

# CREATING CHANGE:

A case study of transformation,  
from 'making greener things'  
towards 'design for transitions'.

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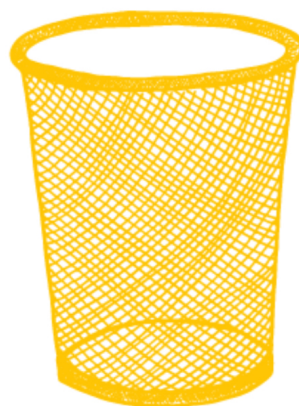
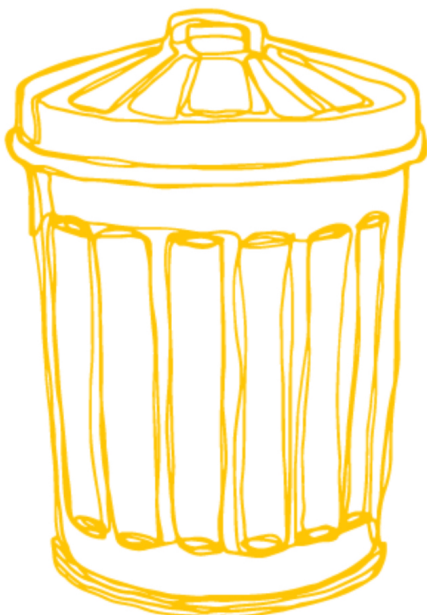
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## Abstract

There are significant challenges to be faced in addressing the complex problems contributing to structural unsustainability, many of which are accelerated by design. Of particular interest to this research is the socio-economic problem of excess consumption and waste in the Global North; a complex problem with increasing visibility in the public sphere. Many designers seem unable to take action against structural unsustainability— particularly against consumption and waste—but with increased knowledge and empowerment, designers could contribute to transitions toward just and sustainable futures. A critical pragmatism frames this mixed method research, which explores design's role in sustainability transitions and presents a comparative case study of transition in an Australian communication and interaction design practice. It documents a transformation from 'making greener things' to 'design for transitions' through an analytic auto-ethnographic study that discusses the personal, political and professional dimensions of this process. To further investigate how design processes might also need to transition, theoretical knowledge has been applied in real-world projects, conducted as research through design and discussed as sites within the case. The case is contextualised by data collected through interviews with designers and discusses their experiences of design industry norms. Analysis indicates designers encounter multiple tensions in their practice, and that critical engagement with sustainability is inhibited by unsustainable industry norms. Resisting these norms also creates tensions in practice and it appears that whether resisting or following industry norms designers can experience a double bind, where action feels simultaneously necessary and impossible. Further synthesis permits recognition of design's mediation of consumer culture and the social and ecological implications arising from this, including the emergence of the 'designer-consumer' whose immersion in consumer culture renders them incapable of designing against consumption. Reflection on my transformation to conscious consumption and a zero waste lifestyle brings new perspectives to the design process, creating a cognitive space where the emergent 'designer-transformer' can consider radical and relational approaches to decelerating consumption. This research recognises design as an important agent for change, and moreover it recognises how self transformation can empower designers to contribute more deeply to transitions toward just and sustainable futures.



## Declaration

I declare that this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, are clearly acknowledged.

Signed:

A handwritten signature in black ink, appearing to read 'W. K. W.', is written on a light-colored rectangular background.

Date: 30th August 2019

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It goes without saying that supervisors are a crucial lifeline during the course of the PhD, and my supervisory team is no different. Warmest thanks go to my principal supervisor, Dr Robert Crocker, without him I'd still be making greener things. Rob, your work inspired my transformation, and for the past few years you have championed me in my own work, connected me to an incredible network and guided me towards a vision of what might be possible. I can't thank you enough, your input was always insightful and considerate. Every time I fell down a rabbit hole you were patiently waiting with the rope to pull me out. Thank you for both letting me explore and keeping me on track.

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## Preface

The research presented in this thesis investigates the complex problem of consumption and waste and examines design's role in accelerating this unsustainable activity. This exploration of and critical engagement with sustainability has been applied within my communication and interaction design practice. My practice produces a range of 'typical' design outcomes including information graphics, publications, identity/branding, animation, web-apps and websites. Regardless of the design 'type', each outcome in my practice is produced using sustainable approaches for ideation and implementation. These approaches are predominantly technical, including but not limited to minimising waste and impact through both design and material specifications, minimising the use of ink, considering the dual role of digital and printed outcomes, and creating meaningful design responses with longevity. Over time this has resulted in a somewhat standardised sustainability response in my work—the creation of 'greener things'. Greener things are outcomes that aim to address sustainability through material or technical changes. Whilst relevant for the general 'greening' of material outcomes, this approach is predominantly superficial and fails to fully address structural unsustainability. This thesis documents an attempt to transform my practice beyond 'making greener things' toward 'design for transitions'. The discussion in this thesis centres around communication and interaction design, however product and service design are not exempt from this critique of design's acceleration of consumption. Where a specific sub-discipline is discussed a prefix is used, wherever discussion is inclusive of all these sub-disciplines, no prefix is used.

My creative practice has spanned almost thirty years, and in that time has embraced a number of sub-disciplines and mediums, predominantly music, art, writing and design. In this time, personal engagement with activism and authorship has been reflected in my creative work which often discusses environmental, political and social issues. My creative outputs are often hybrid and frequently occupy a fluid space between each of these different creative sub-disciplines, but for the past fifteen years my design practice has been my predominant source of financial stability. This practice is also hybrid, mixing writing, interaction and communication design outcomes, all of which make a relatively equal contribution to my income. Early analysis of the financial performance and project/client composition within my practice suggests this hybridity facilitated the survival of my practice through times of economic instability, including the 2008 global financial crisis. While survival is positive, it can also come at a price, and the difference between surviving and flourishing can feel significant.

Since 2007 the creation of 'greener things' has been a norm in my work, but as part of this process my activist mindset and good intentions appear to have been distilled down to a technical approach applied to an aesthetic endpoint. This process is not that dissimilar to those shaped by industry norms,

where designers create outcomes for clients with visually pleasing finishes, the only difference in my approach is the technical conversion of those outcomes to greener things. Through this research, engagement with alternative and emergent design methods in addition to relevant literature has expanded my understanding of how approaches to structural unsustainability could integrate into design work. By overlapping different methods and modes of thinking with particular focus on transition design and autonomous design I am continually exploring how aspects of these methods complement one another and foster transformations within my practice.

The transformation that this research documents is both personal and professional and both are discussed to varying degrees in the thesis. Whilst there is much to learn from the personal aspects of transformation, I chose to minimise the personal aspects in this thesis to avoid this work becoming too auto-biographical. Key insights were often drawn from my personal experiences with conscious consumption and a zero waste lifestyle and where directly relevant these are discussed. It is worth noting that whilst some personal transformation will likely be needed to design for transitions, the extent to which a designer transforms can vary. My personal transformation involved sacrifices that may be deemed unnecessary by some and beneficial by others. Those that have been presented and discussed are connected to the literature and collected data to ground them in an analytical framework.

Much has changed as a result of this research, but the transition in my practice is far from complete. What follows is a documentation of this ongoing process of transformation and transition.

## Introduction

### First things first

Humanity is facing multiple crises and declarations of good intentions will not suffice. The only viable option is action. The crises we face stem from structural unsustainability, a phenomenon that is rooted in a range of intersectional<sup>1</sup> and complex problems, many of which are accelerated by design. Problems including social injustices, climate change, resource mismanagement and abuse, decreased biodiversity and increased consumption<sup>2</sup>, are frequently reinforced by attempts to solve them technologically. Of particular interest to this research is the socio-economic problem of excess consumption and waste in the Global North<sup>3</sup>, a complex problem that is gaining visibility in the public sphere. For communication and interaction designers, approaches to it can be inhibited by design industry norms, including design's somewhat co-dependent relationship with business.

In the design industry, frequent partnerships with business often result in designers working on projects that accelerate consumption. Designers' expert mediation of this unsustainable consumer culture has become a powerful and profitable tool for both business and design alike, and the design industry's unsustainability is further compounded by the process of creation, particularly a lack of consideration for the future impact of designed artefacts<sup>4</sup>. Historically speaking, communication and interaction designers have failed to integrate sustainability principles into their work and despite the growing body of literature contributed by a niche of experts in the field, this information—though readily available—has not shifted into working knowledge for the majority of designers<sup>5</sup>. This lack of action also relates to conflicts and tensions in practice that can lead to designers experiencing a double bind, described in psychology as a feeling of action paralysis after receiving conflicting messages<sup>6</sup>. In design this can occur in a number of ways but is best demonstrated by the experience of feeling a course of action is simultaneously necessary and impossible in the context of a design brief. It is evident in the literature and in

1 Intersectionality is a concept from Kimberlé Crenshaw that describes how the connected problems of race and gender affect the marginalisation of women of colour and cannot be solved independently from one another. Rather, problems relating to both race and gender must be approached as an intersection. For more on this see: Patricia Hill Collins and Sirma Bilge, *Intersectionality* (Cambridge, UK: Polity Press, 2016).

2 See for example: Joanna Boehnert, Tony Fry, Tim Jackson, Naomi Klein, Terry Irwin et al, Val Plumwood.

3 I use the term Global North throughout this thesis to describe what is formerly referred to as the Western world. The Global North includes Australia, New Zealand, United States, Great Britain, Israel, Europe, Canada, South Korea, Japan, and Singapore. The Global South is a term used to replace the 'third world' and includes Africa, Latin America, developing Asia, and the Caribbean.

4 Ann Thorpe, *Architecture and Design Versus Consumerism: How Design Activism Confronts Growth* (Routledge, 2012); *ibid.* This is also discussed in: AnneMarie Dorland, "Routinized Labour in the Graphic Design Studio," in *Design and Creativity Policy, Management and Practice*, ed. Guy Julier and Liz Moor (Oxford: Berg, 2009); Guy Julier, *The Culture of Design*, 2nd ed. (Los Angeles ; London: Sage, 2008); Paul Springer, "Auditing Communication Design," in *Design and Creativity Policy, Management and Practice*, ed. Guy Julier and Liz Moor (Oxford: Berg, 2009); Ann Thorpe, "Design's Role in Sustainable Consumption," *Design Issues* 26, no. 2 (2010).

5 Cameron Tonkinwise, "Ethics by Design, or the Ethos of Things," *Design philosophy papers* 2, no. 2 (2004); *ibid.* This is also discussed in: Joanna Boehnert, *Design, Ecology, Politics: Towards the Ecocene* (Bloomsbury Publishing, 2018). Manzini, Ezio, and Stuart Walker. *Enabling Solutions for Sustainable Living: A Workshop*. University of Calgary Press, 2008.

6 Bateson, G., Jackson, D. D., Haley, J., & Weakland, J. (1956). Toward a theory of schizophrenia. *Behavioral science*, 1(4), 251-264. Gibney, P. (2006). The double bind theory: Still crazy-making after all these years. *Psychotherapy in Australia*, 12(3), 48.

collected data that designers' experiences of tensions and conflicts in practice frequently place them in a double bind. One such tension arises from the client-designer relationship dynamic, where a designer's personal desire to contribute to sustainability goals is often in conflict with the business goals of their client, thereby preventing designers' affirmative actions. This tension and others that can intersect it are theorised in *Part 2: Thinking* and are discussed as part of the analysis of collected data and design projects in *Part 3: Doing*. In addition to these tensions and conflicts, the inaction arising from them is further compounded by a lack of understanding of what sustainability in design means.

Sustainability's weak uptake and buzzword status in the design industry is no surprise, it is a broad term with many definitions. It is often articulated as 'doing the right thing for people and the environment', but what is right? What kind of thing? For which people? And in what environment? For this research, sustainability is defined as the flourishing of many lives (human and other) across many worlds (the pluriverse<sup>7</sup>) in many times (past, present, near and distant future). It positions sustainability for communication and interaction design as quite a distinct endeavour to the typical business approach, which often uses eco-rhetoric such as 'sustainable development' in the pursuit of ever-expanding economic growth. Defining the goals of sustainability for design has little to do with economic growth and in this research the emphasis is placed on value instead of money. This facilitates a greater focus on justice, ecology and futures where all life can flourish. This definition is explored in more detail in the next section.

