

There no such thing as ‘strategic design’: Studying the dynamics of reframing and strategic transformation in the public sector

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Abstract. This paper seeks to explore the way design practices, (and theories, and methods) lead to strategic innovation - on an organisational, as well as a sector-level. We begin this paper begins by stepping away from the assumption that ‘strategic design’ leads to strategic innovation. Let’s start by saying ‘*There is no such thing as strategic design*’, and take a fresh look at the ways in which design and strategy interact, to understand them deeply. For this exploration, we will focus on two professional case studies from the public sector. We will explore how design projects and practices have influenced (or failed to influence) the strategies of the major stakeholder organizations involved. We will then use a change theory perspective to critically reflect on what design can do, and where design practices fall short and need to be augmented by practices from other fields.

Keywords: Framing, Social Design, Strategic Design, Strategic Innovation

1 Introduction

To a degree, what designers can achieve is (pre)determined by the starting point of the design project: the ambition that is laid down in the brief, and the perceived freedom in the problem space (as well as in the solution space). Therefore, the quality of the design briefing (‘the question’) and its scope heavily influence the nature and quality of ‘the answers’ that design can bring – as a consequence, design practitioners have naturally sought to influence the formulation of these briefs. To achieve the up-front influence they covet, designers have attempted to get involved in the strategic decision processes in which design briefs are spawned in various ways (Paton & Dorst, 2011). In a way, the co-evolution of the problem space and the solution space is not just a natural part of design practice, it is also something that designers covet, and in practice often need to fight for (Dorst & Cross, 2001).

It is hardly surprising that design practitioners, researchers and educationalists are now actively engaged in more broadly and systematically extending the reach and influence of design in this direction – towards strategy. Through these developments, Strategic Design is on the verge of becoming a design discipline in its own right. For instance, there are now Masters of Strategic Design curriculums, where the elements of design practices and strategy development are brought together. Graduates from these degree programs find their way on the job market, in a wide variety of roles, and are often valued as bridge-builders in the space between design and the organizational context.

Yet we hold that this notion of strategic design requires cautious consideration and critical reflection. After all, in moving into the strategic space, design is entering a context for which its practices weren't originally conceived. In traditional design practice, the formulation of strategy and the resulting organizational transformation processes were always squarely placed with the client, rather than the designer.

In this paper we will look at this developing field of practice (perhaps a bit early to call it a 'discipline' in its own right), to see what the fit is between design practices as they are now, and the demands of a strategy development process. To take a fresh look, we begin from the starting point that **'There is no such thing as strategic design'**. So, what actually happens in the area between design and strategic development when design influences strategy? What are the bridges that need to be built, across which gaps, and what are the tensions that need to overcome? To what extent are design-based practices up to this challenge?

To start this exploration, we need a working definition. Nowadays there are many ways in which the words *Strategic* and *Design* are combined within practice and academia, reflecting the many ways in which the relationship between design and strategy plays out and can be shaped. This brings to mind the way Frayling articulated the various possible relationships between *research* and *design*: 'FOR', 'THROUGH', etc. (Frayling, 1993). All these adjectives can similarly be used in this context, but these very different relationships tend to all be clustered under the umbrella notion of 'strategic design'. This rich diversity of (potential) relationships unfortunately also means that what KIND of strategic design is considered in a specific paper or piece of literature isn't clear – and then the discussion becomes nebulous. So, let's just define it here, locally as it were, and stick with this definition for the purpose of clarity in this paper –realising that what can be learned by sticking to this narrow focus probably can also be generalised to the broader field. In this case, strategic design is considered to be the *influencing/shaping of organizational strategies through design projects, approaches and practices*.

So the central question for our exploration is: *What are the qualities that design can bring to the influencing/shaping of organisational strategies?* This general question can be approached from several perspectives, here we have chosen to focus at design (1) as a practice, and (2) as an approach. We will be building on the academic discussion and literature concerning both of these.

Design as a practice –in the discussion around design as a practice in relation to strategy development, we can see two general positions, for the sake of brevity here represented by eminent design scholars, Verganti and Kimbell.

- (1) Verganti in his work on Design Driven Innovation demonstrates with case studies how design practices – with their human centered nature – can be very valuable contributors to strategic change. And indeed, Human Centered Design (HCD) is increasingly taken up in the private and public sectors (McGann et al, 2018). In the public sector, this take-up is sometimes embodied in the establishment of Design Labs or teams that adopt a project approach with HCD as the underpinning practice (van der Bijl – Brouwer, 2016). Some of these Labs will be given a further label, either around the topic that they are to deal with (crime, policy, social, user experience, etc.) or will be defined by the expected output (digital, procurement, product, service, etc.). However, as Verganti states, the very human centeredness of these labs might lead to an over-emphasis on finding better outcomes within the existing problem frame - achieving incremental, rather than strategic innovation (Norman & Verganti, 2013).
- (2) Kimbell has been observing pioneering social design practitioners. In a particular study on social design and its effectiveness on impacting inequality, Julier and Kimbell (2019) point to the sense of agency that is present within the emerging profession of social design, but on the other hand they also find that social design has limited ability to impact strategically. Importantly, Julier and Kimbell point out that social design is an emerging profession, and point to a number of areas for development as a practice: (1) development of a manifesto, (2) shifting the power dynamic between designer and ‘client’, and (3) developing methods that transcend the tactical, moving the practice into the strategic space.

