage closer with Volvo Bus and look at transportation systems for megalopolis, which seemed like a promising opportunity with large scope and important R&D budget. "Hopefully this will create a lot of momentum", said Nathan close to the end of the meeting. "Let's continue the efforts, because it's a big one", answered Graham, "We have a strong case and I believe we could even take it to the CEO." Clearly, the enthusiasm was building up.

A few weeks later, the final report was completed. "Volvo Group's Product Design & Service Design Integration Strategy" was materialised in a comprehensive hundred-slide deck. The would-be strategy was now to be confronted with the value scales of the established order; it was about to be

put on trial in the hopes of actually becoming a legitimate strategy. A group of arbiters, in this case senior executives, needed to recognise it as such for this to ever happen. That is, the “big cheeses” needed to approve. Thus a “theatre of the proof”—to use Latour’s (1993a, p. 93) expression—was set up for this very purpose.

The big presentation

After months of work putting together the strategy report, the day to reveal it to a wider audience finally arrives. In early November, Volvo’s Nathan, David, Emily and Digital Creative’s Graham and Barbara are ready to demonstrate the strategic value of their idea. The big presentation is set to take place in the showroom of the PrD studio at two different times. A few handouts have been prepared including some diagrams, customer journeys, personas and case studies; the type of “cultural artefacts” meant to be circulated in support of PrD’s programme of action. There are chairs for about 40 people facing towards the power-wall where the slides will be projected. All around, there are large mood boards explaining different service design methods and processes with attractive imagery. Some quotes from the mood boards include:

”Volvo can’t afford not to work with service design”

”So often what we think is the problem is the symptom of the problem, and we seldom come to the root cause. Well you need design thinking and methodology to find out.”

”The process and methods assure the quality of the result.”

”Without all the work done so far and the service design thinking the digital design would be useless.”

The case they have put together is strong, and they hope that the work they have devoted to it will pay off. This presentation is a form of demonstration, a persuasion tool mobilising forms of representation to ‘project’ the audience into a new spatio-temporal situation (Stark & Paravel, 2008). The objective is to generate interest and a sense of urgency that will hopefully open possibilities for coordinating new roles and

identities to reconfigure power relations and stabilise PrD's programme of action.

There is an issue though, and one of no small importance. The CEO called for a last-minute update meeting with all the senior managers, which is scheduled to be held the very same day at the very same time. The design managers got a heads-up a couple of days ago, but they could not reschedule the event because they had already gone to great lengths to prepare and they had two consultants flying in from London. The news of this sudden meeting came as a crushing blow to the project team. It really decimated the attendance. Originally, the presentation was aimed at high-level executives, vice-presidents and directors, some of them reporting directly to the CEO. So all the "heavy weights" are not making it to the big presentation. Enthusiasm is not at its highest, to say the least. "We didn't get kind of the initial bump that we were hoping for", David later reflected during an interview. Yet, though smaller in numbers, there is still a constituency to persuade.

Despite the unforeseen setback, there is a sense that the stakes are high. The project team prepared everything in detail and decided not to rely on on-the-spot improvisation. The slides that were put together contain many elements of the strategy report but are tailored to the rhetorical situation of a 'live' demonstration (see Stark & Paravel, 2008). With the flair of someone experienced in public speaking, David welcomes the attendees, setting the tone for the presentation:

David [designer]: We're going to talk about Service Design today. Today's about sparking new insights into how we, as Volvo, can create services that start with humans, our customers. We've sought outside experts to help us from Digital Creative to tap into their expertise and experience and we've done this in order to learn and challenge ourselves. So we've a lot to get to, and we're really excited about sharing this work. As you can see there are handouts and posters that you've had a chance to look at. But first I want to start with a story.

From the outset, it is clear that they are not simply presenting a report but are narrating a story—or, perhaps more accurately, several stories within a larger narrative. The opening story is about a manufacturing company. It has two main characters and contains standard narrative elements: an original state of affairs, an action or event, and a consequent state of affairs.

This company—which is one of the main characters in the story—thrives on its expertise of producing engines. As competition gets tougher, the company is faced with the challenge of reinventing itself. In their attempt to develop a new competitive edge, they engage a world-renowned design agency—the other main character in the story—to improve their product’s styling and attractiveness. The design agency went above and beyond the original ask and proposed instead a service design strategy focused on user experience. The design team conducted research to reframe user needs and find new spaces for solutions. Working closely with senior management, they helped build a tangible vision of the overall service concept, which laid the groundwork for its subsequent implementation.

This service became a “dramatic success story.” Against all odds, this traditional manufacturer transitioned from being operations-driven to being service-led. As the narrative unfolds, different photographs and images, such as sketches and customer journey maps, are projected. The hints are obvious, as are the causal relations: Big industrial company is in trouble and needs change. Designers come on board as ‘styling’ experts but redefine their role and bring service design thinking. They get senior management buy-in. Change happens successfully. The moral of the story: Design is a catalyst for change. Near the end, David is also careful to provide figures of revenue growth over a 10-year period following the event, as a way to demonstrate that investing in design is profitable.

After the brief story, David discusses the agenda for the event. Digital Creative’s Graham is up next. They are the outside experts, the evaluators who bestow legitimacy on PrD’s claims, so the idea is to share the findings of the report, explain the research methodology, and provide the ensuing recommendations. Holding some notes in his hand, Graham takes the floor and addresses the audience confidently. He is a gifted speaker with a proven track record, who, at appropriate junctures, lends emphasis through hand gestures. After introducing Digital Creative and himself, he establishes the common truth that binds them all: Volvo Group, as many other manufacturers, is faced with the challenge of transitioning from being a product-focused company to a solution-focused one. As he speaks about this, a slide is projected: a series of icons representing a product-solution continuum from engines to fully integrated transport solutions. The aim is to show the evolution of Volvo’s offerings over time and point towards what the future might look like. The image on the slide loosely aligns with the evolution of design from the second to the fourth order (see

Buchanan, 1992; 1995), that is, Volvo is going from designing things (i.e. engines and vehicles) to designing systems of things-in-action (i.e. fleet management systems). Graham points out how, at different points in this continuum, new combinatorial activities are needed to integrate hybrid product-service offerings. And that is precisely where design can make a difference today, Graham argues.

The next slide is about the brief: “How can PrD help the business transition from product-focus to solutions?” Graham frames the strategy project as an *evaluation*. They were asked to *evaluate* whether PrD had a role to play in the transformation from products to solutions and help them understand what this role could actually be. This evaluation provides the ground for PrD to be *valorised* in a new light, as a community of practice concerned with figuring out the whole. Next, and without further ado, Graham presents Digital Creative’s recommendation for Volvo Group: “Use service design as the catalyst that the radical innovation of sustainable transport solutions requires.” For Goffman (1974, p. 69), “a demonstration provides an ideal running through of an activity for learning or evidential purposes.” This recommendation is the idea(l) running through the demonstration. This is Digital Creative’s prescription for Volvo Group. As an external expert, Graham is framing how Volvo Group should engage with design, in an effort to influence perceptions and attachments in relation to PrD. In short, he is mediating the construction of value by bestowing legitimacy upon PrD, framing them as strategic players.

Graham expounds on the recommendation. “And a catalyst means a way of thinking, a culture, processes and artefacts that help the organisation identify exactly the customer perspective and the opportunity to serve value to the customer.” Here, the idea of design transcends PrD, and becomes a new kind of organising rhetoric that permeates the whole organisation. Graham frames design as a “common language”:

Graham [consultant]: There is a great opportunity for design to provide a common language that helps this integration between the different functions in the organisation, with a very strong focus on the customer...

He then goes on listing the value(s) of design as “common language”, arguing that it (1) brings wholeness in the midst of fragmentation, (2) keeps customers at the centre, (3) helps visualise and understand

complexity in the development of services, (4) facilitates the exploration of ideas by making them concrete and testable through prototyping, (5) supports the development experiences, (6) brings attention to the fact that services, unlike products, are “living organisms” that need to be nurtured, monitored, and taken care of.

Then, Graham gets into the details of how they came to that conclusion through the different activities that they carried out during the project, including interviews, mapping of existing services, review of current service design processes, as well as secondary research to identify best practices in diverse industries. He points out that they adopted both external and internal perspectives in the making of this strategy work. First, he shares two case studies of B2B manufacturers that successfully transitioned into the solution space, as a way to pull in learnings from external sources. Then he spends some time explaining the mapping exercise that was done internally, which resulted in a detailed taxonomy of the different service offerings across the Volvo Group, the service landscape map.

The next slide is about the S-GDP, Volvo Group’s Service Global Development Process, a bundle of design methods and development guidelines outlining gates, phases, activities and evaluation criteria in service development, which is championed by marketers and other managers—some of them sitting in the audience. Graham points out that PrD and S-GDP “speak a very close language.” Yet, they found no trace of PrD involvement in service development projects that use S-GDP, which is problematic. “We saw a great opportunity to bring these two ways of working much more closer together to create this unified systematic way of developing services across Volvo”, continues Graham. He draws attention to the values upheld by the S-GDP and PrD, which, in his view, are the same. Nonetheless, he points out a fundamental difference: S-GDP aspires to turn everyone into a designer by means of training and the circulation of a toolkit, while PrD’s way of working with service design is much more expert-based². This could be characterised as a distinction

²As previously mentioned, designers felt skeptical about this idea of turning everyone into a designer—it made them feel disempowered. The S-GDP is a materialisation of a larger discussion around ‘design thinking’ understood as the importance of spreading

between “diffuse design” and “expert design” (Manzini, 2015). Graham argues that “value can be created” by bringing together the S-GDP approach and PrD’s way of working. “S-GDP is great for a very mature service organisation”, Graham continues, “maybe too early for an organisation that is learning to do service design.” In this sense, in view of the situation that Volvo is currently facing, Graham emphasises that PrD “has all the expertise and competence that is really fundamental to take the whole of the organisation into a healthy service design culture and practice.” In short, the S-GDP is not enough, Volvo needs PrD in order to become a solution provider.

Then, as a way to flesh out Digital Creative’s recommendation, he outlines the value that design can bring to Volvo in this transition. He focuses on four “key activities”: exploration, generation, make, exploitation. Graham characterises *exploration* as the use of design thinking to engage with people and society to make sense of opportunities and uncover new meanings. Once the opportunity space is identified, *generation* is about producing ideas (i.e. ideation) of potential solutions adopting a human-centred perspective. The *make* phase is about creating prototypes and other material representations to be tested by potential users in order to get feedback and make sure that the service is really addressing customer needs. And, finally, *exploitation* is about monitoring and refining the service once it has been launched. Graham’s exposition of the value of (service) design underscores a version of the design process that has become popular in managerial discussions around design thinking (see Brown, 2009; Dunne & Martin, 2006), as “a kind of problem-definition/solution-proposition co-evolution” (Tonkinwise, 2011, p. 534) that involves some sort of action research and iterative prototyping.

design capabilities among non-designers, what Manzini (2015) refers to as “diffuse design.” However, in our post-industrial times, according to Manzini, *diffuse design* and *expert design* need to co-exist and nurture each other. The role of design experts is to feed and support individual and collective projects “in a world in which everybody constantly has to design” (p. 1). Yet, Manzini is critical of approaches similar to S-GDP, which are based on the presumption that, by circulating a method toolkit, people will turn to action. He argues that individuals “find themselves having to deal with all the problems alone, with a high risk of using it too little or in the wrong way.” Toolkits, he continues, “can add nothing about how to motivate people to put that idea into practice” (p. 157).

The next speaker in line is Nathan. His job is to show how PrD has already been working with service design with encouraging results. He steps onto the floor with a confident stride. He is holding up a mobile device in his hand that he shows to the audience. The projected slide behind him reads: “SERVICE DESIGN OF THE FUTURE.”

Nathan [designer]: Alright, so in my hand I have Volvo CE’s first unbranded service platform [...] I’d be willing to show you some of the features in a moment.

His entrance is reminiscent of tech “demos” which consist of exhibiting a technological device in action (Rosental, 2013). But before showing the features of the service platform, Nathan sets the context of the project.

Nathan [designer]: So how do you create that business value stream? How do you create a clear problem definition? Because we tend to think we know the answer a lot of times. We think the customer wants efficiency, right? But in this project we were able to think outside the box and come in as service designers and really think about what is the value that the customer wants to have and how we can create that together.

Nathan starts with a couple of questions that are commonplace to almost any project. But he questions ready-made answers that are entrenched in Volvo’s engineering culture, such as “the customer wants efficiency.” In this manner, he unsettles dominant conceptions of value, and characterises design as a means to “think outside the box” and to reframe problems. As service designers, they are re-defining what “value” is, co-creating it with customers. Then he goes on explaining how they gathered experts and ran workshops to identify different value streams and find the right balance between “customer value” and “business value.” Again, just like Graham before him, he runs through a version of the design process, explaining what they did at different stages of the project. They want to demonstrate the value of the design process itself, of “design thinking”, not only of the resulting designs. This was also constantly highlighted by David who, as he told me in an interview, wanted to demonstrate that “all the real value... the real value is actually in the design... as a verb.” Thus the emphasis on process cannot be overstated. The constituents need to “see” and re-cognise the value of design as a way of approaching service projects.

As Nathan relates how they went from problem definition to solution proposition, some of the statements that can be read on the slides include:

So what is the PROBLEM? Design thinking methodology can help you to find out...

Design methodology always starts with knowing the users

Use cases are made together with experts to imagine what they do and why they do it

Customer Journeys, motivational matrixes and touchpoint mapping for each persona are made

And we iterate with the real customer to see if we got it right

Business synchronisation in early stages is critical to see the business case of the direction

Nathan closes his intervention by describing some of the features of the service platform. In his conclusion, he underscores the role of human-centred design in the transition to solutions. “For us moving forward in Volvo is of huge importance that we do this in the right way because we can’t afford not to do it.” Emily is up next. And if it has not been clear enough, she fleshes out the virtues of the design process and the array of design methods used throughout. Again, the value of design-ing takes centre stage. She bases her explanation in the double-diamond model that designers at PrD have been using to describe their approach.

Next, David takes the floor again to provide some closing remarks. He summarises some of the stories that were told. And then spells out the thrust of their argument:

David [designer]: But I think most importantly, you perhaps had your view of what design is challenged. That it isn’t about making things beautiful, but instead tackles a whole range of challenges. It’s a human-centred process by which we can look at innovation through the eyes of people. By starting with human needs in order to understand what is desirable. And so in the work we’ve shared with you today we aimed to spark a conversation about the role of

service design here at Volvo. And I'll leave with three questions to reflect on today.

The first (rhetorical) question David raises is: “How might we utilise service design case studies to point the way to a future vision for how we collaborate to produce soft offers?” This question is a hint for people to collaborate with PrD in some pilot project that can serve as a basis to demonstrate the value of this (strategy) idea and establish formal roles in the development of services. The second (rhetorical) question is: “How might we utilise design to interpret brand identity across all service touchpoints into a cohesive user experience?” This question links service development to PrD’s established authority as brand care-taker, emphasising once more the integrative role of design. “A great service experience is not a series of one-off moments that are completely disconnected”, David continues, “but instead a holistic vision for a transformed brand experience that evolves over time.” The third and final (rhetorical) question is: “How might we utilise design thinking processes to foster innovation and new service insights?” This question emphasises the value of “design thinking processes” as drivers of innovations focused on “real people, real users, and understanding their problems and their contexts.” These three questions are meant to stir up the urge to use design more strategically. Then, David adds:

David [designer]: So please take our handouts with you and we hope you'll take a moment today to reflect on what you've heard today and what you have in your hands. I am going to send out a follow-up e-mail later this week so that you have access to this presentation as well as our case studies and some of our research. I want to thank you for your attention today.

The pushback

A few weeks before the big presentation, David sent the final report to some of the senior executives he was trying to convince. He was hoping to get some useful feedback since, after all, this work was ultimately developed for them. However, as it turned out, a number of senior executives, working for corporate strategy, were particularly unimpressed. So pushback against

the would-be strategy was felt right out of the gate. The senior executives provided detailed feedback on the report, raising many objections to many of the statements that were made. As it stood, both the “tone” and the contents of the report turned out to be troublesome. The anti-programme came in full force against them.

“They didn’t agree with this current state”, David told me later in an interview. “They thought we were intentionally picking examples that reinforced our case/argument that things haven’t been going well, but they say things are going well”, he continued in a skeptical, yet conciliatory tone. One of the comments on the report made by one of these senior executives reads: “Is it possible to present this in a humble way, not stating that this is the truth as there could be others who have another view?” The perceived bluntness in the report was indigestible. Several statements were regarded as problematic. For instance, a statement such as “Service projects can originate from anywhere within Volvo” was later changed to “The world of services is very dynamic. Service units originate from many units across Volvo.” A statement about the total lack of accountability for service performance was then re-phrased as “a call for more accountability.” The tone of the report was meant to spark a “sense of urgency” and place PrD as an obligatory passage point in the realisation of Volvo’s vision to become a solution-oriented company. However, it did not accomplish the intended purpose. Instead, the tone came across as somewhat overweening. One slide in the analysis section of the report was meant to answer a critical evaluative question: Does Product Design have a role to play in soft product creation? The answer is stated in all caps, “YES! Design is the catalyst that the radical innovation of sustainable transport solutions requires”. Following the pushback, this was later changed, and the bold answer was re-phrased into a more “humble” question: “Can Design be the catalyst...?”

Another contentious issue in the report was about “the new roles design should take on.” The senior executives reacted to this in a very negative way, sparking back-and-forth discussions. Design managers were trying to convince them that there was more to design than just the “styling” of vehicles. As David explained,

David [designer]: She felt we were muddying the waters, and that we would confuse people. Why is design talking about services? And this and that. Because there is very much this mindset that it’s in all

caps PRODUCT DESIGN, so we only work on the product, and we just decide colours and that sort of thing; so the very superficial view of what role design plays.

PrD's attempt to re-define its role and identity was explicitly stated in the report. One recommendation was to change the name Product Design (PrD) to simply *Design*, as a way to transcend automatic associations with hardware.

Another controversial aspect of the report had to do with recommendations about "how design should be organised to fulfil the new roles." They wanted to elevate the status of PrD in the company and redefine their role as strategic players. In a sense, they were calling for a redistribution of power. Ideally, this entailed fast-tracking their way up the corporate ladder, but design managers were quite realists about this prospect. "I think design in every company should have a VP that reports to the CEO", David told me in an interview, "I think we should be at that level, but I don't know that will ever happen in this company." It was too radical a thought for them to entertain, so they resigned themselves to simply advocating for wider scope and additional resources for PrD. For instance, the report suggested the creation of a "Service Office" to coordinate service design projects, providing an environment for the making, testing and on-going monitoring of services. One senior executive worried this could bring about confusion. "Her point was if you start talking about re-orgs people will have a sensitivity to that, and they're going to start making assumptions. Any big change like that will have to go through the executive team and it'll have to trickle down. So it would just really confuse people," David later told me.

For design managers, some of the criticism was fair. "They made some legitimate points that when we stepped outside of our bubble and when we looked at it from their perspective we could see," David conceded. Clearly, they did not want to upset a potential ally. They wanted to show they could be good partners in this transformation. Plus, the relationship between Corporate Strategy and PrD had become tighter over the last couple of years, so they did not want to spoil that. After all, if there ever was a "big cheese" to enrol, this was it. Therefore, David and his colleagues made an effort to accommodate them, and thus modified some statements in the report, adopting a more humble tone and reframing some statements as questions. Also, this rough interaction shaped the content

that they ultimately went through at the big presentation. In order to appease the tension, they decided not to show some of the things that they had originally been planning on showing, such as the recommendations on how to re-organise. The last three (rhetorical) questions at the end of the presentation, for instance, were originally supposed to be articulated as statements.

The controversy helped PrD to refine the message, so as not to “turn people off.” The strategy report in itself remained largely unchanged even after the pushback from senior executives. Most changes in it had more to do with “tone” than anything else. However, when it came to presenting the material in front of an audience, they were more cautious in their rhetoric to keep people from “putting their defences up.” That is precisely what they did when they presented the strategy in the studio (as described in the previous section). The report thus became more of an internal document for design managers to think about how to engage with the organisation, and not one to be freely circulated.

However, there was a wider issue at stake. The backlash against the would-be strategy was about something more than just the tone and contents of the report. It was about the fact that PrD had come up with such a strategy in the first place. As David explained,

David [designer]: Right from the get-go we’re saying this is a strategy for integrating product design and service design, so that was a bit of the boldness they were challenging.

This was a particularly sensitive issue because, as it turned out, strategists were working on a service strategy themselves. They had been looking at how to structure services within Volvo Group. But the strategy was intentionally kept in secrecy. No one at PrD was aware of its existence, despite the research work that had been done to come up with the would-be strategy, including the involvement of someone from Corporate Strategy as key informant and participant in the workshops run by Digital Creative. The senior executive accused PrD of confusing people with this initiative, since this was beyond the scope of Product Design, and she revealed the existence of a service strategy after she received the would-be strategy report. The whole situation turned into an unwanted imbroglio. Suddenly, PrD’s would-be strategy crafted at the fringes of the organisation became contested by an anti-programme. PrD coming up with “Volvo Group’s Product Design and Service Design Integration Strategy” surely reflected

badly on Corporate Strategy. For instance, in the report, there was one statement highlighting the lack of a company-wide “dedicated service strategy.” This was later redacted following the pushback. It was as if PrD were one step ahead of them; though this was not the original intent. Reflecting on this tension a couple of weeks later in an interview, David told me: “I am not saying it came from a bad place. I just think it’s fear, muddying the waters, recognising that if they have the mandate they should be doing things like this.”

In their fervidly stated suggestion to become the community of practice that brings elements into a comprehensive and coherent whole, designers were enacting and seizing for themselves the ‘art of the general,’ or *strategos* in Greek. They were claiming an expertise as strategists, but the “real” strategists perceived their incursion in this territory as some sort of breach, as if their organisational jurisdiction was being challenged. In this sense, not only was the existence of a legitimate—if secret—strategy crafted by the managerial elite the reason for contestation, but also the enactment of competing identities implied in the report. In the executive summary of the report, for instance, they had listed some bullet points to present “the expanding horizons of design,” and the first one was unequivocal about PrD’s ambition: “Extend the reach of Design to *strategy*.” This was later redacted after the pushback. Ultimately, the strategy report had a crucial mediating influence. As a digital artefact, it provided a medium for exchanging ideas between designers and senior executives. The pdf slide-deck was sent back and forth with comments and counter-claims, and its form and contents were negotiated and changed throughout the controversy. In a way, the report changed the state of relations between designers and senior executives, and the report itself was, in turn, changed by them. Designers thought they were ‘using’ the report as a device of persuasion, but the report took a trajectory of its own, slipping out of their control.

However, design managers managed to give a positive twist to the whole situation. As David explained in an interview,

David [designer]: We didn’t do any damage. There wasn’t any scorched earth. I think it was healthy. And also in a good way, it allowed us to take control of this conversation with them. Why is that important? Well, when you set the context of the conversation then you’re having a conversation about the things you want to talk

about. So we did that, it showed we are proactive. It showed that we're also not only proactive and we have our way of talking about this but we're easy to work with in terms of culture and achieving the same goal. Corporate Strategy is a good place for design to work more with.

In a way, the pushback against the would-be strategy gave David and his colleagues some pause for thought. They wanted to strike a balance between appeasing tensions and telling what they considered to be true about the current state of affairs around services in the company. They were convinced that their findings demonstrated that things were in a worse state than some senior executives were willing to admit. They were, as David told me, “shining some sunlight on the fact that we're not doing a good job in the services area.” But, ultimately, the objective was to focus on taking advantage of the opportunities that the company did have, and make themselves indispensable by showcasing their intrapreneurial spirit and demonstrating the worth of their expertise. They wanted to tackle the most important “strategic” question: What should we be doing next? At least PrD had a clear idea. They wanted to demonstrate and promote the strategic relevance of design work in the area of services, and secure a pilot project to justify their claims.

Even after the pushback and the decimated audience, David and his colleagues had reasons to be hopeful. There was still a silver lining to be found. In the weeks leading to the big presentation, David had already been using some of the content of the report to present it to different audiences across the organisation. A senior executive at Volvo Buses noticed a potential opportunity to collaborate with PrD on a large-scale project about transport solutions for cities. David thought this could be the pilot project they had been longing for; an opportunity to really substantiate the claims of the would-be strategy. “I think it's really transformative stuff, like working as a designer at this big scale”, he told me. David's stories about design thinking really struck a chord with the senior executive, so they started talking about the possibility of working together. The senior executive and her team sent David more information about the large-scale project which was co-run by a consortium of different public and private actors. So they started speaking regularly. All of this was happening just before the big presentation of the would-be strategy.

I met with David two weeks after the big presentation had taken place around mid-November, and at the time he was putting together a pitch to join this large-scale project. He was meeting with senior executives in the following days and was “really excited” about the potential implications. Because of the scale and the different actors involved in this project, ideas were fusing all across the consortium. So the opportunity for PrD was to provide a means to evaluate and curate those ideas through a human-centred design process. “We’re going to propose that we give them a framework for how to manage innovation”, David told me. He was using some of the content of the report to set the conversation going and hopefully “hit the sweet spot” in order to secure the pilot opportunity and get the funding.

So despite the earlier terse reactions to the would-be strategy, David was enthusiastic about collaboration prospects thanks to this opportunity. Just a few days before said interview, he had met with a senior executive from Corporate Strategy, who seemed like “an advocate for design thinking” and had some connection to the large-scale project with Volvo Buses. “I wouldn’t say that he totally gets how to utilise us fully, but the opportunity is that he is an advocate”, David told me. In his view, this senior executive was a potential spokesperson for PrD’s programme of action.

David kept the conversation going successfully. As he went through different pitches, PrD’s role and the vision of the project got more and more refined. He went up the ladder and was getting senior management buy-in. Then, around February, the innovation management/service design initiative that David had been putting together in collaboration with the senior executive from Volvo Buses suddenly got killed. The pilot project opportunity vanished in an instant. A senior executive from Corporate Strategy stopped the initiative. David had met with him a few times. He was the one who, back in November, David described as “an advocate for design thinking.” The spokesperson they thought they had enrolled turned out to be an actor of the anti-programme—at least as far as this decision was concerned. Incidentally, he was the last senior executive they had to pitch in order to get the funding to actually make it all happen. “I barely even got started; he just shut it down”, David complained. “It says a lot about how this organisation views design.”

The reason given for this decision was that PrD was under GTT. So if PrD wanted to collaborate with Volvo Buses, which is a different business

area, then they needed to take it up to the executive committee in GTT. Then the latter would need to approach their executive counterpart in Volvo Buses. “It wasn’t killed because the premise was flawed or the idea was flawed...”, David told me, “it was killed simply because of this bureaucratic thing. We didn’t go through the proper channel.” Nathan attributed the pushback against the would-be strategy and the quashing of the pilot project to “political correctness and too much process, mainly engineered-focused because we’re a company like that.” Demonstrating the worth of design turned out to be a more complex exercise than anticipated. The whole project was dependent on enrolling a “big cheese”—that is, some senior executive at the global level—to legitimise and stabilise PrD’s programme of action, as Nathan explained:

Nathan [designer]: The only problem is that again the big cheese is sort of needed, and the plan for that document was to have some sort of stakeholder agree with us and say, “you need to organise like this people are saying.” Who will take it on and sell it at that top level? Right now, we don’t see anybody.

After all these efforts, it seemed like the “big cheese” was nowhere to be found. The strategy report and the presentations did not advance PrD’s programme of action in the dramatic manner they had envisioned. They felt like they “kept hitting close doors everywhere.”

Some learnings

The enthusiasm around the would-be strategy faded rapidly after these events. Reflecting back on how it all unfolded, Nathan told me, “They burst the bubble, I think... We were knocked out, slowly. (Chuckles.)” Indeed, PrD’s plan did not work as expected. The whole premise of the project hinged on enrolling a “big cheese” that would legitimise PrD’s programme of action. After the pushback, it became apparent that a change of approach was needed.

Nathan told me that playing the “boldness” card ended up being a mistake. The more he discussed the idea of setting up a new Design function with wider scope and additional resources with other design managers, the more he realised it would never happen. He attributed this

to the marginal standing of PrD in the organisation. “We’re way too far down, and then we’re really saying that we need to be elevated up in the organisation, like at Apple or something”, he told me self-critically. Not only did they lack humility, but they also lost grip of a critical sense of reality, Nathan admitted. Indeed, as things were standing, there were simply no finances to make any of this happen. The company was under huge financial pressure following bad results. A cost-efficiency strategy was put into effect to save 4 billion SEK annually until the end of 2015 in an attempt to boost profitability. All things considered, the controversy that they faced brought about a new awareness of the political dimensions underlying strategic change. “You know, all that thing that we did with Digital Creative was really political”, Nathan told me, “I probably underestimated that.”