Critical questioning is an important aspect of engagement with sustainability and this research is framed by a critical pragmatism focussed on ethics and the designer's responsibility to social justice and the environment. Critical pragmatism provides a relational and plural view that is appreciative of interconnection and observant of both processes and their outcomes<sup>8</sup>. It is concerned with the impact and consequences of actions, and in this research is informed by authors<sup>9</sup> whose focus is on political activation, the relations between things, and plural possibilities for sustainable futures. This frame has guided thinking throughout this research and creates a deliberative space to consider how a course of action or designed outcome might impact structural unsustainability and 'defuturing'<sup>10</sup> activities. Through critical engagement with sustainability (and structural unsustainability) designers can consider sustainable futures and explore what a post-capitalist practice of design might

7 The pluriverse is a term that Arturo Escobar uses to describe a world where many worlds fit. It is a plural approach that recognises there is more than 'one way' of being in the world and that multiple approaches (worlds/ways of being) are needed in order for all life to flourish. For more on this see: Arturo Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds* (Duke University Press, 2018).

8 John Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations," *Planning Theory* 12, no. 1 (2013); "Three Practices of Humanism and Critical Pragmatism," *Plan. Theory Pract.* 18, no. 2 (2017).

9 While these authors have a significant body of work that has also informed this research, the primary works drawn upon are: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Tony Fry, *Design as Politics* (Oxford: Berg, 2011); *Design Futuring: Sustainability, Ethics and New Practice* (London: Bloomsbury Academic, 2009; repr., 2014); *Becoming Human by Design* (A&C Black, 2013); Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (London: Routledge, 2002).

10 Defuturing is a term from Tony Fry that describes unsustainable activity that robs us of a future.

be. Post-capitalist design pursues outcomes that operate outside of an economic status quo to engage more critically with the impact of design—particularly in relation to the acceleration of consumption. Approaches in post-capitalist design focus on values, social justice and eco-literate outcomes. This critical consideration of future possibilities for design is in stark contrast to design’s current engagement. Currently, typical responses from the design industry reduce sustainability to a series of technical fixes—referred to throughout this thesis as greener things—that are compromised by commercial aims and can reinforce structural unsustainability. These technical fixes (also referred to as ‘technofixes’) are also easily overturned by external stakeholders. Clients and suppliers can impact the design approach and the end outcome, and end-users can alter an artefact’s intended usage and/or disposal, all of which renders technofixes inadequate. Despite the inadequacy of this kind of ‘solutionism’<sup>11</sup>, designers are trained to create a singular solution to a pre-determined problem, which can prevent a more complete articulation of the problems they actually face. ‘Solutionism’ blinkers a designer’s approach and seems to prevent the recognition that no single solution can solve structural problems. Of significance here is how a designers’ exposure to design education, industry norms, and industry governance, drives the belief that solutionism is ‘good practice’ without recognising the extent of complexity in the problems being ‘solved’. Nor does it recognise the inability for technical or superficial ‘solutions’ to adequately address them<sup>12</sup>.

This is particularly true of the consumption and waste problem, which can only be fully articulated by acknowledging design’s responsibility in fuelling this behaviour. Such an acknowledgement appears to pose a problem to designers, particularly those who rely on projects that contribute to increased consumption in order to financially sustain their practice. Industry codes of conduct describe sustainability as an ethical concern, meanwhile it remains relatively absent from both education and design industry norms. Many communication and interaction designers cite time and money as barriers to sustainable practice. Yet increased knowledge and empowerment through approaches such as autonomous design<sup>13</sup> and transition design<sup>14</sup> could facilitate

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11 Solutionism is a term from Evgeny Morozov to describe superficial technical approaches (often referred to as technocratic) that oversimplify or fail to properly address problems.

12 This is also examined by: L Acaroglu, *Making Change: Explorations into Enacting a Disruptive Pro-Sustainability Design Practice* (2014); *ibid.*; Fry, *Design Futuring*; *ibid.*; Stuart Walker, *Designing Sustainability: Making Radical Changes in a Material World* (Routledge, 2014).

13 Autonomous Design is described by Arturo Escobar as ‘design decoupled from defuturing activity’ and argued by Fry as a necessary shift in the goals of design. For more see: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

14 Transition design is a large-scale, multi-level, multi-staged design approach. Its goal is described by Terry Irwin as ‘design-led societal transition toward more sustainable futures’ For more see: Terry Irwin, “The Emerging Transition Design Approach,” in *Design Research Society* (Limerick2018); “Transition Design: A Proposal for a New Area of Design Practice, Study, and Research,” *Design and Culture* 7, no. 2 (2015); Terry Irwin, Cameron Tonkinwise, and Gideon Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions” (paper presented at the 6th International Sustainability Transitions Conference, University of Sussex, Brighton, 2015); Gideon Kossoff, Cameron Tonkinwise, and Terry Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions,” (2015).

contributions to ‘sustainability transitions’<sup>15</sup>. These approaches differ to typical design industry approaches but are not without their own conflicts and tensions. Both are emergent practices (in the Global North) and are still evolving, as such this thesis reflects an experience with their developing state. Transition design is an emergent area of research and practice with a focus on large-scale social change. Its practice is challenged by its demand for broad theoretical knowledge that is mostly lacking in the design industry and difficult to attain outside of a PhD. In practice, embedded power relations in societies, organisations, design practice structures and in client-designer relationships can further impact the approach. The complementary approach of autonomous design is a more established mode of practice in the Global South and its emergence in the Global North benefits from this longer history of participatory and communal approaches. Autonomous design has closer ties to movements and communities than transition design, and explicitly acknowledges the impact of power relations over change. In this sense it fills identifiable gaps in transition design’s current practice, particularly in relation to power and participatory work in communities, but its autonomy from clients in the traditional sense can also create tensions in a Global North context. The explorations of ‘design for transitions’ discussed in this thesis frequently combine these two approaches with the aim of creating change. Both practices (taken separately and combined) are slower paced than commercial design approaches, call for additional knowledge and appear to require designers to transform personally and professionally in order to meaningfully contribute. This process of transformation, the privilege it embodies, and its impacts on design practice are discussed throughout this thesis.

This mixed method research explores design’s role in sustainability transitions and investigates intersecting theoretical domains that deepen the understanding of how to approach structural and behavioural change through design. It presents a comparative case study of transformation in my communication and interaction design practice using design projects as ‘sites’ for study. The case uses analytic auto-ethnography, grounded theory and reflective practice to analyse the practice, its design processes and projects. My transitioning design process is investigated within the case as research through design, where the application of theoretical knowledge to real-world projects is also examined. These projects are documented as part of the transformation from ‘making greener things’ toward ‘design for transitions’, and the case presents the personal, political and professional dimensions of this transformative process, including the navigation of tensions and pain points in practice. The projects are introduced in *Part 1: Situating* and analysed and discussed in *Part 3: Doing*. Each project demonstrates alternative and emergent design processes undertaken as part of this research, and reflects the different modes of thinking underpinning these processes. They provide insights into how

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15 Sustainability transitions are forms of ‘radical transformation towards a sustainable society’ in response to wicked problems. For more see: John Grin, Jan Rotmans, and Johan Schot, “Conclusion: How to Understand Transitions? How to Influence Them?: Synthesis and Lessons for Further Research,” (2010); *Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change* (Routledge, 2010); John J Grin, Jan J Rotmans, and Johan J Schot, “From Persistent Problems to System Innovations and Transitions,” in *Transitions to Sustainable Development* (2010).



designers might work with alternative design approaches and help to identify some of the conflicts and tensions these approaches can create in a design practice. Comparative analysis of the projects also reveals the different stages of transformation in my practice. The role of transformation, the insights gained through the projects, and the analysis of the data collected through the projects informs the theorisation presented in *Part 2: Thinking*.

The case is further contextualised by data collected through semi-structured interviews with designers, where conversations explore their experiences of being a designer and their considerations of industry norms. Emergent themes include business concerns surrounding time and money, the power dynamics involved in the design process, sustainability (or lack thereof), and ‘good design’. Insights from these interviews provide multiple perspectives on design and inform theorisation presented in *Part 2: Thinking*. The collected data from industry-based designers mirrors the descriptions of industry norms in the literature. Interviews with designers actively resisting these norms provide data that facilitate comparison between the experience of either following or resisting industry norms. Both experiences inform the reflective practice conducted throughout this research. Semi-structured interviews with clients provide another perspective on the design industry and its relationship with business that augments this data. Reflection on emergent design approaches and their contribution to the transformation of my practice aims to identify leverage points for other practitioners to explore.

Theories of consumption, change, power and social practices underpin the reflection throughout this research and these theories shape and focus explorations of design for transitions. This process continues to pose unexpected challenges and prompt further critical questioning: In what ways am I activating and participating in just and sustainable transitions towards post-capitalist futures? How might this participation be both financially viable and post-capitalist—and what makes this possible? How can I use my privilege to advance this practice and increase its accessibility for others? Through this research and the articulation of my own transformation—as a creative practitioner and as a human—I continually attempt to respond to these questions.

This research recognises design is an important agent for change, and moreover it recognises the role of self-transformation in activating designers’ agency, empowering them, and increasing their capacity to contribute to just and sustainable transitions towards post-capitalist futures. These processes are temporal and emergent, and as such pose many challenges to designers. This research explores the tensions and conflicts that arise from transformative processes and identifies strategies that could aide in their navigation. This research aims to respond to the ‘what’ and ‘how’ of practicing design for transitions by providing a demonstration of one possible approach and through the discussion of other possible approaches. It provides a glimpse of what my own approach to post-capitalist design practice might look like, and in doing so illuminates a path for others to explore.

## The research problem

This research investigates the problem of design's contribution to structural unsustainability through the acceleration of consumption and waste. While structural problems are many and often intersectional, the focus of this research is limited to consumption and waste. This research problem consists of two interconnected aspects: sustainability and design. Although this research explores sustainability and design together, these two aspects are discussed somewhat separately below.

## Sustainability

Sustainability (or lack thereof) is problematic for multiple reasons, including its typically fuzzy definition, lack of genuine uptake and its rhetorical use. It is frequently referred to in relation to a triple bottom line<sup>16</sup>, particularly in business<sup>17</sup>, and is commonly described using a Venn diagram to illustrate sustainability as the intersection of ecology, economy and society. A wide body of literature argues<sup>18</sup> that this view of sustainability oversimplifies a complex network of structural problems, all of which are exacerbated in service of an economic status quo. This oversimplification is evident in the common goal of 'sustainable development', which Fry<sup>19</sup> argues is an oxymoron, devised to promote an economic imperative. Fuad-Luke outlines a shift in sustainability terminology away from sustainable development and towards Birkeland's term, 'positive development'<sup>20</sup>. However, the reference to 'development' in business contexts is the more problematic part of the original terminology, so replacing 'sustainability' with 'positive' does little to address the goal of continuing economic growth. This research explores how design's connection to business, ergo this economic status quo, contributes to structural unsustainability and investigates the power structures that maintain this economic focus.

Part of the sustainability problem lies in its loose (and many) definitions. These definitions are often appropriated for rhetorical use by organisations as a means of bolstering their own position, rather than being used to critically design a set of sustainability goals to be achieved. The design industry is guilty of using similar rhetoric for its own ends while failing to address sustainability through design work. This rhetorical approach ticks empty boxes and facilitates continued contributions to 'defuturing' activity. A more holistic and temporal approach might align with the five principles outlined by Haughton<sup>21</sup> as inter-generational (consideration of future); intra-generational (social justice);

16 John Elkington, "Enter the Triple Bottom Line," *The triple bottom line: Does it all add up* 11, no. 12 (2004).

17 Sustainability is often implemented in business contexts as sustainable development, a concept that originates from the 1987 Brundtland Report. Many environmentalists (see Fry, Plumwood, and Feinstein for more on this) perceive this concept as a form of 'light green' sustainability that prioritises the economic concerns of business whilst conceding some consideration to ecological and social well-being.

18 See for example: Plumwood, *Environmental Culture*; Fry, *Design as Politics*; Giddings, Hopwood, and O'Brien, "Environment, Economy and Society: Fitting Them Together into Sustainable Development."; Rodrigo Lozano, "Envisioning Sustainability Three-Dimensionally," *Journal of cleaner production* 16, no. 17 (2008).