These two positions help understand where strengths and weaknesses of design practices in the strategic space might lie – where Verganti focuses on what design can do, and Kimbell seeks to outline the practices that need to be added into the design mix to achieve outcomes on a strategic level.

Design as an approach – again, we will use the work of two eminent design scholars to set the scene for discussions, in this case Buchanan and Liedtka:

- (1) In a recent further extension of his Four Orders of Design concept, Buchanan (2019), shares a personal and expressive exploration of his approach of design as dialectic. In his model, Design exists across four orders; Signs, Things, Actions, Thoughts (ibid). Buchanan draws on well established ‘strategic designers’ to explore their approaches and practice of facilitation. Each of the facilitators and their firms have been engaged by their clients to play a role within the development of strategy. When describing their practice, Buchanan proposes that they mediate/facilitate a dialectic that leads to the discovery of a ‘middle ground’. This to Buchanan is the uncovering of an underlying shared value, that has not explicitly been aired

before, and the job of the facilitator is to bring the participants to a discovery of this shared value.

- (2) In exploring the Design Thinking approach in organizations, Liedtka (2018) puts forward a number of key characteristics that make Design Thinking work. In this study, Liedtka is looking at the adoption of Design Thinking as a way of working within existing company structures. To Liedtka the key elements of why Design Thinking is successful are that it is useful in; (1) creating immersion in the context at hand, (2) instilling a flow from research to implementation, (3) building in buy-in with team members and stakeholders through them having a hand in the creation and development of solutions, and (4) bringing a playfulness that facilitates emergence through prototyping. Liedtka points to a raft of case studies all embodying Design Thinking across the private and public sectors.

There is quite a sharp contrast between these two positions on the approach that design could and should bring to the shaping of strategy: design as a way to shape a (critical) dialectic process versus design as a way to bring people along on a journey, in a sense moulding the problem situation and taking it away from the original discussion arena.

In this paper we aim to contribute to knowledge on design practice and design approach to shaping organisational strategy by focusing on two professional case studies from the public sector to explore how design projects and practices have influenced (and sometimes failed to influence) the strategies of some of the major stakeholder organisations involved. This requires a longitudinal research setup: while design interventions are often aimed at immediate success ('a solution'), to answer the question whether a strategy is successful requires a much longer timespan ('an unfolding').

The first, 10-year longitudinal case study of a bottom-up design approach will be used to create a model in which some of the steps and major relationships between design and strategic development are sketched out. We use a change theory perspective to reflect on both the case study and the model. This gives us a basis from which to critically consider what design can do, and where design practices may need to be augmented by practices from other fields to enhance their effectiveness in the strategic space (thus addressing the first discussion, on design practices). The second case study starts from a top-down need for strategic change and shows the potential role a design approach could have in achieving this (addressing mainly the second discussion, on design approach).

These two practice-based case studies, and the model that springs from them, create new insights into the way design could be used to influence and shape strategic processes in organisations. Building on this analysis, we explore how design practices could be more effectively used in the strategic arena.

2 Case study 1: Kings Cross from reframing to transformation

Design predominantly takes place in projects, in which designers aim to create new solutions to a given problem (the design brief). But a new solution is not really the end-game: for a new solution to really stick, it needs to have influence beyond the confines of the design project (and its closest stakeholders): it needs to impact the practices in the organization, the strategy of the organization, perhaps (in the case of a radical innovation) the processes and structures of an organization and radically new design solutions potentially influence the way of thinking in a whole sector ('a paradigm shift'(Khun, 1962)).

This brings up the question of agency, for *strategic design* to be truly 'strategic', it needs to move beyond the role in which 'design' is conventionally cast.

As a first investigation of the strengths and possible limitations of designerly ways of thinking for achieving this, we will introduce in a case study of a radical design project, and a critical longitudinal analysis on its influence and impact in the ten years since the original project. Ten years on, what has actually happened with the frames and design ideas of the initial project? Has this project led innovation on a strategic level, and perhaps to organisational transformation? What does this tell us about the link between design practices and strategy development and implementation?

2.1 Case Study 1 – as it happened

In 2009, the Designing Out Crime (DOC) research center was approached by the City of Sydney (a local council) to look into the problem of 'alcohol related violence' in Kings Cross, an entertainment district.

Australia had a significant crime hotspot. According to the statistics, Kings Cross was the epicenter of violence in Australia. The government responded with an 'evidence-based approach' leading to tighter regulations and restrictions on business. This approach was rational, and built on the knowledge of Kings Cross as a hotbed of crime and corruption. In order to reduce crime, the government applied the evidence-based crime prevention approaches that fit their diagnosis. In practice this led to treating 10-20,000 young people every Friday and Saturday night *as if they were* criminals. Until the Designing Out Crime Research Centre reframed the issue around the underlying values of the 10-20,000 young people who were going to the location every Friday and Saturday night. (*for a much more detailed description of this project and its outcomes see (Dorst et al, 2016, pp: 14-19 and 48-51).*)

The good news: impact. By its very nature, such a radical reframing (from 'alcohol related violence' to 'a music festival') cannot be implemented without having deep repercussions for the key organisations involved. Such a reframing implies a change agenda for the stakeholders that have earlier framed the issue, defined the problem, organized themselves around the response and thereby inadvertently kept it in place.