The expansion of PrD did not get the expected boost they had been hoping to trigger. In fact, the would-be strategy had the exact opposite effect. Their assertive strategic intervention to become regarded as ‘strategic’ actors, raised a red flag among senior executives; they became wary of PrD’s expanding ambitions. In an interview that took place almost two years after the miscarriage of the would-be strategy, a design manager confided that some senior executives were “still negative about Product Design” following this event. Some efforts of collaboration were even thwarted because of the bad impression they had left on some of these people. Advanced plans to collaborate with the marketers who were so enthusiastic about PrD in the beginning, for instance, failed to materialise in the end. The design manager attributed this to a senior executive who had reacted badly to the would-be strategy. “I guess she understands where we’re trying to go, since we had that strategy, right?”, the designer chuckled. “So she was trying to do everything she could to stop that, which is stupid Volvo internal politics, but I guess it’s the same for a lot of big companies,” he concluded. In this sense, the calculated strategic intervention worked to undermine the original ambition.

The backlash also produced a new realisation. Shortly after the big presentation, I spoke with Nathan about what they had learned from this situation:

Nathan [designer]: Going after the global people is a bit of a waste of time. Because they don’t really have that big influence into the business area now. So if you have an agreement at the global level,

they will go like “OK, but we don’t work like that in our business area” (chuckles). What can they do? What can they say?

Design managers learned that going after the “big cheese” was not a panacea; rather, they needed to prove themselves project after project, and work their way up by accumulating success stories, making themselves indispensable to middle managers across different business areas. They decided to adopt a more humble and nimble approach and withdraw from grandiose statements. So instead of planning interventions at the global level, designers realised that it was better to go local and cultivate their influence in day-to-day project decisions by contributing to solving middle managers’ concerns. They thought that if they succeeded in making themselves indispensable and demonstrating their worth, middle managers would, in turn, become spokespersons for PrD’s programme of action.

Nathan [designer]: I think that by proving it in projects, having those case studies, then you can come to top management and sell it on a global level. So I think we realised that.

This experience marked a shift in approach from top-down directed intervention to bottom-up coping, from strategic boldness to strategic humility.

Summary

Drawing inspiration from Callon’s (1986a) seminal study, this chapter examines the political tactics employed by a group of designers to build the case for a new strategy initiative. It describes how designers attempted to construct and maintain a network around their strategy idea. Designers, with the help of external consultants, formulated a report detailing a problematic state of affairs requiring urgent intervention. They suggested courses of actions and instilled notions of desirable states in the hopes of building a compelling case and securing new projects. This report sought to place PrD as an obligatory passage point in the resolution of the problem.

In this sense, designers sought to enrol key actors and translate their diverse interests into the programme established in the report. Their aim was to enrol senior executives that would endow them with the necessary mandates to solidify their programme. Designers undertook efforts to aestheticise their strategy idea by means of rhetorical demonstrations involving the use of impressive visuals and design artefacts. The production of this material was a means to generate favourable opinions and legitimise their idea. Yet, the ‘facts’ represented in the report were met with resistance. There was an anti-programme. Power struggles arose around the question of who the legitimate ‘strategist’ was, and so designers faced a lot of pushback from senior management. The report created an ephemeral space for ‘strategic’ discussion, but failed to advance designers’ interests. In short, the stringent, deliberate attempt to become ‘strategic’ actors ended up undermining their own aspirations.

5

GET ME THOSE NUMBERS— OR HOW TO DEPLOY A VALUATION DEVICE

The tyranny of cost reduction

Consider the following situation:

It's gam on a Wednesday in the design studio. It's the weekly design management meeting for CE. Like any other meeting of this kind, participants discuss ongoing issues and review projects, including reporting and budgeting matters to make sure that things are "on track." This particular day, after going through each of the items in the agenda, the tone suddenly became more cheerful when discussing a recent "victory" for PrD, namely the approval of orange handrails in machines. Insignificant though it may seem, this is a big deal. Shifting the colour to orange was a long contest. The struggle is perceived as an issue of authority whereby the worth of PrD's contribution is not properly recognised. PrD suggested and championed this initiative to highlight safety features in new generation Volvo machines as a distinctive branding attribute. However, nobody in Product Planning (PPL)— that is, PrD's management—really saw the point, because, even though slightly,

this decision would entail increasing production costs, which contradicted PPL's mandate to reduce them. There were divergent evaluative criteria and thus conflicting views on what counts as valuable. That was until a PPL manager saw a presentation done by Lester, a designer, where he demonstrated the application of the orange colour on other Volvo branded products, more specifically merchandising, which prompted the PPL manager's positive remarks. The manager finally "got it" and he helped convincing others at PPL. "We have a champion inside, that's great!", exclaims one design manager. "He's done all the work for us", says another one. Lisa, the design director, congratulates the team with a special mention to Lester for the role he played with the merchandising work. She evokes the image of a puzzle whereby different kinds of initiatives are steadily falling into place, as other people start "getting it." "This means there is hope for us", quips Lester, prompting laughs all around. They all agree that being persistent payed off, even when people started getting mad at them. "We felt in our heart that it was right and this is a huge encouragement for us," says Lisa in an uplifting tone. It's a celebrated victory, not without a somewhat bitter aftertaste. They know all too well that things like this will very likely happen again. "To many people, we are still cost-adding troublemakers", Lisa wittingly remarks. (Fieldnotes, September 2013.)

Over the last couple of years, cost reduction has become an operational priority at Volvo Group. The company has struggled to boost profitability ever since the financial crisis. Indeed, financial results have been underwhelming. In 2013, sales fell 9 percent and net profit dropped by two-thirds (Milne, 2014). This has prompted job cuts and a series of operational restrictions to reduce costs. As part of a deep restructuring programme, the company launched a cost-efficiency strategy with the goal of saving 4 billion SEK annually until the end of 2015 in order to boost profitability. In this context, cost reduction has become the "default" principle of evaluation and a central arbiter of what counts, that is, what comes to be deemed as valuable in the company. The excerpt above provides a good example of the kind of "battles" that constitute the everyday of designers when they set forth alternative conceptions of value that stand in conflict with the default criterion. The suggestion to change

the colour of the handrails was met with resistance because there was a principled disagreement about what counts (Stark, 2009). Different principles of (e)valuation clashed in this controversy. There were different values at stake for the actors involved. What was at stake for designers in this decision (brand distinctiveness and aesthetics) was in direct conflict with what was at stake for PPL (cost). And so designers spend a good amount of their time negotiating and justifying the worth of their contribution. In this case, the idea of having orange handrails held little sway until the PPL manager became persuaded that designers were on to something. He got enrolled and became their spokesperson. In this sense, Lester's presentation was a turning point in the subsequent re-ordering of values leading to PrD's "victory."

In any design project, a multiplicity of values are at stake since there are many perspectives from which products or services are viewed (Buchanan, 1995). Different communities of practice (e.g. engineers, marketers, designers) hold different conceptions of value. This is nothing new to designers working in industrial settings. In their project practice they negotiate and integrate competing interests and values and different bodies of knowledge to deliver a design. In the process, values are tested and contested by different stakeholders until a programme of action is stabilised. So design is, in and of itself, a process imbued in valuation practices¹. However, the challenge for designers at Volvo is that their conception of what is valuable is somewhat drowned in the company's fervour for cost-saving. They feel like they are not operating on a level playing field. The following quotes are telling in this regard:

[Designer]: It's really difficult to try getting more premiumness in when everybody is talking about costs, costs, costs.

[Designer]: And then you have us trying to push for good design in projects, and we don't have that much pull because the people making the decision, they only make decisions driven by cost.

¹This is also the case of many other design disciplines. For instance, Fariás (2015) provides a very interesting ethnographic account of the variety of valuation practices in architectural design.

[Designer]: I guess this is another part of the culture, there's a focus on reducing costs that resembles a fetish, and it consumes every decision. There's no talk about growing revenue, introducing new products. It's all reducing cost. And you can't just reduce cost and become number one.

[Designer]: Convenience, noise reduction, all these feature categories, the technical ones, have to be better. And probably the product has to be cheaper at the same time. So those are kind of conflicting but that's why the problem with the CE engineers is that maybe they're focusing more on cost reduction only. But we're trying to explain to them that they need to handle all things, also we need to handle design features. That's the big challenge, otherwise it would be simple. Otherwise a baby could develop a competitive product.

This focus on cost reduction as central principle of evaluation imposes special constraints on the work of designers. Not only does it compel designers to go an extra length to justify their work, but it also feeds this idea that they are “cost-adding troublemakers.” As they step into projects, some engineers see PrD as a hindrance rather than an asset. Shaking off that reputation requires designers to constantly articulate and demonstrate their worth. Why is it important to spend money on design anyway? A question that haunts many in the studio. So designers often need to prove themselves, which is no easy task in a B2B manufacturing engineering context, let alone in a cost-sensitive one. The emphasis on cost as preferred evaluative framework undermines their efforts to articulate alternative conceptions or registers of value, which brings about enormous frustration. The following excerpt illustrates that succinctly, a designer critically reflecting on the cost-efficiency strategy:

[Designer]: What do we hear from the CEO? Cut costs. Cut costs. Cut costs. Cut costs. I don't know if that's part of our culture or that's a new thing, but we've confused operational effectiveness with strategy. Cutting costs is not a strategy, because all of our competitors are looking at cutting costs. Everyone does that. Being strategic is about saying no to a lot of things so that you can say yes to the thing that makes you stand out. If you look around, I don't think we really do that. We're more like operating effectively. And if

you have that mindset, well of course you should follow the chain of command, you should follow the boxes and arrows, the process diagrams, and it's all very mechanical. It's very Tayloristic, you know? That's really in the DNA here I think.

Thus, for many designers, the company's leadership is enabling a situation in which Tayloristic values of efficiency and control take precedence over matters pertaining to good design and innovation. They find it difficult—if not impossible—to thrive in such an environment. Among designers, there is a shared sense that they are rowing against the tide in their effort to promote “good design” in projects. What is more, the import of cost considerations also means that there is less money allocated to “visionary work”, that is, internally-run projects in which design takes centre stage, including—but not limited to—futuristic product-service concepts. In this type of projects, designers usually have less constraints compared to regular projects. Whereas regular projects are usually supposed to lead to market-ready products, visionary projects yield learning and “challenge the organisation.” What is generally valued in the latter context is the alluring visualisation of innovative ideas. Therefore, what is at stake is less contested by other project members, be they external or internal to PrD. The budget constraints imposed on this type of work make designers feel severely restricted, as the following quotes duly attest:

[Designer]: We've performed a lot of internal work for the last couple of years to reduce headcount, reduce what we do, reduce R&D, to trim our cost base. In this phase, there's been very little visionary work going on.

[Designer]: So we had a few Vice-Presidents coming in here [to the studio] a few years ago. (...) We wanted to show them the new fantastic future stuff, you know, design visions. They couldn't care less. They were just talking about gross margin, right? (...) They really interrupted us, “OK, let's sit down and talk about gross margin. It's very important. It pays all our salaries. If we don't do well there, we're gone as a company, blah, blah, blah”.

[Designer]: All we're hearing day in and day out is reduce cost, reduce cost. We can't hire anyone. We can't travel. We can't go to

conferences. You can't buy any software. You can't buy more computers. You can't do shit.

Designers have a hard time coming to terms with this reality, so they are relentless in their efforts to sell design—or, dare I say it, evangelise. They do this by enacting and articulating values, which is one way of producing stakes or matters of concern (Dussauge, Helgesson, & Lee, 2015a). But which values and which concerns? What do designers care about? What is valuable to them as a community of practice? The following summary of designers' conception of value is based on field notes made from observations and conversations with them, as well as various documents that describe Volvo's approach to design. Notable among them is a document titled "The Volvo Design Philosophy," a values manifesto of sorts.

Designers are care-takers and advocates of the brand, its "premiumness," and all that it stands for. They attach great importance to building consistent, compelling brand experiences. This latter concern has led them to advocate for tighter and smarter product-service integration. They see design as the work of figuring out the whole. They prize style and aesthetics, and hold a strong sense of craftsmanship and attention to material details. They place a high value on user-centricity, and take great pride in designing products that are both attractive and understandable. They also hold in high regard creativity, imagination and futures thinking. A good designer is a visionary problem-solver, skilled in visualisation techniques, and able to reframe human needs and translate them into functional and desirable products and services.

Some of these criteria of worth are shared by other communities of practice. For instance, the mission of Brand Management—a community of practice sitting under Corporate Strategy—is to promote and safeguard the values and heritage of the Volvo brand. Brand Management and PrD work closely to produce handbooks and detailed guidelines to boost awareness, understanding and usage of the brand portfolio. Through their work, designers push brand requirements into product development. So there is a clear alignment in this particular conception of value between these two communities. However, brand managers are not attuned to, say, craftsmanship and material details the way designers are.

Another example could be the concern for developing futuristic concepts. Advanced Technology & Research (AT&R) is a community of

practice within Volvo Group that drives research and advanced engineering projects to ensure future competitiveness. So both PrD and AT&R value futures thinking and the development of conceptual work in this direction. However, sophisticated visualisation skills and fine-tuned attention to branding issues are not pre-eminent in the work of engineers at AT&R. So different communities of practice hold different criteria of worth.

In this sense, designers have their own idiosyncratic way of conceiving worth. They uphold and enact all of these values. That is what is at stake for them when stepping into a project. But, as previously shown, other project members representing different communities of practice uphold their own conceptions of what is valuable, which, not unexpectedly, creates tension and conflict about which concerns should be favoured over others. For instance, designers' concern with figuring out the whole is often at odds with engineers' narrow specialty focus, as one designer explained:

[Designer]: You can literally drill down to the [engineering] team or the person who owns this switch on the steering wheel. That's all they do. So that switch is highly optimised in and of itself. But then it's alongside all these other switches, controls and everything else who have the same exact setup, where they have some person or some team that just has that, and then they highly optimise that. So you end up with a lot of things that are highly optimised onto themselves, but the whole system isn't optimised at all. That seems like a very radical thing in here sometimes. Obviously designers think that way. But I mean, we're vastly outnumbered. So when we go and talk about these things it just doesn't resonate with people. They don't get it.

In broad terms, engineers care about efficiency, reliability, security and cost-efficiency. Those are their stakes. So their performance is measured based on those criteria. But contrary to the work of designers, the stakes of engineers are quantifiable. For example, fuel efficiency, the relationship between distance traveled and the amount of fuel consumed by a vehicle, can be accurately measured. In the same way, cost can be precisely determined in monetary terms. Therefore, the issue for designers is not only about upholding their conception of value, their conception of what the concern is during a project, but also about *finding the right ways to assess*

or evaluate their stakes, in order to make them compelling to others in defining a programme of action.

Evaluating design(ing)

Now consider the following situation:

It's 8:30am on a cool Tuesday morning. But, for designers, this is not a regular working day. It's the start of the "VCE Workshop", a yearly two-day event that gathers all designers from CE and, this year for the first time, a few senior designers from Trucks as well. In this event, designers are removed from their familiar studio environment. A special room was set up in another location. The agenda of the first day includes a lineup of three invited speakers. Their interventions are meant to "inspire" and "broaden the horizon" of participants. One of the speakers is an artist. Essentially, his presentation is a showcase of his artwork. As he goes through it, he explains the context and the thinking behind each piece. He has a self-described obsession with collectors, his work spanning sculpture, drawing, and installation. "I spend my time creating problems", he says in his opening lines. After the presentation, the floor is open for comments or questions. "We usually are the odd guys at Volvo," says one design manager, "so we really enjoyed your presentation." This event helps them to further cultivate their sense of 'otherness,' their sense of being an "odd" community of practice within Volvo Group. Another speaker leads an interactive session. He presents a method for "creative problem-solving," based on the work of Edward de Bono. After his presentation, the speaker asks the audience to suggest work-specific problems to be addressed during the workshop. Different problems are raised. Next, participants split into teams to apply the method. Among the many problems brought up by designers, there is one that strongly resonates as a shared frustration in the room, prompting lengthy discussions. The problem: it's hard to communicate with people outside of PrD; it's hard to communicate the value that designers "bring to the table." This is attributed to the notion that design is a practice deeply imbued with and richly

informed by “intangibles,” such as “values and emotions” which are hard to articulate. After the workshop, each team shares their reflections on the problem they addressed, along with the potential solutions. The spokesperson for the team in question is the senior designer that first raised the issue. He emphasises the need to develop more presentation skills and to “open the design process” so that anybody in the design team can “defend it and present it” in a sound manner. He adds that design managers should increasingly champion that. “We have a different mindset compared to the rest of the organisation,” he says, echoing some of the comments that had been made throughout the day. “We need to create a story and show others how to see the big picture,” he continues, highlighting the narrative and integrative role of design. Towards the end of his intervention, he recognises the quandary they find themselves in, “We need to convey what we do, essentially. The thing is that engineers can measure everything they do, but what about us?” (Fieldnotes, October 2013.)

In the excerpt above, designers raise the pressing issue of conveying the value of their work. They see themselves as a community with a unique set of values that starkly differentiate them from the rest of the organisation. But their uniqueness comes at a cost. They find it hard to communicate their worth, which raises the question: Is design measurable? Can the values or concerns of designers be evaluated or assessed? Can one evaluate brand experience? Can one measure the aesthetic qualities of a product or digital interaction? As previously mentioned, design is a process imbued in valuation practices. So designers do, in fact, evaluate their performance all the time. Designers routinely comment on each other’s work during weekly meetings and informal interactions. The socio-spatial organisation of the design studio has different project teams working in close proximity with artefacts and visuals openly displayed, which fosters casual peer-to-peer evaluative engagements. Review meetings, workshops and ‘demos’ are also routinely held, whereby designers and non-designers are invited to test, assess or comment on a particular design. They set up ‘clinics’ where they invite users to test and evaluate prototypes as a way to gather empirical material to make informed design decisions. Furthermore, design work developed in the studio has, on different occasions, received prestigious accolades for innovative product design, such as the *Red Dot*

Award, and the *iF Product Design Award*. International design prizes such as these are very well esteemed and recognised as quality labels, generating media attention and bestowing value to design work. They are a validation of the quality of designers' work. So, in this sense, design is, as a matter of fact, constantly assessed and evaluated in different ways. Yet the efforts of designers to articulate their stakes often fail to resonate with other communities of practice during projects.

What designers came to realise is that these evaluations are performed *on their own terms*; this, in turn, made the value of their work seem too abstract to others, especially engineers. In other words, designs are evaluated in terms of aesthetic and functional qualities, user impression, brand congruity and so on and so forth, on a qualitative—and mostly discursive—level. For instance, an evaluation carried out for the “PrD Strategy Update” for CE—referred to as “Design Survey”—includes categories such as “emotional factors”, “how to recognise a Volvo”, “customer wants.” Some of the following phrases appear in the evaluation results:

Attributes to describe the design: smart, stylish, nice.

Basic and straightforward, simplicity, warm, friendly, open, caring and competent.

It is reflected in the design's lines, as well as in providing comfort and visibility.

A clear corporate identity in the exterior: pleasing, rounded, flowing and streamlined design.

Evolution, not revolution.

Highlight the Volvo brand more.

Enhances enjoyment of the job and is a motivating factor.

[Design] determines whether the potential customer takes a closer look at the machine or not.

Thus, whereas the stakes of designers are expressed in words (qualitative), the stakes of engineers are expressed in numbers (quantitative). “Good design” is not measurable in the same way that, say, fuel efficiency or noise

reduction are. Therefore, whereas the stakes of engineers are perceived as factual thus objective, the stakes of designers are perceived as values-based thus subjective. As one designer claims, designers are “the ones who are mastering the subjective... connected to brand experience” or, as stated by another one, “there are a lot of subjective matters of design.” In a certain sense, designers take pride in their subjectivity as a way to affirm their difference. They consider it an asset and a trait constitutive of their worth and their otherness as a community of practice. There is a particular ‘design’ language that designers use to articulate and assess their stakes. The following excerpt serves as an example:

[Designer]: [Business strategists] do lots of research work which is based on more scientific studies about immigration, demographic changes, changes in the economy, changes in society, a lot of things (...) that can be useful for us [Volvo Group] to build our future business strategies upon. But we [designers] work with something we call more like human behaviours that sometimes are not rational, and sometimes are based upon non-scientific thoughts like an artist who can actually come up with an idea. It can be like this or like that. And thanks to that we don't have to prove that this is right, we can also make up or invent or just fantasise, to bring something unique which the normal research work doesn't do. (...) And we have a role to play here. (...) We have to explore the unknown, we have to look into the future, we have to think about things, what can happen. It can go like this or like this or like that. It's part of our creative processes.

In the excerpt above, the value of design consists precisely in its breaking away from ‘scientific’ ways of assessing stakes, in favour of imagination. Whereas business strategists bring quantifiable data, designers set forth fantasies. In this sense, design practice could be characterised as a form of “organised heresy” (Kornberger, Kreiner, & Clegg, 2011) which produces and exploits difference. In their practice, they seek to suspend the normal order and “challenge the organisation,” as one seasoned designer puts it. It is heretical in the sense that they exploit and celebrate the questioning of orthodoxies, which has a determining influence in the constitution of designers’ identity vis-à-vis other communities of practice. For instance, in the following quote, a seasoned designer characterises PrD’s uniqueness in relation to other departments:

[Designer]: We are not marketing because marketing is very much today, what to sell today, so they are not so visionaries at marketing. And then we have product development, they are very much engineering-driven, sort of hard-process way of working. And then we have brand management and we have business strategy. And they are not that operative, they are more coordinators you could say.

In her view, the criticality of design is that it connects visionary efforts with day-to-day development operations. Designers “challenge the organisation” by breaking away from the dominant rationality. They are futurists able to influence the present through project-based design work—if only given the right means. Designers move between the polar oppositions of creative and technico-operational work on a day-to-day basis. However, affirming their difference and their subjectivity turns out to be an ambivalent strategy for designers at Volvo; perhaps quite useful in visionary projects, but not so much in regular projects where designers’ abstract way of expressing their stakes is frequently at odds with a prevalent engineering rationality that favours factual observation and measurement. In a B2B manufacturing engineering context—as we shall see in the following sections—“facts” get preferential treatment because they are “actionable.” “Values” such as “premiumness”, on the other hand, though heavily preached under the banner of the brand, are fuzzy, abstract entities when it comes to concrete product decisions. This conflict rests on the canonical dualistic opposition between facts and values, between objectivity and subjectivity.

[Designer]: People in our company—since it’s an engineering-driven company—we see that people feel insecure when it starts to be a little bit abstract, which the designer is very much about. So we work a lot with visualising to be able to start the dialogue and to show our concern about the design decisions for instance.

So designers, as all other communities of practice, are articulate and adamant about their stakes. However, unlike engineers or business strategists, designers cannot express their stakes as *matters of fact* (Latour, 2004), that is, contextless statements of fact that are seen as universally valid. What is at stake for designers is hardly expressed in this manner. Their justifications are closer to the notion of *matters of concern* (Latour, 2004), that is, concerns that are situated and socially contingent. Typically,

designers raise their concerns through visualisations—their preferred mode of representation—in an attempt to bring their perspectives to bear upon project decisions and future strategies. They craft sophisticated visuals to explain what is at stake in the project and justify design decisions. But this type of mediation has its limits. Arguably, the chasm standing between the techno-scientific realm concerned with “facts” and their application, and the aesthetico-cultural realm concerned with “values” and human conduct is very much present in an “engineering-driven company” such as Volvo Group.

The challenge of CE

Even though the problem of communicating the value of design work is shared across all the different business areas (i.e. Trucks, CE, Buses, Penta), this situation is particularly challenging in CE. As a subsidiary and a distinct business area within Volvo Group, CE has expanded its product range and market penetration by means of a series of acquisitions. Since the 80’s, Volvo CE has acquired manufacturers or developed joint ventures in many different countries, including Sweden, US, Germany, Canada, France, India, South Korea, and China. The company sells machines under two brands, namely Volvo (“premium” or high-end) and SDLG (“standard value” or mid-level). So there are different product platforms located in different countries around the world with dedicated engineers specialised in particular product ranges (e.g. excavators, wheel loaders, pavers, etc.). This creates a situation whereby all of these spread-out platforms operate in silos. For instance, engineers working with excavators in South Korea hardly ever talk to engineers working with pavers in Germany.

As a corollary, brand consistency became a continual challenge for the CE business area. In 2006, the first Design Director for Volvo CE was appointed in PrD. The first in-house design team dedicated to CE was then assembled in an attempt to create a consistent range of Volvo products and promote commonality between the different technology platforms. Prior to this, design work in the CE business area was commissioned to external design consultants. So even today the CE design team is a relatively new addition compared to, say, the Trucks design team which has a long tradition and whose work has typically been more visible within Volvo Group.

Furthermore, the CE industry is not particularly mature when it comes to integrating design. Indeed, construction vehicles are sturdy, rational machines considerably less glamourised than transportation vehicles. The role of the design discipline has traditionally been perceived to be less critical in the CE industry than in the transportation industry. As one designer explains:

[Designer]: Every time we look at the customer by standard criteria [in the CE industry], design is not there, and that is used by all the project leaders as a means to take away an emblem, for instance. Look at the customer by criteria and they want fuel efficiency, ease of maintenance, blah, blah blah. Where is styling? Nobody cares about styling. So [engineers assume] we can take everything away. And the problem for Volvo and the complexity is that we're a premium brand.

So in such a setting, not only is designers' work costly, but also largely perceived as irrelevant for the customer. However, market trends seem to challenge this view, since there is increasingly more design work that goes into leading products in the CE industry. So the role of design is still a matter of contention. Arguably, this is partly due to the fact that design has generally been conceptualised as a cosmetic add-on that appeals only to the (irrational) retail consumer, so B2B manufacturers such as Volvo CE had no motive to put much emphasis on design when selling 'work' vehicles to (rational) corporate buyers. This assumption is slowly dissolving. Granted, technology is considered the primary buying factor in the CE industry, but design, if slowly, is increasingly gaining importance.

Thus designers in Volvo CE find themselves in a particular situation: they need to communicate the value of design to cost-sensitive engineers who are not particularly acquainted with the design discipline. Designers' conception of what is valuable is not only at odds with established dominant (engineering) values, but is also unintelligible and irrelevant to many engineers. As a result, proving their worth has been a daunting exercise for CE designers. In the first years since its establishment, the CE design team expressed their stakes using the kind of 'design' language previously described. They spoke of "brand impression", "look and feel", "wow factor." In this period they achieved important milestones, namely designing a relatively consistent range of machines. But their efforts did not yield the desired mandates for them to become a formal authoritative

voice in product-service decisions; in short, they did not become a “strategic” function within the CE business area.

A new design director for Volvo CE was appointed in 2013 which marked a new direction to the problem of articulating stakes. The new director attempted to change designers’ language. So, after speaking ‘design’ to engineers for 7 years, he set out to do something different. “If after 6 or 7 years people don’t understand design, you have to reach a point where you need to start speaking engineer”, he said in an interview. In his view, designers needed to get better at selling their work and proving their worth in terms comprehensible to other communities of practice. He set out to convince people of the “added value” of design. His goal became to make his team indispensable and an “obligatory passage point” (Callon, 1986a) in the strategic agenda of Volvo CE.

[Designer]: We shouldn’t try to push; they [engineers] should come and tell us, “Hey guys, come help us out!” If those guys don’t think we add value, we are pissing them off, we are wasting their money. If they think we add value, if they understand that thanks to us the machine will be better, cheaper, etc., all of a sudden the conversation is different.

The point is to become indispensable not by educating others in design language, but by adapting to the management-by-measurement language prevalent in the organisation. This marked the beginning of a *managerialist* turn for designers at Volvo CE.

PPL’s scoring device

Around this time, in their efforts to develop product positioning strategies for their different product platforms, PPL at Volvo CE ideated a scoring device, a system used to classify and measure product features in order to rank them and compare them to the competition with the purpose of delivering the right product, in the right market, at the right price. The device—a complex Excel spreadsheet—provides a frame to compare Volvo machines with those of the competition, any model within any product category. With this system, PPL can make overall or feature-by-feature comparisons to identify opportunities for differentiation and set priorities

and ambitions for new product development. The device considers 5 feature categories or types for each machine: machine standard item, machine options, performance, aftermarket, company. Each feature type is broken down into several function groups (e.g. power transmission, electrical system, hydraulic system). Each of these function groups are, in turn, broken down into detailed product features which are then scored. For instance, “electrical system” (function group) is broken down into detailed features, such as “automatic pre-start checks”, “battery disconnects switch”. The 5 feature categories are converted into a percentage scale, from which an overall score is drawn. The relative weight of each feature type can vary depending on the product category. Through a formula, the device calculates a feature index. The feature index then allows PPL to examine the relationship between feature offering, price and market share. For instance, the device can help them to assess whether an excavator is lagging behind feature-wise compared to the competition; or whether they are overspending in particular features that turn out to be non-essential in specific markets. This kind of insights facilitate product-positioning decisions that determine where Volvo is to be placed in regards to price and features in a given market. So by looking at which products are competing in certain markets, their price and their technical features, PPL can then assess where the opportunity to position Volvo lies. This calculative device shapes the strategic agenda of Volvo CE. Thus, PPL can be viewed as a centralising force or a key “centre of calculation” (Latour, 1987) concerned with devising new standards and techniques to formulate positioning-strategies that can then be further circulated.