19 Fry, *Design Futuring*.

20 Alastair Fuad-Luke, *Design Activism: Beautiful Strangeness for a Sustainable World* (Taylor & Francis, 2009), p 24

21 Graham Haughton, "Environmental Justice and the Sustainable City," *Journal of planning education and research* 18, no. 3 (1999).

geographical (global concerns); procedural (treatment of people); and inter-species (ensuring biodiversity). These five principles start to conceptualise the complex interdependence that extends thinking beyond that which is communicated in the typical ecology/economy/society Venn diagram. Adding to this complex interdependence is Escobar's idea of the pluriverse<sup>22</sup>—a world that is made up of and supportive of many worlds/ways of being—as a means of exploring sustainability from many viewpoints, not just those held in the Global North. Ehrenfeld's simplified and quite elegant definition is 'the possibility that humans and other life will flourish on the Earth forever'<sup>23</sup>, and Escobar also highlights flourishing rather than surviving as key.

In the context of design, sustainability has been argued as systemic by Acaroglu<sup>24</sup>, who suggests it is a 'parameter' to guide thinking. Cadarso<sup>25</sup> outlines sustainable communication design as a new discipline in its own right, identifying it using four core principles: nature, culture, society and economy. However, Fry argues that any economic imperative restricts the potential of sustainable approaches (or what he calls approaches to 'the Sustainment') and reinforces what is already unsustainable<sup>26</sup>. This is easily identified in paradoxical 'sustainable design' projects, for example using a cradle-to-cradle approach<sup>27</sup> to design zero-waste packaging for a disposable product<sup>28</sup>.

Considering the lack of knowledge and subsequent inaction in practice, this research does not separate 'sustainable design' from 'normal design'. It argues for a sustainability imperative as part of designers' ethical responsibilities, to guide critical questioning and action in design practice. This research engages with sustainability principles not as a secondary consideration to visual design principles, and not as a part of a separate discipline, but as an intentional and ethical undertaking that is embedded in the thinking and doing of design.

Synthesis of these different approaches and definitions informed the definition for this research previously outlined in the introduction as the flourishing of many lives (human and other) across many worlds (the pluriverse) in many times (past, present, near and distant future). This definition recognises that humanity's flourishing should not come as a result of standing on the backs of those before us, or by casting aside those amongst us, nor because we robbed a future from those ahead of us. In this sense, sustainability is positioned as a goal and its antithesis, structural unsustainability as the problem to be approached.

22 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

23 John R Ehrenfeld, *Sustainability by Design: A Subversive Strategy for Transforming Our Consumer Culture* (Yale University Press, 2009), p 49

24 Leyla Acaroglu, "Eco Innovators," <http://www.ecoinnovators.com.au/>.

25 Maria Cadarso, "Sustainable Communication Design Principles - 2.0 Version," *Procedia Manufacturing* 3 (2015).

26 Tony Fry, "Design after Design Workshop," (2018).

27 Michael Braungart and William McDonough, *Cradle to Cradle: Remaking the Way We Make Things* (MacMillan, 2010)

28 Peter Claver Fine, *Sustainable Graphic Design: Principles and Practices* (London, UK: Bloomsbury Academic, 2016).

## Design

Over 40 years of design theory argues the importance of addressing sustainability through design. Exploring why this has not yet been embraced in practice reveals how challenging this imperative is to action. Multiple problems exist in practice, some stem from power dynamics and the relations between design and the world at large, others from a lack of critical engagement with the nature of design itself. Particular to both is a tendency within design to focus on solutions and in doing so, to reduce a problem's complexity or fail to recognise it at all.

While other sub-disciplines such as fashion and product design have made some inroads in addressing the sustainability problematic, communication design and interaction design are yet to make any significant changes to process, policy or politics that could affect change within practice. A niche of practitioners is focused on technical approaches to sustainability but in the process, fail to address structural unsustainability. An even smaller niche is resisting industry norms by practicing emergent approaches such as transition design, but there are very few designers who work in this way and those who practice design outside of the status quo are extremely rare.

In professional practice, both communication and interaction design typically focus on making things for clients. Communication designers communicate visually and verbally through predominantly two-dimensional artefacts<sup>29</sup>, while interaction designers share some communicative interests but focus primarily on interactions and experiences crafted through digital outcomes<sup>30</sup>. Neither is particularly focussed on sustainability as a goal or as a structural problem. It would appear that attempts to address structural unsustainability in professional practice can lead to the aforementioned double bind for designers.

The tensions and conflicts that lead to the double bind are key aspects of the design problem. Examination of these conflicts reveals how designers' actions can be hindered by co-dependent client-designer relationships. In the course of 'doing business' tensions arise from these relationships, and limitations placed on time and money create frequent conflicts for designers that can impact their actions and their design outcomes. These impacts span both sustainability and creativity. Design's ties to business can blur the lines between the goals of design and the goals of business. In these contexts, the goal of sustainability can be overshadowed by the larger aim of achieving economic growth for a client.

Design literature and collected data indicate sustainability in design is also misconceived as a technical aspect of material production, for example using recycled paper and vegetable ink, reducing energy use by making a website more searchable or using carbon neutral server hosting<sup>31</sup>. This 'greener things'

29 Julier, *The Culture of Design*.

30 Lauralee Alben, "Defining the Criteria for Effective Interaction Design," *interactions* 3, no. 3 (1996).

31 Tim Frick, *Designing for Sustainability: A Guide to Building Greener Digital Products and Services* ("O'Reilly Media, Inc.", 2016); Tania Humphries-Smith, "Sustainable Design and the Design Curriculum," *J of Design Research* 7 (2008); Joachim H. Spangenberg, Alastair Fuad-Luke, and Karen Blincoe, "Design for Sustainability (Dfs): The Interface of Sustainable Production and Consumption," *Journal of Cleaner Production* 18, no. 15 (2010); Victoria State Government, "Sustainability in Graphic and Web Design," Victoria State Government, <http://www.business.vic.gov.au/marketing-sales-and-online/business-sustainability/sustainability-in-graphic-and-web-design>; Mightybytes, "[Http://www.sustainablewebdesign.org](http://www.sustainablewebdesign.org)," <http://www.sustainablewebdesign.org>.

approach has been evident in my own design practice and is echoed in collected data, where superficial attitudes towards sustainability were defined by these technical approaches or by participating in activities like recycling initiatives. Most described sustainability as uncommon or unconsidered in their practice. This absence of the principles of sustainability is far more problematic than a superficial ‘greener things’ approach. It could indicate a lack of knowledge and/or a lack of power to contribute to structural change, and both point to a limitation of the role inhabited by the designer. Regardless of sustainability’s absence or oversimplification, both outcomes fail to consider the complexity of structural unsustainability, the impact of business goals, the position of designers, or their contributions to unsustainable consumption as part of the problem. If designers are to address sustainability in a deeper and more holistic manner—as an ethic rather than an aesthetic—an exploration of the perceived limitations of roles within design’s ‘orders’ becomes necessary<sup>32</sup>.

The four orders of design put forward by Buchanan are a way of understanding the types of things being designed, their complexity and level of influence or impact<sup>33</sup>. In the first order is communication design, the second is product design, in the third order is interaction design, and the fourth order is environment design<sup>34</sup>. Clarifying what these orders mean for non-designers is perhaps best done by looking at the extreme ends: in the first order, the designer’s role is to work with signs and symbols, (think graphics, logos and means of communicating information). In the fourth order, the designer’s role is to operate at an environments or systems level, (think town planning, architecture or cultural projects such as social change). Each can be impactful in different ways, but in the lower orders a designer can feel inhibited by their role and the types of things they ‘make’. This can be seen in the ways each order oversimplifies complex problems. First order design typically reduces sustainability to a technical or material response because first order design work is primarily technical and material. A similar argument exists for third order design, where technical approaches to processes and interactions fail to address the ‘defuturing’ nature of the interactions themselves. For example, creating a more sustainable e-commerce experience can still accelerate consumption, waste and transport related emissions<sup>35</sup>. This research aims to demonstrate how designers might overcome disciplinary limitations and shift orders. In doing so it endeavours to respond to deeper societal issues surrounding the impacts of consumption and post-consumer waste. This approach is reliant upon strong theoretical underpinnings, and an expanded understanding of what sustainability within design means.

The order-related restrictions experienced by designers are compounded by design’s financial dependence on business. As previously discussed, the design industry is closely aligned with business, and financial concerns

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32 Richard Buchanan, “Design Research and the New Learning,” *Design Issues* 17, no. 4 (2001). p 10-17

33 Ibid.

34 These orders are explored in more detail in Chapter 1. For more on this see: *ibid.*

35 Blackbee, “Sustainability in Ecommerce: How Green Is Your Online Shop?,” <https://webdata-solutions.com/en/2017/11/10/sustainability-in-ecommerce-how-green-is-your-online-shop/>.

frequently underpin decision making in practice—particularly for designers with employees. Identifying economics as a perceived barrier to sustainability is important, however this barrier can be overcome through a deeper understanding of what sustainability entails, thus demonstrating how designer assumptions can also impact sustainability in practice. In his discussion on the business of design, Granet argues that good work results in good money—here the context of ‘good’ work is understood as award-winning work<sup>36</sup>. This research will demonstrate how the same principle can apply to ‘good’ work in the context of sustainability, which can lead to the emergence of autonomy, an organic economy, and a financially viable mode of practicing that fosters just and sustainable futures. It also explores the role of privilege in this mode of practice, and some of the challenges that are likely to be faced in its pursuit.

A large part of the problem being faced in design is the continuing trend of either ignoring sustainability or underestimating the principles of sustainable design as purely technical. Yet even the niche of designers attempting to work in genuinely sustainable ways experiences conflicts and tensions when trying to integrate sustainability into their work. If sustainability is to be properly integrated into design, there must be a greater awareness for how it can be addressed *through* design.

## Questions and possibilities

Throughout this research I have investigated complex problems contributing to structural unsustainability and continually returned to the question: what can I do—as a designer—to contribute to systemic change that addresses unsustainable behaviours? The question of ‘what can I do’ is complemented by additional questions such as ‘how?’ How am I contributing to transitions towards just and sustainable post-capitalist futures? What role has transformation played in the transition taking place in my design practice? And, how might other designers start this journey?

## Aims and objectives

Exploring sustainability and design as interconnected aspects of the structural problem of consumption and waste permits a much needed integration of both sustainability and design. This research aims to contribute here, by demonstrating the impact that an expanded understanding of sustainability can have on a design practice. It aims to show how such a transformation can inspire design work that is purposeful, functional and viable as a part of sustainability transitions.

This research also aims to demystify some of the possible ways that designers could contribute to transitions toward just and sustainable futures. Its primary objective is to document this endeavour in my own practice, to examine and discuss what might be needed in order to extend a practice beyond ‘making

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36 Keith Granet, *The Business of Design : Balancing Creativity and Profitability*, 1st ed. (New York: Princeton Architectural Press, 2011). p 28

greener things'. Discussion is limited to design approaches to the consumption and waste problem, however through this discussion, I aim to create tangible connections between theories (of change, power, social practices, consumption and waste) and the practice of design for transitions. Discussion of the integration of these theories into design projects aims to demonstrate how this work might be done, with the objective of creating an entry point for other designers to begin their own process of exploration.

## Contributions to the field of design

As an emergent area of research and practice, there is very little work documenting design for transitions in practice. The gap for communication and interaction design's role is significant, leaving ample space for multiple contributions. The possibility of extending this work also remains quite open. The relations between action/inaction and power dynamics, knowledge gaps, social practices, mindsets and the commercial viability of design practice are interrogated throughout this thesis. This research attempts to respond to gaps around the roles of power and change, and to provide a critique of design's role in the mediation of consumer culture. Its documentation of transformation and of practice-based projects also offers examples of tangible entry points that other designers could leverage.

Without dedicated, collective and continued action from designers, transitions to just and sustainable post-capitalist futures will likely remain a niche activity. As more designers contribute into this space it will become further enriched by multiple ways of thinking and doing this work.

## Chapter outline

This thesis has been divided into three parts, Situating, Thinking, and Doing. The explorations in each part are outlined chapter by chapter below.

### Part 1: Situating

Part one situates this research in a design context with a focus on sustainability using an ethical lens, and describes how this has been approached. This is presented as two chapters, the first provides a review of the literature and the second outlines the research design.