Towards a new strategy. A number of remarkable people within the City of Sydney local government quickly picked up on the possible role that they could play within the ‘Music Festival’ frame, and recast their organization from being centered around the conventional local government roles (provision of infrastructure for public life, and rule enforcement) to become a ‘conductor’ of night life in the Kings Cross area. From this much more active, creative role they recalibrated their relations with a wide group of stakeholders that could be involved in shaping the future of the Kings Cross experience. And they even went much further: the Music Festival frame is a nice metaphor to think with, but it has obvious limitations: (1) many elements of the complex Kings Cross environment cannot be captured within this frame (e.g. the experience of local residents), (2) this frame only applies to Kings Cross (which is only a couple of streets), and merely to a couple of nights per week, mostly in the summer months. For the City of Sydney to become a true conductor of nightlife throughout its local government area, it would need frames or development agendas for all of its different neighbourhoods – some are local entertainment oriented, others more tourist focussed, and yet others are residential. These would need to be based on evidence as to the current state of the night life there, and of course involve the participation of citizen, local businesses and other societal stakeholders. The City of Sydney commissioned research into the night life (City of Sydney, 2011) and consulted with residents and stakeholders about appropriate ambitions and frames for the various areas going forward. This resulted in a comprehensive Open Sydney strategy (City of Sydney, 2013) that captures the local ambitions and translates them in hundreds of action points for the short, medium and longer term. These action points in turn resulted in more projects being commissioned to explore possible futures in Kings Cross and other parts of the city.

Towards a new organizational structure. The original 2009 Kings Cross project was done in collaboration with the Safer Sydney unit of the City of Sydney as the commissioning party. In the years after the project, this unit spun out the ‘Night-time Economy team’ with a member of the DOC design team joining the leadership of the Night-time Economy team. This team takes a much broader and more comprehensive and inclusive view of the meaning, significance and the value of nightlife. The dollar value of the economic transactions of the city at night has also become part of the bottom line, in 2019 Sydney’s night-time economy is \$27 billion per annum (Deloitte, 2019). The Night-time Economy team set about implementing many of the recommendations of the Kings Cross project. The Chill Out Zones from the ‘music festival’ frame became Take Kare Safe Spaces. The Kings Cross Guides became Precinct Ambassadors and then Take Kare Ambassadors integrated with the Take Kare Safe Spaces. Portable urinals were implemented (Moore, 2011) as well as portable dynamic signs and secure taxi ranks. The Take Kare Safe Spaces had an immediate impact, and in the first three years of operation provided direct support to more than 50,000 people. In some cases this support was life saving (Doran et. al. 2018).

Towards sector-level change. The Kings Cross case study story has travelled really well, in professional practice and in academia, as an early example of social design, and a successful case of design contributing to public sector innovation (Bason, 2010). It has had a widespread international influence. The project itself has had direct influence on the thinking about nightlife in cities like Vancouver, New York, London, Cardiff, Manchester, Edinburgh, Paris, Amsterdam, Berlin. Direct follow-ups for the Designing Out Crime team include invitations to projects in Amsterdam, Eindhoven, Seoul, Hong Kong, among other places. The founding director of the Night-time Economy team at the City of Sydney won a Churchill fellowship to study best practices around the world (Matthews, 2009). In parallel, the Night Mayors movement emerged to help cities think about the importance and potential of the nightlife in a city. In 2019, this movement had spread to 40 cities across the world (Seijas and Milan, 2019). This in turn has led to an international series of ‘Global Cities after Dark’ conferences, sharing practices and lessons on the creation of a thriving night-time economy from around the world (www.globalcitiesafterdark.com). Through the impact the movement is having and the discussions it is enabling, it is sharpening the emerging role of the Night Mayors. Part of this discussion is recognizing the various roles that they play (regulatory, advocacy, etc.) in curating the night-time as a space for ‘trust and identity building’ (ibid). The Kings Cross project is one of the iconic examples that helped establish this new paradigm.

Towards new projects and an ongoing engagement in Kings Cross. Some of the new Kings Cross projects that the Designing Out Crime research centre was involved in, in the ten years since, built on the original reframe (the ‘music festival’), others were much more detailed and specific. For instance, one project focused on the problem of violence: to a degree, the reason groups of young men get into fights is because they want to fight, as part of their specific group culture as they establish a hierarchy within and between groups. The reframing here was based on the realisation that the key theme behind this behaviour is competition, not violence per se. Creating other arenas for competition, like urban sports, helps them achieve these goals by less violent means. And as it turns out, given the opportunity these people are quite happy to compete in these less harmful ways.

The bad news: tragedy strikes - a cause for reflection on the limits of design. But then in 2012 and 2014, two young men were killed in separate unprovoked one-punch attacks in Kings Cross. These very tragic deaths were of course front-page news, which put pressure on politicians to create new countermeasures to clamp down on the ‘alcohol related violence’ in Kings Cross. In response, the state of New South Wales introduced “Lockout Laws” (reducing trading hours, and basically preventing people from entering/re-entering a pub, café or restaurant after a certain time and limiting the service of alcohol). These laws served to make these areas very unattractive, and effectively killed the nightlife. Restaurants, cafes, nightclubs, pubs and shops left the area or went bankrupt. In total, 176 establishments closed as a result of the lock-out laws (Taylor, 2018).

The changes in Kings Cross meant that other, more suburban areas of the metropolitan area became busier, stretching the local infrastructure (the sad irony behind this state of affairs is that the Lockout Laws would not have prevented the two one-punch attacks, as those were both early in the evening and not the result of late-night drinking).