PPL includes both easily quantifiable technical features (e.g. fuel efficiency) and more abstract ones (e.g. brand image) in their scoring device, but it is fair to say that technical features have a dominant weight in the assessment. “Styling and good design” was included as a feature in PPL’s device. Somehow it was decided that design work would account for 5 percent in the overall score in the measuring system. The scoring of design was binary, a design was either good or bad, and it was performed by PPL, not designers. So PPL started making judgements on design through its scoring device in their product positioning efforts.

In the beginning, this development did not change things for PrD in any substantial way. Designers went about their business as usual. At PrD, they had their own way of comparing their work with the competition, namely internal benchmarks. Designers would go to fairs and take pictures

of machines from competitors, focusing on criteria of worth such as “impression”, “design scope”, “user-centred design”. They would search for differentiators in those areas, asking different questions. How can we be different from other brands? What is the impression we want to have? What is the character? Then they would share their benchmark results with indicative pictures, but then again the impact was low. These efforts ran in parallel to the ‘centre of calculation,’ and thus were not taken ‘into account’ in PPL’s calculations; they remained anecdotal and had no consequential effect on decision-making. One designer reflects on their early benchmarking practices:

[Designer]: Back then we were more thinking about scoring the design impression. (...) The importance of being different is what we focused on. Not that there is anything wrong with that, but by the end of the day you don’t have that much to share. I mean you can share a couple of images from competitors, showing that they’re different...

With the new design director in charge, a controversial incident would prove decisive in the emergence of a new resolve to influence PPL’s strategic calculations, marking a novel direction in their quest to become strategic actors. One that would lead them to re-think the whole concept of “impression”. “We are now skipping the impression completely”, a designer told me, “so that’s the new thing.”

The controversy

Controversies are fruitful (battle)grounds for surveying the articulation of conflicting values (Dussauge, Helgesson, & Lee, 2015a). These situations are characterised by dissonance (Stark, 2009) and their requirement for the justification of action (Boltanski & Thévenot, 1999), making discernible competing programmes of action (Latour, 1999b). In this sense, the following controversy provides a glimpse of how designers are subjected to an imperative of justification (Boltanski & Thévenot, 1999), a need to justify their actions and defend their stakes. It particularly highlights the role of non-human forms of agency enabling designers to advance their interests (Callon, 1986a).

The project was DD80, a double-drum asphalt compactor for the Indian market. Double-drums are typically commodity machines. Low margin, so low quality because of that. Except for one player who at the time was doing premium-looking double-drum machines in this market, a German construction equipment manufacturer. This competitor's machine was produced in India, but they were using the same design and technology they used elsewhere.

So, as in any other project, PPL conducted a feature analysis using their scoring device to define some positioning for DD80. In their analysis, not unexpectedly, the German competitor scored around 75 percent in feature offering—a fair score for a premium brand. So it was decided that Volvo's DD80 would compete in this market by outperforming the German competitor in product features. The goal: produce a machine with a feature index of 90 percent. Volvo CE engineers in India began working on the project. Double drums being low-margin products, the engineers set out to make the cheapest possible machine without compromising the feature offering priorly determined by PPL.

The DD80 project was well under way when designers got involved; they simply did not know about it. The engineers had basically designed the machine by themselves when designers stepped into the project after a late-coming management decision. Usually, designers hate it whenever that happens. "If we just come now really late and painted the pig, would that matter?" told me one designer. But this time, a certain sense of satisfaction (and hilarity) accompanied their sense of displeasure. What the engineers had come up with was simply and objectively hideous to look at. During one of the weekly designers meeting, the CAD model of the DD80 was shown, producing a steady stream of laughter from everyone in the room.

Maybe this turning of events would help designers to get more recognition for their work; a case of "look what happens if we're not involved from the beginning." So the design director went to his manager at PPL to show him the machine. He assumed that the problem would be self-evident; this machine was clearly not acceptable, it was not "good design". To his bewilderment, the manager looked at it and replied, "What are you talking about? You guys are fulfilling the PIB." Designers were puzzled by PPL's reaction. One of them involved in the project recalled: "We showed this to really high up managers, and they said: what do you mean? They just couldn't see it. That's kind of amazing!"



DD80 CAD model made by engineers

The PIB, Product Identity Book, is a document authored by PrD and updated every year detailing a series of guidelines and recommendations to be taken into account when designing Volvo machines. Considered an asset in the beginning, the PIB became a matter of controversy over the years. With no little derision, designers call it a “cookbook” because it reduces design to a recipe, a “racing stripe.” Essentially, the PIB establishes rules for colour schemes for different parts, iron mark applications, gauge positions, just to mention a couple of examples. The PIB was useful over time because it enabled PrD to create a consistent range of Volvo machines across the different product platforms. It plays the role of a contract between PPL and PrD whereby all Volvo machines need to be PIB compliant. It sets a minimum viable design standard of sorts. However, according to designers, the PIB paints the wrong picture of design and fails to address the way they work. When it comes to project decisions, the authority of PrD is limited to the PIB, and in situations where the discussions go beyond elements included in the document, PrD remains unable to defend what is at stake for them. In the 2013 PIB update, designers raised the issue in a discussion section at the end of the document. It includes sentences like the following:

Formally, Product Design is not represented in any project governance.

Product Design is not reporting to the strategic objectives of Volvo CE.

If the authority is relying only on documents like the PIB (...), Product Design has no more influence on decisions than any external consultancy.

If Product Design is more integrated in the governance and the strategic objectives, the role of the PIB might be of less importance.

Designers want PrD to be regarded as “strategic” and not merely “operational.” They would rather do away with the PIB altogether, because it disempowers them. It undermines their defence of the cause of “good design.” “If the design and the engineering are bad”, a designer explained to me, “then you just put a couple of stickers; it makes it compliant, but it doesn’t make it a good design.”

So the DD80 engineers followed the PIB’s recommendations. And ugly and misshapen though it might have been, the result was a non-problem to PPL since the machine was PIB compliant and had all the technical features. As far as PPL was concerned, the DD80 was premium material. This was hard to swallow for designers:

[Designer]: So it was a very difficult conversation because we were like, “yeah, it’s compliant to the PIB, but look, it doesn’t look right. The cables are visible, the cabin...” I was really trying to put forward some arguments but people were not resonating with it.

So the design director and his team were left with very little room for manoeuvre. They could not cut the frame or make any major changes because it would spike up project costs. So they simply worked with the graphics of the machine. They came up with a few proposals but this whole ordeal just did not “feel right.” So they came up with an idea to be able to “communicate with all those engineers that did not understand design.” Inspired on the PPL positioning tool—the scoring device—, they set out to find an objective way of articulating their stakes. They came up with their own “design feature positioning tool”, following PPL’s logic. They decided to measure what they called “effort spent on design.” Here, effort, for any

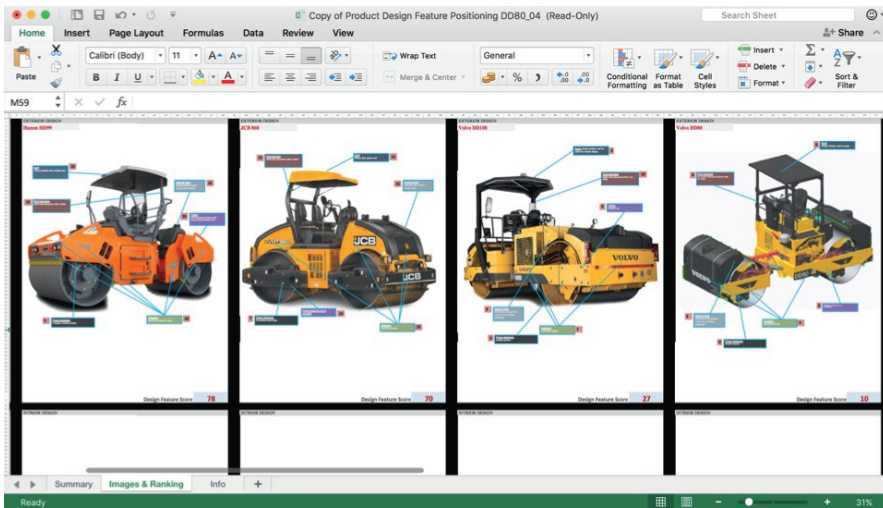
given design feature, is defined as the money spent (cost) in the techniques used in producing it. It's about the "complexity" of a feature. Generally, the more complex it is, the more costly it is to produce. To put it another way, to get top score one would have to do something really expensive and complex. The objective of this scoring device was to empirically verify how much competitors were willing to invest in design features, and contrast that with Volvo's commitment. The resulting scores were referred to as "empirical data."

The designers identified all the double drum asphalt compactors competing in the market. They gathered pictures of each one of them, and then lined them up. They looked at what they considered to be the most important and visually differentiating components of the machine, such as the roof, roof structure, hood and tank, frame, frame fasteners and graphics. They examined each one of these components or "feature areas," and identified the features that, in their eyes, drove cost and quality by analysing the materials and production techniques employed. They set a scale from 0 to 100, and assigned each feature area a weight relative to its importance. For instance, the frame of the machine is more important than the roof, because it is more visible. Therefore, the roof accounted for 15, the frame, 25, and so on. Then, they started to make scores for each component. For instance, a sturdy fibreglass roof ended up being a 15 (top score); a simple roto-moulded plastic roof, a 10; a painted metal roof, a 5. So in the end, each machine had an overall score in the 0-100 scale.

After performing the scoring exercise on the DD80 and its competitors, designers compared the results. Within this product category in the Indian market, only Volvo and the German competitor were "premium" brands. The latter's machine scored 90 in design features, and had previously scored 75 in the PPL positioning for other technical features. Volvo's DD80 had been designed to score around 90 in technical features in the PPL positioning, but, as it turned out, it only scored 15 in design features. It was lower than the mid-level Chinese-made machines in that market. Given the evidently off-putting appearance of the machine, this did not come as a surprise to the designers performing the scoring. It simply confirmed what was already obvious to them. The distinctions produced by the scores had already been predicted by designers. But the scoring device allowed them to define these distinctions as 'real' for others

to see, confirming and amplifying designers' initial expectation. Now they had "factual" evidence to make their case: numbers and graphs.

Based on these new data they had gathered, designers, as brand care-takers, came up with a scale or spectrum of new DD80 proposals. Each proposal featured gradual improvements in design feature scores. The higher the score in design features, the higher the costs. Of all the different proposals, only few were "acceptable machines" fulfilling the Volvo identity in the designers' eyes, scoring at least 60 in design features. They arranged the different proposals along with their respective scores in an Excel file. The idea was to highlight the contrast between the high-score proposals and the low-score ones, the "painted pigs" as it were, which, in their eyes, were not worthy of being considered "a Volvo."



Scoring Device

So the design director called for a new meeting with PPL managers. Two weeks had gone by since PPL managers had dismissed PrD's concerns as unimportant. In our interview, the design director summarised the meeting as follows:

[Designer]: I said our machine is a 15, and our [German] competitor, is a 90. Now everybody said, "Oh my God! We have a problem!" And nobody asked me how I came up with the figures, no one was interested in that. But once I had a figure, we had a problem.

The effect of the scores was striking among PPL managers. It is not that the evidence presented was suddenly incontestable; it is just that it became *comprehensible* to PPL managers. The value of designers' contribution emerged from these comparisons, which were framed in terms of how much of design is needed to compensate for the low scores vis-à-vis other premium competitors. Designers' contribution and value was made recognisable through this numerical comparison. For the first time, designers made their case with numbers. They mobilised the scoring device as a non-human actor to get their point across and convince other people. However, it was not incontestable, because designers were still adding cost, so their contribution was still at odds with the KPI (Key Performance Indicator) of the platform engineers, that is, decreasing product cost. After all, that was how these engineers got measured and how they got rewarded. Simply put, they did what they were paid to do: make the cheapest machine possible that meets all the technical specifications established by PPL. They had no incentive to change things. In this sense, a principled disagreement on what counts prevailed. But at least now, designers were able to express their stakes in a language that others understood.

There were conflicting values at play in this controversy, so this led to more negotiations. The high-score DD80 proposals suggested by designers had a competitive score in terms of design features in relation to other premium machines, but they represented a risk in terms of budget and timeline. The engineers were not pleased with this unforeseen setback, and the design director took a lot of heat for delaying the project. The anti-programme was strong. At some point, marketing people also became part of the conversation. The issue was that, though acknowledging the low scores in design as a problem, PPL managers still regarded one of the "painted pigs" as the best option and the less risky one at that. From a marketing vantage point, this machine was still competitive in the Indian market. For PPL managers and marketing people, the aim was to outperform the best-selling machine in that product category, an Indian mid-level asphalt compactor that scored 15 in design features and 68 in technical features. Clearly, as the figures showed, the "painted pig" could compete with that, they reckoned. Plus, the technical features derived from the PPL positioning matched those of the German competitor.

This way of thinking was completely out of line with what designers stood for. They made the argument that Volvo machines by definition must get a good design score because it is a premium brand. As things were standing at the time, DD80 was a machine not worthy of the Volvo brand. As far as designers were concerned, the German competitor's premium brand, was Volvo's competitor, and though similar in technical specifications, the "painted pigs" were largely inferior to the German competitor's compactor when it came to design features. So there were conflicting views of what the concern was as different values were enacted in the project negotiations.

Designers put together some slides in an attempt to get their point across. One slide consisted of a column chart. On the horizontal axis, they lined up all the double-drum asphalt compactors available in the Indian market which they had previously scored; among them, the first version of the DD80 that the engineers had come up with by themselves. On the vertical axis, there was a scale from 0 to 100, representing the feature index that results from the scoring. So for each machine there were two columns: one representing the design feature score and the other the PPL feature score. The aim was to show the sharp discrepancy between the two scores for the DD80. In the chart there were only two machines labeled as "premium" brands, Volvo and the German competitor. All the rest were "value" brands, that is, mid-level brands. The only sentence in the slide was: "Many Volvo products are low on design features even if the positioning is high."

The next slide stated: "There is no correlation between brand positioning, product positioning & design feature positioning". It included three positioning matrixes divided into three levels (premium, value, basic), and consisting of a vertical axis representing price and a horizontal axis that varied for each matrix (brand image, PPL positioning, design features). Using the scores, the logos of the companies were positioned in order to compare and see how consistent each company was to the brand positioning. The verdict at the bottom was conclusive: "DD80 India case study. Note that the position for Volvo varies in all three charts but most other competitors are consistent."

In the end, a compromise was settled. PPL managers agreed to go up a few steps in design features, though not enough for the machine to be in the realm of the "acceptable" for designers. It was still a "painted pig." Had PPL decided to go one step further in the scale of proposals set forth

by designers, it would have been a great victory for PrD. Regardless, this event set an important precedent because everyone understood why PrD was objecting. The design director told me, “It was nice in the end. We fought hard and, in the end, they recognised I was right.” The resistance payed off because it unsettled dominant values with new alternative articulations. In this sense, the scoring device translated the values upheld by designers into numbers, and thus became a spokesperson for PrD’s interests. If anything, it proved that designers’ values could “travel” farther if expressed in numbers.

The way designers went about scoring can be understood as a three-step process of calculation (Callon & Muniesa, 2005). The first step consists in detaching and sorting out the entities to be calculated, arranging them in a single space. In this case, designers aligned competing machine models next to each other on an Excel spreadsheet that served as calculative space. Next, each machine was scored and compared on the basis of a common operating principle. Designers were careful to be as consistent as possible in performing the scoring, lest they be accused of subjective bias. Then, once the scores were summed up, a result was extracted and framed as “evidence,” producing a new type of association between the machines in the spreadsheet, and also between designers and their negotiating counterparts. In this sense, the score results left the calculative space and travelled as part of the designers’ negotiations and justifications, reconfiguring the distribution of agency, as shown in the case of the DD80.

Building trustworthiness

This was a key turning point for designers at CE, and it also had an impact on the way PPL was carrying out product positioning efforts through their scoring device. The scoring of design—which was routinely performed in binary form by PPL—was now entrusted to the design team and their new “design feature positioning tool”. All of a sudden, PrD was now included in strategic efforts to position new products, and was now responsible for providing PPL with figures for “styling and good design”, which accounted for 5 percent of the overall score. Now designers had some degree of influence in the ‘centre of calculation.’ Given the positive reactions to the design scoring device and the leverage it provided in the DD80

negotiations, the design director decided to systematise the approach for exterior, interior and HMI/UX and promote its use in every project. In a certain sense, designers proved their trustworthiness by showing PPL that PrD could perform better judgements on design than PPL managers ever could. The design director reflected in our interview:

[Designer]: That's very good because now they really trust us to give them a number. In the past they were doing it. They thought that design could be judged by just about anybody. Now we showed them that we have a really stable, consistent way of doing it.

This was a step in the right direction. By assessing their stakes in this manner, designers managed to build trust. “The best thing about [the scoring device] is that they start trusting Product Design more”, said one designer. “We can do figures like engineers!”, he chuckled. However, designers wanted design to be more than just a minor factor in a long equation. What the design director had in mind was to get “styling and good design” out of PPL’s scoring device altogether. He feared that, being one variable among many others, “good design” could be drowned by other concerns. In this sense, there was a paradoxical dimension to the whole initiative; designers were both conforming to and resisting the ‘centre of calculation’ (Whittle & Mueller, 2010) in their attempt to influence decisions. The design director explained:

[Designer]: And what I am arguing for right now is to get design out of the measurement... We have some products where our engine is so much better than everybody else's, and we're scoring premium. So because the engine is so good, design can be zero... To me, it's unacceptable, because design should always hit the same level no matter what. Because design is what you see. It's what portrays your brand and what you experience. So what I'm trying to convince PPL to do—and not only PPL—is to take design out of the list of features. And design should be an absolute. So no matter how powerful our engine is or not, the look and feel of the machine should always be the same. Today, the 5 percent doesn't change much.

So the design team set out to fine-tune their scoring device, making it more consistent by constantly measuring the same components across product lines. They sought to standardise their valuation by means of the scoring

device. In order to build their case, they closely analysed more products and they put together a number of Powerpoint slide decks to explain their approach. In them they argued that “*design features are key to give a product brand identity and to safeguard the brand position.*” For the sake of transparency, they created explanatory visuals to show “how to measure design features” with steps and detailed examples. They also described what a “design feature” is in the following terms:

- Improves the overall product appearance
- Defines the product character
- Strengthens the brand ID
- May or may not be practical or functional
- Normally adds cost

A lot of the statements in these documents are presented as findings. For instance, they decided to perform the same scoring exercise with the Mercedes-Benz C-class interior over a period of 16 years. In one slide, they put forward their results by providing images of 4 car interiors and their respective scores for design features in components such as the steering wheel, instruments and dashboard. A column chart next to the images clearly shows that Mercedes-Benz considerably added more and more design features over time. For instance, in the 1999 model, the dashboard is a one-piece panel (score 5), whereas, in the 2015 model, the dashboard is a three-piece panel with colour split (score 18). The latter is much more costly and complex to produce.

Similarly, designers performed the scoring exercise on hospital beds—a B2B and less fashionable industry, more relatable to CE—and they found the same trend: design features increase over time. Their conclusion: “*In most industries companies are spending more money and attention on design.*” Following the same layout in another slide, they included a detailed analysis of the interior of a competitor’s 20-tonne excavator using the scores in order to drive their message home. They highlight the same conclusion: “*As a matter of fact in the construction equipment industry our competitors are spending more effort and money on design too.*”

In another slide, they also included sales figures to make their case even more compelling. They found that “*interestingly there is a correlation between the volume index and the design features.*” The volume index is a figure

calculated by PPL indicating sales volume. Designers observed that the best-selling machines in the industry get higher scores in design features. Following from there, one might argue that increasing investment in design boosts sales². However, designers felt uneasy claiming that. In fact, they showed a great deal of nuance in this regard:

[Designer]: So if we wanted to be simple, we could say, “Hey, you know what? Design sells.” In reality it is not like that. If you have a high volume, it allows you to stamp parts, to rotomould parts, so it’s a chicken-and-egg conundrum here. I don’t really know if the correlation is the result of it or if it is because of the correlation that it is like that.

[Designer]: This is important. So everybody says: “So if we add design features, we’re going to sell more”. That’s not really what we’re trying to say here. We are trying to say that the best-selling products have a lot.

Linking design feature scores to sales figures is far from an artless move though. Subtle though it may be, it unambiguously associates design with the business bottom line of profit and loss. By combining their scores with other metrics and expressing their stakes with charts and numbers, designers assembled a new sense of trustworthiness and business acumen. The scores helped them drive this conversation and build their case for design as a “strategic” actor for the business. In this sense, the scoring device had a self-promoting quality.

Designers demonstrated the existence of an upward business trend regarding design expenditures. They soundly argued that leading companies are investing more and more in design. “I think we have shown that that is actually the case”, one designer reflected in our interview. “In every product, if you look back a certain amount of time, you’re going to

²This is what organisations like the Design Management Institute (DMI) are constantly championing with initiatives like the Design Value Index, for instance (Rae, 2013; 2016; Westcott et al., 2013). The Harvard Business Review published an article about this initiative in 2014, titled “Design can drive exceptional returns for shareholders” (Rae, 2014).

see that they add more costs to design.” Designers reckoned this could spark a new predisposition towards their work. This was their own way of resisting the cost-saving anti-programme, a sort of demonstration to defy dominant conceptions of value. In the Powerpoint slides, their uneasiness was expressed in statements such as: “*Most Volvo products have a low content of design features and cost reduction activities will worsen the situation.*” In short, they problematised the import of cost considerations, unsettling dominant conceptions of value, and framed their worth in terms (numbers and charts) and media (Excel) familiar to managers and engineers.

[Designer]: We truly earned their respect. The moment we utilise Excel and other tools they’re familiar with, I think we earn their respect. In short, we stop speaking design and we start speaking engineer. The guys understand us and respect us.

Given the circumstances, full-blown managerialism became the tactic of choice. Numbers became the new rhetoric.

Speaking in numbers

Previously, designers’ efforts to convey their conception of value and their own idiosyncratic way of assessing performance were largely ineffective because they were too “abstract” and therefore not “actionable” for engineer types. This rendered PrD a regular if uninfluential participant in crucial project decisions. The apparent incommensurability and subjectivity of design had become an unbearable burden. The mark of their otherness was also their curse. Designers were used to performing benchmarking on their own terms and when conversations revolved around qualities like “good design” and “premiumness”, designers realised that their arguments were simply falling flat. For instance, explaining why a machine looks better than another often turned into vexing interactions, as was the case for the DD80. Designers recognised that qualitative attributes and distinctions were “design talk”, mostly irrelevant in the ordering of decisions and articulation of value. Further, the self-evident, explanatory power of “design imagery” could no longer be taken for granted by designers attempting to “sell” the value of their

work. The idea that good design speaks for itself became fallacious. As one designer told me:

[Designer]: To say that good design sells itself is bullshit. As designers, we think that an engineer will understand a mood board [an arrangement of images and text intended to explain a design concept]. He probably will not. We see things in pictures because we really have the eye for it, and we can really understand it. (...) We need to show things in a way they understand. That's a key aspect that we need to work with a lot.

The stakes of design had to be translated and legitimised in other terms. Thus the DD80 incident prompted them to rethink their benchmarking practices. They redefined the way of assessing their stakes in order to make them compelling to others and influence decision-making. Not surprisingly, in an engineering-driven culture preoccupied with cost, numbers seemed to speak louder than anything else. As Porter (1995, p. 20) points out, a decision made by the numbers has the appearance of being fair and impersonal, and thus numbers provide a way of making decisions without seeming to decide. In this manner, designers realised that, in order to influence and participate in the mechanised decision-making made possible by quantification, the value of their contribution had to be expressed in numbers, rather than words or visual materials. During an interview, one designer reflected on this change of approach:

[Designer]: In general, it's a lot about seeing that design can actually put some figures on the benchmarking. Because before we would come with all these pictures that we took for benchmarking, and we'd be like, "hey, look at Komatsu, it's really awesome!" And then it's just forgotten. When I started here, of course we did benchmarking, we showed it and everybody took a look at it. But from our perspective, what is premium and what is not was harder to pin down and sell at that time. Even if it's basically the same work we were doing, we're actually now putting some figures on it, and people start trusting it. It's an Excel file so it looks scientific (chuckles), and now it becomes something. But if it's a picture in a PowerPoint presentation, or a picture on a board, forget about it.

So it is not that they got rid of “impression” altogether. They just started expressing it and assessing it differently. They kept basically doing “the same work”, plus the scoring. Going to trade fairs became an utterly structured matter, when before it would be more unmethodical. When the scoring device was adopted, anyone who went to a fair had a specific task. The designer would be assigned a specific set of products and would need to take pictures of all design features, for her to be able to do the scoring exercise later on.

The scoring device provided designers with a new language, a new means to express the worth of their contribution. Instead of telling people about the strategic value of design, designers understood they had to show it in terms others could understand. They shifted their discourse from “we need more design” to “we need to score higher in design features.” In the following quote, a designer succinctly characterises this shift:

[Designer]: In the old days, [we] would tell [other departments], “Look, this machine doesn’t look or feel Volvo.” People then would look at us and would say, “You guys are a bunch of artists, good luck to you!” Now we say, “Hey, you know what? This machine is scoring 30 and everybody’s scoring 35.”

So numbers actually made a difference. When it came to negotiating and stabilising a programme of action, numbers held a stronger sway than words or images. Through quantification, designers were able to justify design decisions without appealing to abstract concepts like “impression”, “premiumness” or “good design.” More than a measure, quantification was a means of making their contribution *visible and intelligible*. As Espeland and Lom (2015, p. 19) point out, “visibility is often a motive for quantification.” The score results revealed new phenomena that could not previously be seen by other stakeholders. For instance, in a number of occasions engineers and managers were surprised by the low scores of some Volvo products, which, in turn, influenced project decisions. The act of scoring, as a form of evaluative measure, changed how people made sense of and reacted to situations (Espeland & Sauder, 2007).

As a mediating artefact, the scoring device looked “scientific,” so designers’ contribution was recognised; it became “something.” Here the difference was the translation of qualities into quantities, of “good design” into “design features scores.” Quantification, understood as the

production and communication of numbers, is a privileged form of authority, associated with ideals of objectivity, rationality, transparency and efficiency, which produces new forms of unity and comparability (Espeland & Lom, 2015; Espeland & Stevens, 2008). By expressing in numbers what is at stake for them, designers managed to make their contribution commensurate and thus comparable to other registers of value. Indeed, measurement techniques are a way of making (or making to seem) commensurate apparently separate worlds (Moor, 2012) by juxtaposing and relating disparate entities according to a common metric. Through the act of scoring, not only were designers making different machines commensurable with each other, but they were also making the value of design commensurable with other quantifiable considerations. That is to say, design was taken 'into account' and associated with other parameters—such as fuel efficiency—in the larger scheme of product-positioning strategies. One designer expressed this desire for commensurability:

[Designer]: How much should we invest in design? Do they get their money back? That's the main question at the end of the day. And if I were project manager, I would want to know that. For an engine, OK I can understand if I invest two million in man-hours, they are going to develop an engine that performs 2% more. I can measure that. I can check with the market. Is that acceptable? Is this a business case? Are we going to sell more? Blah, blah, blah. Design is not measurable and that's what we are trying to fix (chuckles and smiles).

Quantifying design can thus be viewed as an attempt to come to terms with a political reality in which claims made with quantitative measures hold more authority (Espeland & Stevens, 2008). In this manner, measuring design became a matter of political necessity in a wider context in which increasing demands for accountability and efficiency have given rise to a plethora of social measures to evaluate the performances of individuals and groups in organisations (Espeland & Sauder, 2007) as part of an explosion of audit practices in contemporary culture (Power, 1999).

Playing the political game

When there are different values at stake, the ensuing programme of action is the result of power struggles (Dussauge, Helgesson, & Lee, 2015a). So what ultimately comes to count as “strategic”, is an outcome of political battles (Whittle & Mueller, 2010). Designers understood they had to play the “political game”, for them to be able to shape in some way the strategic agenda. Thus, given the power of numbers in defining the value of business activities (Whittle & Mueller, 2010) and their status as a privileged form of representation in the language of strategy (Kornberger, 2013a), the design team chose to associate rather than dissociate with the established valuation regime. But their conforming to the logic of the ‘centre of calculation’ (Whittle & Mueller, 2010) was done as an act of political resistance. In other words, rather than accentuating their otherness, designers chose to adapt and imitate legitimate valuation practices to express and assess their stakes as part of a political battle in which they did not have the upper hand.