#### Chapter 1: Sustainability and Design: a review of the literature

A review of literature spanning design, economics, sociology, environmental management, ecology, politics, and philosophy locates the complex problem of sustainability and reveals its interdisciplinary nature. An investigation of design orders situates the functions of contemporary practice and a brief history of sustainability reveals a key aspect of structural unsustainability is paradigmatic and embedded within an economic status quo. The designed world is presented as a critical frame in which design is responsible for addressing structural unsustainability. A map of design's historical relationship with sustainability reveals sporadic action and a subjugated position within a small niche of practice. Further analysis unpacks five key unsustainable aspects of practice: business tensions, the acceleration of consumption, operational aspects, the power dynamics of designer positioning, and unsustainable processes in technical production. The designer's responsibility in addressing matters of sustainability is explored through an ethical lens. This framing further interrogates designers' complicity in the transmission of messages and argues for the exercise of greater ecological and social responsibility through their work. This chapter closes with the presentation of a typology that communicates the different dimensions of one approach to design for transitions.

#### Chapter 2: Research Design and Methodology

Chapter 2 outlines a critical pragmatism as the frame for this mixed method research design, and describes the case study and the activities that have occurred within it. The appropriateness of this approach is established, and its flexibility is described as a necessary aspect of the research activity. The research methods are outlined, including case study research, analytic auto-ethnography and research through design which also discusses the incorporation of action research, and ethnographic approaches. Analysis of collected data uses grounded theory and reflective practice to consider emergent themes, and reflective practice has been used to synthesise collected data with the literature, theoretical framework and lived experiences.



## Part 2: Thinking

Part 2 explores theories of consumption, change, power, and social practices which combine to form the theoretical framework underpinning this research. This exploration spans three chapters and closes with the presentation of a modified canvas that uses two key theories to analyse the interconnected problems of consumption and waste.

### Chapter 3: Practice makes perfect? Design, consumption and waste

This chapter opens with an exploration of consumption from the perspectives of economics, sociology and design, and interrogates the social constructs of consumption as an attempt to satisfy needs and the subsequent negative impact on well-being. Design's role in accelerating excess consumption is examined. The discussion of a range of conflicts and tensions in practice reveals how a designer's actions against consumption can be inhibited by education and work experience in the mediation of consumer culture, and how a realignment of the priorities of design is needed. A sociological perspective provides insights into consumption's impact on well-being and reveals how altered social practices could help people meet their needs outside of or with minimal consumption. I argue for this process to be led by designers and suggest that this could also help 'unmake' waste, an exponentially increasing by-product of consumption. Explorations of the waste problem continue, and a critique of technical solutions identifies how greener things can fail to address the waste problem and unintentionally reinforce structural unsustainability instead. The politics of plastic—a significant waste material—are discussed and the connection to power is highlighted as a contributing factor in technocratic approaches to the waste problem. This chapter closes with a discussion of design's potential to 'unmake' waste. It explores behaviour change and the role that slow design might play in this process.

### Chapter 4: Power, Change and Alternative Economies: theories for transitions

The exploration of theories continues in Chapter 4 which presents intersecting theories of power and change, and examines the role of alternative economics in sustainability transitions. A study of theories of power begins with an investigation of ideologies and mindsets that reflect power relations and contribute to structural unsustainability. The relevance of empowerment and resistance is unpacked and relational power dynamics are highlighted as an important area for designers, particularly for those working collaboratively or looking to change the dynamics of their client relationships as part of their activation of sustainability transitions. Geels' multi-level perspective (MLP) is presented to provide an understanding of large-scale transitions in societies and social practice theory is presented to study the 'little things' that can detract from or contribute to a sustainable lifestyle. The 'slow movement' is presented again, and its role and contribution to well-being through evoking flow states, and its connections to values and the timing of change is considered in the context of food production and consumption. This analysis is contextualised

using social practice theory. Discussion of how designers might use these theories in practicing design for transitions provides some tangible leverage points for their application, and a necessary analysis of alternative economies ensues. The sharing economy and circular economy are reviewed and critiqued, and a framework to guide economic thinking is presented.

#### Chapter 5: Putting theory into practice: the multi-level perspective and social practice theory

This chapter explores the MLP and social practice theory (SPT) in more detail and applies them to a sensemaking process that maps the consumption and waste problem. The MLP canvas from the transition design toolkit presents an exploration of the problem of consumption and waste using the MLP. Discussion of how this canvas was modified during this research outlines the iterative and reflective process that led to the inclusion of a more explicit recognition of ideologies and mindsets, and of the MLP's ecological context. This modified canvas also presents an alternative exploration using SPT to map the everyday practice of teeth-brushing. Contrasting two approaches to this same practice reveals the impact of change in everyday practices and how change might be activated and supported through interventions into surrounding systems.

### Part 3: Doing

The third and final part focuses on the act of doing design as part of doing research. It presents the case of transformation in my practice from 'making greener things' to 'design for transitions' and discusses the activation of, and activity within, this process. This part of the thesis adopts a more designerly perspective while maintaining a critical approach. It analyses design projects that approach the problem of consumption and waste and reveals their role in the transformation. This work spans four chapters that unpack the different dimensions of design for transitions.

#### Chapter 6: Design against 'defuturing'

This chapter explores approaches to design that aim to confront 'defuturing' activity. 'Defuturing' is a term from Fry that describes activity that robs humanity of a future and much of this activity can be exacerbated by design. Firstly, collaboration and co-creation are presented as a way of working that seek to mitigate 'defuturing' through deeper engagement with people. This is followed by the introduction of two emergent practices that embrace collaborative approaches. First, transition design is explored as a practice which seeks societal-level change through the design of pathways to just and sustainable futures. Secondly, autonomous design is presented as a more existential approach to design that operates outside of the status quo. Transition design and autonomous design are both presented as approaches to design practice that could facilitate designing against 'defuturing' and both are integral to my practice of design for transitions.

### Chapter 7: Research through design: The Rethink Rubbish project

Doing research as a designer has led to the exploration of key concepts through design projects. This chapter documents and discusses a design project that approaches the problem of consumption and waste and presents insights on its outcomes. The sensemaking processes used throughout this research begin to be unpacked in this chapter. It presents synthesis of the literature and collected data with an application of theoretical knowledge into a real-world design project. This chapter attempts to illuminate the typically tacit process of knowledge integration into design practice, and presents an approach to the practice of design for transitions that blends transition design and autonomous design.

### Chapter 8: Practice, process, projects: explorations of transitions through design research

This chapter analyses design practice (my own and others), as well as the design processes and projects that have been undertaken as part of this research. Data collected during interviews with designers is analysed and establishes a view of the norms in contemporary practice that mirrors the conflicts and tensions explored throughout this thesis. Analysis and discussion of design processes reveals how new processes are emerging within my practice that facilitate design for transitions and accelerate the process of transformation. Analysis of design projects contrasts ‘making greener things’ with the emergent practice of ‘design for transitions’ and demonstrates the transformation taking place in my practice. This project analysis also presents an assessment method for measuring a project’s potential to contribute to the practice of design for transitions.

### Chapter 9: Personal, political, professional: the case of a practice in transition

The final chapter presents the case of transformation in my practice. It discusses the personal, political and professional dimensions of this process of change and identifies self-transformation as a precursor to the transformation of a design practice. The political dimensions of transitioning are proposed as a key component in designer empowerment and the activation of change. Explorations of the professional dimensions of transitioning reveal the practice of design for transitions is in its infancy and is benefiting from incubation within academia. The process of curating space for transitions is presented and leads to a discussion of the different ways that the process of transitioning towards increased sustainability might be experienced within a practice. This prefixes a discussion of the tensions arising from the process of transition, and the importance of their navigation as part of pursuing work in this space.

# PART 1: SITUATING

*Part 1* situates this research in the field of design and uses a critical pragmatism with an ethical lens to discuss design's contributions to structural unsustainability. It discusses the trend of inaction on matters of sustainability in design and analyses five key areas of unsustainability in design practice. The particular focus on design's role in accelerating excess consumption and waste is introduced and sets up the continuing discussion of this problem in *Part 2: Thinking*. This part closes with an outline of how this mixed method research was conducted.

## Chapter 1

### Design and Sustainability

This is research about design, but it is also research about sustainability, because in being about one it is necessarily about the other. For many designers this is not the case. Historically, sustainability has been under-considered by communication and interaction design practitioners<sup>37</sup> and appears to remain absent from the norms of contemporary practice. Literature from the fields of design and environmental management indicates that sustainability in communication design practice was largely ignored until the 1990s, and upon introduction was misconceived as a technical aspect of production, for example using recycled paper and vegetable ink<sup>38</sup>. However, the past decade has seen an important shift towards methods that influence designers' thinking<sup>39</sup>. This has revealed new approaches to the problem of addressing sustainability through practice, but also points to a conflict in the symbiotic client-designer relationship model. It is evident from the literature that the long-term servicing of an economically driven market has influenced the way designers approach their work<sup>40</sup> which has also had repercussions for how they consider sustainability. Practitioners' acknowledgement of value in alternative practices complicates existing tensions in professional practice, between business and creativity, surrounding authorship and the positioning of the designer as a resource as opposed to an agent for positive change<sup>41</sup>. These tensions also pose an ethical conundrum for the designer, and the concept of designer responsibility is reiterated throughout this research as a key aspect of addressing sustainability within design.

#### 1.1 Situating the practice of design

We live in a designed world that is breaking the natural world and the practice of design is situated in both<sup>42</sup>. Fry and Willis both argue that humans design and in turn are shaped by design<sup>43</sup> and Cross describes design as part of the

37 Eric Benson and Yvette Perullo, *Design to Renourish: Sustainable Graphic Design in Practice* (Florida, US: CRC Press, 2017); Fuad-Luke, *Design Activism*; Dorothy Mackenzie, *Green Design: Design for the Environment* (Books Nippan, 1997); Walker, *Designing Sustainability: Making Radical Changes in a Material World*.

38 Spangenberg, Fuad-Luke, and Blincoe, "Design for Sustainability (DfS): The Interface of Sustainable Production and Consumption."; Humphries-Smith, "Sustainable Design and the Design Curriculum."; Government, "Sustainability in Graphic and Web Design".

39 Buchanan, "Design Research and the New Learning."; "Wicked Problems in Design Thinking," *Design Issues* 8, no. 2 (1992); Terry Irwin, Gideon Kossoff, and Cameron Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles* (<http://aiga.org/video-HHH-2013-irwin-kossoff-tonkinwise/>; AIGA, 2013); "Transition Design Provocation," *Design Philosophy Papers* 13, no. 1 (2015); Cameron Tonkinwise, "Design for Transitions—from and to What?," *ibid.*; "I Prefer Not To: Anti-Progressive Designing," (2017).

40 Dorland, "Routinized Labour in the Graphic Design Studio."; Springer, "Auditing Communication Design."

41 Michael Bierut, William Drenttel, and Steven Heller, *Looking Closer Four: Critical Writings on Graphic Design*, vol. 4 (Allworth Press, 2012); Steven J McCarthy, *The Designer As... Author, Producer, Activist, Entrepreneur, Curator & Collaborator: New Models for Communicating* (Uitgeverij Bis, 2013); Joyce Yee, Emma Jefferies, and Lauren Tan, *Design Transitions* (BIS Publishers Amsterdam, 2013).

42 Fry, "Design after Design Workshop."

43 *Becoming Human by Design*; "Design after Design Workshop."; Anne-Marie Willis, "Ontological Designing," *Design philosophy papers* 4, no. 2 (2006).

human experience<sup>44</sup>, distinguishing humanity from all else by the human performance of design. It is widely argued that designing is neither unique nor elite; anyone *can* design, and most people *do* design. However, those who practice design professionally have the responsibility<sup>45</sup> to do so using stricter guidelines, ethical underpinnings and more formal processes. Design is both a mediator of culture and culturally situated<sup>46</sup>. Design's cultural dimensions are discussed in this thesis, but design is also situated ecologically. Locating practice in this way maintains cognisance of the ecological context for all activity in<sup>47</sup> earth and recognises that ignoring this context contributes to structural unsustainability.