Protest and discussion. The introduction of the Lockout Laws led to ongoing protest from Sydneysiders, the community and business owners in the area. A political party was created to advocate for their repeal. This sparked an impassioned societal discussion on what being an ‘international city’ actually means, what the role is of night entertainment in the life of a city, and how we as a society support young people going through the confusing years then they are coming of age, etc. The City of Sydney actively facilitated these discussions through platforms like sydneyyoursay.com.au > openandcreative while advocating for ‘Sydney as a 24-hour city’, commissioning research on the state of the ‘night-time economy’ to benchmark with other major cities around the world.

The New South Wales Government also commissioned its own research into the matter. After a public inquiry that attracted more than 200 submissions (see for instance (City of Sydney, 2019)). In the end, the Lockout Laws were largely repealed in 2019. The New South Wales Government launched its 24-Hour Economy Strategy in 2020, and in March 2021 the inaugural 24-Hour Economy Commissioner took his post, with five strategic objectives (Treasury NSW, 2020):

1. Integrated planning and place-making
2. Diversification of night-time businesses
3. Cultural entrepreneurship
4. Public transport
5. Changing the narrative

2.2 Reflection on case study 1

There are a number of lessons that can be learned from this initial success and unfortunate course of events. In retrospect, there were some weaknesses in the original Kings Cross project: (1) The DOC centre designers had not realized that responsibility for the area was shared between several departments in the New South Wales Government. (2) Secondly, the DOC centre designers didn’t involve the media in the project, and hence didn’t influence the societal discussion on Kings Cross. When the two tragic deaths happened, that discussion naturally started where it left off - from the old frame of ‘alcohol related violence’. In the years since, the societal discussion has moved on, and the NSW Government has been reflecting on the appropriateness of the Lockout Laws as a response to the situation in Kings Cross. There now is a much more resilient and robust societal discussion and a better context to really change the situation in Kings Cross for good.

There are several sides to the Kings Cross project story: on the one hand, there is the emergence of a compelling frame and the design of boundary objects that capture people's imagination and lead to success on project level – but on the other hand, we can see how difficult it can be to create real and lasting change. In retrospect, we can now see clearly that in the initial project, the designers may have been too focused on the project level. Despite the positive developments in the aftermath of the project, including the Open Sydney strategy and the organizational shift to the Night-time Economy, the outcomes proved to be critically vulnerable because the societal discussion had not moved on. This means that if design interventions are to have lasting impact, they will need to strategically work across all these levels.

These are the lessons that can be drawn on a practical level. Yet there is a pattern here: numerous authors have presented design case studies that run into similar difficulties, and commented on the difficulty of 'applying' design as an agent for strategic change in a public sector environment (Bason, 2018, Stacey & Griffin, 2012, Tromp & Hekkert, 2019, Willemsen & Watson, 2018). What deeper lessons can we draw from this? In the next section we will build a model to capture the relationship between design approaches and the way strategy gets formulated in the public domain. Then in section four we will see that the vulnerability of the design approach is quite fundamental: it is integral to the nature of design as an agent for change. Implicitly design steers us towards 'learning' as a change strategy, to the exclusion of other change strategies.

3 Discussion 1: the Dynamics of Reframing and Strategic Transformation

As said, what happened in the Kings Cross project seems to happen all the time: great design interventions that have the potential to lead to new practices (and to some extent, they do lead to new practices, at least among the people close to the project) and deserve a hearing on a strategic level don't get to the full impact they should have. And chances are, the project outcomes then remain vulnerable within the context of the organization, because it hasn't shifted to a new state in which the design solution is a better 'fit' (Hekkert & van Dijk, 2011). The problem could be that strategy is normally determined top-down (Bason, 2010): the sector or organization reacts to what it sees as its relevant context (the 'Field'), and adapts its structures and strategies accordingly (see Figure 1).

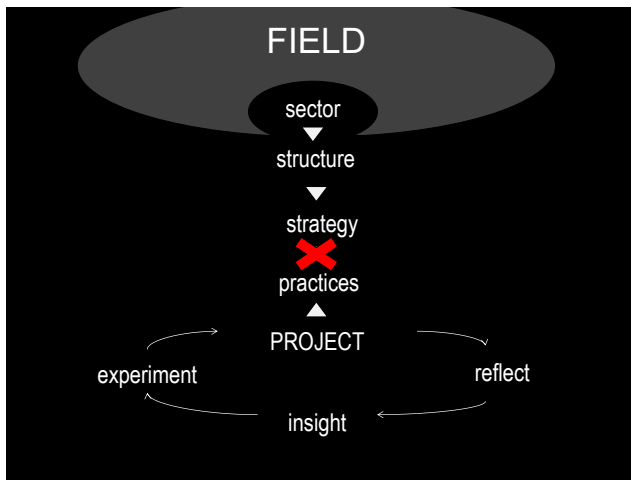


Figure 1. The blockage that comes from the top-down approach to strategy formulation.

This blockage in the innovation system can be bypassed by using the insights that come from the projects to directly influence the Field (thereby changing the perception that a sector or organisation has of its relevant environment). This creates a new dynamic, combining the two movements: as the insights that come from the projects are used to create a new Field, the sector adapts to this new Field by using its normal top-down adaptive processes, and meets the bottom-up movement halfway (see Figure 2).