For PrD to be perceived as a legitimate, “serious department,” designers realised they needed to get better at using numbers and metrics, and demonstrate their business acumen. In other words, they embraced *managerialism* by adopting business language, including more formalised reporting and control mechanisms (Kornberger et al., 2011), and importing the calculative techniques used by managers and engineers. They started to craft a new identity for themselves. “We need to show that we are a serious department, delivering, having our shit together with budgeting and these types of things. The more we utilise their language, I think it helps us,” a designer explained in our interview. They were prompted by a desire to look rational and reliable. This new concern was addressed even in PowerPoint documents used to present the work of PrD to outsiders. One slide contains the following sentences:

- To enable the different activities we have a system to manage budget & resources of 200 projects.
- We established a standard cost of design based on the past 3 years of historical data.
- Given the project calendar we are establishing our burn rate in projects and we monitor our 200+ projects to avoid/explain discrepancies.

- We also forecast our traveling budget.

By showing their managerial credentials and by creating a scoring device inspired on PPL's, they associated themselves with the prevailing rationality of the organisation as a tactical move to enhance the recognition of the “strategic value” of their work. In short, designers acknowledged the power of numbers and their political affordances. Given the challenging environment, quantifying design was a matter of manoeuvring around an organisational realpolitik obsessed with management-by-measurement, as the following quotes show:

[Designer]: If we were at Apple or a car company where design is more integrated, we wouldn't need that. But here, we are so heavily an engineering organisation, so this is the stuff we need (chuckles).

[Designer]: We have used [the scoring device] for political reasons to anchor concepts and everything. So for us it's equally good to help and put a figure on it.

[Designer]: It's quantified! Graphs! Numbers! This company is run by engineers, and they love those things. So we can speak the right language.

[Designer]: That's the beauty of it: there is a number.

[Designer]: So it can be used in many different ways. As long as you have the numbers, everything is like: “oh, numbers!” (chuckles).

Designers recognised that numbers, as a preferred and pervasive means to enact all sorts of business goals and measurements, are powerful because they can effect change in ways that abstract concepts cannot. In the ‘age of strategy’ (Carter, 2013), numbers hold the most sway, and so convincing arguments need to be based on this privileged form of representation (Kornberger, 2013a). In the organisational life of Volvo Group, numbers are “actionable” because they represent “facts,” not opinions or subjective “values.” Below, a designer reflects on how the scoring device became a mediating agency in their interactions with engineers and marketers.

[Designer]: Actually putting a value to design in numbers, not because it's totally correct, but just for something that other people

can do some tangible stuff with. Otherwise, it's still fluffy. If they see a number, it's 40! OK, it's 40! Then if it's 40, 50 or 45 and the competitor is 65 or 85, it doesn't really matter, it shows that we're here and they're here. Everybody needs to get their things together to go in the right direction.

Interestingly, the most important quality of the scoring device is not the presumption that it accurately depicts a reality that exists beyond it, but rather its mediating effects. The use of the scoring device was pragmatic, not essentialist (see Doganova & Eyquem-Renault, 2009). Thus the main concern of designers was not the issue of the truthfulness of numbers as precise representations, but the capacity of the scoring device, as legitimising mechanism, to translate their interests and enrol and mobilise other actors. Therefore, the productivity of the device depended less on "actors' belief in its objectivity, but rather on its capacity to identify opportunities for agency" (Moor & Lury, 2011, p. 452). The device can thus be identified as a form of 'sociocalculation' (Vormbusch, 2008) concerned as much about shaping the 'socio' as it is about 'calculation' (Moor & Lury, 2011).

In a certain sense, it was designers' very own attempt at bridging the gap between facts and values. The device made designers' "intangibles" such as "values and emotions" tangible and factual through numerical expression. It was almost as if they had no other choice but to speak about design matter-of-factly to convincingly prove themselves to others. As it turned out, when abstract qualities fell short, quantification prevailed as a robust 'grammar' of justification in controversial situations. In this manner, the scoring device, as a mediating artefact, started coordinating action between designers and other stakeholders, like engineers or marketers. One designer reflected on this:

[Designer]: The more we put figures or numbers on it, it's something you can discuss with management. Otherwise, there is nothing tangible for them to give feedback on, really. Now at least we said, we're 40 and we need to be 120, and [this competitor] is 80. So we need to do something about it... Then they say, "Oh, but we're really 60 and [this competitor] is really 80." But at least we can talk about up or down, and we get a general picture that we're behind. It defines a common way forward.

The scoring device became a “live document” around which people could have discussions. For the sake of transparency, designers even invited people to perform the scoring themselves. If needed, the scoring device could be put at other people’s disposal; they could tinker with it, provide new input, and do their own scoring. Designers were quite confident about the scoring logic afforded by the device. However, the risk of misrepresentation and distortion was ever-present. In fact, the scores were contested sometimes leading to further negotiations before a compromise could be settled. Yet the scoring device was at the centre of these negotiations and became the mediating platform for many discussions concerning design decisions. For instance, another designer pointed out how the scoring device mediated his interactions with management, when previously he struggled to get his message across.

[Designer]: This helps management a lot to understand. You know, by just having a graph (chuckles). It’s simplified, but if they have any questions they can go in here. They can start questioning our things and come with their input. That’s fine. We are not saying we are the only word. But this is how *we* think how good [these competitors] are. Then it’s easier to talk about it. Before, we may have not ever shown that, and you needed to argue why and have all those discussions. Now we just say “take a look at this one.” And they’re like “alright, do that.” And we build trust.

The device translated design value into numbers, thus allowing designers to enact and displace their values by giving them leverage in negotiations. For instance, one designer pointed out that the device allowed them to be more confident in their negotiations with managers and engineers, even if their suggestions entailed additional costs. Before having the device, when faced with opposing opinions, designers would become confused and hesitant about their own work. The device enabled them to build trust and self-trust and to construct and clarify their arguments for themselves and others. However, it would be misleading to characterise the device as a passive transporter of stabilised design values. The use of the device modified and re-ordered what designers considered valuable. For instance, “selling design” by making it comprehensible to other communities of practice became a prized ability among designers following the deployment of the device. The managerialist turn became enacted and realised through the device as the result of a continuous struggle. That is

to say, designers' conception of value was ultimately shaped by the scoring device. In this sense, the device had agency of its own, because it was not a passive *intermediary* transporting meaning without transformation; rather, it was a *mediator* that translated and modified meaning (see Latour, 2005, p. 39).

Scoring as provocation

Designers thus tested and tasted the power of numbers, but they were also very much aware of the limitations inherent to the approach. Some designers felt that a focus on quantification might send the wrong signals of what constitutes “good design.” Their argument was that “complexity” and “cost” were not proper criteria to make judgements on whether a certain design is good or bad. They contended that people can use really expensive techniques and still do a “bad design.” So the problem was that the scoring device made “cost” the gist of the case for “good design.” But what is left out of the picture when design gets valued on those terms? What about—more elusive, yet fundamental—conceptions of value upheld by designers, such as aesthetics?

The design director understood these concerns and made efforts to reassure his uneasy colleagues—who had seemingly taken a rather essentialist approach to interpreting what the scoring device was all about. At PrD, designers knew that, no matter how much money is invested in design during a project, “if the designers are worthless it’s going to look like shit anyhow, right?”, as one designer told me. So this approach did raise some eyebrows. “Of course we know”, the design director was careful to clarify, “cost is not the ultimate measure of good design, but it’s something we can compare, right?”

In the Powerpoint slide utilised to explain the scoring device to external audiences, they included an asterisk (*) pointing to a small-letter annotation at the bottom of the slide that states: “Cost is not the ultimate measure of a good design but it is interesting to see our position compared to our competitors.” As Espeland and Lom (2015, p. 19) point out, “comparison is a specific kind of visibility that creates sameness, unity, and distinction simultaneously.” So cost was the gateway to making design work visible to others in a way it had never been before, by comparing design features scores. In this manner, the design director defended the focus on cost as

basis to score design features. He reminded everyone that whenever the scoring device was used, it was measuring “the effort that the company was willing to make on behalf of design,” not “design execution” in itself. To reassure his colleagues, he contended that they were not really scoring design. He simply wanted to be pragmatic and provocative. In an interview, he was rather explicit in this regard: “We still call it ‘scoring design’, and I don’t think it’s a problem because we still want to be extremely provocative.”

In the Powerpoint slide, they also added: “*Design execution is not included since it is subjective. Product Design is focusing on measuring design features with empirical data to understand the effort spent on design by Volvo and our competitors*”. So, in a sense, “good design” depended on two variables: the “effort spent on design” (objective)—that is, how much a company is willing to invest in design—and “design execution” (subjective)—that is, how good the designers were at their craft, taking into account the resources available. So the scoring device focused on “effort spent” because, to them, it was objectively measurable. And “design execution” was not included, because it was more subjective and elusive. However, the separation between objective and subjective criteria of worth in the scoring of design features was not as straightforward as they portrayed it in the Powerpoint slides, as we shall see in the following section.

Repressing style and aesthetics

The scoring device aimed at transcending subjective evaluations of design work when dealing with people external to PrD. Quantification fitted seemingly incommensurable design qualities into a commensurate framework of numbers and metrics, enabling a sense of “objectivity” and a common language for expressing and defending different conceptions of value. Some designers alluded to this in our interviews:

[Designer]: We have figures, right? So now it’s not about what I think or what you think. It’s about the fact that this machine sucks and this one is better. We can really have an adult conversation here. And we can disagree but now everybody understands why Product Design objects.

[Designer]: ...and I can play the game because all of a sudden I can explain that it's a 25 and this one is a 70. And it's not about "Oh yeah, I think this one looks better or the other one looks better."

By focusing on the "effort spent" as a "factual" criterion, the aesthetic dimension of design was rendered opaque. Indeed, quantification is a subversive technology which makes certain things obvious and others obscure (Espeland & Lom, 2015). The apparent subjectivity of "design execution" was purposefully concealed; it was a problem to be avoided through the use of the scoring device. In this manner, the scoring device may be seen as a performative measurement technique which highlights some qualities and leaves others in the background (Moor, 2012). The following quote is quite telling in this regard. Using the example of cars, the design director explained:

[Designer]: If you look at a car from 15 years ago, and you compare it to the same category of car today, the interior will look a lot more premium today than it looked 15 years ago. For us designers, it's difficult to explain it. So yeah, the car looks better. Why? Because the stance of the IP [Instrument Panel] looks better, it looks thinner... You start expressing that, and you can express it with a designer language, but then the engineers in front of you, or in my case, my manager will tell me, "Yes, so what? What do you want me to do?" I really needed to give him something actionable. So now it's very good, now I tell him, "Everybody's doing more parts that are moulded, they're doing more..." I really give him examples of parts where more effort has been put in. In a way, I give him a solution to solve a problem. And I give him something that he can defend in front of his management as well.

Repressing aesthetic discourse was a means for designers to avoid communication problems when articulating their stakes. Arguments based on aesthetics did not amount to defensible evidence for both PrD and its potential allies. This repression of aesthetic discourse was justified by its apparent unintelligibility and that of its accompanying artefacts, such as mood boards. The design director argued that using "design language" to account for the value of something—in this case, a car interior—was simply ungraspable to engineers. PrD had to do something

different in order to advance their concern for “good design.” The design director also added:

[Designer]: Because speaking of stance, and lines, and dynamics, I mean, it's great, we can do it in the studio all day long and give each other critiques on how this machine looks more dynamic than the other and this one has more direction than the other and this one has a better stance, but we tell that to an engineer and we're speaking gibberish to him. Whereas if we tell him, “Hey, you know what? This machine has plastic doors.” And plastic doors in some cases they allow you to create some lines that are a bit more dynamic. So it's just the tools that we need to be able to do a good design.

Typically, as he points out, design language adopts idiosyncratic terms, such as “looks better”, “looks thinner”, “stance”, “direction”, “dynamics”, “lines”, which allude to aesthetic qualities. Speaking about design to outsiders in this fashion then became something to be avoided. Designers realised that “impression”, “look and feel” and other criteria of worth that were part of their daily vernacular, were to be kept to themselves for the sake of being taken seriously.

However, in practice, though somewhat hidden under the opaque category of “design execution”, these “subjective” criteria still played a role when designers performed the scoring. They were not able to bracket off the question of aesthetics altogether in their calculations. For instance, they used the scores to prove that a machine “looks better” than another. In this sense, the scores were *rationalised aesthetic demonstrations*. Also, when scoring, the weight that they assigned to specific components was greatly dependent on its impact on the impression of the overall design. So the objective/subjective divide was not as sharp as they had characterised it in their Powerpoint slides when they purportedly excluded “design execution” for being “subjective.”

Thus designers' realisation that they needed to express and assess their stakes “objectively” in order to “sell” design and demonstrate their strategic value was accompanied by the repression of aesthetic discourse. Along with it came an impetus to dissociate design from artistic connotations—at least when it came to presenting themselves to the outside world. This marked an important change of approach for designers who, as a community of practice, prided themselves about their ‘otherness’ and their sense of being an odd community of ‘creatives’ in this

large organisation. Now, rather than affirming their difference they decided to downplay it for the sake of finding commonplaces to generate more recognition for their work.

So when presenting themselves to the outside world—that is, outside of PrD—designers made conscious efforts to avoid any misleading artistic associations with their work. They wanted to be associated with engineering or scientific identities, rather than artistic ones, as the following quotes illustrate:

[Designer]: My take is to say: “Hey guys, you are engineers, we also are engineers... Our thing is that we are engineers who understand design very well and what it does to people...” I want to speak their language, you see. When we present an Excel sheet with figures and numbers and we tell them that 70 is better than 30, they understand and we speak their language. I want to do that more and more... [In the past] those guys took us for artists.

[Designer]: We’re not those artists anymore that are waking up in the morning and one day with a good mood we say it’s good, and one day with a bad mood we say it’s not good. We’re consistent. We’re scientists. We understand a science that they don’t understand. I think it created a lot of respect for us.

[Designer]: They see we work more than just half-drunk artists that do nice sketches.

Artistic associations were thus misleading and disserving in their quest to be recognised as strategic actors. Even visionary projects became double-edged swords. They are a great outlet for designers to “fantasise” and unleash their artistic skills in creative ways, keeping them engaged and focused. At the same time, this work feeds the idea that designers are simply skilful artists working on abstract futuristic visions. For instance, when I asked a designer about the impact of the GaiaX project—a futuristic compact excavator which generated positive press exposure—on the recognition of design within the company, he expressed some ambivalence about it.

[Designer]: It has definitely been more positive than negative. But it doesn’t mean that now everybody knows design thinking and loves

what we do. It could also backfire. “You guys are just thinking about crazy futuristic things”, which is what people often think about design. But we have this huge production leg for what’s going on right now and we deliver lots of projects. And that’s actually 95 percent of our work. But I think that’s a common idea if you know nothing about design and you’re thinking about a new machine, you might think that engineers design it, and maybe designers only sketch futuristic stuff. But that’s not really case.

In another instance, during a conversation with a designer, we started talking about a conference that he had recently attended. He told me about this speaker who mentioned this experiment conducted by some cognitive scientists. They were looking at aesthetics in Human-Computer Interaction. In the experiment, the scientists put two different interface designs in front of their subjects. The interfaces were functionally identical, but one was more stylish than the other. The stylish interface was not only perceived as beautiful but was also consistently rated as more usable than the other one by the subjects in the study. It was an argument for the usefulness of beauty. I started joking, “You should use that around here to get buy-in.” He laughed, “We can’t sell that... We will look like monkeys!” He pointed out that if they engaged people talking about ‘beauty’ like that, “They’ll be like, screw you!”

Summary

This chapter describes in detail how designers went about scoring design features in an effort to gain leverage in decision-making situations in which cost stood as the predominant principle of evaluation. Designers were constantly subjected to an imperative of justification (Boltanski & Thévenot, 1999) which led them to find more compelling ways of expressing and assessing their concerns. The scoring device started as a small initiative, and became an important form of agency in the recognition and advancement of PrD’s agenda. It became a *valuation device* with important mediating effects; it made design work visible and intelligible, coordinating action between designers and other actors. Numbers became the new rhetoric, a specific kind of political aestheticization. Here, designers did not display their usual aesthetic skills,

and began to systematically repress aesthetic discourse. They embraced managerialism and decided to adapt to the established valuation regime of quantities and metrics. But this adaptation can also be viewed as an act of resistance aimed at reversing their peripheral position.

The findings show that the making of 'strategicness' depended on the articulation of values in numerical terms. In the current 'performative condition' of organisational life (Muniesa, 2017a), there is an infatuation with numbers and the ideal of objectivity (T. M. Porter, 1995). Designers prepared valuations as political acts to consolidate their 'strategicness.' Instead of setting up rhetorical demonstrations, designers set up mathematical demonstrations. The "added value" of design in the context described in this chapter was thus made, provoked and assembled by actors in practice. The case shows that the valorisation of design does not primarily rest on the rhetorical abilities of designers but in the material arrangements and systems of measurement that they mobilise. The case also shows that values are not fixed but mutable, and can undergo significant changes during a controversy (Dussauge, Helgesson, & Lee, 2015a). Indeed, after the managerialist turn, designers started enacting and displacing their values differently, also adopting new ones. For instance, as the increasing focus on numbers materialised at PrD, a good designer came to be not only one who reframes human needs and masters visualisation techniques but one who is also able to compellingly sell design and make it understandable to the rest of the organisation.

6

GO LOCAL—OR HOW TO COPE AND WORK FROM THE ‘BOTTOM UP’

Weaving webs of soft contracts

Making design valuable and exploring new territories was work, hard work. As we have seen, when design managers set out to demonstrate the relevance of their expertise and the worth of their would-be strategy idea to senior executives, they got entangled into power struggles and political battles. They sought to enrol a “big cheese” but came back empty handed. The pushback experience was a trial of strength and served as a reality check; it awakened them to the reality of their circumstances. Building the case for new “mandates” required more than simply presenting a strategy idea with the help of external consultants. To avoid repeating this mistake, they decided to shift their approach and make themselves indispensable to middle managers, as one design manager explained:

[Designer]: If you work at Pepsicola and the CEO understands that design and design thinking is important and they bring you in and they bring you the full mandate, I mean, that’s amazing. But there are like 5 CEO’s that understand that in the world, right? If you work in a company like Volvo then you have to deliver at the low level and

you have to build from the bottom up, instead from top down. That's what we need to do here.

The truth of the matter is that they had already been working in this manner all along, slowly expanding and building legitimacy from the bottom up. It was just that at some point they decided to plot a strategic intervention. They reckoned that a top-down executive decision would make things easier for them; it would provide grounds to solidify their worth and legitimacy; and it would make design the official “catalyst” to realise Volvo Group’s vision to become the world leader in sustainable transport solutions. The would-be strategy carried with it the promise of rapid institutionalisation. Alas, the “big cheese” was unimpressed and did not go along for the ride. In order to be recognised, designers relentlessly performed valuations and staged demonstrations. In the design-unfriendly landscape of CE, designers considered that traditional product design was unrecognised and undervalued, so they started using scoring devices to articulate their stakes in numerical terms to make them compelling to engineers. They set out to become legitimate strategic players in an environment where they were mostly regarded as “cost-adding troublemakers.” To be regarded as legitimate *product* designers was already hard; to be regarded as legitimate *service* designers proved even harder.

Interestingly, the CE industry seemed ripe for the adoption of service design approaches. The digitalisation of construction machines opened avenues for the creation of innovative value propositions. The post-industrialisation of the CE industry started gaining new speed. Within PrD, these opportunities were hard to overlook. These changes were already reflected in daily design work. Projects involving some kind of digital component started multiplying. It was in 2011 when design managers at PrD decided to form a distinct HMI/UX design capability for Volvo CE. The team started with two designers and grew consistently over time; only four years later, in 2015, there were over 12 designers working in this area.

Volvo CE’s HMI/UX team was formed to ensure brand consistency and holistic on-board user experiences for machine operators. Their mandate included physical controls, sound, visual design and logic of screen interaction. However, in the early days, designers were simply “pushing pixels onto the screen”, as one designer told me. That is, they were simply providing the graphics for already-engineered systems. Someone would give them requirements and they would then use design

software, such as Photoshop and Illustrator, to create graphical user interfaces fitting those requirements. But then, in 2012, Volvo CE started to work on a project that involved an Android-based electronic control system and mobile applications. One of the designers had experience in mobile UX, so PrD got green light to work on the project from a broader UX perspective. In this manner, the HMI-UX team started doing more work than simply translating requirements into graphical interfaces. They were now able to work on the logic of interaction more broadly and further integrate the user perspective.

The project took off but had a rough start because designers and developers did not work on the same building. Designers would send the graphics to the developers writing the code for the system but there were many inefficiencies due to the geographical separation and the complexity of the requirements. Designers had to go in and out of the studio to hold physical meetings with the developers and clear up misunderstandings, which delayed the project and made it more costly. By the turn of the year, in early 2013, PrD got green light to hire front-end developers to work at the studio in an attempt to make the work more efficient. UX design and front-end development would now take place at PrD, whereas the integration with the back-end of the system was carried out by the other team of developers. By having in-house front-end developers, designers had more control over the user experience. In this manner, the HMI-UX team started expanding the scope of its work.

However, this expansion was not formal. For instance, PrD's mandate around UX did not include front-end development. Volvo Group—as most large manufacturers—has institutionalised processes aimed at guiding different kinds of developments, but designers decided to operate outside of regular processes through what they dubbed as “soft contracts”—a widely used term among UX designers. They considered both the upsides and downsides of the situation. On the one hand, this allowed them to actually deliver, operating in a more “agile way.” But on the other hand, these workarounds were often contested, providing fodder for controversies with other organisational groups. “We are jumping many of these structures”, one designer told me, “so it's understandable that in some parts of the company this is seen as a problem.” Yet, designers felt like they did not have much choice; it was either this guerilla-like approach or complete irrelevancy. If they wanted to operate as a form of “organised heresy” (Kornberger et al., 2011), that is, as producers of difference,

designers had to bypass established structures or else become inconsequential technicians.

Ultimately, the more they delivered the more doors were opened for them to work in this broader UX area and the more fruitful relationships they established across the organisation. Volvo Intelligent Compaction (IC) was such a project. It had the right characteristics: high visibility and great UX potential. The plan was to introduce IC at *World of Asphalt* in Baltimore, a trade show where manufacturers present their latest innovations. IC is an Android-based system that measures density in real time for more efficient asphalt compaction. At the end of the project, marketing people commissioned a launch video for the show to an external supplier. Designers prepared all the visual material which was sent to the marketing people. The video was supposed to be available on YouTube the day of the big launch. To the designers' surprise, the resulting movie was simply wrong¹. The imagery used did not correspond to the work they had delivered. The graphics were dull and basic. Designers attributed this error to bureaucratic processes and the lack of PrD involvement. Apparently, the marketing department had contracts with an external supplier when it came to the making of videos. But it was not entirely clear how they ought to work with design content. The external video makers made their own assumptions and the result was near appalling.

Designers were ill at ease with the situation so they decided to make a movie themselves, using PrD money. They worried that the circulation of the wrong movie would taint PrD's reputation, so they secured final cut privilege for themselves. The new movie featured the right design, highlighting the many interactive features². Designers decided that the cost of making a new movie in monetary terms was lower than the risk of circulating a wrong movie that might reflect badly on them. Marketing people loved the new movie, and PrD proved to be a trusted ally. "Now

¹Volvo Construction Equipment. *Revolutionizing the Paving Industry: Volvo Intelligent Compaction with Density Direct* (2015, March 17). Retrieved from: <https://www.youtube.com/watch?v=gYu8T-wVQbA>

²Volvo Construction Equipment. *Revolutionizing the Paving Industry: Volvo Intelligent Compaction with Density Direct* (2015, June 5). Retrieved from: <https://www.youtube.com/watch?v=ArsxtaBEQtI>

we're in the marketing process with those guys a lot", one designer told me. After this incident, PrD started to be included in decision-making forums when it came to marketing communication at CE, bestowing upon them a sense of legitimacy. As one designer explained, "We managed to get into the management team where everything happens, and then we could elevate and stop stuff."

As the IC case shows, the visual traces of projects were key for PrD to establish the reputation underpinning these "soft contracts." Their network of associations was not composed by materials in the form of institutionalised processes—that is, formal technical inscriptions (Callon, 1990; Latour, 1986b)—but was flimsily held together by materials in the form of design artefacts which were circulated through internal portals, e-mails, live demonstrations, YouTube videos, or PowerPoint documents. The circulation of these materials was key in the composition of "soft contracts." Their circulation improved PrD's prospects of getting new projects whenever people became swayed by them. These materials helped designers constitute a visually-appealing portfolio of projects that was mobilised every time they needed to pitch or negotiate involvement in new projects.

[Designer]: Projects are a question of internal word of mouth. People say, "There's going to be a project about machine control systems." We then go and knock on the door of the people in charge of the project, "We did Intelligent Compaction, we did [this other project], we'd like to participate in this project." It's a sales process where we need to show a portfolio of what we have done, where we've done it, showing our experience.

So their involvement was highly dependent upon informal relationships or "soft contracts." As design work expanded, the way designers worked with other functions largely relied on verbal agreements and personal connections. Designers mentioned this during our interviews,

[Designer]: All the processes we have established are not written in any process document. We have done it with soft contracts, all the things we've been delivering in the last few years.

[Designer]: It's not really a set process, that you *need* to call Product Design. But [...] having the right people, they know us, and we deliver [...] That's the case with most of our deliverables actually.

Designers built trust one project at a time, and were able to reach agreements with people that somehow saw the value of design and were willing—sometimes eagerly, often reluctantly—to take a gamble on them. Against all odds, designers managed to assemble a reputation by consistently delivering design work for on-board experiences. The expansion of their scope of work was established through these “soft contracts.” However, designers recognised the risk of operating in this manner. They were cognisant of the fragility of the network of associations they had been working so hard to compose. “There’s a big risk, because you build up a lot of personal connections”, one designer explained. “It’s always a go or no go in development.”

At any given moment, their role could be contested and they could be easily kicked out of projects. What is more, a key connection leaving or a change in leadership within a project could severely jeopardise PrD’s standing since their involvement was not officially anchored in development processes at the company. Yet, in their view, this was the only way to go. “It’s all based on soft contracts which is kind of funny”, chuckled one designer. “It’s very dangerous if someone leaves but we have no choice.”

Designers knew all too well that they needed to make themselves indispensable before they could formally be inscribed in development processes that would make their involvement a formal matter. As one designer explained,

[Designer]: It’s probably not going to happen in 3 years that we establish a process in paper that goes out to any process thing so they see, “you should call Product Design”. It’s more like you have the right manager, he knows that guy, he heard about that good project, so of course they call Product Design (chuckles). Soft contracts, that’s how we work so far. It’s just rumours of good projects.

The hard work eventually paid off, and UX designers managed to become strategic players when it came to on-board developments. They succeeded at making themselves indispensable, and their work started to make

ripples in some sectors of the organisation. Their legitimation was consolidated in new inscriptions. Now they were included in the accounting system as part of the “standard cost of design”, which meant that product office managers could better estimate HMI/UX design cost and calculate it in their budgets. Designers even managed to formally inscribe or “anchor” a HMI process stating when PrD should be called to intervene in on-board developments. Generally speaking, a process is inscribed when it appears in the Volvo Group Management System, a web platform which provides information on the organisational structure, processes, roles and controlling documents for different types of developments. This tool allows employees to visualise processes and identify stakeholders. Process diagrams are clickable and each click unfolds new information. Some of these processes can be vague though. For instance, a process might establish that during the pre-study, requirements need to be gathered from key stakeholders, but might fail to define who the key stakeholders actually are. Designers were careful to include as many details as possible in their process inscription, as one of them explained,

[Designer]: Our HMI process was actually made quite detailed, so it says exactly when we are delivering something to [the engineering department] and vice versa. But it’s not a given that even if the process is anchored everybody knows key responsibilities for how the process should work in detail. Because you could still make your own assumptions depending on your context.

The inscription of this HMI process was considered a step forward but its stabilising effects were limited. It did not always act as a loyal mediator. During projects, some responsibilities were likely to be challenged and negotiated. Plus, this was only an agreement between PrD and one engineering department. Their involvement in other areas such as marketing was still up for negotiation.

Nonetheless, the efforts and rising success of UX designers did not go unnoticed. They rose in standing and visibility in a short period from 2011 to 2015. One design manager explained the impact of the HMI/UX team,

[Design manager]: [They] help us a lot on the design side too. They managed to make themselves indispensable really fast. Because the

truth is, if tomorrow Product Design were to disappear, if all product designers were gone, there are still engineers who know how to make exteriors, engineers who know how to make cabs. The world keeps spinning. But if tomorrow UX designers were gone, we're stuck. No one else knows how to do their job.

As UX designers started working more and more from a broad UX perspective, the need to integrate on-board and off-board experiences quickly became apparent. The fragmentation they observed had an undermining effect on the overall brand experience, which was unacceptable to them. So they took it upon themselves to do something about it, and became interested in expanding the scope of design work into off-board services.

The long, hassle-ridden journey of building up legitimacy in the on-board HMI/UX space at Volvo CE prompted design managers to try a different approach in their resolve to expand PrD's influence into new contexts. Ultimately, as previously shown, this is what led PrD to come up with the would-be "Product Design and Service Design Integration Strategy", in an attempt to persuade upper management about the relevance of design practice for the realisation of Volvo's vision to become a solution-oriented company. Maybe now they had enough legitimacy capital to cash in some mandates, they reckoned. But this interventionist move proved ill-fated. Yet, despite not being able to enrol senior executives to support their would-be strategy idea, design managers saw great opportunities to effect some change from the bottom up. They decided to do what they had already been doing for the on-board side, only harder: sell design and hustle their way into projects.