Design is defined in a large number of different ways. However Herbert Simon's oft-cited definition is perhaps the most relevant point of reference for an ever-broadening discipline<sup>48</sup>. He defines design as devising 'courses of action aimed at changing existing situations into preferred ones'<sup>49</sup>. Though lacking in nuance in relation to preference (who decides what is preferred, how is this decided, does this preference marginalise 'others' and so on) Simon's definition allows for some much-needed flexibility for hybrid or transdisciplinary practitioners. Buchanan describes design activity using a set of four orders of design<sup>50</sup>. Communication design, the first order of design, is the design of signs and symbols; product design is the design of products and things is a second order; interaction design's focus on processes and experiences is a third order design; and in the fourth order is the design of systems and environments<sup>51</sup>. Tonkinwise describes how these orders have been adapted as part of the ever-evolving practice of design and how reinterpretations reflect the maturation of design in a contemporary setting<sup>52</sup>. His (draft) paper presents an 'in-progress' framework that re-positions design's sub-disciplines within these traditional four orders to reflect the complexity each sub-discipline engages with. Here he positions design for social innovation and transition design in the fourth order due to their aims to transform systems and societies<sup>53</sup>.

For this research, Tonkinwise's reinterpretation of the orders of design is considered, however Buchanan's original orders are used to describe the orders of established sub-disciplines of communication, product, interaction and service design. The more emergent practices of design for social innovation and transition design are positioned in the fourth order using the 'in-progress' framing provided by Tonkinwise. This reflects the complexity of work undertaken when designing for change, particularly at a systems level and the

44 Nigel Cross, *Designerly Ways of Knowing*, Springerlink Engineering (London: Springer, 2006). p 29

45 Responsibility is used here in reference to ideas of designer responsibility from Victor Papanek.

46 Julier, *The Culture of Design*.

47 The reference here to activity *in* rather than *on* earth is a deliberate reframing of humanity's relational and interdependent context in earth taken from the Stephan Harding Deep Time Walk. For more on this see: <https://www.deeptimewalk.org>

48 Herbert Simon, *The Sciences of the Artificial* (Cambridge, MA: MIT Press, 1969; repr., 1996). p 111

49 Ibid. p 111

50 Buchanan, "Design Research and the New Learning."

51 Buchanan, 2001 #74}

52 Tonkinwise, "Design's (Dis)Orders & Transition Design."

53 Ibid. p 9-11

potential scale of the outcomes<sup>54</sup>. My own practice blends communication and interaction design, and through this research, design for transitions. Much of the discussion in this thesis centres around this particular blend of sub-disciplines. Combining Buchanan's and Tonkinwise's discussion of orders of design would position my practice as spanning the first, third and fourth orders of design.

### 1.1.1 What is communication design?

Communication design is described by Buchanan as a first order of design, concerned with the design of signs and symbols<sup>55</sup>. The practice of communication design applies design skills, knowledge and methods to visual communication outcomes typically in print but also in digital media. Defining the boundaries of this sub-discipline can be contentious—some academics define communication design through its tasks, responsibilities and outcomes<sup>56</sup> yet these discussions remain contextual and place-based<sup>57</sup>. Communication designers often specialise in outcomes such as branding/identity design, packaging design, or information design to name a few. Some have embraced digital technologies and others push beyond what is typically perceived as a communication design outcome, however most communication design work is situated within the boundaries of first order design.

### 1.1.2 What is interaction design?

Buchanan describes interaction design as third order design, concerned with the design of interactions and experiences<sup>58</sup>. Its focus on the relationship between users and products has led to it being driven by human-centred approaches. Its relative youth and relationship with rapid-cycling technology means the definition of interaction design has evolved from a past in human computer interactions (HCI) to become more inclusive of all human interactions. It frequently centres around the design of interfaces for digital technology but not to the exclusion of analogue experiences. There is a communicative aspect to interaction design, for example, crafting the language used for interactions, the design of communicative iconography and other graphic elements. However other dimensional aspects to this process tend to differ from communication design in their temporality and deeper considerations of the physicality of use in terms of objects and space, as well as the addition of sound and motion and triggering particular behaviours<sup>59</sup>.

54 Ibid. p 9-11

55 Buchanan, "Design Research and the New Learning."

56 Robert G Harland et al., "Divergence and Convergence in Graphic Design and Communication Design," (2018). p 7-8

57 Ibid. This was also noted during interviews with designers who described the performance of communication design but referred to themselves as graphic designers, brand specialists, or creatives depending on where they were and who they were speaking with.

58 Buchanan, "Design Research and the New Learning."

59 Alan Cooper, Robert Reimann, and Hugh Dubberly, *About Face 2.0: The Essentials of Interaction Design* (John Wiley & Sons, Inc., 2003). See also; Kevin Silver, "What Puts the Design in Interaction Design?," UX Matters, <https://www.uxmatters.com/mt/archives/2007/07/what-puts-the-design-in-interaction-design.php>.

Prototyping is an embedded part of this design process which usually engages users as part of prototype testing and frequently involves the crafting of personas to communicate user narratives. The practice of interaction design applies a specific set of skills to the design of interactions often in digital environments (HCI) but also includes human interactions (such as experiences and interactions between people and information) as part of the design of interactions, services and their support materials.

### 1.1.3 What is transition design?

Transition design is an emergent area of research and practice that is focused on the design of transitions to just and sustainable futures. Transition design is a multi-level, multi-stage design approach that is slower and more temporal than other design disciplines. It advocates for ‘design-led societal transition toward more sustainable futures’<sup>60</sup> and is described as fourth order design due to the complexity and scale of its aims<sup>61</sup>. Transition design has a somewhat paradoxical nature, as it seeks to design change in the systems it is embedded within<sup>62</sup>. In this respect, it could be described as a post-capitalist design approach situated in a neo-liberal capitalist<sup>63</sup> economic context. Whether this positioning will help or hinder its practice remains to be seen. The transition design approach is explored through this research and discussion of it is interspersed throughout this thesis. It is discussed in more detail in Chapter 6 and an application of its processes is discussed through the analysis of design projects in *Part 3: Doing*.

### 1.1.4 Locating professionalism in design practice

According to Csikszentmihalyi<sup>64</sup> there are four components that make up a professional realm: a field, a domain, individual practitioners, and other stakeholders. Both communication and interaction design are sub-domains of design, are made up of individual practitioners and their stakeholders (for example clients and suppliers), and consistent with Csikszentmihalyi’s thoughts, both could be considered a professional realm. Transition design is harder to identify in this same way. As an emergent area of practice its practitioners and stakeholders are less visible, however it emerged as a niche of practice post-2015 (this niche is located and discussed in Chapter 9). Communication design is an older profession by comparison. It stabilised in the 1950s–1960s through shifts from industrial to corporate connections<sup>65</sup>, and interaction design emerged

60 Irwin, “Transition Design: A Proposal for a New Area of Design Practice, Study, and Research.” p 229

61 Tonkinwise, “Design’s (Dis)Orders & Transition Design.”; *ibid*.

62 *Ibid*. p 12

63 Neo-liberal capitalism is discussed throughout this thesis in reference to the dominant ideology governing economic activity in the Global North. As an ideology and as an economic practice, neo-liberalism promotes a free-market economy that values growth and competition at the expense of social justice and the natural environment. For more on this see: David Harvey, *A Brief History of Neoliberalism* (Oxford University Press, USA, 2007); George Monbiot, “Neoliberalism—the Ideology at the Root of All Our Problems,” *The Guardian* 15, no. 04 (2016).

64 Mihaly Csikszentmihalyi, *Creativity: The Psychology of Discovery and Invention*, Modern Classics 1st ed. (New York: Harper Perennial, 2013).

65 Fine, *Sustainable Graphic Design: Principles and Practices*.



in the 2000s from a shift to digital spaces becoming more considered and sophisticated in their crafting<sup>66</sup>. Contemporary practice in both communication design and interaction design is closely associated with business<sup>67</sup>. This association has helped shape the design industry by directing design's creative outputs towards profit and metrics<sup>68</sup>. It should be noted that not all professional communication design and interaction designers consider themselves as part of this industry, though many do.

It could be argued that practice needs to be financially focussed in order to meet professional criteria, making professional design synonymous with working in the design industry. Yet practice can also operate outside of the design industry and without focussing on business, instead focussing on the creation of culture, creativity, change, authorship or activism<sup>69</sup>. The term 'professional' can imply financial compensation, however the volume of pro bono work and authorship within professional practice suggests that the term 'professional' can be used irrespective of financial reward<sup>70</sup>. As such, this research defines professional practice as the design of outcomes for an audience regardless of financial reward.

### 1.1.5 A brief history of contemporary practice

Since the advent of the computer as a design tool, design practice has changed dramatically; from one of a network of people performing highly specialised roles to one of the designer as a 'Jack-of-all-trades', wielding their computer, fully loaded with specialised software<sup>71</sup>. As a consequence of the shift to digitally enhanced processes, the use of toxic chemicals and processes has been reduced,<sup>72</sup> however many still remain<sup>73</sup>. The print production process still generates chemical, water and paper waste, and the carbon footprint and e-waste resulting from digital processes poses an ever-growing problem<sup>74</sup>. It has been argued that many of the things designers create have unsustainable lifecycles, and that designers' focus should be on 'the right things' rather than on 'making things right'<sup>75</sup>.

66 Cooper, Reimann, and Dubberly, *About Face 2.0: The Essentials of Interaction Design*.

67 Granet, *The Business of Design : Balancing Creativity and Profitability*; Julier and Moor, "Design and Creativity."

68 Springer, "Auditing Communication Design."

69 McCarthy, *The Designer As... Author, Producer, Activist, Entrepreneur, Curator & Collaborator: New Models for Communicating*.

70 Bierut, Drenttel, and Heller, *Looking Closer Four: Critical Writings on Graphic Design*, 4.

71 Philip B Meggs and Alston W Purvis, *Meggs' History of Graphic Design* (John Wiley & Sons, 2016). p 571-621

72 Used in hand production and crafting in pre-digital practice but these remain evident in the contemporary print production process.

73 Aaris Sherin, *Sustainable* (Beverly, Massachusetts: Rockport Publishers, 2008).

74 Brett H Robinson, "E-Waste: An Assessment of Global Production and Environmental Impacts," *Science of the total environment* 408, no. 2 (2009).; Rolf Widmer et al., "Global Perspectives on E-Waste," *Environmental impact assessment review* 25, no. 5 (2005).; Jayant Baliga et al., "Carbon Footprint of the Internet," *Telecommunications Journal of Australia* 59, no. 1 (2009); CustomMade to Made by Custom Made, 13 April 2015, 2015, <https://www.custommade.com/blog/carbon-footprint-of-internet/>.

75 Leyla Acaroglu, *Disruptive Design Method Handbook* (New York, US: Disrupt Design LLC, 2017).; Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.; Walker, *Designing Sustainability: Making Radical Changes in a Material World*.

The impact of technology extends beyond a reduction of specialised technical roles and their associated processes; more recently, it has democratised design. With a computer, and some software, anyone can design using a growing number of drag-and-drop website builders or design/print-on-demand services available online<sup>76</sup>. In fact, Tim Brown—CEO of international design and consulting firm IDEO—argues that anyone who can think can design, and that the recent democratisation is a good thing<sup>77</sup>. Others argue that democratisation has devalued design<sup>78</sup>, evidenced through its manifestation as a crowd-sourcing activity, which provides an online space where design projects can be posted by clients in the hope that designers will create and submit designs to win the project. This is ‘free-pitching’<sup>79</sup> for a new generation of designers, however this competitive process is not concerned with creative concepts; crowd-sourcing is about price. This ‘race to the bottom’ has spurred many designers to invoke their agency through authorship, using blogs to voice their concerns that democratisation of this nature threatens the value of design and the future of design as a profession<sup>80</sup>. After Steiner<sup>81</sup> advocated the value of crowd-sourcing creativity in *Forbes Magazine*, Brown’s comments regarding thinking become more pertinent: whether someone has access to technological tools or not, they have access to their brain, and ‘real’ designers need little more than this to create. As designer tool kits become more generally accessible<sup>82</sup>, some designer’s increasing fear of democratisation might indicate their reliance on a mastery of tools rather than a mastery of thinking.