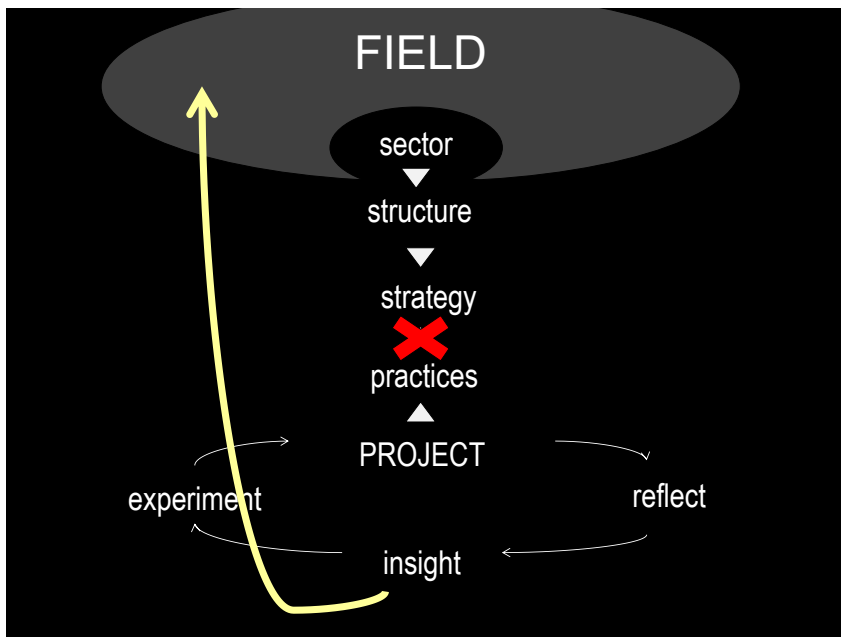


Figure 2. The Dynamics of Reframing and Strategic Transformation

As seen in the aftermath of the Kings Cross project, the societal discussion that was sparked by the Lockout Laws (in Figure 2: the shift in the 'Field', in this case the societal discussion) has finally created the context for the outcomes of the initial Kings Cross project - and its reframing of the Kings Cross situation as a 'music festival' - to be supported. For radical innovation to occur, ALL levels in the model need to shift into a new alignment. In the case of Kings Cross,

this realignment has eventually occurred but it has taken ten years, and two tragedies, and a government keen to kick-start the economy after a recession, to shift the old ways of thinking. From a design perspective, the Dynamics of Reframing and Strategic Transformation model seeks to create a context for the outcome of the design intervention to be taken on board, and in creating a context for the broader innovation process. In conventional (product) design practice this influence might develop over time in the designer-client relationship, where the influence that a designer might have on the 'Field' increases as a trusted client relationship grows over many projects.

Figures 1 and 2 introduce two new elements: (1) the notion of a 'Field' and (2) the arrow that bypasses the top-down/bottom-up blockage by connecting the insights that are sparked by Design projects directly to the Field. These two new elements are both strategic in nature: they are tools to create transformation in the organization, and as such they have to function relative to the current state of the organization and its current ways of dealing with novelty and innovation. This is beyond the domain of 'normal' professional design practice - although they both can be seen as designs that need to be made, and high-level design practitioners will undoubtedly do this as they engage with their clients on a strategic level (see Lawson & Dorst, 2013). To start detailing these new elements and their dynamics, we have to turn to theories of change.

4 Discussion 2: Design and strategic change

Looking at the field of design, there seems to be a naïve sense that if only the ideas and design concepts that result from a project are good enough, they will more or less inevitably lead to greater impact and more fundamental change within the client organization (this is certainly what the authors believed early on in their careers). The model in section 3 serves to contextualise that optimism a bit, showing that there is a structural problem associated with the fact that design starts from the lived world, working bottom-up, while strategy is often determined top-down, and is bounded by the rationality that dominates the sector/field. And there is a second assumption behind this sense of optimism: that organisations will learn from the lessons of the design project, and change accordingly. In design, the implicit change strategy is through learning. Again, this simple statement can be unpacked to show that it contains a whole slew of assumptions about how organisations operate and change. To elucidate this we can turn to the established academic discipline of change management. To capture the dynamics (or lack thereof) of organizational change, Vermaak and de Caluwe have created a meta-model of change paradigms that could be useful for moving forward. This 'Colors of Change' model sheds light on the challenges/forces at play when working with organizational structures and the various cultures around change that exist there. In the context of this paper we cannot do justice to the extensive body of literature on this model (and the many case studies that elucidate its

application). To just skim the surface here we will use some quotes from (Vermaak and de Caluwe, 2018) to explain what the Colors of Change stand for:

(1) Yellow-print change

'Yellow-print thinking assumes that something only changes when key players are backing it and that little will happen if key players oppose it. In this view, enabling change requires getting the powers that be behind it, whether their power is based on formal positions (e.g. board members) or informal influence (e.g. opinion leaders).'

(2) Blue-print change

'In blue-print thinking, rationality—not power—matters most. The assumption is that change happens only when you analyze first what problem is, suggest the best possible solution, and implement it according to plan. Change is thus deemed a linear endeavor: you think first before you act. The process is expert driven, the activities are executed by those who have the necessary know-how and experience.'