Selling design

It is mid-April 2015 in Stockholm. The crowd in Chinateatern applauds as the speaker takes the stage.

Good morning, thank you for coming! Where are my designers at? (The audience cheers.) That was lame. Where are my designers at? (The audience cheers grow louder.) Stand up, you're vikings dammit! Where are my designers at? (Some audience members

stand.) Come on, let's do it! I am a designer and I am here to help you because we share a craft and I care about that craft. It is an important craft, an honourable craft, and a craft that when practiced right can mean a better life for the people who come in contact with our work. So it's worth practicing right and I know all of you feel the same way or you wouldn't be here. I have some incredibly bad news for you though, you have been lied to. You have been deceived. You have been told fictions, falsehoods. You have been sold a bill of goods. You, my dear brothers and sisters, have been bamboozled. Your design professor told you that if you just followed good design basics, if you just kept it simple, if you made it Swiss enough, if you kept it to a tight little grid, people couldn't help but be swayed by it. He was wrong. The hippies from Finland told you that if you just lovingly crafted it, if you stayed true to yourself, if you meant it more than anyone else did, if you just poured your heart into it, then no one could not be swayed by how pure your heart light was. And that doing what you love was the utmost calling a designer could aspire to. And they were full of shit. (Audience laughs.) Your design school taught you that if you could talk about your work with other designers and formally critique it with other people who share your craft that would be enough. But designing for designers is bullshit. (Audience laughs.) They're releasing designers into the world that don't know how to earn a living. Staying alive is not a soft skill. (Audience laughs.) They stole your money. And their sin, maybe the biggest sin of all: your design education was terrible. You were told that good design sells itself. You were told that good things come to those who wait. You were told that quality rises to the top. You were told that making was enough, that your place was in front of a screen. They labeled you a "creative." They gave you a panda hat, and they told you to go find inspiration. They fucked with you. Does good design sell itself? (Suspensive silence.) Fundamentally no, it does not. Selling design is a core design skill.

The excerpt above is from a talk delivered by Mike Monteiro³, a California-based designer and author known for his outspoken style. His talk made a strong impression on Volvo CE designers when they attended *From Business to Buttons*, Scandinavia’s biggest “user experience, service design and innovation conference.” The gathering attracts designers, strategists and researchers working across different industries. It is “the meeting place for everyone who wants hands-on advice on how to generate business value by creating great user experiences”, according to the organisers. The description of Monteiro’s talk reads: “The hardest part of design is presenting work. (...) Work that can’t be sold is as ineffective as the designer who can’t sell it. Presenting is a core design skill.” If selling design had been increasingly emphasised following the managerialist turn at Volvo CE, Monteiro’s claims were decidedly picked up as a manifesto of sorts, a battle cry. They started to make more conscientious efforts to hone their design-selling skills and their abilities to justify their actions. “Like Mike Monteiro says, you can’t think that good design sells itself”, one designer told me, “you need to tell that business manager why, why, why.”

As previously shown, designers at Volvo CE, faced the challenge of articulating and assessing their stakes in product development projects. They struggled to justify design decisions concerning the product⁴—their legitimate playing field—and thus came up with and mobilised the scoring device to advance their agenda. Selling traditional product design was already hard, but selling service design proved even harder. Designers started journeying piecemeal across this new playing field as they engaged more and more with digital design work. And so the newfound success of the HMI/UX team paved the way for making the case for service design. So even after the debacle of the would-be strategy, designers remained firm in their conviction to prove their worth in service-related projects.

[Designer]: So we’ve managed to go from a very graphic, back in the day doing symbols to now actually working with high business

³Monteiro, M. *Mike Monteiro at From Business to Buttons 2015* (2015, April 27). Retrieved from: <https://www.youtube.com/watch?v=niLVvoxhs5g>

⁴See handrails example in section XX in Ch. 5

development departments. There we need to defend service design, that we should do service design. And that's the most difficult challenge we've been in so far because then you actually need to tell why it's important that Product Design do service design, compared to a business department. There we try to sell in the material we created that without the link into the UX, the user experience design, a service is broken. Service design and user experience design they're all the same.

As described above, the challenge consisted in justifying their presence in a context usually populated by business managers, not designers, never mind ones coming from a department called Product Design. Here, they were not simply defending their stakes in a project controversy—as was the case with the scoring device—; rather, they were justifying whether they even had stakes at all. It was not a matter of disagreement on what the concern was during a project; it was a matter of justifying their involvement in the first place. That is why designers characterised it as “the most difficult challenge” yet.

Their tactic became to equate the UX design work they had already been doing with service design, framing themselves as an obligatory passage point in the development of services. The material mentioned by the designer in the above quote was a slide deck that they utilised whenever they were seeking involvement in a project that was beyond their traditional on-board scope; it was a sales pitch and a justification for “Service Design thinking.” They set out to do the pitch in five slides. It had to be “sharp”, so they kept it short.

The first slide is rich in symbolism. An iceberg image. The tip of the iceberg is juxtaposed to a smartphone app. The unseen, underwater portion overlaps with flow diagrams and service blueprints. The metaphor illustrates what in service design is known as the the front-office and the back-office, the point being that design work spans both—not just the graphic layer commonly associated with design work. The text reads, “To guarantee a good Experience/Service it is crucial to have a UX designer in all the steps of the process.” The message is that experience in a service is crucial; therefore, there is an absolute need to involve UX designers, the craftsmen of experiences.

The second slide alludes to the growing trend of business & IT consulting firms (e.g. McKinsey & Co, Accenture, Deloitte) acquiring

design agencies (e.g. Veryday, Fjord, Mobiento) globally (see Maeda, Xu, Gilboa, Sayarath, & Kabba, 2017). It reads, “It is a recognised practice to engage service designers into strategic projects...” Designers want managers to understand that renowned business consultancies are recognising the strategic value of design. They want to convey that their design expertise is increasingly prized by consulting firms whose clients are multi-national corporations, such as Volvo Group. If experts, the argument goes, such as management consultants—who have been characterised as ‘merchants of meaning’ (Czarniawska & Mazza, 2003) in a privileged position to introduce new language games and new theories (Clegg, Kornberger, & Rhodes, 2004a)—are interested in design, why not Volvo too? Designers sought to associate themselves with this wider trend. They even started to compare themselves with management consultants to the point that they felt the need to make the case for why Volvo Group should choose PrD over McKinsey & Co in their project pitches. Consulting firms “can do nice board presentations of service design”, one designer pointed out to me, “How do you execute that?” Designers leaned on their track-record of projects and internal knowledge. Their argument: we are not only talking about service design, we are executing it. “That’s what we’re trying to sell to management”, he continued, “that we can work and we can also deliver. And that’s what you can’t get from McKinsey.”

The third slide extends this latter point. “Having an internal UX team is crucial”, they argue. It features a diagram representing their version of the UX design process. The argument is that to ensure the successful implementation of a service design idea, the same team needs to collaborate from ideation to delivery. An external consultant, the argument implies, cannot execute this work. Therefore, Volvo needs to nurture an in-house UX and service design capability to “retain knowledge” and “re-use it in new projects.”

The fourth slide highlights, “At VCE we have worked incrementally.” Again, it stresses designers’ capacity to deliver. The slide also emphasises four key benefits of having designers involved in service development: competitive edge, continuity, cost reduction, and risk reduction. These are references to grammars of common good. Arguably, any Volvo employee would agree that these goals are worthy of pursuit. The first one appeals to achieving competitive advantage by means of design thinking. The second one refers to continuity and consistency in brand experiences, as well as the continuous involvement of designers to ensure it. The third one and the

fourth one seem to appeal to the dominant rationality in the organisation, a fervour for operational efficiency and cost saving. The case they are making is that, by consistently involving designers in this kind of projects, the company is actually saving money, contrary to their ill-famed status as “cost-adding troublemakers.” Instead of commodifying design expertise into a package of design methods (the S-GDP), designers argue that there is much to gain by not having to specify everything again whenever a new team engages in service development. Consistently involving designers, they argue, builds knowledge and allows room for improvement. Thus this slide is “for management to understand that this is not about cost increase, but cost *decrease*”, as one designer told me. “It’s also actually, for [Volvo], a risk reduction”, he continued, “because if you get this team and you know that they execute both on-board and off-board things, you can start to trust that they know what they’re doing.”

The fifth slide shows a bar chart depicting “time spent on service” from 2012 to 2015. It shows a dramatic upward trend. In 2012, the UX design team hardly worked with service design at all. From 2013 to 2015, the time spent on this kind of work doubles up every year. The slide also features a list of projects in which they were involved as a way to boost their credentials.

Selling design had long been an occupational hazard at PrD; it came with the territory of being a designer within an engineering organisation. But never before was it so emphasised and rhetorically thought through by design managers. After the pushback against the would-be strategy though, they sought to be subtler in their “sales” approach. Gradually, the necessary line of action became clear to them. As one design manager, described:

[Designer]: But the last way we’ve been doing this is to actually have the business part selling us, with us in the background. So we create a good presentation, we say if they agree with it and if they see the business value, and then that business manager goes to his big boss and says: “this works well thanks to Product Design.” We are not coming there and shovelling this down the throat of someone, but they actually have someone they trust from a business point of view. Because that’s the challenge, no one trusts Product Design to talk about business. Why should they? They have business people with 20 years of experience, so why should they?

“Shovelling this down the throat” was what the would-be strategy regrettably amounted to. So now designers put their hopes on enrolling middle managers who could get them involved in projects and eventually act as their spokespersons in front of senior executives. They had to enrol trustworthy managers whose voice was respected in this new playing field. Designers had no legitimacy at all when it came business speak. They were bound to be uninfluential as long as their presence was not priorly justified and validated with the help of a legitimate ally. Their approach was straightforward: use their design skills to make managers look good. They decided to somehow dissolve into the background. Designers reckoned that by doing this, managers would, in turn, advance PrD’s agenda.

[Designer]: We have come to the conclusion that by making a business manager or department look good, by helping them to look good, we, together, can go to the next actor saying this worked well, and having them say that, rather than us. That’s mainly the conclusion so far.

This was their programme of action; their path to influence. Another designer confirmed this with a witty remark, “We need to sell it like we’re becoming their best pal, making them look good, you know?”, he chuckled. In a certain sense, “making them look good” was an attempt to mitigate the risk of vexation. Designers recognised that by stepping into new areas they were likely to upset other communities of practice, which was exactly what had happened with the would-be strategy. This time designers were committed to be more mindful and fluid in their approach. They did not want to frantically wave their credentials as specialists. “If you do that”, a design manager told me, “those guys are feeling like they’re losing control.” Designers recognised their status as outsiders in this arena. Their position was fragile, based on a flimsy tissue of relations in the form of soft contracts. In view of these circumstances, a design manager explained the new approach,

[Designer]:[Our approach] is to say, “Hey, you know what? We’re going to be facilitators for you guys. We are product designers and we have some techniques and we want to participate because we want to help you guys.”

The following excerpt is a good example of how designers went about selling design to middle managers.

It's Friday afternoon. Today, there is a special visitor from the Volvo CE headquarters in Brussels. Jo is the director of services for the CE business area. A key figure to be enrolled to get more service design projects into the PrD pipeline. He was given a guided tour of the design studio in the morning, and now we are set to have a meeting with him. Niklas, an innovation manager at Volvo Group, is joining us. From PrD, two design managers, Nathan, Samuel, Tor—a senior designer—and myself are participating in the meeting. The idea is to get more acquainted with each other's lines of work. Nathan and Jo have been talking for some time, but this is Jo's first time in the PrD studio. The meeting starts in a very light mood, with chit-chat about weekend plans and jokes about caffeine. Niklas is the first one to discuss his areas of work, showing some slides. The conversation picks up quickly. It mostly revolves around the implications of digital change for Volvo Group's business. Jo shares how they are working to spot new business opportunities in view of all these technological changes. Then, Nathan shows some slides. (The slide deck is quite similar to the one described above, but with more illustrations and project examples.) He gives a presentation of how PrD has been working with service design. He uses the example of a conceptual project that resulted in a movie which was widely circulated in the company. He fleshes out what they did at each phase in the design process. "...And at the last phase we create the graphics, the final layer that we put on top of it." His mission is to persuade Jo that design is so much more than simply the graphics, so he emphasises all the research and the thinking that goes into their craft. "Everyone tends to see the graphic layer. That's nothing in the process. I mean, we do it really nicely, of course. But there's nothing we can do there to ensure a good user experience design, if we don't control all the different points of the electronic system, and have the ability to have a say in that process", says Nathan. The exchange continues:

Nathan [design manager]: So that was just some background of how we work with service design.

Jo [director of services]: So you do more than just design then. You create ideas of value too.

Samuel [design manager]: Yeah, we sit as part of design. ‘Cause I think why we’re pretty good is we have a fairly good process in design to be able to iterate ideas and select them.

Jo [director of services]: Yeah. You go out and find out what’s valuable for customers. That’s kind of a marketing...

Samuel [design manager]: Yeah, it’s a collaborative role. I think we’re pretty good at organising workshops and getting things happening whenever we need inputs from marketing, from you guys...

Nathan [design manager]: That’s what’s absolutely needed in a group like that, knowing the needs from these experts and from you all, and creating these early initiatives. (Fieldnotes, April 2014.)

This is a positive example of how designers presented themselves to middle managers, seeking to promote a wider understanding of their role. This demonstration was successful insofar as Jo recognised that PrD did “more than just design.” His reaction says a lot about the current standing of the idea of design(ing). This is what designers are up against when stepping into service projects. To Jo’s surprise, designers can “create ideas of value too.” Nathan demonstrated that their work was valuable, presenting PrD as a friendly, helpful ally. Jo subsequently became a regular contact and collaborator. However, it hardly ever was that smooth and easy. Presenting PrD and the value of design(ing) to middle managers often had unanticipated effects.

Lending a helping hand

A more textured example of how exactly designers hustled their way into projects, “making middle managers look good” and lending a helping hand, is DataLink, a fleet management system. This was a “full service design project” and an example of the “incarnation of solution thinking.”

Back in late 2014, HMI/UX designers were working on a strategic study surveying digital touchpoints across the Volvo Group. In this process, designers found that, unbeknownst to them, there was another team of UX designers working at the company; they were affiliated with Volvo Group Telematics (VGT). As it turned out, VGT had its own UX team creating digital interfaces for DataLink, Volvo CE's fleet management solution. The VGT UX team had been working on a new version of the solution. Designers at PrD knew about DataLink but they assumed that the design work was carried out by an external design agency. As it turned out, the design work delivered for DataLink was not in line with the HMI/UX strategy that PrD had previously set forth in 2013, which was problematic. PrD had defined a series of design principles to unify digital developments across the Volvo Group. For instance, there were some conceptual UX guidelines to reduce the surplus of buttons in favour of simplicity, giving interfaces a "pure digital" look and feel. VGT designers were totally unaware of the existence of such a strategy so there were considerable discrepancies between their work and the UX guidelines.

This serendipitous discovery led to a series of conversations. UX designers went to VGT to introduce themselves and present the HMI/UX strategy. Both parties agreed to align efforts, and VGT committed to follow the same design logic. A few weeks later, the departure of a key manager left a void in the project that resulted in a closer collaboration between VGT and PrD. An experienced UX designer, Tor, was sent from PrD to work with VGT's UX design team to ensure alignment in the next version of DataLink. It was yet another soft contract. Neither formal negotiations nor any sort of contract underpinned this agreement.

That is how PrD, by a strange happenstance of connection, started working in this wide-ranging project; the type of project that could serve as a demonstration of their worth as service designers. The scope of this project was a perfect fit for PrD to show their "added value." DataLink was a digital solution and a service platform that transcended the product. It was a true pilot project; the kind they had envisioned when they were planning the would-be strategy a few months prior to this. Tor, joined by another design manager, had his first meeting with VGT in early January 2015. He introduced himself to the people at VGT and a business analyst gave them an introduction to DataLink.

DataLink is a system that pulls data from machines, helping customers to manage their fleets more efficiently. It is commercialised by

dealers. Created in 2007 as a research project by Master students in computer science, DataLink started as an experiment, not a real marketable solution. With time, the system was refined and grew to become an actual service offering. However, the system, as it stood, had many flaws. The architecture was planned to support a few thousand users. But the system kept scaling to the point where these limits were vastly surpassed, causing several bugs and troubles with the servers hosting the platform. Given the growth of the user base and the opportunity to generate more value, the company decided to invest in the development of a new DataLink system that would respond to these challenges.

PrD did not participate in this process at all because no one tipped them off, and it was simply beyond their traditional scope of work. As it turned out, the development process was quite fragmented. The project was owned by a marketing group at Volvo CE, and VGT's role was simply that of a contractor, executing the requirements they were provided. The project team did not directly involve end customers, operators, dealers or fleet managers in the development of the solution, and worked largely based on assumptions and conjectures held by team members. There was no clear understanding of the problems that different stakeholders were facing or of the categories of information that they considered more valuable. Yet things went on in this fashion until the project was completed. It soon became apparent that the solution was inadequate on many different levels. For instance, there were blocks of information that turned out to be irrelevant for users. Indeed, a lot of the data collected remained just that, raw data, which was not put to any valuable use. Also, the system had traceability issues and restrictions as to the number of machines allowed per customer, which turned out to be a major hindrance. One year of work and millions of Swedish crowns had been invested in the project, eventuating in a disappointing, substandard result.

When Tor arrived to VGT, he experienced first-hand the fallacy of sunk cost, whereby the more people invest in something the harder it becomes to abandon it. The new DataLink system was already completed. And defective though it might have been, the project team could not come to terms with the idea of scrapping it, since so much money had already been invested in its development. Altogether tossing it and starting with something new seemed like an outlandish idea. The plan was then to launch the system and come up with fixes on the go. That is why Tor's presence was welcome: to improve the visual layer of the system in an effort

to attenuate its flaws. The idea was to work on improving the graphical user interfaces of DataLink and develop a couple of complementary mobile apps aligned with the HMI/UX strategy. The architecture in and of itself was unmodifiable. To his displeasure, Tor's role was conceived as that of a graphic designer, a decorator of an already-engineered system. There was no talk about user experience or service design at this point.

Before developing a proposal, Tor wanted to share a couple of reflections with the project team at VGT. So he requested access to the full platform. Access was granted and Tor started to explore step by step all the functionalities of the system as if he were a user. He compiled a list of more than one hundred errors, inscribing them in a document. He discussed this with a VGT manager who seemed to agree with Tor. The manager had a background in Human-Computer Interaction (HCI) and was really familiar with UX concepts, so he was responsive to Tor's critique of DataLink as a poor user experience. In Tor's view, there was neither service case nor business case. In short, the system was not solving any problem whatsoever—if anything, it was creating more. Tor was prepared to argue that the system was bound to fail on the market because it was not human-centred.

What Tor had in mind was to bring to the table a proposal to work on a new DataLink version from scratch, since, for him, the system, as it stood, was simply useless. He needed to convince people that his proposal would help to develop a better-performing, human-centred system. Part of his argument was that the company could rip economic benefits from adopting a user-centric perspective. He wanted his case to make business sense to these people. So he came up with a plan and a framework for how to develop this, using a design approach and agile principles, but highlighting the underlying business rationale of his project. Tor saw an opportunity to instil his conception of value not by bringing the idea of design(ing) to the fore, but by emphasising the expediency of user-centricity to the business bottom-line. At the time he did not know much about how the responsibilities were distributed in the project, so he groped his way forward as best as he could. Quickly Tor realised that getting to the right interlocutor entailed a journey across several barriers, whereby gatekeepers needed to be enrolled and turned into allies.

Searching for allies

Over the course of the next three months, Tor's work amounted to presenting PrD, UX design, and service design to different project members. He delivered the same presentations and used the same slide decks over and over again as he attempted to enrol each gatekeeper. He became the embodiment of the new approach to selling design from the bottom up, and seemed politically attuned for the dreary challenge,

[Tor]: This constant coming and going trying to convince people is an exhausting process. Long, tedious and costly [...] One has to always weigh what's behind the agenda of every single person with whom one talks.

The first gatekeepers were developers at VGT. Tor went and delivered a presentation about the benefits of design, explaining the design process. The framing of the presentation was focused on underscoring the importance of adopting the user perspective, more than on design itself. "It was not good to push the theme of design too much", Tor told me, "because people then might think we only do graphics." With the help of a slide deck, he emphasised that adopting a user perspective could help Volvo CE save on product development costs, speed time to market and increase margins. The developers thought it all made sense, but pointed out that they were not the right interlocutors. They advised Tor to speak with the 'technical team' of the marketing group.

The technical team was composed of engineers. They were the ones who wrote the requirements and commissioned the development of DataLink to VGT. Ultimately, they were responsible for the overall technical development of the system. Tor went down to Eskilstuna to meet them, and booked a one-day session with them. In a sense, he was identified as a member of VGT's project team, which made him a legitimate actor—or at least someone to be heard. In the morning, Tor delivered a presentation about PrD in front of the whole team. He decided not to speak about DataLink straight away, but rather focus on how he could be of help to them by highlighting the value that design expertise could bring to the user and to the business. In the afternoon, Tor focused on the problems he had encountered when testing DataLink and how these could be tackled by building a new system under human-centred design principles. The

technical team was not particularly well-versed when it came to integrating the user perspective, but Tor's remarks positively resonated in the room. They agreed with Tor's analysis, and they were themselves perplexed by the situation. Yet it was not up to them to decide what to do, and Tor was referred to the 'business team' of the marketing group.

The business team was composed of project managers and product owners. They held the business case for DataLink. They were responsible for conceptualising solutions with business potential, and for securing strategic alliances enabling the implementation of such solutions. The business team worked closely with the technical team. The former puts together business cases, and the latter translates them into technical requirements which are then passed to contractors—such as VGT—in order to build the solution. The business team controlled the budget for DataLink, which was given to them by the head of the marketing group.

Talking to the business team turned out to be more complicated than expected. Team members were scattered across different geographical locations, so it was hard to book a meeting where everyone could convene. Thus Tor talked to them separately. As he went about speaking with each one of them, he began to realise who was who and who had more influence over others. Most members of the business team seemed to agree with the case Tor was making. They were all cognisant of the problem, but they did not all agree on which course of action needed to be taken. There was one manager of the business team, Alicia, who strongly opposed Tor's proposal, outrightly rejecting it. She was very influential as she reported directly to the head of the marketing group. Without her consent nothing could be set in motion. Contrary to VGT and 'the technical team' who became durable PrD allies and whose interests were successfully integrated into PrD's programme of action due to an "awesome connection," Tor said that his encounter and subsequent collaboration with Alicia was like "running into a stone wall." She became "the biggest barrier" yet.

Alicia objected that Tor's framework was too costly. Initially, she was in favour of applying patches to improve the current DataLink version instead of developing something anew. Tor argued that launching a defective product would end up being more costly because they were not responding to real customer needs, but his justification efforts seemed fruitless. Nonetheless, he continued making the case for a design approach every time he met with the business team. Tor even invited them to the design studio to show them previous work in an attempt to draw forth

excitement and persuade them about the importance of design. Still, Alicia seemed quite reluctant; she was not too keen on involving PrD in the project. During an interview, another designer who co-hosted the visit went as far as saying that “she hated it with passion.” Needless to say, the relationship was adversarial.

Mobilising design artefacts

Soon enough, Tor found out that the marketing group was indeed planning to develop a new DataLink version from scratch. This turning of events was good news for Tor. The visibility and scope of this project had the potential of enhancing PrD’s legitimacy in the area of services. To Tor’s surprise, Alicia integrated many of his suggestions into the new framing of the project. A lot of Tor’s material—especially concerning service design methods and agile setup which he inscribed in PowerPoint presentations—was included in the new project plan. In a way, Tor’s programme of action had triumphed. Had the design studio visit worked after all? Was her initial reluctance a mere facade? Or what kind of political game was she playing? Tor could not help but wonder. A feeling of ambivalence struck him. On the one hand, he was content with the idea that his programme of action was being adopted. But on the other hand, he was unsure as to what extent his contribution was being acknowledged in the process.

It seemed like Alicia had accepted Tor’s ideas but had rejected the role Tor was trying to compose for himself. She translated the programme of action on her own terms, betraying Tor’s original intent. He wanted to be a service designer but, as far as Alicia was concerned, his role was simply that of a graphic design consultant moving pixels on a screen. Tor knew that his involvement in the project was fragile so he accepted this situation. He opted for a non-confrontational approach and resigned himself to a limited role.

Though accommodating, Tor was committed to prove that the worth of his contribution extended beyond graphics. Thus he started gaining influence by performing seemingly mundane tasks. For instance, he started formatting the notes of the meetings and project discussions in such a good way that it was compelling to people. They started trusting him because of his ability to synthesise and organise information in a visually appealing way. Alicia relied on Tor’s expertise to provide support material

for workshops and visual summaries such as posters, which were then circulated between project members.

In this manner, Tor's influence in the project grew gradually. The project team had monthly meetings with the head of the marketing group to report progress. In one such meetings, Tor's material about service design methods and frameworks made Alicia look good in front of her manager who praised the novel human-centred approach adopted for the project. Tor simply stood as a witness in the meeting and let Alicia take all the credit. After all, this was their new approach to selling design: making middle managers look good and become so indispensable to them that they cannot help but be enrolled as design champions. And it worked to the extent that Alicia, unknowingly or not, started to concede Tor a wider role—one beyond that of a graphic designer. Tor's influence over the visual materials, documents, wireframes and prototypes which were produced for the project was decisive in the re-definition of his role and the re-ordering of concerns. As one design manager working closely with Tor explained,

[Designer]: So you're building the prototype then that means that you're in charge of the look and feel of it. We're in charge of quite a lot, and they don't even realise it, because in their eyes they think we're in charge of the graphic design of the system. But all of a sudden we're in charge of the wireframe, so all the functionalities and how they're distributed. We're influencing which functionalities are being used.

Tor utilised his design skills to prepare large parts of the decision-making material, such as personas, customer journeys, service blueprints and prototypes, which to some extent mediated and displaced Tor's own interests. Through the agency of these design artefacts, Tor gained new stature in the project, slowly becoming an obligatory passage point. Now Tor worked closely with Alicia co-organising workshops and activities. For instance, they co-ran a workshop to define the vision of the product and the scope of the project, determining lines of work. He was actively involved in capturing customer requirements from internal and external stakeholders. Next Alicia and Tor co-ran workshops to develop personas and customer journeys. What is more, Tor started to play a key role in the development of deliverables. For instance, he, along with VGT, was in charge of developing a wireframe and a prototype to test the solution. A

wireframe is a diagram which prescribes the connecting points of all possible interactions within a system and specifies all the possible states of the screen; it is the architecture of the user experience. These artefacts are the material manifestation of the service concept. This newfound synergy facilitated collaboration and smoothed out the adversarial mood. In this fashion, Tor, from his seemingly marginal position, started influencing strategic decisions. A design manager reflected on Tor's role in the project,

[Designer]: I think he's doing a fantastic job. Is he doing it in the full potential of what he could do? No. I really think we should have a chair at the table and we should be talking about what we should be doing. I think he's participating in those discussions but we should really participate at a higher level. But I don't think the company is ready for that yet. If we go and say, "Hey guys, I want to sit and tell you what we should do", then the guy is going to tell me, "You're crazy, you're not responsible! What do you want to tell me?"

Tor's influence depended on a fragile tissue of relationships between people and materials. Granted, he had a voice, albeit not an authoritative one; that is, he did not have a "chair at the table." Indeed, although Tor's influence steadily grew, it was not all bliss. As Alicia kept requesting material and information and Tor kept delivering and adopting this wider role, a territorial sense of distrust started to emerge. And it worked both ways.

Disputing credit and control

On the one hand, Tor felt that he was not given due credit for his work and that Alicia was taking it all for herself, especially when presenting to upper management. "Then one looks at her presentations", Tor told me, "and you see that she basically changes the author's name." He was clearly bothered by this, but at the same time he was conciliatory in the hopes that upper management would see and recognise his contribution.

[Tor]: There are two ways one can take this. Either you raise the issue and argue about who should and who should not take the credit; or, you take it as a kind of compliment, and tell yourself you did well,

and in some way you make things work in your favour, trying to do things with a design approach to make it all work.

This hopeful uneasiness is also evident in the following quote from another design manager involved in the project.

[Designer]: It's just about being there to see that all the business managers that we work with now don't take all the credit. Or they can, but people will see that they worked with us...

In later conversations, Tor seemed increasingly frustrated about this issue. A design manager made mention of this during an interview,

[Designer]: Actually Tor just came in really frustrated from a meeting [...] [Alicia]'s taking all the credit now for all the things in the presentation [...] [Tor and I] just had a tough discussion now. What should we do? Is that OK? Should we go to her manager and be like it's not OK anymore? Or do we continue to make her look good so that the complete output looks good and we are there so we're seen as one enabler? It's really tricky. There's no one clear yes or no answer.