Continual shifts in technology have kept communication design practice in a state of flux for over twenty years. Technology has evolved practice—sometimes for the better and sometimes for worse—and it is also driving the ongoing democratisation of design. If democratisation continues to manifest as crowd-sourcing activity, it could prompt a necessary re-valuing of design. Re-evaluating practice as a whole, could accommodate a deeper integration of much needed collaborative approaches that could address sustainability in

76 Drag and drop website builders such as Wix or Squarespace and print on demand services such as Vista Print offer a range of design templates that the public can use to create their own websites, business cards, coffee table books and other merchandise such as mugs and mousepads. (see <http://vistaprint.com.au> for an example of the print on demand service or <http://wix.com> for an example of the drag and drop website builder service)

77 Kasper Worm-Petersen, “Democratization of Design,” <http://graspmag.org/urbanism/design-thinking/democratization-of-design/>.

78 Gerry Beegan and Paul Atkinson, “Professionalism, Amateurism and the Boundaries of Design,” *Journal of Design History* 21, no. 4 (2008); Katja Fleischmann, “The Democratisation of Design and Design Learning—How Do We Educate the Next-Generation Designer,” *International Journal of Arts & Sciences* 8 (2015); Adrienne L Massanari, “Diy Design: How Crowdsourcing Sites Are Challenging Traditional Graphic Design Practice,” *First Monday* 17, no. 10 (2012).

79 Free pitching involves the creation of concepts and accompanying artefacts to demonstrate their function as a means of securing a project without receiving any payment for works completed. Historically, free pitching has been an accepted part of the competitive nature of securing large projects or clients. It has been more predominant within Advertising, however expectations of free pitching have also impacted communication design and many practitioners have taken an active stance against it.

80 See the following for examples David Airey to On design, et cetera., 20 September 2017, 2009, <https://www.davidairey.com/forbes-calls-designers-snooty/>; Brian Yerks to Brian Joseph Studios Blog, 20 September 2017, 2009, <https://brianjosephstudios.com/design-contests/why-crowdspring-owners-should-be-ashamed-of-their-business/>; Jeff Andrews to My Blog Adventures, 20 September 2017, 2009, <http://myblogadventures.blogspot.com.au/2009/02/forbes-magazine-graphic-design-is.html>.

81 Christopher Steiner, “The Creativity of Crowds,” *Forbes*, 29 January 2009 2009.

82 Beegan and Atkinson, “Professionalism, Amateurism and the Boundaries of Design.” p 307

more meaningful ways. Transition design is one such approach, others will be introduced and discussed as this thesis unfolds. This kind of democratisation is deeper than lay people using Photoshop or crowdsourcing for creatives. As design practice shifts to more collaborative modes of practice, Manzini's ideas of what happens 'when everybody designs'<sup>83</sup> come to the fore. In these more participatory approaches people are more involved in the design process, not as end-users to study, but as collaborative partners. This allows designers to step out of the role of expert and into the role of facilitator. Here, democracy in design is less about designers losing their jobs as 'mac-monkeys', and more about designers evolving into collaborative facilitation roles that create space for people to co-define problems and co-create solutions. Democracy in this sense could also shift designers out of their weak positions as business resources.

The relative youth of design as a profession coupled with its iterative processes and fast-paced technological shifts, suggest change should feel comfortable for designers, but this is not necessarily the case. As the world changes, the roles and responsibilities of designers must change too, and in spite of the discomfort that flux<sup>84</sup> brings, the dissolution of deeply entrenched ways of working leaves space for more collaborative, agile and responsive approaches to emerge. In this space practitioners could become empowered to reconsider their own position in relation to matters of sustainability.

## 1.2 Sustainability and design

### 1.2.1 What does 'sustainability' mean?

With hundreds of definitions in existence, sustainability's meaning can be highly subjective, and often means nothing at all. It is also a term that is susceptible to rhetorical use, which further reduces its meaning as a term and as a broader concept. Contemporary notions of sustainability were born out of the counter-culture movement in the 1960s–1970s, when environmentalists first argued the limits to growth<sup>85</sup>. Sustainability is often contextualised in business as development with a triple bottom line; a term coined by Elkington<sup>86</sup> in the 1990s to describe the core goal of sustainability as a means of moving forwards whilst maintaining a balance between ecology, economies and social well-being. Sustainability's triple bottom line is often reflected diagrammatically as the interplay between ecology, economy and society, however Lozano<sup>87</sup> argues that this model has proven problematic in its simplicity, its inability to adequately value things in non-monetary terms, and the subsequent ease with which one segment can gain priority over another. Klein has described in detail the

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83 Ezio Manzini, *Design, When Everybody Designs: An Introduction to Design for Social Innovation* (MIT press, 2015).

84 The experience of flux is reintroduced later, as part of embracing alternative approaches to design. This is discussed in more detail in Chapter 9.

85 Sharon Beder, *Environmental Principles and Policies: An Interdisciplinary Introduction* (Routledge, 2013). ch 1

86 Elkington, "Enter the Triple Bottom Line."

87 Lozano, "Envisioning Sustainability Three-Dimensionally."

impact of free trade agreements that permit the economy to trump ecology<sup>88</sup> and this is also reinforced by Plumwood's argument that overemphasising society is too anthropocentric and does not adequately consider others (non-humans) or ecology<sup>89</sup>.

The term, 'sustainable development' was popularised through the 1987 *Brundtland Report*<sup>90</sup>, but many environmentalists<sup>91</sup> perceive this concept as a form of 'light green' sustainability that prioritises the economic concerns of business whilst conceding some consideration to ecological and social well-being. This prioritisation is echoed in Fry's argument that 'sustainable development' is an oxymoron with an implied economic imperative, equating to a 'have your cake and eat it too' approach to sustainability<sup>92</sup>. It not only maintains the economic status quo but also limits influence over environmental and social issues by grounding them in an economic framework. It also fails to recognise the multitude of societies and their importance, instead prioritising Global North society as part of a 'one-world world' to the detriment of all others<sup>93</sup>.

These limitations might prompt shifts towards a view where sustainability is described as a nesting system of interdependence rather than interconnection<sup>94</sup>. Giddings et al<sup>95</sup> discuss blurring the lines between economy and society to link all human activity and well-being and nest it within ecology. At the extreme left, Brianson argues that humans are ontologically part of nature<sup>96</sup>, a notion that further blurs lines and delineation inherent in definitions using the economy/ecology/society triad. Ontological arguments are also carried out in the holistic sciences<sup>97</sup>. Positioning humanity as part of nature stems back to pagan traditions when nature was revered, prior to organised religions' introduction of a more hierarchical view of humanity as 'separate' or 'above' nature rather than part of it. Throughout time philosophers have discussed the interconnection of humanity and the natural world and the ontological argument is furthered by Escobar who presents a theory of unified onto-epistemology—that our way of being in the world and our way of knowing the world are inseparable<sup>98</sup>. When considered from these perspectives, delineation and nesting are both inadequate; everything is enmeshed in ways that defy simple definitions.

In an effort to address the inadequacies of other definitions, Haughton<sup>99</sup> argues for consideration of five principles (inter-generational/intra-generational/geographical, procedural/inter-species) to help conceptualise the complex

88 Naomi Klein, *This Changes Everything: Capitalism Vs. The Climate* (Simon and Schuster, 2015).

89 Plumwood, *Environmental Culture*.

90 Gru Brundtland et al., "Our Common Future (\Brundtland Report\)," (1987).

91 For more on this see: Tony Fry, Val Plumwood and Nick Feinsein

92 Fry, *Design as Politics*.

93 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

94 Giddings, Hopwood, and O'Brien, "Environment, Economy and Society: Fitting Them Together into Sustainable Development."

95 Ibid.

96 Alex Brianson, "Europa and Gaia: Towards an Ecofeminist Perspective in Integration Theory," *JCMS: Journal of Common Market Studies* 54, no. 1 (2016).

97 Fritjof Capra, "Speaking Nature's Language: Principles for Sustainability," *Ecological literacy: Educating our children for a sustainable world* (2005).

98 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

99 Haughton, "Environmental Justice and the Sustainable City."

interdependence that extends beyond the simple ecology/economy/society model. Giddings et al<sup>100</sup> suggest that guiding principles such as Haughton's could steer decision-making processes to improve the sustainability of outcomes. Addressing the design challenges associated with such complexity is a significant task, and Haughton's principles for equity help guide a systems thinking<sup>101</sup> approach. Returning to Fry's notion that sustainable development is an oxymoron, it is evident that economic considerations can serve to reinforce that which is unsustainable. Fry also makes it clear that systems thinking can limit approaches to sustainability as some things exist across multiple systems, and both he and Escobar present relational thinking as being of greater benefit for sustainable designers<sup>102</sup>. Escobar describes the way all living takes place in a relational matrix, regardless of being human or otherwise, and he and Plumwood both claim the rational separation of nature and culture is a significant contributor to our ecological crisis<sup>103</sup>. They call for the political activation of relationality through prudent ethics, activism, co-operatives and alternative economies. This call for relational thinking is also evident in the transition design framework<sup>104</sup> and relational thinking underpins the investigations throughout this research by treating sustainability as a goal that stems from a holistic and temporal decision-making process, external to the economic status quo.

In this research sustainability is used as a term that is often given context by use of its antonym, unsustainability, which is used more specifically to refer to structural unsustainability. In this sense, sustainability is defined as a goal: the flourishing of many lives (human and other) across many worlds (the pluriverse<sup>105</sup>) in many times (past, present, near and distant future). With this said, structural unsustainability can be understood as a set of systemic interconnected complex problems that limit (or void) the achievement of this goal. Structural unsustainability threatens humanity's future on this planet, and in doing so threatens all life on this planet including the health of the planet itself. For all its definitions and rhetoric, sustainability is far from meaningless, it is a goal worth striving for.

### 1.2.2 Why sustainability matters for design

The global concerns arising from structural unsustainability are categorised as 'wicked problems'—a complex network of interconnected issues that must

100 Giddings, Hopwood, and O'Brien, "Environment, Economy and Society: Fitting Them Together into Sustainable Development." p 194

101 Systems thinking provides an understanding of the interconnection of things and their processes and considers how things form networks. This can deepen the understanding of interactions with things and how they fit into broader systems.

102 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Fry, "Design after Design Workshop."; "Design for/by "the Global South";" *Design Philosophy Papers* 15, no. 1 (2017).

103 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Plumwood, *Environmental Culture*.

104 Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*; "Transition Design Provocation."; Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions."

105 The pluriverse is a term used by Arturo Escobar to describe a world where many worlds fit. This plurality recognises that there is more than one way of being in the world and that plural approaches are needed in order for all life to flourish. For more on this see: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

be addressed in order for the planet to sustain life. Acknowledgement that ‘everything is designed’ highlights how crucial it is that designers address sustainability, particularly in light of the impact of consumption on structural unsustainability.

Vocal members of the sustainable design niche have called for affirmative action from designers for more than 60 years, yet the majority of designers remain passive. Papanek championed sustainability in design in his seminal work, *Design for the real world*<sup>106</sup>. He outlined design for disability, poverty and a number of other social and environmental sustainability issues, many of which are yet to be fully addressed in design. The book encapsulated the underground movements of the 1960s and 1970s yet still failed to affect significant change outside of a niche of dedicated followers<sup>107</sup>. At the time of writing, we edge closer to 2020, and design is yet to experience a meaningful mainstream social or ecological movement. In early 2018, Escobar interrogated Papanek’s *Design for the Real World* by asking ‘what reality?’ and ‘what world?’. These crucial questions fly under the radar of designers under the dominant Global North ‘one-world world’<sup>108</sup> paradigm but they are key to Escobar’s argument for the pluriverse—the many worlds within the world. Central to this argument is the notion that space must be made for multiple approaches to emerge. It is positive to note that many Global North architects, engineers, industrial/product designers and fashion designers are taking greater responsibility for the impact of their work and are implementing discipline-wide strategies and approaches to manage it<sup>109</sup>. Conversely, communication and interaction design have not addressed these important issues with any widespread affirmative action. Without such notable action towards change, the professions of communication and interaction design risk losing their relevance and in the process, practitioners could be branded as irresponsible.