(3) Red-print change

'In red-print thinking the emphasis is not on power or rationality but on motivation. The key assumption is that change is not about policies and plans but about behavior, and that people change their behavior only when they are stimulated to do so. In its simplest form this comes down to barter, but it can also go beyond that by taking an interest in people's wellbeing and creating an inspiring working environment.'

(4) Green-print change

'In green-print thinking everything is about learning. Changing and learning are deemed inextricably linked: they are thought to mean almost the same thing. The process is characterized by setting up learning situations, preferably collective ones as these allow people to give and receive feedback as well as to experiment with more effective ways of acting.'

(5) White-print change

'White-print thinking can be regarded as a reaction to the previous colors, in the sense that these still tend to view change as a planned affair. In contrast, white-print change agents view change as constant and taking place of its own accord. The key assumption is that people can make the most difference when they understand and catalyze a change that is about to happen. They see self-organizing and dialogical processes as an effective way to deal with that complexity and they take an active part in their emergence. The outcome is unpredictable.'

Vermaak and de Caluwe take pains to stress that all of these colors are equally valid and useful – one might posit that for an organization to be resilient, it probably would need elements of most or all of these. Each of these different Colors of Change comes with tools and strategies, and in later papers Vermaak and de Caluwe place them within a general innovation framework that

expresses their dynamic interrelationships over time. For the purposes of this paper, the attractiveness of this model lies in its comprehensiveness, and in the fact that it seamlessly works across different scales: all the way from macro (using these colors to characterize the dominant change strategy of an organization or unit) to micro (providing insight, tools and advice that can be used in design workshops and one-on-one conversations).

It should be clear that Design as a professional field is not neutral: the broader influence of design-based interventions is supposed to emerge from the fact that design is creating a new reality, that the organisation should then learn from. Design is also a great inspirator and motivator, the power of design to take people on a journey is key (Schaminee, 2019). This view of how design can exert a broader influence most closely aligns with the colors Green (learning), Red (motivational) and possibly White (motion). This is exactly why 'Design Thinking' and design-driven innovation are attractive to some people and organisations: they hold the promise of moving away from the often dominant Yellow (power) and Blue (planning and control) styles of thinking, and broaden out the repertoire. Yet we have seen that design's concentration on learning comes with a lot of assumptions about the capability of the organization to support learning as a change strategy (Argyris, 2000, Senge, 2006). And this is where design becomes quite vulnerable: when we take all of these five change strategies to be omnipresent in most organizations, then the ones you do not involve tend to become blockers. We have seen this in the King Cross example: the intervention from the state government ('yellow') and the lockout laws ('blue') is what held back the progress in the area for many years. It was only when the societal discussion moved away from polarization to more of a learning dialogue that the results of the design intervention could become embedded in new ways of working, new strategies and a repositioning of the roles of the various layers of government. Only then could design start to exert a strategic influence.

5 Case study 2: Nitrogen pollution and strategic, sector-level change

In this case study, we will road-test these models by describing a design-driven innovation program that effectively started at the other end of the Dynamics of Reframing and Strategic Transformation model, top-down, and with the opposite change strategy: this program was very much a result of a power intervention that suddenly created a new Field, requiring change on a sector-level. Yet the major stakeholder realised that the Blue and Yellow change styles had been instrumental in creating the situation that needs to be resolved, and that they have effectively exhausted their possibilities. The situation is now in a state of crisis, rife with paradoxes that cannot be negotiated anymore without the introduction of other ways of thinking. Yet much to their credit the stakeholder showed a keen interest in what design can bring to this situation.

The Netherlands is a signatory to the Paris Climate Agreement, and the lawyers from the activist NGO Urgenda took the state to court over failing to protect designated nature reserves

(designated as such under the EU Natura 2000 rules) from Nitrogen pollution. Nitrogen oxide emissions mostly come from transport, building works and agriculture (about 45%). The problem is that Nitrogen acts as a powerful fertiliser, dramatically altering the soil, and thereby influencing the flora and fauna in these nature reserves. In the end, the High Court, ruled in favour of the Urgenda objections, rendering the government in breach of the law. This ruling had huge repercussions, all through society: (1) to reduce the emissions from transport, the Dutch government reduced the maximum speed on (almost all) the highways from 130 to 100 km/h. (2) About 18,000 ongoing building works were ruled in breach of regulations (with earlier permissions being void) and had to be stopped, immediately. (3) The ruling impacted agriculture more than any other sector: many farms would now have to radically change their practices to cut their Nitrogen emissions. Farmers and building contractors were up in arms, and came to The Hague to protest in front of the Dutch parliament – and they came on their tractors and rather slow heavy building machines, effectively blocking traffic in the whole country for days.

The Department of Agriculture, Nature and Food Safety (LNV), enlisted André Schaminée and his team from the consultancy Twynstra Gudde to look into this matter. They used a Frame Creation approach (Dorst, 2015, Schaminée, 2019, Schaminee & Dorst, 2021) to address these matters, starting with 60 long conversations with various stakeholders in 3 localities. The paradoxes that surfaced were formidable indeed. Just to name a few:

- **It is a zero-sum game** The discussion is stuck in an either-or-pattern (either ‘nature’ or ‘agriculture’).
- **People complain about ‘going from crisis to crisis’.** Yet there is very little appetite to look forward, to the next problems that are going to come to the agricultural sector (drought, water management, salty groundwater, Nitrate pollution, etc).
- **Some parties have a vested interest in the problem** as long as the solutions lead to a steady increase in investment in the current state.
- **The value-models are not sufficient.** While the transition in agricultural practices is proposed as the only viable option, there is no clear path of action for the farmer – economically, this could only work if there is a structurally higher price level for their goods. And because there is no direct economic value to nature, the only thing that gets counted is ‘a loss of value to farming’.