Designers felt betrayed by those they thought would represent them in front of upper management. They thought their interests would travel unchanged and they would be given their due. Alas, "*Traduttore traditore*, as they say. The translator as betrayer" (Serres, 1995, p. 101). Was it worth trying to enrol middle managers if PrD's interests were diluted and distorted in the translation process? From translation to treason there is only a short step (Callon, 1986a). Tor's interests were misrepresented, and, by denying him credit for his work, his authorial voice was diminished. "An interpreter may actually obstruct a conversation", expounds Serres (1995, p. 101) in his fictional dialogue between Pia and Pantope. "And a representative may pass himself off as the authority that he represents." Clearly, Tor felt de-authorised by Alicia's actions.

On the other hand, Alicia felt that she was losing control. At any rate, Tor was somehow stepping on her toes. He reflected on this during an interview,

[Tor]: She always wants to remain in control. She's afraid of delegating responsibility to us. This is a general reality in the company whenever [Product] Design intervenes. They're afraid of losing control. They feel like we encompass too much and that they lose relevance in the company, I suppose. I've been told this first hand, regarding losing control. And so I just assume they feel like they lose relevance. Then this leads to a situation where she's micro-managing us, even to this day. We speak every third day or sometimes even daily. This slows down the process. We have to justify every single thing.

Paradoxically, at the same time they needed each other badly; they were locked into an interdependent relationship. Alicia needed Tor's design expertise and his ability to craft compelling materials. Tor needed Alicia because she was an influential decision-maker.

Negotiating roles

In a sense, this territorial dispute boiled down to one question: Who is the legitimate service designer here? In PrD's programme, Tor was; but Alicia would not attribute him this role. It was hers. Identities were thus defined in a competitive way. Her e-mail signature did not let room for doubt: "Global Product Manager & Service Design." Also, Alicia had gone through the S-GDP training programme, which educates managers to become "service designers" and "design thinkers." She had a legitimate claim over service design in the project. Indeed, she was familiar with methods, such as customer journeys, personas, service blueprints. She had the theory, as she was acquainted with the glossary of terms and was able to employ the vernacular. Yet she was unable to apply these methods in practice, which is partly why she tolerated Tor's intervention, but only as "support" or "consultant."

Alicia refused to be enrolled which is evidenced in her efforts to micro-manage Tor's actions. She had her own way of defining identities and interests, her own (anti-)programme, which was at odds with Tor's original programme of action. "We entered into a series of conflicts where she was the service designer, and we were simply the support", Tor related during an interview. Another designer also weighed in on the issue,

[Designer]: It's frustrating that we don't have an authority. We're not seen as the experts, but more like a supporting function. It feels like other people decide and we do.

In fact, Alicia reminded Tor of his limited supporting role whenever things got tense following disagreements over project decisions. Thus not only was Tor's involvement in the project hanging on a flimsy tissue of relations, but his authority was often limited to that of a "consultant." He explained,

[Tor]: Since we are in this "soft contract", I am a guest. I don't exist in this process. It becomes difficult because I am thrown into these games of authority. Then add to that I am a consultant. Even more difficult. I've had confrontations with Alicia and the way she shuts me up is by saying that I'm just a consultant. She tells me that upfront. "We consult you but we take the decisions." With that argument, they kill me.

Tor's role was then under constant negotiation; formed and adjusted in action. A design manager told me of their struggle with their status of "consultants" in the project. This was highlighted every time Tor raised a contentious issue. "So they're all like, Tor is a CONSULTANT!", he quipped. "But we're not really working like that." Indeed, Tor's role was fluid throughout the project. He was both pixel decorator and service intrapreneur; both feeble consultant and influential project manager; both extraneous note-taker and workshop facilitator. At times, he was able to impose his agenda; at other times, he was not.

Seeking an authorial voice

In Tor's view, the issue was not so much about who gets the official title of "service designer." He knew that designing services was a multidisciplinary endeavour that required a wide range of skills. Rather, the problem was that Alicia was receiving all the credit for his service design work. "I don't have an issue if someone else calls herself a designer, as long as she demonstrates she is actually designing", Tor told me. Receiving proper credit for the work produced was as much an issue of authority as it was of authorship. These were intertwined concerns. How could designers

be regarded as authorities in service design when their authorship remained concealed? The identifiability of the author(ities)s was crucial in Tor's quest to demonstrate his worth as a service designer. Somehow there had to be 'traces' of PrD's authorship for the new bottom-up approach to ever work in their favour. They needed a distinct 'authorial voice' (Kornberger et al., 2011) to assert their authority.

For instance, back in 2013, designers got involved in a service design project for Volvo CE—one of the earliest ones—consisting of a service concept for a communications platform. The outcome of the project was a movie which showed some of the features of the service concept and included scenarios illustrating the user experience. The movie turned out to be widely circulated, and became the subject of various conversations across the company. By and large a successful project. So much so that a lot of other departments “started selling [it] like hell”, told me one designer involved in the project. Yet, he felt like they were not given due credit for their work. “There we had a problem that we didn't say we did the service design, which we did”, he regretted. Indeed, at the end of the movie, “concept development” is the first category to appear in the credits. Designers go unmentioned. Instead, they are credited under “production”—the third category in order of appearance—for “technical development.” “That's the classic example”, he added. Designers longed to be recognised as designers of the concept, not just of its graphic expression. They felt regarded as narrow technicians, executing what they were told, when in reality their contribution was broader and their delivery shaped the whole service concept. Apparently, this was no isolated circumstance. This situation aroused a deep sense of injustice, as one designer expounded in our interview,

[Designer]: You can have other departments over here that totally need the delivery of Product Design. Without it, they can't live, but they take the credit and use it with a third party, so to speak, so they look good. If you look at external agencies, that's a lot how it works. When another department goes to an external agency, they say “We have this cool idea!”, and they go to this agency. Then they come back with an awesome concept and say, “We did this.” No, you ordered it (chuckles). It's always like that when you talk to business people, “I did this” (mocking voice). OK, but who did you work with? OK, Fjord [a renowned service design agency]? Now I

understand. [...] If you order something, like if you buy a nice sofa for your home, you feel like you are responsible in some way, right? I mean, you picked that sofa. But you didn't make it! I think that's a general personality problem that is quite difficult to manage in major companies like this, really. You always get those departments that need to show off more, to get their management's eyes on them.

In the above quote, the designer attributed the lack of recognition to a "general personality problem." His critique is that people who manage projects develop a sweeping sense of ownership that obscures who the real authors or makers are; all for the sake of "showing off" in front of their management. To manoeuvre around this situation designers' contribution and authorship had to be traceable and recognisable, as this was the currency that they needed to become strategic actors in the company. Indeed, PrD was no exception; they also needed to "show off."

In the DataLink project, developing an authorial voice represented a tough challenge. The struggle was that design work was largely perceived as the graphic representation of someone else's thinking. Arguably, that is how Alicia interpreted the project as she was unrelenting and unapologetic in her appropriation of Tor's work. This was no Machiavellian ruse on her part; it was simply how she understood the role and contribution of designers vis-à-vis her (and her team's) role: she was responsible for the product/service concept, and PrD was simply lending a hand with the graphics. So, for instance, whenever designers created materials for the project, such as a customer journey, Tor felt like he was only credited for the graphics "and not the actual thinking behind it." A design manager remarked,

[Designer]: We had a quite tough discussion but the conclusion is that even if you're a Chief Designer and you actually built this [product or service concept] with your team, in the end people see some graphics and they are just like, "Oh, it looks good." [...] It fulfils all the needs, it's easy to use, [it's] because then we did our job. No one realising [...] in that project that what we did was actually good. They could as fast forget about it since the design in the end is good. That's a really tricky thing with UX design, once you do your job you actually take away the ground that you're standing on.

The behind-the-scenes approach always held the risk of misrepresentation because designers were entrusting their fate to the mediating actions of spokespersons, both human and non-human. Alicia, as a spokesperson, was the middle manager who, on Tor's programme, was supposed to sell designers' work and legitimise their involvement in service development. She was equipped with materials—that is, customer journeys, personas, prototypes—, spokespersons in their own right, crafted by designers as inscriptions to influence decisions and demonstrate their worth. This meant that PrD's agenda could 'travel' farther but at the cost of transformation and distortion. On the one hand, as we have seen, it became apparent that the anticipated actions did not occur because Alicia had a different programme—an anti-programme. Her agenda was at odds with Tor's, as they had conflicting definitions of roles and identities. On the other hand, despite their important role on Tor's ascension through the project ladder, materials could also be treacherous. Whenever these design artefacts circulated or were presented by middle managers to upper management, designers lost grip on their effects. As stated in the above quote, if a prototype for a new system was easy and intuitive to use, or if a service blueprint looked convincing and fulfilled all the needs, it was not a given that designers would receive credit for it, since their contribution was obscured and hampered by their very success.

Indeed, in this new context for designers, the nature of design work was somewhat paradoxical. Doing a great job entailed the risk of non-recognition, since the experience afforded by the resulting design was seamless and intuitive. This is reminiscent of Latour's (1999b, p. 304) concept of 'blackboxing' in the sociology of science, which he describes as "the way scientific and technical work is made invisible by its own success." Indeed gazing at a simple, neatly designed solution obscures the process and trials it took to get there. Designers are generally trained to make things look simple. And yet this simplicity is misleading insofar as it conceals the costly and demanding work of taming complexity into a simple solution. "When a machine runs efficiently, when a matter of fact is settled," Latour (1999b) continues, "one need focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become."

In this sense, the final design eclipses the designing. Designers wanted to avoid this 'blackboxing' and that is why they increasingly

highlighted the importance of “opening the design process” to convey the value of designing as a verb, as opposed to a thing or a stable matter of fact. They wanted to convey that their abilities to communicate visually were not simply representational on a surface level, but required also a great deal of analysis and synthesis—which takes us back to the iceberg metaphor that they used in their slide deck to sell design. In short, designers wanted to demonstrate they were both material and intellectual author(itie)s in the project, and in their view this could only be done by showcasing the design process. Yet they depended on Alicia translating and displacing the idea of designing whenever she presented Tor’s work—such as customer journeys or service blueprints—to upper management. More often than not, not only did Tor feel like his contribution was made to seem superficial, like the tip of an iceberg, but he also felt like the project setup itself was fostering these misunderstandings.

An unfavourable setup

Tor was of the view that whenever Alicia presented the material he had produced in front of upper management, her performances were often riddled with misinterpretations, like playing “Chinese whispers” or “broken telephone.” He observed,

[Tor]: She has to present to other people what we present, which is prone to errors [...] I say something, she interprets something else, then she tells that to another person, and that person interprets yet another thing, and in the end the people who put the money understand something totally different. Information is lost in that transmission. Or it’s distorted. For example, sometimes we want to transmit panic, “We don’t have this piece of information that we need!”; this person mitigates it and doesn’t express it as an urgent matter. Alicia is a mediator in decision-making. Every month in our meeting with the [head of the marketing group] all the translation errors come to light and it turns into a kind of therapy to try to clarify things.

Tor’s awareness of the intricacies of chains of translation is made evident in the above quote. When it came to making project decisions, he really

struggled to impose himself, since the advancement of his programme of action was left to the discretion of ‘treacherous’ mediating agencies. The monthly meeting was his window of opportunity to set the record straight and advance his interests. But, for designers, the general setup of the project, was not helping their cause. Aside from occasional workshops, almost all exchanges took place by means of e-mail and a teleconferencing platform, due to geographical dispersion between project members, which, again, hampered the process with misunderstandings. A designer involved in the project made it plain,

[Designer]: If I were to imagine the project happening in a project room with all the people involved in one room, if someone has a suggestion, he can show it and we can discuss it. It would be very different. Now if someone has a suggestion, they send an e-mail, so it is more prone to misunderstandings. You don’t know the thoughts behind things. The interaction is bouncing documents back and forth. And then we also have the [teleconference] meetings, but there is always someone missing or someone running into another meeting.

The project framework devised by Tor—which was eventually accepted and appropriated by Alicia—was based on ‘lean’ and ‘agile’ principles, whereby decisions are quickly made based on user insights gathered from field research. In this manner, the risk of moving fast is mitigated by a strong alignment with user needs. This was the original plan. However, when the project was launched, Tor quickly realised that decision-making would not unfold as anticipated. Alicia’s constant micro-management and the involvement of several stakeholders in decision-making drove out any ‘agile’ aspirations. “Decision-making is complicated”, Tor told me, “because everyone has to always be there.” The project thus seemed to follow a waterfall model, that is, a non-iterative linear development process—typical in manufacturing—which is at odds with iterative design processes common in agile environments.

Detours in translation

Tensions around credit and control persisted throughout the project and some questions lingered on. Would PrD be given credit as an enabler of the end result or would they simply be regarded as visual technicians? Given these circumstances, was the behind-the-scenes approach working at all? Tor and other designers had their reasons to doubt. Yet disengaging was not an option, so the project moved forward in spite of all.

Another dispute emerged at a crossroads during the project. Following Tor's framework, the project team had already come up with a vision and a scope for the project; they had carried out research and captured insights from internal and external stakeholders to come up with 'personas', that is, customer/user archetypes with details of individual tastes and activities which are then extrapolated to 'use cases' or 'customer journeys' that allow to envision their activities, including 'touchpoints'—the materials with which customers/users interact over time—as well as 'pain points'—problems that personas are likely to face when they carry out their daily tasks. The persona represents the voice of the customer during the design process. The customer journey allows a better understanding of problems/opportunities. Both tools are inscriptions of text and images, collected in PowerPoint slide decks. The project team was then at a point where they needed to translate the personas and customer journeys into "something actionable"; the problem being a disagreement on what "something actionable" meant.

Designers were of the view that they needed some sort of concept map to prioritise and filter user needs; then these needs could be translated into specific product/service features; these features could in turn be translated into some kind of prototype or blueprint; this prototype could be iteratively tested and refined and then be translated into detailed technical requirements or specifications. In this manner, they could establish some kind of "circulating reference" (Latour, 1999b) in the chain of transformation from user needs to final product. According to Latour (1999b, p. 310), the term 'reference' designates "the quality of the chain of transformation, the viability of its circulation." Thus, from a user-centred design perspective, the circulating reference is a way of connecting user problems to potential solutions, keeping the voices of customers/users active in the debate unfolding along this chain of transformation or translation. If all the translations in the chain have been correctly done, it

means that the process can be reversed, from technical requirements to user needs. For designers, each feature of the system needed to be prioritised and justified on the basis of the problem it solved for the customer.

Alicia, however, was of a different view. She was adamant about using a document with a standardised format called “area feature description,” which provided a formal structure to enlist requirements. It did not seem problematic at first, but then Tor noticed something was amiss. In this predetermined format, it was not possible to trace the requirement to the problem it solved; it was simply a descriptive list of features. With slight contempt, Tor described it as “the typical requirements document of the 90’s, where you have requirement ID, blah, blah, blah.” Another designer involved in the project also observed how, at this particular juncture in the project, people had a penchant for “old tools.” She recounted,

[Designer]: Now we get to a point where we have to make some big decisions, and people grab back their old tools and start opening their Word documents with descriptions of things. If you want to follow a design method that’s not probably how you do things and then that creates an obstacle for the process. [...] That happens when people don’t know how to handle the next steps but then it’s up to me and Tor to say, “this is how we should continue.” But at the same time we don’t have the authority. So people go on their own and do other things.

Furthermore, Alicia was pushing for the forthwith inclusion of features, such as ‘anti-theft’, to be specified in the document, without any reference to the personas or customer journeys, which was quite frustrating for designers. She simply took for granted that DataLink needed an anti-theft feature. It was not a conclusion drawn from previous work, but a predetermined conjecture. Designers were critical of this approach on the grounds that it was not truly based on user needs; it was damaging the quality of the chain of translation they had envisioned. During an interview, Tor blurted out,

[Tor]: From day one she’s talking about anti-theft! But then what happened with this? We did some work to specifically address the problems that our customers are facing. Nobody’s asking what the

problem is. They simply create platforms and then look for a need to this platform. First they create the platform, and then they shove it down and push it to customers [...] I want them to answer this, why is anti-theft a need? What problem are we solving?

Tor's defiance was not directed against 'anti-theft' itself. He was aware that this could be a need to consider, but it had to be justified and weighed against other needs based on the research they had conducted. Hence the problem was one of principle: people were "jumping straight into solutions" without taking previous work into account. As another designer remarked,

[Designer]: And now people are wanting to jump straight into the solutions, failing to make the connection to all the research. For which persona are you doing this? Which problem are you addressing? How does that relate to the flow within the software?

Without a circulating reference all the previous work was useless, and the "area feature description" document was like a bolt cutter forcefully severing the chain of translation. Yet Alicia was resolute about using it. To cope with this challenge, Tor came up with a flanking manoeuvre, and decided to persuade the other project members of a better way. "Once they all agree with me, then I will go and speak with her", Tor told me during an interview. He anticipated this could upset Alicia, but he had no other choice to advance his interests and defend what was at stake for him. "It's the only way we can play. We need to take control somehow," he said.

So, Tor spoke to other project members who got onboard with him. Designers prepared a presentation where they emphasised the connection between the research and potential system features, and proposed a way to define them based on the problems and opportunities framed in the customer journeys. What is more, in a conciliatory move, designers made their own version of the "area feature description" document. They used the same template and the same document title, but added several categories to include and justify feature descriptions based on insights from customer journeys and personas, to avoid breaking the chain of translation. This tactical move turned out to be successful. Designers defined a new role for the document without deviating too much from its original intent. The circulating reference was thus kept undamaged, and Alicia agreed to move forward.

Experiencing design

As the DataLink example shows, the bottom-up approach adopted by designers to become strategic players and demonstrate their worth was dependent upon a complex chain of mediators where values, interests, attitudes and opinions collided, causing unanticipated turns. But there is something quite distinctive about this kind of coping that differentiates it from the other two initiatives outlined in the previous two chapters. The would-be strategy was an exercise in demonstrative and deliberative rhetoric, whereas the scoring device was the mobilisation of a calculative instrument for rhetorical purposes. Both initiatives aimed at raising PrD to a special status to which other groups could give credence. Both initiatives translated and re-presented an idea of design(ing) through inscriptions or devices: a strategy report and an Excel spreadsheet with scores. These aimed at capturing aspects of the value of design practice for them to be re-articulated in front of other communities of practice so as to be productive of action. Now, while the bottom-up tactic also integrated some of these elements, it was different insofar as it opened more spaces for people to experience design(ing).

In their firm determination to enrol middle managers, designers were prepared to give presentations about their work should any opportunities arise. Inspired by Mike Monteiro's talk, designers started spending more time and effort into crafting "sales" material to present their work. But with time, they realised that it was not only slide decks that were important, but also the space itself where these demonstrations took place. People had to experience being in the studio; they had to be brought closer to the experience of designing and making. Maybe the space had poetic and rhetorical qualities as well. At any rate, designers sought to exploit the aesthetics of the space to their advantage. Nathan explained,

Nathan [design manager]: We have now realised that no meetings about design should take place [elsewhere]. I've done some mistakes in the past, you know? Never thought about actually taking people to the studio. Now it's mandatory! Each new CPM, project members, business developers, take them to the studio. There they see what creative design is all about. They see that we deliver a lot. They see a lot of trucks, they see we that have a big power wall. [...] That was a key thing. Once they're there they understand. [...] The

space is helping. That's a core learning I think. If you're going to sell design you need to show design in that experience. It's like interior design. If you're an interior designer and you want to sell it seating in a badly designed space, it doesn't really help you.

Tor also highlighted the importance of bringing people to the studio, if only to assert their existence as a community of practice:

Tor [designer]: Every time I have a meeting I try to take people to see the studio. Then people are like, "All of this exists? I thought it was just a storage warehouse." They ignore the existence of the studio, that we have a power wall to see the machines, that we have prototypes... They don't even know. This makes it difficult to go out and sell design in different areas of the company.

Designers were convinced that studio visits played an important part in ensuring involvement in certain projects. In the following quote Nathan makes plain this causal relation:

Nathan [design manager]: We worked like hell during a week. We put up the right boards, what is a broken process of UX and what is a good one. All the different methodologies. We put up an idea of a service platform that shared on-board and off-board. We put [the visitor] in a seat inside a machine where we had the system so he could interact and understand the experience. We also had the line manager. They loved it so they went "let's go ahead and do this."

Bringing people closer to the experience of design(ing) became an alternative means for the articulation of value. But it was not only 'staged' studio visits and demonstrations that made an impact. Active engagement of project members in design activities and workshops facilitated by designers, became a fruitful way of having non-designers taste and test design as an approach to service development. Unlike product design projects where designers acted as specialists working behind closed doors in the studio, and focusing on the design of objects (products), service design projects were more open and transversal, involving a broader range of organisational groups, where designers acted as facilitators and connectors, focusing on the design of relationships (services). Involving non-designers in design activities was in itself an enactment and

articulation of value, and a way of advancing a wider recognition of PrD's worth.

The DataLink project is a good example of how this enactment of values took shape in practice. The service design framework on which the whole project was based had been almost entirely formulated by Tor and Nathan. And though the proposed framework and methods were adopted by the project team, there were clearly some tensions and doubts. At first, project members were skeptical about some of the design methods that Tor had set forth in the project framework. They thought they were "too fluffy." Tor related,

Tor [designer]: They say a lot that it's too fluffy. They had a preference for an engineering-type of structure. For them, all this process was too fluffy. The methods seemed fluffy.

Tor's framework clashed with the dominant (engineering) rationality. Throughout the project, conflicting conceptions of value were enacted and courses of action were vehemently negotiated. Tor's emphasis on the incalculable aspects of experience, contrasted with other project members' preference for 'hard facts' and numbers. In the following quote, Tor explicates his uneasiness over this tension,

Tor [designer]: This word that upsets me is when they say that all this thing about the customer journey is too "fluffy." That's typical. They're people, engineers, who work with numbers and square things. They don't understand the psycho-social backdrop of this, which, in the end, is what decides when a person chooses one thing over the other. And they think it sounds nice but that it doesn't bring any value. Every time I can, I try to bring numerical data to put it at their level. But there are things you cannot calculate. There are incalculable aspects. And you just have to press on.

And press on they did. Throughout the project, designers sought to convince people by engaging and including them in the design process. Instead of telling people about design, here they had an opportunity to make them experience it hands-on. In this instance, rhetorical persuasion was achieved through participation, not through words or numbers. In the above quote, Tor acknowledges that reducing design to numbers or to calculative frameworks is problematic because it misses a crucial aspect of

design practice, which is the embodied, aesthetic dimension of experience. This “incalculable aspect” had been mistranslated or simply omitted in the would-be strategy and the scoring device. Attempts to explain the worth of design in words or numbers were, in this sense, treacherous and insufficient. Indeed, the commodification of design practice (as in the S-GDP case), epitomised in “design thinking” discourses, results in abstractions that overlook the embodied nature of designers’ thinking and knowing (Kimbell, 2011; Rylander, 2009) and repress the role of aesthetic judgements (Tonkinwise, 2011).

So, designers were persistent despite the early opposition. A designer involved in the project reflected,

[Designer]: Things first-time around are never easy, so facing resistance is normal before people actually trust the process and know what you’re doing. That is to be expected. [...] I’m used to working in a very designerly kind of way and these people are not, so how can I take my methods and make something they can work with? It takes a little time for people to accept it as a way of doing things.

Early skepticism was steadily transformed into assured reliance through participation. By engaging in this process, project members began to understand the value of the approach.

[Designer]: I can notice that people understand the value of the design methods that we’re using but they struggle because it’s not their natural way of working. For example, to do a customer journey in PowerPoint is not the easiest thing to do. And if you’re not used to working with visual things you get chunks of text but nothing visual that shows the flow. That’s one thing.

This was not a smooth process, since the way of working advocated by designers was clearly at odds with the engineering way. So tensions persisted throughout, but project members recognised the value of design. As Tor recounted,

Tor [designer]: A little by little, they have become adept at using the methodologies and have found the value in them. There is even a business analyst who once came with a book about design methods

like customer journeys and impact maps. So they have taken interest in this situation and they now clearly see the value in this.

In this way, the bottom-up approach opened spaces for the valorisation of design by recovering the aesthetic. Instead of mobilising re-presentations of the idea of design(ing) via words or numbers, designers enacted the value of their practice by fostering participation.

Summary

This chapter describes how, after a failed attempt to consolidate their 'strategicness' through the enrolment of senior executives, designers turned their efforts towards dealing with localised concerns. Instead of presenting an idea of a grand project or a big picture to seduce top management, designers focused on making themselves indispensable in everyday projects, expanding through 'soft contracts.' In other words, instead of taking the route of rapid institutionalisation through top management buy-in, designers weaved a fragile network around their ideas, skills and expertise. They became nimble and adaptable actors attuned to their circumstances. Enrolling middle managers entailed a prolonged series of trials of strength whereby actors struggled over the attribution of credit and the recognition of authority. Surprisingly, the opening up of the design process and the fostering of participation played a valorising role for design.

7

CONCLUDING DISCUSSION

Designers as network-builders

Chapter 4 reveals how persuasive arguments that criticise an old reality and justify courses of action to create a new reality are constructed. Unsatisfied with their limited ‘operational’ role mostly focused on hardware, designers faced a ‘critical moment’ characterised by reflexivity and retrospection (Boltanski & Thévenot, 1999; 2006). Designers felt sternly constrained by the limited purview of their role and realised that their organisational standing needed to improve. Their ambition was to expand the scope of their work into new strategic areas, such as service development. Needless to say, such an ambition exceeded their formal mandate, which left designers with scant leverage and meagre institutional support to make any change happen. Therefore, designers engaged in active efforts to build a network around their ambition to become legitimate strategic actors in the design of services at Volvo Group. In order for this to happen, they reckoned that the idea of design(ing)—as a strategic value-adding activity—needed to catch on at the highest echelons of the organisation. As network-builders, they were acutely aware of the necessity of providing justifications and building a cogent argument to secure top management’s support and solidify their network, in the hopes of attaining the institutionalisation of their strategic authority. Somehow the prospect of convincing top management carried with it the promise of recognition and ascendancy, and so designers, though peripheral to the strategy-making agenda, entered *de facto* into the strategy-making game, competing for

authoring future courses of action. It was their own bid at *heterogeneous engineering* (Law, 1987).

In this manner, designers engaged in *strategising*—understood here as a complex process of translation involving heterogeneous actors. First, designers translated their aspirations into a strategy idea that blended the concerns of top management with their own, so as to position themselves as an *obligatory passage point* (Callon, 1986a) in the network of relations they were building. The solidity of this emergent network depended upon their ability to persuade senior executives that the interests of top management were best furthered by supporting the designers' programme of action, thus forging a crucial association that would produce the necessary *agencement* to influence strategic action. Simply put, designers were trying to enrol and mobilise senior executives to act on their behalf by turning them into spokespersons for their programme. The assumption held by designers was that the interests of senior executives were best epitomised in the company's vision "to become the world leader in sustainable transport solutions." At the time, following a larger trend in the manufacturing sector, a transition towards service orientation was unfolding at Volvo Group—albeit haphazardly, as admitted by several informants from different organisational departments. And so the strategy idea, in short, was that design could be 'the catalyst' required to accomplish this vision. The objective was to frame design in such a way that it could be readily recognisable as a valuable, strategic asset to foster 'radical innovation' and 'product-service integration.' In this way, designers—much like the researchers in Callon's (1986a) study—sought a way to make themselves indispensable in the network. *Join our cause! Give us the mandate! The situation calls for it! Only then can 'we' become a 'true' solution provider!*

In order to devise the best way to formulate the argument and then 'sell' the idea to top management, designers called upon Digital Creative, a group of consultants, experts in strategic design and innovation, to assist them in the making of a comprehensive strategy report—the materialisation of their strategy idea. Digital Creative was an important actor and a natural ally in the nascent network. During their initial interactions, designers and consultants worked on the definition of a problem in an effort to write up a clear project brief. This can be recognised as a moment of *problematization* (Callon, 1986a) whereby actors assume an active role in the definition of a problem—the goal being to make this new

definition conspicuous to others. In this case, designers were struggling to be recognised as strategic actors; they felt that their contribution was undervalued and that their role was wrongly perceived as that of “mere stylists.” They were convinced that they deserved a “seat at the table” when it came to making strategic decisions regarding products and services. They saw their lack of involvement and recognition as a problem that was enabling rampant offering fragmentation, which impeded the design of wholesome experiences for Volvo customers. The root of the problem, as discussed by designers and consultants, ran deep into the company’s fabric and involved a “cultural bias” towards a product-oriented mindset. Services were mostly conceived as aftermarket ‘add-ons,’ and roles and responsibilities in connection to their development and maintenance were full of ambiguities. This situation severely restricted the prospects of innovation and generated a problematic disjointedness between the usage experience of products, on the one hand, and the consumption of services, on the other. Designers’ subversive programme of action, which aimed at securing their involvement and asserting their authority as strategic actors, needed this somewhat bleak assessment of the situation as justification. How else could they become regarded as strategic actors if not by giving reasons for why the organisation should care? So this whole project evoked a rich articulation of values and concerns (Dussauge, Helgesson, & Lee, 2015a) as mode of justification (Boltanski & Thévenot, 1999). Therefore, their tactic did not amount to a downright claim for recognition and authority, but was framed as an ‘evaluation’ of the ‘current situation’—and a critical one at that—, highlighting the problem of fragmentation and its costly impact on customer experience. This was the prerequisite justification for the programme of action laid out in the would-be strategy. The ensuing recommendations were then supposed to present design as a force for change to resolve this problematic situation; thus placing designers as an obligatory passage point. Consultants and designers were of the view that their attempts to persuade senior executives that they could all benefit from pursuing this programme needed a clear emphasis on what was being lost by not pursuing it. They wanted to create a sense of urgency to go from an old reality to a new one.