### 1.2.3 The history of sustainability in design

Much like the term ‘sustainability’, sustainable design has multiple meanings, and it is frequently reduced to rhetoric that means nothing at all. For designers embracing methods of sustainable design in contemporary practice it can be a way of designing that has longevity whilst maintaining a light ecological footprint. It can be design that considers people but not to exclusion of all ‘others’, design that ensures and even encourages biodiversity. Moreover, it is a consideration that is temporal, as its outcomes impact both present and future generations whilst also drawing on the past. Including these considerations in a design brief can result in many additional moving parts for the designer (and client) to factor in, which could explain its relative absence from the minds of most contemporary designers.

106 Victor Papanek and R Buckminster Fuller, *Design for the Real World* (Thames and Hudson London, 1972).

107 Alice Rawsthorn, “An Early Champion of Good Sense,” *New York Times*, 15 May 2011 2011.

108 John Law in Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. p 66

109 See the following as examples: Daniel Silverstein, Jo Cramer, Clare D’Souza, Ann Thorpe, Simon Guy and Graham Farmer, Ezio Manzini, Stuart Walker

The literature points to an assumption that sustainability for communication designers is an occasional technical concern, relating more to chosen materials than to process or anything deeper<sup>110</sup>. Further to this is the belief that the majority of paper/stocks—as a principal medium for print designers—are sourced from an industry that has shifted to more sustainable methods of resource management, primarily governed by Forest Stewardship Council (FSC) accreditation<sup>111</sup>. Whilst FSC accreditation is more prevalent, it is only one aspect of sustainable materials specification. Analysis reveals communication design has done little more than skim the surface of technical/material sustainability; perceived barriers and other limitations appear to have prevented deeper engagement. Interaction design suffers from a similarly shallow approach. The predominantly digital nature of interaction design makes it appear lightweight, however much like communication design, the outcomes of designed interactions (for example websites, apps and software) can also contribute to structural unsustainability. These issues cannot be addressed by simplistic technological approaches such as greening servers and improving page load times for digital content<sup>112</sup>.

Historically speaking, sustainable design has been somewhat scattered and mostly contained within small niches of practice, however the broader sustainable design movement spanning the field of Design can be traced back to the beginning of the industrial revolution<sup>113</sup>. Amidst the rise of industrial machine making and mass production of the 1880s, textile designer, William Morris, was developing a sense of radical green politics and integrating themes of contemporary sustainable practices into his work<sup>114</sup>. This included the continued endeavour of hand-crafted designs, consideration of materials, and reuse of waste. Morris fought for increased functionality and high-quality crafting in production, which combined with a politically left alignment, resulted in what many will argue to be the birth of sustainability within design culture<sup>115</sup>.

Morris is certainly a seminal figure, however it was not until the 1920s when Fuller coined the term ‘spaceship earth’<sup>116</sup> that the interconnectedness of all our planet’s resources within a closed system was clearly articulated. In Fuller’s analogy, earth is a ‘spaceship’ consisting of a closed system of finite resources, the ‘spaceship’ requires maintenance and care, and its ability to process and store waste and pollution is limited by the confines of the ‘spaceship’, its resources, and its need to support life in a clean and liveable environment. This

110 Government, “Sustainability in Graphic and Web Design”. This is also discussed by authors such as: Tony Fry, AnneMarie Willis, Aaris Sherin, Dorothy Mackenzie, Peter Claver Fine, Stuart Walker

111 Forest Stewardship Council, “Fsc Policies and Standards,” FSC, <https://au.fsc.org/en-au/standards>.

112 Mightybytes, “[Http://www.Sustainablewebdesign.Org](http://www.sustainablewebdesign.org)”.

113 Derek Wall, *Green History: A Reader in Environmental Literature, Philosophy, and Politics* (Taylor & Francis US, 1994).

114 Maynard Solomon, *Marxism and Art: Essays Classic and Contemporary* (Wayne State University Press, 1974). p 79-90

115 Wall, *Green History: A Reader in Environmental Literature, Philosophy, and Politics*; Clive Ponting, *A New Green History of the World: The Environment and the Collapse of Great Civilizations* (Random House, 2007); Patrick O’Sullivan, “Morris the Red, Morris the Green: A Partial Review,” *The Journal of William Morris Studies* 19, no. 3 (2011); Bradley J Macdonald, “William Morris and the Vision of Ecosocialism,” *Contemporary Justice Review* 7, no. 3 (2004).

116 R Buckminster Fuller, *Operating Manual for Spaceship Earth* (Estate of R. Buckminster Fuller, 2008). p 51

metaphor makes humanity's reliance upon ecology obvious, leaving sustainable approaches as the only viable option for action. The unfaltering messages from Morris and Fuller were met with resistance and competed with an underlying push for increased consumption in the post-war West. Packard<sup>117</sup> describes the economic strategy of designing obsolescence into objects and using design and advertising to stimulate desire for the new, thereby fuelling consumption and boosting the economy out of recession. The effects of this strategy continue to be felt globally today. Literature from Lippincott<sup>118</sup> in the late 1940s focused on design for business outcomes, promoting consumerism and design to maximise saleability. Post-war propaganda encouraged consumption as a civic duty, intertwining consumption and citizenship<sup>119</sup>, but in 1964 communication designer Ken Garland<sup>120</sup> created the *First Things First* manifesto to stand in opposition to work of this nature. The manifesto declared design had become a tool for advertising; selling the trivial and unnecessary to a world that was overly saturated with messages promoting consumerism. The manifesto's signatories endeavoured to seek work that was less commercially focussed and more intent on producing 'good' for the world. The proposal called for a 'reversal of priorities', it was signed by 22 creative practitioners and in 2000 was revised and relaunched, revealing that in the 40-odd years since its inception, little had changed. As Boehnert suggests<sup>121</sup>, this critique has been well established in design theory and warrants a deeper questioning to explain its lack of application in practice. The work of Victor Papanek<sup>122</sup>, Ian McHarg<sup>123</sup>, Paul Palmer<sup>124</sup> and Donella Meadows et al<sup>125</sup> in the 1970s further developed Fuller's ideas of interconnection and brought the principles of sustainability into a contemporary design context. Papanek's *Design for the real world* was shunned at the time of publication<sup>126</sup> as his approach was in stark contrast to the growing trend for disposability within design, however Papanek has since been posthumously recognised many times over as a 'founding father' of green design. His primary argument around the designer's responsibility has become central to designers' operating position within an ethical framework. This notion of responsibility has been embraced by many contemporaries<sup>127</sup> working towards positive social outcomes, but Escobar's critical questioning of Papanek's 'real world' highlights a lack of representation of all experiences of reality

117 Vance Packard and Bill McKibben, *The Waste Makers* (Penguin books Harmondsworth, 1963).

118 Joshua Gordon Lippincott, *Design for Business* (Chicago: P. Theobald, 1947).

119 Greg Dickinson, "Selling Democracy: Consumer Culture and Citizenship in the Wake of September 11," *Southern Communication Journal* 70, no. 4 (2005).

120 Ken Garland, "First Things First," *KG Published Writing* (1964).

121 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

122 Victor Papanek, "The Future Isn't What It Used to Be," *Design Issues* 5, no. 1 (1988); Papanek and Fuller, *Design for the Real World*; Victor J Papanek, *The Green Imperative* (Thames and Hudson, 1995).

123 Ian L McHarg, "An Ecological Method for Landscape Architecture," in *The Ecological Design and Planning Reader* (Springer, 2014); "The Place of Nature in the City of Man," *The ANNALS of the American Academy of Political and Social Science* 352, no. 1 (1964); *Design with Nature* (New York: Doubleday/Natural History Press, 1971).

124 Paul Palmer, *Getting to Zero Waste* (Purple Sky Press, 2004); "The Faux Zero Waste Movement Is Spreading," *Green Social Thought*; "The Death of Recycling," <https://www.organicconsumers.org/> (2007), <https://www.organicconsumers.org/news/rachels-900-death-recycling>.

125 Donella H Meadows et al., "The Limits to Growth," *New York* 102 (1972).

126 Rawsthorn, "An Early Champion of Good Sense."

127 For examples see the following: Leyla Acaroglu, David Berman, Tony Fry, Alastair Fuad-Luke, Dorothy Mackenzie, Bruce Mau, Ann Thorpe, Joyce Yee et al, Steven McCarthy, and Stuart Walker



and all worlds<sup>128</sup>. Escobar proposes a decolonial and pluriversal approach instead—one that designs for many worlds rather than the one world of the Global North. This plurality has been embraced as an aspect of the designer’s responsibility within this research.

In 1971, McHarg declared that ‘without ecology there is no economy’<sup>129</sup>, revealing the limitations of an economic status quo that disregards its context; sentiments that are largely ignored in the concept of ‘sustainable development’. In 1972, Meadows et al explored the limitations of the economic status quo in *The limits to growth*, and like the work of McHarg and Papanek, the work of Meadows et al’s is seminal in arguing against sustainable development. These arguments suggest sustainable development is anthropocentric and favours an economic status quo. This line of thought is shared by Fry<sup>130</sup> who argues that sustainable development is a ‘have your cake and eat it too’ mentality that serves to maintain the status quo rather than facilitating sustainable design solutions. Anthropocentric approaches to sustainability are also criticised by Plumwood<sup>131</sup>, who argues for greater prudence in consideration of others.

In 1974 chemist, Paul Palmer introduced the concept of zero waste through his chemical disposal company *Zero Waste Services*<sup>132</sup>. The theory behind zero waste is the creation of a closed loop system where a circular approach is adopted in order to divert waste back into use. This same theory underpins Braungart and McDonough’s cradle-to-cradle adaption for design<sup>133</sup>, however literature from Palmer reiterates that considering zero waste as the treatment of the aftermath of consumption does little to address what was inside the discarded packaging<sup>134</sup>. Over the past 40 years Palmer has been particularly outspoken about the language that surrounds waste, declaring the terms ‘zero waste’ and ‘recycling’ have become powerful rhetoric used by the waste management industry to greenwash the public. Palmer explains how landfill waste can be ‘spun’ into recycling rhetorically by using it for ‘productive purposes’<sup>135</sup>. It is still technically landfill, however the rhetorical spin permits Government departments to report far lower landfill rates than are actually achieved. Palmer uses this example to highlight the importance of embracing the theory of zero waste as a principle of design, to eliminate designed obsolescence, disposability and the constant push to sell the unnecessary<sup>136</sup>. The zero waste design movement remains an even smaller sub-section of the sustainability niche, and is easily derailed by the deceptive rhetoric used by external stakeholders.

128 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

129 McHarg, *Design with Nature*. p 196-197

130 Fry, *Design as Politics*.

131 Plumwood, *Environmental Culture*.

132 Palmer, *Getting to Zero Waste*; “The Death of Recycling”.

133 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

134 Palmer, “The Faux Zero Waste Movement Is Spreading.”

135 Ibid. p 44

136 Palmer, *Getting to Zero Waste*; “The Death of Recycling”.

Furthermore, zero waste design that focuses on waste without addressing consumption does not address sustainability holistically and temporally. To adopt Palmer's thinking: to truly design a zero waste outcome is to permit an end-of-life redesign of function as well as materials, an approach that is echoed by Fry<sup>137</sup>.

Between the early 1970s and late 1980s there was minimal activity in the sustainability niche for communication design, but in the 1980s 'design' became both a noun and a verb; a mode of thinking that led to an increased focus on 'the brand'. This set the stage for communication design in the 1990s and beyond. In 1988 the concept of designing for end of life became popularised by Henstock<sup>138</sup> who outlined a method for designing for recyclability either as harvested materials or through the re-purposing of an object or the materials used to create it. Braungart and McDonough<sup>139</sup> later expanded on these themes with their cradle-to-cradle approach to re-making things. Whilst cradle-to-cradle considered the end of life in a more circular way, key to their argument is the principle that designers should focus on the 'right' things rather than focussing on making the 'wrong' things less 'bad'. During this period, design for assembly was integrated into manufacturing of products like Sony's *Walkman*<sup>140</sup>, and home-assembly became normalised through brands such as IKEA<sup>141</sup>. As a design method, design for recyclability did not principally serve sustainability, however there were benefits beyond the intended economic improvements that this method brought to manufacturers and retailers.