These paradoxes on the relationship between Nature and Agriculture have been exacerbated by the lack of connection between the layers of the complex problem area: the policy layer, the layer of organizations (NGO’s, Companies), the lived world (private life, community, civil society) and the biosphere. These layers all have their own scale, dynamics, timelines, history and way of addressing the future. They all have their own vicious cycles and learning cycles. But currently they are mostly disconnected, as ‘worlds to themselves’. To link the learning cycles on the layers

and create a common value discussion, the designers proposed to create frames that go across some or all of the levels. In the end, the central theme the participants arrived at is Vitality. The notion of Vitality is defined within all four layers of the problem area, but does mean something subtly different in all of them – and these differences create the space for experimenting, learning, and the development of new mastery. In the end, this is not about initiating design projects as pilots or experiments to arrive at ‘a solution’, but creating designerly interventions to shape collaborative learning cycles across the whole system. This requires structural support, a common innovation infrastructure (innovation ecosystem). This innovation ecosystem itself is the key outcome of the whole program – and it can be harnessed to approach the current issue (Nitrogen) and future challenges.

The frames created in the second case study are learning frames rather than solution frames – the capacity of design to create learning is used as a means to open up a static situation. Design is used in a different way (i.e. this is not unlike Design for Debate, Dunne and Raby, 2013) to create a new Field, in which sits a strategy, in which then sit projects. Again, top-down and bottom-up have to work in concert to achieve real change. To support these processes, the designer and the commissioning party have to work together quite closely. This is exemplified in the ‘9 lessons for the public sector’ that were drawn from this project and published in a professional publication (Schaminée & Dorst, 2021):

- 1) Start from Values and Principles (i.e. framing)
- 2) Don’t confuse the design approach with others like lean, agile or theory U (they are not unrelated, but work out very differently)
- 3) Give content and meaning to the roles in the collaboration (not transactional, but shaped around a learning approach)
- 4) Make it “A UFO”: Attractive, Useful, Flexible, Open (communication is key, right from the start)
- 5) Connect bottom-up and top-down, (as in Figure 2),
- 6) Build competencies within the public sector organisation (do not underestimate the design expertise needed: just doing a ‘Design Thinking’ workshop is not enough).
- 7) Ask the expert: realise that this process requires a combination of design expertise, public service expertise and strategic expertise.
- 8) Create long lines of engagement, this is not a project but a learning program.
- 9) Realise that the design approach touches many in your organisation: decision makers, communication, etc. front line staff are especially important, as they can be bridge builders to the lived world of the stakeholders.

While the model in Figure 2 concentrates on connecting design’s Green style (Learning) with Blue (top-down planning), these 9 lessons are much more geared towards the Yellow (power) and the Red (human, capability building) to support people to build a broad innovation

ecosystem within, around and/or across organisations. This is not just a question for a design department, or for an innovation unit: getting a new initiative up and running is a relay race, and its needs involvement from all critical functions across the organization (Bjorklund, 2020).

6 To conclude: from ‘strategic design’ to building innovation ecosystems

Where do these models and case studies lead us, in terms of the discussions we outlined at the beginning of this paper?

In terms of design practices; based on the first Kings Cross case study we can both support Verganti in confirming the importance of deep human-centeredness (on a values level) for driving innovation, and support Kimbell in realising that the design practices as we have learned them from the designing disciplines are not enough to achieve strategic innovation. The richness of the colours of change model points us towards a whole landscape of practices that could/should be added to the ones that design can bring.

In terms of the approaches; in the Nitrogen Crisis case study we’ve seen that to move beyond current stalemates, parties needed to be taken along on a common journey, very much supporting Liedtka’s insights on design as an approach that can help shape and mould problem situations. Perhaps because the conflict was so entrenched, there was no unsuspected middle ground to be uncovered between conflicting parties to help shape strategy. In this case, design was explicitly called for because the top-down dialectic approach (in terms of the Colours of Change: a mostly Yellow and Blue approach) had run its course and just led to a set of formidable paradoxes.

On reflection, we can say that Verganti and Buchanan have focused on ‘Design FOR Strategy’, identifying the valuable contribution that design practices can make to strategic thinking within an organisation. Both Kimbell and Liedtka have taken on the challenge of ‘Strategy THROUGH Design’. Following them we can clearly see that design’s contribution to strategy development is limited. In this sense, there is no such thing as strategic design.

At least, not yet. Looking at the dynamics of strategic transformation, we have seen that Design interventions, while they have the potential to spark strategic innovation, fall short in dealing with the organizational change issues involved. The Dynamics of Reframing and Strategic Transformation model is an attempt to start mapping this gap, and the Colors of Change model helps to position what design can bring, as well as what design would need to learn to achieve truly strategic design.