Yet the moment of *problematization* not only entails the identification and articulation of a problematic situation, but also the definition of the actors involved (Callon, 1986a). Here, network-builders establish roles and define identities for themselves and for other actors. In this case, designers

and consultants negotiated their relationship to each other, but more importantly, they articulated a redefinition of the role and identity of designers, roughly stating how PrD should relate to other organisational groups. The whole project hinged upon this redefinition of design, which amounted to a call for a shift from design as mere styling to design as strategic asset. However, their intent was not to come across as power-thirsty, Machiavellian players, but as concerned, proactive team players advocating for customer and user centricity as well as smarter product-service integration. Designers were convinced that they had a special claim on knowledge about users and so they integrated that aspect into their own identity. In their problematisation, they presented themselves as advocates who could speak on behalf of the user. So, concerning the evaluation of the current situation and the fragmentation of offerings, designers adopted the role of representatives or spokespersons for users and customers, expressing frustration on their behalf at the use of disjointed products and services. In this manner, there was a symbolic mobilisation of users and customers in the network they were trying to build.

Consultants as mediators and evaluators

Evidently, the consultants were also enrolled and mobilised, but their enrolment and mobilisation was not only symbolic but emphatically material. The role of the consultants was thus negotiated in the first exchanges as the brief was being discussed and defined. The consultants acted as *evaluators* and *mediators*. As discussed in Chapter 2, Latour (2005) distinguishes between an *intermediary* and a *mediator*. The former simply transports meaning without transformation, whereas the latter actively shapes and transforms outcomes, in some cases even distorts them. In this case, the consultants acted as mediators. Their role cannot be reduced to that of a *rapporteur* of an unchanged idea—that is, an intermediary. Through their mediation, an initially vague ambition turned into a strategy idea, which then turned into a strategy report. Indeed, consultants are professional translators *par excellence*; they are “designers and distributors, wholesalers and retailers in ideas-turned-into-things, which then locally once more can be turned into ideas-to-be-enacted” (Czarniawska & Joerges, 1996, p. 36). They are Hermes-like figures transporting ideas

across space and time, recasting them into localised ideas, artefacts and actions.

Digital Creative's team of consultants arrived at Volvo Group with a repertoire of 'quasi-objects', that is, ideas that acquire objective attributes, usually turned into labels, metaphors or platitudes (Czarniawska & Joerges, 1996). In this case, the consultants introduced new terms into the conversation with designers, such as 'radical innovation' and the idea of bringing 'new meaning' through design—clear references to Verganti (2009) and Krippendorff (1989) that were later made explicit in the strategy report. Further, the idea that design is a valuable strategic asset came warped in popular "design thinking" platitudes and examples of successful 'design-driven companies' such as Apple and IDEO. These 'quasi-objects' then became inscribed in various ways becoming images and text which were then circulated across networks and reassembled at once in demonstrations. In this sense, the mediating influence of the consultants depended upon these non-human elements. From their privileged position between theory and practice (Clegg et al., 2004a), the consultants brought new ideas-turned-into-things to build up the case and make the nascent network more robust.

At the same time, the consultants were also *evaluators*—which is, in fact, a type of mediation. Their role as evaluators consisted in two main tasks: (1) evaluating the current situation, and (2) evaluating whether designers had a legitimate role to play in solving the situation. Regarding the first task, in order to evaluate the current situation, the consultants carried out fieldwork, including interviews and workshops with key informants linked to service development. They translated their fieldwork into notes, transcripts and pictures, which were in turn translated into artefacts such as the 'service flower,' two-by-two matrices and other schematic representations. Eventually, these were all included in the definitive deliverable—and the ultimate materialisation of the designers' programme of action—, the strategy report. As previously mentioned, the tone set for the whole case was one of urgency; therefore, the evaluation of the consultants did not spare criticism of the current situation. The situation *had* to call for the involvement of designers and serve as justification for their ambition to widen their scope of work and increase the esteem of design(ing) as an idea-to-be-enacted.

Regarding the second task, to evaluate whether designers could legitimately stake a claim to be strategic actors in the design and

integration of products and services, the consultants gathered examples of best practices in diverse industries, as well as examples already taking place at Volvo Group, and offered their advice as experts. The strategy report gave the evaluation results a material form. These evaluative practices served an unequivocal agenda set from the outset: the results of the evaluation had to communicate urgency and present and re-present design(ing) as the potential solution, the obligatory passage point. After all, this project was about the institutionalisation of the strategic authority of designers. In this sense, strategising and valuation are interrelated processes of translation. So the project, though framed as an *evaluation* with its accompanying recommendations, was a *valorising* operation all along. Vatin (2013) distinguishes between *evaluating*, that is, processes in which things undergo judgements of value, and *valorising*, that is, processes in which things are produced so as to be of value. Yet, in this particular case, these two faces of valuation collapsed into *valuing*.

As evaluators, consultants were not ‘unveiling’ the ‘true’ state of the situation or the ‘true’ value of design; rather, they were *making* the situation problematic by framing it as such, and *making* design valuable by presenting it as a ‘catalytic’ force. In other words, they were performing a reality; a reality that is *done* and *enacted* rather than observed (Mol, 1999). Whether or not top management would accept this definition of reality was still to be settled in the subsequent trials of strength. What is clear is that the evaluative practices in which the consultants engaged (i.e. fieldwork analysis, comparison with best practices, giving of advice) were political acts aimed at producing and inscribing evidence and recommendations as a kind of durable material to solidify the emerging network. Evaluating the situation entailed more than simply “sizing up the situation” since it also became a matter of actively shaping evaluative practices (Stark, 2009) in an attempt to impose their own version of what is good and desirable, of what is worth pursuing.

With their explicit claims to professional expertise, the consultants constructed value by framing how the organisation should regard and engage with design(ing) as an idea-to-be-enacted. They acted as mediators and (e)valuators to influence perceptions and conceptions around the idea of design as a strategic asset, ultimately shaping the outcomes of the programme. These findings resonate with a strain of ANT-inspired literature on the notion of ‘cultural intermediaries’—in this particular case, strategic design consultants—; that is, individuals whose role is to

promote particular values, norms and lifestyles, acting as mediators and evaluators whose influence depends on material and non-human forms of agency (see Moor, 2012; Strandvad, 2014). In a time where the idea of design(ing) is being translocated into the domain of management and organisation as a new paradigm for dealing with problems (Dorst, 2011), strategic design consultants are emerging as privileged ‘cultural intermediaries’ (Kimbell, 2011).

The trials of setting an idea in motion

The roles and identities laid out in the programme and materialised in the strategy report would remain hypothetical as long as they were not tested. The redefinition of roles and identities and the new forms of co-operation they presupposed needed to be legitimised. The strategic ‘essence’ or strategicness of design(ing) had to emerge from these trials, it had to be realised—in both the sense of people becoming fully aware of it and in the sense of giving it actuality. The moment when the conditions are met for these trials of strength to occur is called *interessement* (Callon, 1986a). This is when actors attempt to stabilise the identities and roles that they more or less defined in the stage of problematisation. In this case, designers tested and displaced their ideas piecemeal in front of different audiences before having the final version of the strategy report. They met with managers and marketers at different points in time raising the same issues they had discussed with Digital Creative. Generally, their assessment of the current situation often struck a chord with people, but the corrective courses of action and the roles and identities advanced by designers remained ambiguous and open to debate at best. Why are designers from a Product Design department talking about services? This objection was raised more than once. It was difficult for designers to impose their redefinition and legitimise their call for a redistribution of power. The initial interest that some managers and marketers manifested in different exchanges did not turn into a durable alliance—that is, an actual *enrolment*—because it never got materialised or enacted. They never became representatives or spokespersons for the programme. Simply put, their respective interests were not translated into further joint collective action. However, designers had set their sights on enrolling senior executives first and foremost, so these various exchanges were just a way of testing and

refining the problematisation to make it more compelling for the C-level audience they originally had in mind. In this sense, the claims and roles of the programme were not developed independently but were formed and adjusted throughout these interactions. The solidity of the problematisation—and thus of the nascent network as a whole—would be determined in the oncoming negotiations with top management, the ultimate trial of strength.

The burden of proof was on designers. Not only did their argument had to be compelling but also mobile. It had to travel in the field and be subjected to scrutiny if it ever was to be recognised as a legitimate strategy idea. In this sense, the strategy report became an important non-human actor in the nascent network. As the materialisation of the strategy idea, this hundred-slide deck with text, pictures and diagrams re-presented the interests of designers in front of various audiences. As the study shows, the strategy report was the outcome of a series of negotiations between designers, Digital Creative's consultants and researchers, informants at different organisational levels of the Volvo Group, linguistic and visual artefacts, case studies, and empirical material such as field notes and interview transcripts, as well as late-coming senior executives. The report was supposed to be mobilised as a device of *interesement* to turn senior executives into allies. It was supposed to be the artefact that would turn the tide in favour of designers, bestow a new legitimacy and authority on them, and set in motion a new kind of *agencement* that would make their voice count as valuable in strategic decisions. However, the strategy report was severely contested when it 'travelled in the field' and the strategising attempt became more 'political' than designers had anticipated. And yet, the whole initiative was political from the very beginning. Seeking to be recognised as a strategic player was in itself a political ambition. And so the enrolment and mobilisation of people and materials as well as the expression of particular values and concerns were political activities, that is, directed efforts to exert an influence on the strategic agenda. These political activities, as Whittle and Mueller (2010) argue, are the very substance of strategy practice.

The mobility of the strategy report consisted in it being a circulating digital document, which allowed for its seamless travel within and across networks. The report travelled and drove the conversation further than any designer had thus far been able to reach. When senior executives first got hold of the report, it definitely captured their attention—albeit in a manner

rather different from that which designers had envisioned. Senior executives were bewildered at the boldness and tone of the claims made in the report. The identities and relationships envisaged in the would-be strategy did not sit well with them. The *interessement* clearly failed since the attempts to stabilise the claims and relationships defined in the problematisation were unfruitful and the value of design(ing) went unrecognised. Designers thought they had provided the required justification for their claims and that senior executives would 'see' that their interests were furthered by the programme. However, the scene developed into a controversy.

The strategy report was suddenly a matter of contestation slipping out of the control of its authors. In a back and forth manner, senior executives provided detailed critical comments on the pdf slide deck contesting the tone and claims made in the report, making counter-claims that not only shaped the content of the report but also the material ultimately utilised in subsequent presentations. Suddenly, there were competing authors holding an alternative definition of reality. The report displaced, modified and inflected the initial intention; it created a detour that translated and betrayed their original aspiration. As it travelled in the field, the strategy-idea-turned-report did not go unmodified. The report itself became a dissident as it actually provoked the opposite effect that it was supposed to provoke. As a representation, it failed to have valorising effects and change perceptions around the idea of design(ing). It did not play the role that was assigned to it in the problematisation and its mediating influence weakened the nascent network, to the point that designers decided to stop its free circulation, shifting its role to that of an internal document whose content could serve as input for presentations to 'sell' design. The report seemed to lay bare an agenda that designers thought legitimate, but in the process, they overlooked the *realpolitik* inherent to the whole project: they were challenging the hegemonic control over strategy-making exercised by top management, that is, the governing strategic centre, the generals, as it were.

The political ontology of strategising

By engaging in network-building efforts to turn themselves into indispensable strategic players and thus entering *de facto* into the strategy-

making game, designers positioned themselves as an ‘emergent concerned group’ (Callon & Rabeharisoa, 2008; Skærbæk & Tryggestad, 2010) aspiring to reframe the strategic agenda from the periphery. However, their assumption that senior executives would recognise their own interests being furthered through this programme overlooked the fact that designers were enacting competing identity claims. By raising their concerns through problematisation and by deploying devices of *interessement*, designers challenged the governing strategic centre, whether they intended it or not. The “real” strategists perceived their incursion in this territory as some sort of jurisdictional breach, and thus started enacting an anti-programme to neutralise the claims of the aspiring authors of strategy whose assertiveness backfired. The situation devolved into a turf dispute. Designers’ effort was so sweeping as to become threatening. The “real” strategists were not particularly thrilled at the prospect of letting designers formulate strategy, thus overruling the obligatory passage point envisaged in the problematisation.

Although classic ANT studies have been blamed for a tendency to focus on powerful actors who become protagonists, without much regard for those at the fringes or periphery of networks (Gherardi & Nicolini, 2005; Helgesson & Kjellberg, 2005; Whittle & Spicer, 2008), the present work builds on a growing body of ANT-inspired studies of strategy-related issues that advance our understanding of those at the periphery and those who resist enrolment (see e.g. Harrison & Laberge, 2002; Knights & McCabe, 2016; Skærbæk & Tryggestad, 2010; Tryggestad, 2005; Whittle & Mueller, 2008; 2010). This thesis shows how designers constituted themselves as an emergent concerned group that made an assertive attempt at displacing a strategy idea into the governing centre in the hopes that it would be valued and acted upon in the manner they had anticipated.

Such an account of strategising practices emanating from the periphery reverses the conventional ‘heroic’ narrative that tends to follow the flow of power from a governing centre as it marshals faithful intermediaries that extend its influence and control (Gherardi & Nicolini, 2005; Whittle & Mueller, 2008). It is precisely at the periphery where power and politics become visible and where practices of valuation come to be bound up with questions of inclusion and exclusion (Mennicken & Sjögren, 2015). This study highlights the challenges faced by those who, standing at the periphery, seek to raise their voice and attain inclusion in strategy-making; but rather than simply attending to individual human

‘voices’, it explores how assemblies of people and things enact values and raise matters of concern in contentious situations. Such a perspective resonates with Alcadipani and Hassard’s (2010) call for a “political ontology of organising” that mobilises ANT as a new kind of political critique that de-naturalises ‘the way things are.’

Clegg et al. (2004b) argue that to understand power one needs to pose the question of what is deemed admissible within a strategy-making environment. In this case, the claims of the strategy report were deemed inadmissible by the governing centre. The critique of the state of affairs raised by designers led to a defensive attitude and, ultimately, to the demise of the strategy idea—at least in its then-current form. The anti-programme emanating from the centre aimed at silencing the dissenting voices of the periphery. Designers were accused of “muddying the waters,” of making the situation confused and cacophonous for the rest of the organisation. Why were designers from Product Design arguing for a shortening of their name to simply *Design*? Why were they advocating for new responsibilities and identities? Why were they talking about reorganising and changing the state of relations between actors? As it turned out, these were all inadmissible suggestions.

One can only speculate about the cost of failing to accommodate dissent and subversion in the strategy-making process. Clegg et al. (2004b) point out that it may be mistaken to rely on strategy-making that emanates from the governing strategic centre, since people “find themselves unable to do little else than reproduce what worked for them, or the organisation, at a different time and in a different space” (p. 25). This was precisely part of the critique raised by designers. One of them would often use a short scene of Lewis Carroll’s *Through the Looking-Glass* to convey this very point. Reproducing what works, making it more efficient was the trap in which the company had already fallen into, as viewed by the designers. They wanted to convey that change was about doing things differently, and that PrD was finding ways to do just that. They instilled notions of desirable states and ways to reach them in an attempt to bring the idea of design(ing) to the centre of the company’s concerns.

However, the governing centre enacted an anti-programme to tame the subversiveness of the strategy idea, and recast it in a less controvertible way, only to let it go uninstigated, to let it fade away in the white noise of the fiercely competitive marketplace of corporate ideas. Accommodating the designers’ problematisation was rejected as too risky a move. Yet,

quashing dissent entails a different kind of risk, that of reproducing the prejudices and biases of the governing centre by not taking alternative voices into account. Indeed, Clegg et al. (2004b) draw attention to the fact that people at the periphery hold different perspectives and often think more creatively because their ideas do not conform to the company's orthodoxies. It is at the margins that existing practices are problematised and new ideas are brought into play (Mennicken & Sjögren, 2015).

As the study shows, the case of designers as emerging concerned group attempting to effect change from the periphery is particularly interesting because, as a community of practice, they prided themselves on challenging orthodoxies; they were adamant about their values, cultivated their otherness, and highlighted their 'design thinking' as different from the dominating engineering rationality. In the strategy report and in presentations, designers emphasised the importance of understanding design as a process and they went to great lengths to outline the integrative and creative nature of design(ing) as an activity characterised by imagination, iteration, user empathy, and prototyping—commonplace traits advanced in 'design thinking' discourses (see Brown, 2009; Dunne & Martin, 2006; Lawson, 2006).

In a sense, designers were trying to surf the 'design thinking' wave that was increasingly capturing the imagination of management practitioners at the company. In this context, the fashionableness of 'design thinking' was epitomised in the emergence of the S-GDP, a design thinking-based process for service development that emanated from the governing centre, which was used to run trainings on how to design services with a 'design thinking' mindset. This commodification of design practice was not acceptable to designers. They thought that the S-GDP portrayed 'design thinking' as a managerial recipe. Indeed, the adoption of 'design thinking' discourse within the realm of practical management, has generally tended to be superficial in character (Johansson-Sköldberg et al., 2013). The S-GDP assumed that design thinking could be verbalised and packaged into a toolkit of design processes and methods that could be readily applied by managers. These approaches overlook the situated, embodied nature of designers' thinking and knowing which cannot be fully verbalised or transmitted as information (Kimbell, 2011; Rylander, 2009).

However, designers knew, at least, that some people at the governing centre were enthusiastic about a certain idea of design(ing).

Arguably this is what partly triggered such an assertive attempt to impose themselves as strategic players in this area. As an idea materialised in the S-GDP, design was harmless, it was just another addition to the repertoire of management techniques. As an idea materialised in the strategy report, design became a politicised threat. Its threatening character did not lie in the nature of the design process itself, but in the redefinition of roles and identities laid out in the programme. In the would-be strategy, design shifted from a disembodied set of methods and techniques to a type of embodied knowledge practiced by a specific community of practice seeking to become more influential. Designers were not only conveying that design(ing) was valuable, but they were also making the case for changing the state of relations between different actors. In this sense, the strategy idea was an innovation that called for the redistribution of power in the organisation, which, as Harrison and Laberge (2002) argue, challenges the legitimacy of new forms of co-operation. However, as shall be argued in the next section, power struggles between actors vying to shape the strategic agenda do not only play at the level of explicit strategy ideas. Designers found ways to cope with their lack of legitimacy as strategic actors by other means.

From deliberate intervention to practical coping

As previously established, being a “strategist” is the property of a network, which shifts the focus from the general to the army battling in the field. However, though emphasising the complex network of forces and relations participating in strategic action, certain (mis)readings of the strategist-as-a-network may adopt anthropocentric biases that assume an heroic agent as bottom-line mover (de Laet & Mol, 2000), a general that orchestrates and arranges the connections in the network in, say, strategy or organisational change. Granted, strategic action is the achievement of a network of people and things, but it *does* need a general to coordinate the campaign, or so the argument goes. That is to say, the capacity for strategy is something that grows out of the will and drive of an heroic agent who plots to spread and solidify a network, the originator of the chain of

causality. This is the connotation¹ often associated with the notion of *heterogenous engineering* (Law, 1987) whereby strategists, as network-builders, enrol and juxtapose various elements to create a relatively stable network to strengthen and amplify their cause (Steen et al., 2006). In such a reading, network-builders gain prominence by successfully mobilising an army of people and materials to execute their will, which sustains the myth of mastery and control exercised by human agents (de Laet & Mol, 2000; Law & Mol, 2008). Heterogenous engineering then becomes “the struggle to centre and order from a centre” (Law, 1999, p. 5).

In the case of the would-be strategy, designers tried their hand at operating as bottom-line movers with bold centring ambitions. They planned a strategic intervention to go from being an emergent concerned group at the periphery to becoming strategic advisors to the governing centre. Designers were seeking to weave a new *agencement* where agency and authority could be attributed to them. To put it another way, the would-be strategy presupposed an arrangement whereby design(ing), as an idea, and designers, as a community of practice, could be recognised as strategic and valuable. Their bid to enlist a “big cheese” rested on a managerial vision that assumed they could act as heroic agents who could persuade others to act on their behalf. Having said that, their calculated efforts were short-lived for they were not able to enrol and mobilise other actors successfully and the connections that they marshalled did not hold in the face of adversity. Passing their plans through the strategy report, which was supposed to stand in for the programme in a materialised form, modified and inflected the initial intention. The study shows how the translation process deviated and yielded unexpected outcomes that not only escaped the designers’ control but worked against their original aspiration.

Conventional thinking in organisational life assumes a ‘controlling epistemology’ and ‘goal-directed behaviour’ as the basis for strategic action, pointing at ‘grand gestures’ and ‘spectacular interventions’ performed by heroic agents (Chia & Holt, 2011). This behaviour underlay the would-be strategy. As shown in Chapter 4, designers wanted to be the

¹In the domain of STS, John Law has gone to great lengths to dispel the managerialist overtones often associated with the notion of *heterogenous engineering* in later works. See notably Law (1994; 1999).

‘catalysts’ and ‘extend the reach of Design to strategy.’ However, the deliberate intervention concocted by designers with the purpose of gaining influence and stepping closer to the governing centre produced, paradoxically, alienating effects. As shown in Chapter 4, some senior executives were wary of designers following the pushback against the would-be strategy, keeping PrD at bay from the governing centre. As Chia and Holt (2011, p. 190) argue in their critique of mainstream literature on business strategy, “spectacular forms of intervention aimed at generating desired outcomes often unintentionally generate negative consequences.” Designers had grand plans for a strategic intervention to subjugate entities to conform to their will as they were building their network. They chose the path that promised rapid institutionalisation but their resolve to control and commandeer change ended up working against them, in the process undermining their prospects of becoming strategic players. Their programme to briskly extend the nascent network was so sweeping that it activated anti-programmes enacted by established networks.

As it turned out, agency was distributed across a multitude of links when it came to strategising efforts. In hindsight, the controversy produced a new type of self-awareness among designers, which led them to relinquish all pretensions of rapid institutionalisation. It was then that designers followed a different kind of approach: the deployment of a valuation device and the behind-the-scenes tactic expounded in Chapters 5 and 6 respectively. Chapter 5 shows how the deployment of the valuation device was an emergent initiative which emanated from an immediate need to justify design decisions and their costs to a design-skeptical audience of engineers during projects. Chapter 6 shows the emergence of a behind-the-scenes approach to quietly become indispensable to middle-managers in day-to-day work. Both accounts can be seen as a continuation of what designers had already been doing prior to the would-be strategy, the slow and mundane work of demonstrating the worth of design(ing) in everyday projects. The would-be strategy, in this sense, was a move away from the mundane flow of practice to grand strategies, from a local adaptive approach to top-down directed strategy. But after the pushback, a sense of not being in control now cast a gloom over their strategising efforts.

When it comes to the deployment of the valuation device, designers sought to defend their stakes from dilution in an environment dominated by quantifiable considerations. Instead of imposing themselves through a top-down intervention, they were simply trying to have their voice heard in

project decisions. When it comes to the behind-the-scenes approach, instead of weaving a stable *agencement*, designers settled for weaving a tissue of “soft contracts” that, in their mind, would eventually be solidified on account of a concatenation of successful projects. In both cases, there was no grand ambition, no showy strategic intervention in the works. Their only mission was to become vital to middle-managers and demonstrate the worth of design in everyday work. If successful, this could eventually open the road to institutionalisation more organically. To be sure, they still wanted a solid authority but their legitimacy had to be constructed—or, rather, cultivated—in a manner that forwent the control-drive of their previously failed strategic intervention.

Chapters 5 and 6 describe how designers, conscious of their own limitations and possibilities, gave themselves over to the situation-at-hand rather than seeking incontrovertible control over it. They knew that forceful efforts to improve their standing and place themselves in an influential position had become inauspicious and thus settled with a less ambitious arrangement: they engaged in what could be deemed as *wayfinding*, a process of localised engagement with the world which derives from a ‘dwelling’ view of the world (Chia & Holt, 2006; 2011). In this sense, designers made a shift in their mode of strategising; they went from a ‘building’ perspective characterised by the prior conception of plans and their subsequent implementation to a ‘dwelling’ perspective characterised by practical coping and flexible responsiveness to evolving circumstances (Chia & Holt, 2006; 2011). In other words, they largely abandoned controlling pretensions to focus on local opportunism. Instead of following a rigid programme of action of which the strategy report was the materialisation, designers turned to local, adaptive, opportunistic action. Whereas traditional approaches are predicated upon deliberate intervention and detached decision-making as the basis of strategy practice, Chia and Holt (2006; 2011) underscore the complex, subtle and non-deliberate ways in which coping actions might engender strategic outcomes.

Interestingly, as shown in Chapters 5 and 6, designers’ cumulative coping actions gradually took strategic significance. For instance, without this being their original intent, designers gained standing in the DataLink project simply by taking notes in meetings and formatting them in a compelling way. Also, their advocacy for user-centred approaches had lasting effects in the project and placed them in a strategically favourable

position to stir decisions. They also realised, almost by accident, that the seemingly mundane act of bringing people to the design studio and showing them around was having a positive impact on their credibility as a community of practice. Further, the deployment of the valuation device was simply meant to convey the value of design to engineers, but its successful reception allowed designers to have a say in strategic product-positioning decisions going forward. In this sense, rather than imposing themselves through a deliberate strategic intervention, designers simply coped with the immediate business of delivering design work and dealing with localised obstacles and concerns. Interestingly enough, designers' efforts to demonstrate the worth of design(ing) were more effective when they invested themselves in coping with immediate concerns in the flow of everyday practice (Chapters 5 and 6), rather than in plotting a strategic intervention (Chapter 4). Direct and deliberate forms of intervention are the leitmotiv running through most business strategy theorising, but, in line with Chia and Holt's (2006; 2011) argument, the findings of this thesis suggest that seemingly mundane and unspectacular actions can be more efficacious at effecting change.

Arguably, the present work constitutes an expansion of Chia and Holt's (2006; 2011) original project in two key respects. First, it brings their argument into conversation with ANT, creating a cohesive *mélange* of analytical vocabularies. Much like ANT, Chia and Holt (2011) criticise the dominant conception of human agency that views action as "intentional, volitional and purposeful in character" (p. 61), and advance a more modest view that "acknowledges the limits of human capacities" (p. 91). They contend that, "in an inherently chaotic and complex world, the idea of controlling and managing happenings in the world through some grand pre-designed strategy and oversight is patently unworkable" (p. 91). Thus Chia and Holt (2011) join ANT in embracing a worldview that appreciates the mystery of unintended consequences and recognises how "odd" the idea of mastery is (Latour, 2008). However, though relational in character, Chia and Holt's (2011) revisited notion of agency remains largely human-centred and underemphasises the role of materials and technologies in the emergence of strategic outcomes. In contrast, the argument set forth in this thesis underscores the influence of non-human forms of agency which, as shown in Chapters 5 and 6, mediated everyday coping practices and contributed to the rise of a certain form of 'strategicalness.' In this

manner, the present work engages Chia and Holt's (2011) main argument but employs ANT's expansive notion of agency detailed in Chapter 2.

Second, this thesis extends Chia and Holt's (2006; 2011) work into the 'ontological politics' (Mol, 1999) of strategy practice. Their systemic critique is largely levelled at the epistemological function of strategy. They call for a shift away from a 'controlling epistemology' which presupposes 'knowing *before* we go' (planning) to a 'relational epistemology' which involves 'knowing *as* we go' (wayfinding) (Chia & Holt, 2011, p. 164). That is to say, they make a compelling case against commonplace portrayals of strategy as a rational, quasi-scientific endeavour or *epistemological instrument* that provides frameworks to master and bend the future in a desired direction. Yet, in their work, they largely overlook strategy's critical political function—as discussed in Chapter 2—as a practice that frames and stabilises matters of concern in situations where different conceptions of value collide and compete against each other (Kornberger, 2013a). Indeed, strategy is a political instrument that uses rationality as a facade and ceremony (Carter et al., 2008b) to repudiate old realities and justify and legitimise courses of action to create new ones. In a sense, by failing to adequately emphasise the ceremonial and political function implicit in strategy practice, Chia and Holt (2006; 2011) seem to give too much credit to the instrumental rationality underpinning mainstream conceptions of strategy, taking it at face value rather than as a facade.

Clausewitz's (1832/1909) *On War* is interesting in this regard because it apprehends both the political and epistemological functions of strategy. When it comes to epistemology, his experience in the battlefield led him to conclude that "[i]n real action most men are guided merely by the tact of judgment" (Clausewitz, 1832/1909, p. 10), as opposed to pre-established plans, for ascertaining knowledge claims in the fog of war is impossible. In this sense, Clausewitz's (1832/1909) critique against the epistemological pretensions of strategy neatly aligns with Chia and Holt's (2006; 2011) in that both reject the notion of rational planning and controlling aspirations as the basis for strategic action. Instead, both projects view strategic outcomes as dependent on "the tact of judgment," in Clausewitz's terms, or on the "phronetic capacity to continuously make timely and ongoing adjustments and adaptations to local circumstances," in Chia and Holt's (2011, p. 143) terms. From a Clausewitzian perspective, appropriate action does not need strategic reflection, for tact is all that is required (Kornberger, 2013a). Similarly, for Chia and Holt (2011, p. 195),

appropriate action is a matter of “direct and immediate apprehension of phenomena rather than general reflections upon them.” Thus, strategy, as traditionally understood, has little—if any—epistemological value.

Notwithstanding, strategy performs a critical political function as a rhetorical mechanism (Kornberger, 2013a). Strategy is not simply about calculating future actions, but also about galvanising support to perform new organisational realities in situations in which actors struggle over conflicting interests and values (Kornberger, 2013a). In the present analysis of designers’ shift from deliberate intervention to practical coping, the concepts of Chia and Holt (Chia & Holt, 2006; 2011) have been extended and applied to the ‘ontological politics’ (Mol, 1999) of strategy practice. In short, not only can a ‘wayfinding’ attitude account for the success of organisations such as the Grameen Bank, Google or the open-source movement (Chia & Holt, 2011), but it can also help to account for the ways in which ‘strategicness’ is constructed, negotiated and made ‘real’ through a variety of coping practices and non-deliberate, spontaneous forms of acting involving humans and non-humans. That is to say, in controversial situations in which there is a struggle over the attribution of ‘strategic’ qualities to ideas or groups, actors can advance their concerns through ‘wayfinding,’ rather than through direct intervention. Contrary to common interpretations of the politics of strategy practice whereby actors vie to impose themselves through direct action and Machiavellian plots—often accompanied of spectacular and entrepreneurial displays of skill and courage—the present work shows how seemingly mundane coping actions can have strategic significance and perform new organisational realities.

Designers as fluid actors

As previously argued, designers’ bid to enlist a “big cheese” in a grand strategic intervention assumed a specific kind of actorship that is pervasive in strategic thinking, that of strategists as heroic, transformative leaders (Clark & Salaman, 1998; Clegg et al., 2004b) and bottom line movers (de Laet & Mol, 2000). This classic vision ascribes ‘heroic’ qualities to a leading human agent who exerts power and influence in the world and possesses a superior ability to see the future (Sillince & Simpson, 2010). This conception of managerial leadership as the exercise of decision-making

power is still central to the theatre of business education where the empire of the ‘decision point’ prevails as the epitome of heroic action (Lezaun & Muniesa, 2017; Muniesa, 2017a). As shown in Chapter 4, the actions of designers revealed this kind of actorship; they threw themselves to the foreground of the drama in an attempt to secure mandates and stand before the organisation as a solid super actor capable of heroic and visionary decision-making. But in the face of overwhelming adversity, the epic drama devolved into a tragedy², and so their ambitions to be foreground figures vanished as a result.

As a corollary to this miscarriage, designers decided to stay clear from grand strategic interventions and adopt a more humble and nimble stance, that is, a wayfinding attitude. Instead of imposing themselves as foreground figures, designers tried to serve other people and “make them look good,” dissolving themselves into the background (de Laet & Mol, 2000). Instead of enacting the role of power-seeking strategists, they were impelled to adopt a more fluid role responsive to the circumstances (de Laet & Mol, 2000). Interestingly, contrary to the would-be strategy in which designers sought a sharp and solid role for themselves as strategic ‘service designers,’ wayfinding elicited the enactment of multiple identities. It was not out of their own volition but simply a matter of practical coping, as discussed in the previous section. In this sense, after the would-be strategy, designers went from network-builders pushing a rigid programme of action to fluid actors whose ability to act was afforded to them by a varied and fluid milieu requiring flexibility and adaptability (Mol, 2010).

This fluidity and wayfinding attitude is evidenced in Chapters 5 and 6. As shown in Chapter 5, designers acted under the influence of a managerialist bent whereby numbers were adopted as primary rhetoric in an attempt to advance their concerns. In the process, they crafted a new identity for themselves when it came to justifying design decisions; they repressed aesthetic discourse and downplayed their otherness to act in

²As Halpern (2011, p. 550) observes of tragedy as theatrical genre: “Tragedy depicts a world in which the flux or web of events wrests action entirely out of the hands of its agents, deforming it in catastrophic and ironic ways. In this sense, tragedy is almost a photographic negative of heroism. What it depicts is not the greatness of action but merely its unpredictability, its tendency to go awry.”

accordance with the dominant rationality, presenting themselves as 'engineers' to certain portions of the world outside the studio. At the same time, however, designers also accentuated their otherness and the production of aesthetic value in instances in which they had visitors in the studio to showcase their distinctive and creative way of thinking—their 'design thinking.' In this manner, designers enacted multiple identities and mobilised different modes of justification depending on the situation. This fluidity allowed them to adapt and respond to varied circumstances. In Chapter 6, this fluidity is even more salient because, in the DataLink project, designers were exploring new territories of action. They even refrained from using the word 'design' to avoid being stereotyped as graphic designers who were there just to produce visuals. And so designers' role and identity was particularly unstable. The designers in question acted as both pixel decorators and service intrapreneurs; both feeble consultants and influential project managers; both extraneous note-takers and workshop facilitators. Sometimes they were able to push their agenda; sometimes they were not. In this sense, their role was fluid as it lacked distinct boundaries.

Contrary to 'product design' which, in manufacturing settings, assumes a rather fixed set of responsibilities, 'service design' is still a somewhat new development in this sector, one that requires an expansion of designers' activities to areas previously covered by different disciplinary domains (Morelli, 2002). This shift from an order of design focused on material artefacts to an order focused on interactions, services and processes (see Buchanan, 1992; 1995) generates ambiguity as to what 'designing' entails in these new situations. What is 'designing' when it comes to services? How does the division of labour work in service development? Who owns what? Everything is up for negotiation in such situations; roles and responsibilities are up for grabs. As framed in the problematisation, the would-be strategy attempted to liberate design from an exclusively product-focused mandate and solidify a set of roles and responsibilities for designers in the emerging space of service development. It was an unsuccessful attempt to seize control and prompt institutionalisation in the midst of an interstitial situation. The behind-the-scenes approach epitomised in the DataLink project, by contrast—and somewhat counterintuitively—, profited from the blurriness and fluidity of designers' roles and responsibilities. Enacting multiple identities allowed designers' influence to evolve and grow in a more organic fashion.

Admittedly, there were several clashes over competing values and definitions of reality but their fluidity enabled them to negotiate settlements and work around issues. As wayfinders, they attuned their responses to the movements they observed in their surroundings (Chia & Holt, 2011).

In fact, this fluidity extended to their own artefacts. For instance, the valuation device was framed in different ways as both a scoring mechanism and a political instrument. It was made to work as an objective arbiter, but also as an agent of provocation and critique. It was framed as a precise tool to score design-s, yet the idea of “good design” still eluded its grip. The fluidity of the device is apparent in its multiple framings and workings. What is more, designers did not craft a new managerialist identity for themselves independently; rather, it was the valuation device that afforded the possibility of enacting it. Another fluid artefact was the wireframe in the DataLink project. The wireframe was not a mere map of functionalities and screen states produced by designers, but the roles of designers themselves were produced by it, since this particular artefact made other actors realise that design work entailed more than simply “pushing pixels.” Similarly, other artefacts—e.g. personas, customer journeys, the area feature description document—enabled designers to negotiate new roles and identities throughout the project. In this sense, the mediating influence of artefacts was crucial to this fluidity. Designers shaped artefacts and artefacts shaped the designers’ fluid selves in turn.

Fluidity also entailed new types of challenges for designers notwithstanding. For instance, giving themselves over to the situation by dissolving their actorship meant that success and failure (for them) were hard to assess in the DataLink project. It actually turned out to be an ambivalent move. On the one hand, designers thought it a success that business managers took up their ideas as the foundation for the new DataLink project; but on the other hand, their contribution was not being properly acknowledged in the process. Was that a success or a failure? There was no clear-cut answer to this. They debated themselves between deliberate dissolution and readily recognisable authority and authorship; between backgrounding and foregrounding. Where is the line between dissolving oneself to make others look good and passing into utter oblivion? Designers wrestled with this question throughout the project. Their rationale was that by working discreetly and overdelivering in projects, they would get paid in terms of recognition and involvement in

future projects. But what constituted success and failure was difficult to determine *in situ* at the time when the project was running.

As Mol (2010) argues, 'societies' or associations may take the form of a network that is constructed to have a stable arrangement, but they may also take the form of a fluid whose arrangement is adaptable, 'fluidly dancing' from one version into the other. This implies that whereas in networks actors are clear-cut, in fluids the outlines or bounds of actors are less sharp (Mol, 2010). These two forms are evidenced in this ethnographic study of designers' practices. The strategic intervention was aimed at stabilising designers' strategic role and identity in an *agencement* where agency could be attributed to them. Its failure led to the adoption of a wayfinding attitude whereby roles and identities were fluidly adapted depending on the situation.

However, it would be misleading to characterise this adjustment as the mere acceptance of something undesirable but inevitable; a situation in which designers had no other choice but to relinquish agency. And yet deliberate dissolution seems to be tantamount to stripping oneself from the capacity to act. But this is misleading insofar as it underestimates the silent efficacy of 'behind-the-scenes' action. What goes down, for instance, behind the scenes of a theatre production is no small feat. As Latour (2005) has observed, an actor on stage is never alone in acting, therefore it is never clear who and what is acting whenever there is action in the foreground. In this sense, fluidity and dissolution do not necessarily entail the loss of agency; rather, fluidity can be understood as a kind of agency in itself (de Laet & Mol, 2000; Law, 2002) in which the constraints of the environment, rather than a hindrance, become generative of new possibilities (Gomart & Hennion, 1999). Indeed, designers' fluidity did not preclude them from becoming 'strategic' players, but actually enabled them. As designers engaged in wayfinding, their agency rested on their capacity to be adaptable and attuned to the happenings around them. And so dissolving themselves and becoming fluid actors turned out to be suited to the advancement of their agenda in some of the situations described in Chapters 5 and 6. What appeared a liability at first, turned out to be an asset.

The fluid reordering of design values

Furthermore, not only were designers' roles and identities rendered fluid, but also their values. Studies on the culture and practices of designers in management and organisation literature (e.g. Fayard, Stigliani, & Bechky, 2016; Michlewski, 2008) often assume the existence of stable values out of which designers act and conduct their practice. In these approaches, values are fixed and constitutive forces (Dussauge, Helgesson, & Lee, 2015a). Michlewski (2008, p. 385), for instance, proposes five categories of values espoused by designers that shed light on the "nature of their particular attitude"—what he refers to as "design attitude"—: (1) consolidating multidimensional meanings, (2) creating, bringing to life, (3) embracing discontinuity and open-endedness, (4) engaging polysensorial aesthetics, (5) engaging personal and commercial aesthetics. His approach consists in "uncovering" a given set of values that guide action. Similarly, Fayard et al. (2016) discuss the role of values in the construction of the occupational mandate of service design, as an emerging occupation. They found that service designers differentiated themselves from other competing occupations—such as management consultants—by highlighting how a given set of values make them unique: holism, empathy, and co-creation. These values guided service designers' material practices, such as conducting design research, visualising, and prototyping. Both articles mobilise stabilised values as explanatory devices for "design attitude" (Michlewski, 2008), and for the construction of a distinctive occupational mandate (Fayard et al., 2016) respectively.

However, studying values from an ANT-pragmatist perspective entails a different point of departure. As argued in Chapter 2, values should be viewed as an outcome of valuation understood as practical action. In this sense, values are enacted, that is, values are *realised* and generated in practices involved in the making of reality (Woolgar & Lezaun, 2013). It follows that there is no such thing as 'essential' design values that can be separated from the contingent, situated set of practices that brought them into being. That is to say, designers' practices are generative of values and not the other way around. This opens avenues to examine the instability of what are typically considered 'essential' values of designers by attending to the way in which values are enacted, ordered, displaced and transformed in practice. As Dussauge et al. (2015a) argue, the unstable quality of values is often made evident in controversial situations where numerous and

multifaceted frictions come into view due to simultaneous efforts to enact different values.

Such situations are evidenced in Chapters 5 and 6. Again, these chapters narrate how designers struggled to justify worth during projects, but also draw attention to how the values of designers became fluid over a prolonged struggle for legitimacy. Over the years, as a traditional in-house design department in the automotive industry, designers at Volvo PrD built a sense of value around their identity as brand care-takers and the notion of being different and producing difference. As a community of practice, they prided themselves on upholding the Volvo brand values, producing aesthetic value, and questioning orthodoxies through their creative work. That is to say, their practice was a form of “organised heresy” (2011). But this stable conception of value became unsettled in new situations in which the scope of design work was expanded into new areas where designers did not have an established legitimacy. In these contexts, the focus on creativity and the production of aesthetic value became a nuisance in everyday work when it came to negotiating with other organisational actors. Thus this struggle fostered the emergence of a new sense of value connected to the notion of ‘selling design’ by making it comprehensible to other communities of practice, which became an absolute priority.

As shown in Chapter 6, designers were impelled to justify both their inclusion and contribution to the DataLink project. In this case, they enacted values connected to the notion of user-centricity, purposefully shrugging off connections to notions of style, aesthetics or creativity. They stressed the importance of responding to real user needs and that such focus could bring economic benefits to the company. This mobilisation of an economic rationale to justify design decisions upset previously stabilised conceptions of value shared among designers which were mostly focused on safeguarding the aesthetics of the Volvo brand. Similarly, in Chapter 5, instead of enacting values commonly portrayed as proper of designers, such as aesthetics or empathy, designers enacted managerialist values more closely associated with ideals of objectivity, rationality, and accountability. Quantified comparisons turned out to be useful in particular situations where designers needed to justify worth. The case shows how the deployment of a valuation device was crucial to the crystallisation of a new ordering of values among designers engaged in ‘selling’ design. In contrast to Fayard et al. (2016) and Michlewski (2008), this study shows how the values of designers were unstable as they changed

from one situation to another; that is, design values were fluid and multiple as part of designers' wayfinding efforts. As they negotiated the value of design(ing), they also negotiated their values as a community of practice.

Very often, 'design thinking' discourse is predicated upon the notion of a distinctive way of thinking, governed by a set stabilised values which supposedly guide the work of designers. Such an approach assumes the existence of a generalised 'design thinking' that "ignores the diversity of designers' practices and institutions which are historically situated" (Kimbell, 2011, pp. 285-286). In this sense, the present work addresses Kimbell's (2011; 2012) call for the critical rethinking of design thinking by attending to the situated practices of designers in relation to other social actors including artefacts and their effects on the making of value(s). Theorising values as precarious accomplishments stabilised through ongoing practices opens an interesting and promising avenue for research into designers' thinking and knowing. Instead of assuming that designers espouse particular values, future studies could focus on the exploration of valuation practices connected to the work of designers and their role in the making of design values—the edited volume by Farías and Wilkie (2016) being a good step in that direction.

Valorisation of design(ing)

All these stories of a misfired strategic intervention, of the deployment of a valuation device, and of the coping practices of designers working behind the scenes, converge in a single narrative: the valorisation of design(ing) in a changing context. The present ethnographic account describes the struggles designers faced in search for recognition and legitimacy as strategic actors and provides insights on the practices that produced (un)intended (de)valorising effects. In a sense, each story describes similar, yet different, situations of valuation whereby multiple conceptions of value or principles of (e)valuation were at play (Stark, 2009). The stories are told from the vantage point of designers, who, as a peripheral community of practice at Volvo Group, struggled to impose themselves and defend what was at stake for them in these situations. It is worth pointing out, however, that the kinds of mediating activities and mediating objects in operation differ in each account.

In Chapter 4, designers sought to build a solid network around a strategy idea. They mobilised consultants and a strategy report as spokespersons for their programme; the latter of which, as previously discussed, followed a dissident trajectory that undermined their original aspirations. Furthermore, designers set up a “theatre of the proof” (Latour, 1993a, p. 93) to demonstrate how valuable designers’ “design thinking” was to the organisation. In their search for allies, they staged multiple demonstrations and told stories that articulated their values and convictions through images and verbalisations. These actions had an important aesthetic dimension, whereby the idea of design(ing) was expressed and re-presented as a consumable vision of how things could be. The process of design(ing) was described with explanatory diagrams that highlighted user-centricity, prototyping and iterative loops as key principles. Designers mobilised visuals of successful projects using media such as pictures, videos, and PowerPoint slides. As professionals invested in the production of compelling visualisations on a regular basis, designers put great care into crafting a repertoire of materials to build their case. These representations, however, were not particularly consequential in the valorisation of design(ing) as an idea-to-be-enacted strategically.

In Chapter 5, designers sought to justify worth by deploying a valuation device. This device emerged as a way to cope with localised obstacles that kept designers from having a say in important product decisions. In their attempt to be regarded as strategic actors, they engaged in rhetorical practices that deviated from their traditional repertoire. They went from a rhetoric of images to a rhetoric of numbers; from demonstration as the portrayal of convictions and values to demonstration as a process of mathematical proof. Designers understood that the mechanism underlying the truth-setting regime in the organisation was measurement, and so they entered a political game to defend their stakes against other considerations. The valuation device can thus be viewed as a form of ‘sociocalculation’ (Vormbusch, 2008) by which designers sought a reconfiguration of power. More than a measure, quantifying their stakes was a way of coping with unfavourable circumstances, by simultaneously conforming to and resisting the dominating valuation regime imposed by the ‘centre of calculation’ (Whittle & Mueller, 2010). Through the device, designers were able to make their contribution visible and intelligible to other communities of practice (Espeland & Lom, 2015). So ultimately, the use of numbers and graphs did help designers to influence strategic

outcomes. In this particular case, the allure of numbers and graphs outplayed the allure of design visualisations. As a privileged mode of representation of the 'strategic' (Kornberger, 2013a), numbers and graphs are alluring because they make complex phenomena comprehensible in an aesthetics that holds clarity and parsimony as ideals (Espeland & Stevens, 2008).

Chapter 6 epitomises the adoption of a wayfinding attitude by which designers fluidly adapted to varied circumstances as they sought involvement in new service design projects. In this process, designers enacted multiple identities and started gaining strategic stature by performing seemingly mundane tasks. Here, their demonstrations of worth were varied. They mobilised visual materials and a variety of design artefacts to re-present the idea of design(ing). Also, they invited people to the design studio, for them to 'see' with their own eyes what design(ing) was all about. The studio space, as it turned out, did have an important rhetorical appeal. So much so that it became mandatory for designers to bring people to the studio whenever they had to negotiate decisions or involvement in projects. Interestingly, the long struggle for legitimacy that unfolded during the DataLink project had a prolonged turning point in which, instead of describing the importance of design(ing) through words, images or numbers, designers co-designed the service with the business team in charge of the project, which had notable valorising effects. Instead of 'consuming' an idea of design(ing) by means of rhetorical representations, the business team engaged and participated in a number of design workshops, experiencing design(ing) first hand. This was an important shift away from a passive aesthetics of consumption, towards an active, embodied aesthetics of experience (Dewey, 1934/2005).

Summary of contributions

As part of a larger trend to valorise and speak of design as a strategic resource for business that goes beyond product form-giving, much has been said about design's capacity to uncover new meanings (Jahnke, 2013; Verganti, 2009), drive organisational change (Brown, 2009; Buchanan, 2015; Junginger, 2006), and enable innovation (Carlgren, 2013; Carlgren, Elmquist, & Rauth, 2014), yet much less attention has so far been given to design's strategic valorisation as a study phenomenon in its own right. The

present ethnographic study of designers' practices provides a detailed account of the efforts through which designers sought to valorise design(ing) as an idea-to-be-enacted and gain strategic ascendancy and influence at Volvo Group, thus contributing to our understanding of how this larger trend plays out in the changing landscape of manufacturing where design has a strong tradition linked to the product.

By exploring the type of mediations and translations that operate in this valorisation, this research follows the tradition of other ANT-inspired studies that explore strategising and organisational change as the building and unbuilding of networks. Specifically, the study draws attention to the role of valuation in the politics of strategy practice. By adopting a pragmatist perspective on valuation, this research conceptualises value(s), neither as a subjective preference nor as an intrinsic quality of things, but as the outcome of ongoing practices of valuation that shape reality.

The study reveals how, despite careful planning involving the enrolment of consultants, staged demonstrations, and the circulation of a report, designers failed to get their strategic authority institutionalised through a top-down decision. In fact, their calculated efforts to valorise design(ing) worked to undermine their original aspiration.

The study puts on display how designers deployed a valuation device that allowed them to quantitatively express and assess their contributions, in the midst of controversial situations where divergent conceptions of value were at play. Rather than accentuating their otherness, designers chose to adapt and imitate the dominant valuation regime of quantities and numbers, in their attempt to justify design decisions and negotiate settlements.

The study shows how designers weaved webs of 'soft contracts' and engaged in efforts to co-design solutions with non-designers, which produced valorising effects, changing some people's perceptions around the idea of design(ing). Designers' efforts to demonstrate worth were more effective when they invested themselves in fluidly coping with localised concerns and obstacles in the flow of everyday practice, than when they sought to impose themselves through a top-down decision.

The study demonstrates that the valorisation of design(ing) does not primarily rest on the rhetorical abilities of designers but on the material arrangements and systems of measurement that they mobilise, as well as the practices of engagement and participation through which non-designers experience design(ing).

By focusing on controversies where different conceptions of value were at play, the study shows how the values of designers were rendered unstable and fluid over the course of a prolonged struggle for legitimacy. As they explored new areas of action, designers were constantly subjected to an imperative of justification that led them to repress the articulation of values related to notions of style and aesthetics, in favour of managerialist values and the use of numbers, in an attempt to look rational and reliable. In this sense, designers' practices were generative of values and not the other way around. And so, this work presents a novel approach to the study of design values that goes counter to common discourses that assume values as fixed constitutive forces 'hiding' behind actors' actions.

Practical implications and future directions

The findings of this study have interesting implications for design management practitioners, for they raise important questions about the management of design(ing). As design infiltrates new areas that were typically beyond its purview, it fights to justify itself and its seriousness to the world (Brassett & O'Reilly, 2015). This need of justification often leads to the construction and articulation of arguments whereby what is valuable about design(ing) is expressed in managerialist frameworks, which is a thread running through the empirical stories of this thesis, but is decisively most notable in Chapter 5. As previously shown, designers' resistance-by-conformity did grant them ascendancy, it did "work"; but was it successful? Is managerialism the way forward for design management practitioners seeking to leverage design(ing) as a force for change in organisations? In a sense, this has been the trajectory of much of the design management field with initiatives such as the 'Design Value Index' (Rae, 2016; Westcott et al., 2013) that seek to harness design(ing) as a tool to accomplish managerialist fetishes of superior performance, as part of a wider fascination for 'design thinking' as the next competitive advantage in business. Arguably, 'design thinking' has devolved into a pandering discourse that presents as new old unsustainable forms of 'business as usual.' Thus, there is a sense in which the valuation device and designers' swim-with-the-stream approach was not successful. As Espeland and Stevens (2008, p. 432) argue in their case for an 'ethics of quantification,' measurement "can narrow our appraisal of value and relevance to what can

be measured easily, at the expense of other ways of knowing.” Through their complying with the imperatives of measurability and calculability, design practitioners may unwittingly be further delegitimising design(ing) as a valuable, alternative way of knowing and thinking, leading to even more intolerance towards articulations of value(s) that defy measurement.

The McNamara fallacy that ‘if it can’t be measured, it doesn’t exist’ is alive and doing well in contemporary organisational life. From this standpoint, whatever cannot be calculated, cannot be managed. In a brilliant essay, Mollie Painter-Morland (2017) throws down the gauntlet to this kind of thinking. She argues:

The problem with the idea that only what can be measured can be managed, is that it leads to “misery thought”, a calculative mindset that can only justify the expense of time, energy and resources when it will pay off in terms of a neat cost-benefit analysis. (p. 151)

This “misery thought”, she argues, throws organisations into a constant pursuit of “what is missing.” A pursuit underpinned by the principle of utilitarian calculation whereby the central question remains one of profit and loss expressed in numbers (Kornberger et al., 2015a). In late capitalism, “what is missing” is defined by an imperative of constant, permanent innovation in almost every societal field (Hutter & Farías, 2017). This concern for the “new” and the “innovative” in the form of products, services, technologies, policies, business models, etc. explains why the harnessing of ‘design thinking’ and the procurement of “creatives” has become so important in recent years. Something that is increasingly evident in the current wave of acquisitions of design agencies by global management consultancies and corporations seeking to boost their ‘creative’ credentials (see Hurst, 2013; Maeda, 2015; Muratovski, 2015). But, as Painter-Morland (2017, p. 153) points out, “the preoccupation with the ‘creative’ and ‘creatives’ betrays the same attempt at measuring, managing and engineering outcomes.” Indeed, the current vogue for ‘design thinking’ and design’s ascendancy to strategy and innovation is still largely underpinned by this calculative mindset, this “misery thought.”

Management by measurement is predicated upon the notion that that which cannot be calculated falls outside of the realm of what can be valued. This is why, as Painter-Morland (2017) argues, organisations struggle to factor in aesthetic considerations. In this sense, it does not come as a surprise that ‘design thinking’ discourses have tended to conceal

the crucial role of aesthetics, an aspect of design(ing) that remains too incalculable (Tonkinwise, 2011). This is also made evident in the manner in which designers at Volvo Group repressed allusions to the aesthetic, for these were not “facts” but subjective opinions; they amounted to worthless arguments in their negotiations and justifications. Thus, designers’ strategic ascendancy, in a way, came at the expense of considerations of style and aesthetics.

[A]esthetics is too political. Sam Ladner has conjectured that design thinking is a way of concealing the politics of management (2009). Aesthetics, as inherently subjective and/or cultural, foreground interpersonal politics. Despite its commitment to failure-friendly iterations, perhaps the risks involved in styling are too much for “design thinking”. (Tonkinwise, 2011, p. 536)

Indeed, aesthetics is too ‘heretical’ a notion for the managerialist commodification of ‘design thinking’ to even consider. And yet, perhaps the way forward for ‘design thinking’ is precisely this recovery of the aesthetic³, as Tonkinwise (2011) and others have argued (see e.g. Amacker, 2017; Brassett & O’Reilly, 2015; Jahnke, 2013). Organisations seeking to leverage design(ing) as a force for change need to practice a kind of management that acknowledges the limits of calculation, and gives room for multiple, alternative ways of knowing and conceiving worth. Allowing for this kind of ‘dissonance’ (Stark, 2009) to unfold is necessary to open critical spaces for the questioning of ‘business as usual’ and the exploration of alternatives. Perhaps, after all, designers’ knowing and thinking could be useful in reconnecting with what lies beyond calculability and escape “the calculative, miserly mindsets that rob us of our intimacy with ourselves, each other and the world” (Painter-Morland, 2017, p. 158). Perhaps, this is the kind of aesthetic knowing that can help

³John Dewey’s pragmatist aesthetics (see Dewey, 1934/2005) and Antoine Hennion’s sociology of attachment (see Gomart & Hennion, 1999; Hennion, 2001; 2016b) can—as part of the critical rethinking of ‘design thinking’ (Kimbell, 2011)—be important guideposts in this turn to the aesthetic, understood not as the affirmation of stable taste regimes ‘already there’ but as the continuous testing of styles and tastes in situated, embodied design(ing) practices that make possible new forms of attachment.

us to rediscover modes of being that have been obscured by our obsession with the illusion of mastery and control enacted through measurement. And, perhaps, this can be of help in operating a transvaluation of values in the necessary transition towards more sustainable ways of living and working in our societies.

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Today there is a fairly widespread recognition that design is relevant for business and society. Organisations are increasingly calling upon design as a strategic asset to generate innovation as part of a wider fascination with ‘design thinking’ in business. This renewed cultural cache around the idea of design extends beyond the form and function of manufactured goods into services, experiences, and organisational cultures. In short, design is a fashionable idea whose time seems to have come.

Recent scholarship has tended to emphasise design’s many contributions in this expanded field, playing a part in the growing recognition and diffusion of design as an idea. However, scant attention has so far been given to the valorisation of design as a study phenomenon in its own right. How is the idea of design made valuable and strategic in organisations? This ethnographic study explores such question by attending to the practices of in-house designers who undertake efforts to ‘sell’ design and become strategic actors at a Swedish multi-national manufacturing company, Volvo Group. The study shows that the “added value” of design was made, provoked and assembled by actors in practice.

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