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References

- Argyris, C. (2000) *Flawed Advice and the Management Trap*. Oxford University Press, Oxford
- Bason, C. (2010) *Leading public sector innovation: Co-creating for a better society*. Policy Press.
- van der Bijl-Brouwer, M. (2016). The challenges of human-centred design in a public sector innovation context. In *Proceedings of 2016 Design Research Society 50th Anniversary Conference, 27-30 June*.
- Björklund, T., Maula, H., Soule, S. A., & Maula, J. (2020). Integrating Design into Organizations: The Coevolution of Design Capabilities. *California Management Review*.
- City of Sydney (2011) *Late night management areas research project*. Parsons Brinckerhoff for City of Sydney
- City of Sydney (2013) *OPEN SYDNEY Future directions for Sydney at night*. City of Sydney
- City of Sydney (2019) *Submission to the joint select committee: Sydney's night-time economy*. City of Sydney
- Deloitte. (2019). ImagineSydney. Accessed 30 January 2020
http://images.content.deloitte.com.au/Web/DELOITTEAUSTRALIA/%7B725ffb22-cab6-47f4-9958-37305087ba5e%7D_20190211-cit-imagine-sydney-play-report.pdf.
- Doran, C., Wadds, P., Kinchin, I., Curry, O., Shakeshaft, A. (2018) Interim evaluation of the Take Kare Safe Space program. Accessed at <https://www.staykind.org/wp-content/uploads/2019/09/TKSS-Interim-Report-Final.pdf> on 21 January 2020
- Dorst, K., & Cross, N. (2001). Creativity in the design process: co-evolution of problem–solution. *Design studies*, 22(5), 425-437.
- Dorst, K., (2011). The core of ‘design thinking’ and its application. *Design studies*, 32(6), pp.521-532.
- Dorst, K., (2015) *Frame innovation: Create new thinking by design*. MIT Press.
- Dorst, K., Kaldor, L., Klippan, L., Watson R., (2016). *Designing for the common good*. BIS publishers.
- Dorst, K. (2017) *Notes on Design – how creative practice works*, BIS Publishers,
- Dorst, K. (2019). Co-evolution and emergence in design. *Design Studies*, 65, 60-77.
- Dunne, A., & Raby, F. (2013). *Speculative everything: Design, fiction, and social dreaming*.
- Frayling, C. (1993), *Research in Art and Design*, RCA Research Papers, 1: 1, London: Royal College of Art.
- Hekkert, P., & Dijk, M. . (2011). *Vision in design: A guidebook for innovators*. Amsterdam: BIS Publishers.
- Lawson, B., & Dorst, K. (2013). *Design expertise*. Routledge.
- Liedtka, J., Salzman, R., and Azer, D., (2017) *Design thinking for the greater good: Innovation in the social sector*. Columbia University Press.
- Julier, G., Kimbell, L. (2019) Keeping the System Going: Social Design and the Reproduction of Inequalities in Neoliberal Times. *Design Issues*, 35 (4). pp. 12-22. ISSN 1531-4790

- Kuhn, T. S. (1962). *The structure of scientific revolutions*. University of Chicago Press: Chicago.
- Matthews, S (2009) *To compare regulatory and planning models which reduce crime in the night time economy*. The Winston Churchill memorial trust of Australia.
- McGann, M, Lewis, JM and Blomkamp, E (2018) *Mapping public sector innovation units in Australia and New Zealand: 2018 survey report*. Melbourne: The Policy Lab, The University of Melbourne.
- Moore, C. (2011) Summer Trials to Improve Sydney's Late Night Economy: Minute by the Lord Mayor. Accessed on 21 January 2020.
https://meetings.cityofsydney.nsw.gov.au/Data/Council/20110725/Agenda/110725_council_item33.pdf
- Norman, D. A., & Verganti, R. (2014). Incremental and radical innovation: Design research vs. technology and meaning change. *Design Issues*, 30(1), 78–96.
- Paton, B., and Dorst, K. (2011). Briefing and reframing: A situated practice. *Design Studies*, 32, 573-587.
- Seijas, A, and Gelders, M., (2019). Governing the night-time city: The rise of night mayors as a new form of urban governance after dark. *Urban Studies*.
- Schaminee, A., (2018) *Designing with and within public organizations*, BIS Publishers, 2018
- Senge, P, M., (2006) *The Fifth Discipline: The Art and Practice of the Learning Organization*. Random House, New York
- Stacey, R, and Griffin, D., (2007) eds. *Complexity and the experience of managing in public sector organizations*. Routledge.
- Taylor, A (2018) 'What the hell is going on in Sydney?' 176 venues disappear. The Sydney Morning Herald, 27 May 2018. Available at: <https://www.smh.com.au/national/nsw/what-the-hell-is-going-on-in-sydney-176-venues-disappear-20180527-p4zhst.html> (accessed 3 December 2019).
- Tromp, N., and Hekkert, P., (2019) *Designing for Society*, Bloomsbury.
- Treasury NSW. (2020) 'Sydney 24-hour Economy Strategy' Available at:
<https://www.investment.nsw.gov.au/assets/Uploads/files/Sydney-24-hour-Economy-Strategy.pdf>
- Verganti, R., 2009. *Design driven innovation*. Harvard Business Press.
- Vermaak, H. and de Caluwe, L., (2018). The Colors of Change Revisited: Situating and Describing the Theory and its Practical Applications. In *Research in Organizational Change and Development* (pp. 167-216). Emerald Publishing Limited.
- Willemsen, M., Watson, R., (2018) A Transdisciplinary Approach to Wildlife Crime Prevention, In *Wildlife Crime; from theory to practice* Moreto, W, Editor, Temple University Press