As each decade passed the arguments for sustainable design became simultaneously stronger in their urgency and more opposed by those within the confines of the status quo. Throughout the 1990s branding became a pivotal means of promoting consumption<sup>142</sup>, but in contrast there was also a broad range of ecologically focussed literature to counter this movement. In the early 1990s, Manzini<sup>143</sup> pushed for greater consideration for the interconnectedness of things—that our objects should be nurtured much like a garden not discarded as waste. Whiteley provided great insights into consumer-led design as a stimulus for desires rather than a means of fulfilling needs<sup>144</sup>, and in the late 1990s Mackenzie argued that designers were full participants in 'the

137 Fry, *Design Futuring*; "Design after Design Workshop."

138 Michael Edward Henstock, *Design for Recyclability*, vol. 450 (Maney Pub, 1988).

139 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

140 Susan Sanderson and Mustafa Uzumeri, "Managing Product Families: The Case of the Sony Walkman," *Research policy* 24, no. 5 (1995).

141 Julier, *The Culture of Design*. p 73-74

142 For discussion on this see: Mary Bucholtz, "Shop Talk: Branding, Consumption, and Gender in American Middle-Class Youth Interaction," *Words, worlds, and material girls: Language, gender, globalization* (2007); Douglas B Holt, "Why Do Brands Cause Trouble? A Dialectical Theory of Consumer Culture and Branding," *Journal of consumer research* 29, no. 1 (2002); Daragh O'Reilly, "Cultural Brands/Branding Cultures," *Journal of Marketing Management* 21, no. 5-6 (2005); Guido Palazzo and Kunal Basu, "The Ethical Backlash of Corporate Branding," *Journal of business ethics* 73, no. 4 (2007).

143 Ezio Manzini and John Cullars, "Prometheus of the Everyday: The Ecology of the Artificial and the Designer's Responsibility," *Design Issues* 9, no. 1 (1992).

144 Nigel Whiteley, *Design for Society* (Reaktion books, 1993).

disposable society<sup>145</sup>. As the decade closed, Klein<sup>146</sup> highlighted branding as a significant contributor to the sustainability problem, and Poyner<sup>147</sup> revisited the First Things First manifesto, revealing that the acceleration of consumption remained a driving force within the design industry.

The 2000s saw Palmer's zero waste concept become re-popularised and also brought an abundance of how-to literature for the green designer. From Sherin's<sup>148</sup> guide to sustainable design practice, to Fuad-Luke's<sup>149</sup> promotion of design activism, Berman's<sup>150</sup> suggestion to 'do good', and Chapman's<sup>151</sup> drive for design with emotional durability, each has their merit and many maintain some relevance today. During this same period, Fry<sup>152</sup> developed redirective practices for architects, a concept that was embraced by communication designers through Berman's philosophy of saying no by designing a better yes. However, it was Glaser's 2004 essay *Ambiguity and Truth*<sup>153</sup> that highlighted a new aspect to the sustainability problem: the lack of ethical frameworks from which many designers operate. This suggests that regardless of available literature, engagement with sustainable practices remains limited by the personal ethics and values of the designer. In 2007 Blevis<sup>154</sup> argued for sustainability in interaction design through the consideration of values, methods and reasoning, suggesting that deeper engagement with sustainability was a necessary step in creating greater responsibility for designed artefacts, particularly in relation to invention that leads to disposal. In 2012 Benson and Napier also investigated the values limitation in their research, using values and framing to awaken altruistic values in students and foster a passion for sustainability<sup>155</sup>.

Throughout the 2010s there have been further contributions to the thinking that informs sustainable design, including *The Ellen MacArthur Foundation's* provision of educational tools that promote circular economies<sup>156</sup>, where systems thinking is applied to better understand the holistic lifecycles of designed things<sup>157</sup>. Walker's Design for Sustainability (DfS) method<sup>158</sup> presents a more considered thinking and making process that is highly reflective, interrogative, grounded in theory and imbued with meaning<sup>159</sup>. Transition design was introduced in 2013 as a provocation for change that fully utilised the designer

145 Mackenzie, *Green Design: Design for the Environment*. p 11

146 Naomi Klein, *No Logo* (London: Fourth Estate, 2000).

147 Rick Poyner, "First Things First, a Brief History," in *Looking Closer Four: Critical Writings on Graphic Design*, ed. Michael Bierut, William Drenttel, and Steven Heller (New York: Allworth Press, 2012).

148 Sherin, *Sustainable*.

149 Fuad-Luke, *Design Activism*.

150 David A. Berman, *Do Good* (Berkeley, CA: New Riders, 2009).

151 Jonathan Chapman, "Design for (Emotional) Durability," *Design Issues* 25, no. 4 (2009).

152 Fry, *Design Futuring; Design as Politics*; "Redirective Practice: An Elaboration," *Design philosophy papers* 5, no. 1 (2007).

153 Milton Glaser, "Ambiguity and Truth," *Indaba* 3 (2004).

154 Eli Blevis, "Sustainable Interaction Design: Invention & Disposal, Renewal & Reuse" (paper presented at the CHI 2007, San Jose, CA, USA, 2007).

155 Eric Benson and Pamela Napier, "Connecting Values: Teaching Sustainability to Communication Designers," *Design and Culture* 4, no. 2 (2012).

156 Ellen MacArthur Foundation, "Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition," ([circularfoundation.org/2013](http://circularfoundation.org/2013)); Ellen Macarthur, "Https://Www.Ellenmacarthurfoundation.Org" <https://www.ellenmacarthurfoundation.org>.

157 Foundation, "Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition."; Macarthur, "Https://Www.Ellenmacarthurfoundation.Org".

158 Walker, *Designing Sustainability: Making Radical Changes in a Material World*.

159 Ibid.

as a thinker and actor<sup>160</sup>. By 2015 the transition design framework had been further developed and it now presents a clear and necessary theoretical underpinning. Transition design provides what other methodologies appear to lack—an acknowledgement of holism within nature, of the impact of daily practices and of the need for a transformed self as part of a transformed design practice. In 2017 Acaroglu’s *Disruptive Design Methodology*<sup>161</sup> was published. It leads designers through a deeper investigation of the problem and its landscape to explore disruptive alternatives, rather than leaping to a solution-focussed making process. Acaroglu’s methodology leaves more space for the new to emerge, a process which also connects with Braungart and MacDonough’s idea of focussing on the ‘right’ things as a means of shifting away from making existing things ‘less bad’<sup>162</sup>. Research by Remy et al<sup>163</sup> presents a spike in ‘sustainability’ as a key word in peer reviewed interaction design papers. However this was coupled with a continued lack in adequate metrics to measure such activity, suggesting a possible increase in the design industry’s embrace of eco-rhetoric. By 2018, Escobar’s argument for the decolonisation of design had reached the Global North. He offers autonomous design as a decolonial approach that designs for the ‘pluriverse’—the multitude of societies or worlds within our world. Boehnert<sup>164</sup> also clearly articulates the need for social theory and ecological literacy in design, and calls for designers to step up as political actors and facilitators of change.

Literature from the past decade highlights an important movement towards more collaborative methods that influence designers’ thinking; this sits in contrast to the previous decade’s guides and demonstrations of sustainable making. The shift’s relevance to this research is nested in the identification of consumption as a significant contributor to the sustainability problem and the transformed mindset that is required to address it. Historically, the underlying issue in addressing this appears to be in the very nature of communication and interaction design, which since the rise of the industrial revolution have been sealing an attachment to business<sup>165</sup>. This symbiotic relationship generates continued income for both parties, but the outcomes of the business-design relationship often accelerate consumption and bring focus to the superficial<sup>166</sup>. The long-term servicing of an economically driven market appears to have influenced the way designers approach their work. At its core, much of communication and interaction design is selling something. Whether what is being sold is ‘good’ or ‘bad’ depends on the context, the audience, and the interpretation of ‘good’ and ‘bad’. The crux of this is that designers’ thinking is focussed on selling. How can a sales-focussed designer consider possibilities outside of saleability? Is the socially constructed identity of the designer as a

160 Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*.

161 Acaroglu, *Disruptive Design Method Handbook*.

162 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*. p 76

163 Christian Remy et al., “The Limits of Evaluating Sustainability” (paper presented at the Proceedings of the 2017 Workshop on Computing Within Limits, 2017).

164 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

165 Julier, *The Culture of Design*; *ibid.*; Julier and Moor, “Design and Creativity.”

166 Thorpe, “Design’s Role in Sustainable Consumption.”; *ibid.*; Thorpe, *Architecture and Design Versus Consumerism*.

consumer connected to this way of thinking, and how cognisant are designers of their contribution to consumption? Boehnert<sup>167</sup> suggests that those who are aware maintain that they are hamstrung by a lack of alternatives, a concept which echoes Sartre's ideas of bad faith<sup>168</sup>—simply put, that these are the lies one tells oneself in order to justify one's actions. Of particular interest moving forward, is how this historic focus on selling will be impacted by the current trend in sustainable design literature towards influencing designers' thinking.

The key players in sustainable design's history operated in their own niche, were sometimes unpopular amongst their peers, and several only gained true recognition many years after their deaths. Also worth noting is that very few of these practitioners identified as communication designers. Other than Garland's contribution via the *First Things First* manifesto in 1964—a document that achieved very little at the time—it was not until the 1990s that communication designers contributed to sustainable design discourse. Mackenzie<sup>169</sup> described the need for green design to be fully integrated into the 'mainstream' design process rather than viewed as a sub-set of design or an add on service, and Klein identified branding as a particularly unsustainable aspect of contemporary practices in its acceleration of consumption and 'erosion of noncorporate space'<sup>170</sup>. Boehnert identifies designers as actors choosing to inhabit a commercial or political space by suggesting design 'is a field of practice that plays a powerful role in reproducing the dynamics of the system'<sup>171</sup>. Her proposal that designers have the power to change the system to one that is more sustainable—should they choose to pursue this goal—reveals the importance of empowerment in design for transitions.

*Megg's History of Graphic Design* spans decades of design history and is unarguably a respected piece of historical design literature, yet notably absent is any discourse around sustainability, ecological movements or ethics within the field<sup>172</sup>. However closely Meggs and Purvis have mapped this history, the work sitting in the sustainability niche has remained invisible, even to astute design historians. The lack of reference to artefacts addressing sustainability is also noted in the Phaidon Design Archive<sup>173</sup>, a loose-leaf volume archive that documents the most influential and notable designs of the past century. The absence of communication and interaction design from the bulk of a much longer conversation in design could also explain the gravitation toward technical responses to sustainability. Whilst designing greener things might remain an important step for designers to take in order to lift the base standards of contemporary practice, it does little to address the sustainability problem holistically. This is particularly relevant when considering the breadth and depth of unsustainability in practice.

167 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. (p 29)

168 Jean-Paul Sartre, *Being and Nothingness* (Open Road Media, 2012).

169 Mackenzie, *Green Design: Design for the Environment*.

170 Klein, *No Logo*. p 131

171 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. (p 17)

172 Meggs and Purvis, *Meggs' History of Graphic Design*.

173 Kerry William Purcell and Theorising Visual Art, *Phaidon Archive of Graphic Design* (Phaidon Press, 2012).

### 1.2.4 An analysis of five key unsustainable aspects of design practice

The ‘wicked problem’ that sustainability presents is not the consequence of any one bad action or thing. Rather, it is a tangled web of systemic problems, interwoven into the fabric of societies through holding patterns of unsustainable behaviours. Synthesis of the literature from design, business, economics, anthropology, sociology and environmental management underpins this exploration of five unsustainable aspects of design practice: business tension, the acceleration of consumption, operational aspects, designer positioning, and technical production.

Practice is a business, and the tensions that arise from both financial and other business considerations can impact decision-making, particularly in relation to sustainability<sup>174</sup>. The relationship between clients and designers is usually structured around business needs, the client’s needs as well as the designer’s. The client engages the designer to help achieve their desired business outcomes, and the designer aims to satisfy the client’s needs in return for financial reward. This complex co-dependent relationship impacts the speed with which designers can produce work, and has potential to impact designers’ creativity, their sustainability and their ethics. Design’s historical emergence as a craft connected to production/manufacturing preceded the contemporary bond between business and design<sup>175</sup>, and design’s history has in some ways set the tone for contemporary practice. The economic drivers of business impact design<sup>176</sup>, and as Fry points out, in business, a constant push to increase sales and profits promotes an economic status quo<sup>177</sup>; an unsustainable process that is facilitated by the visual and verbal rhetoric provided by designers<sup>178</sup>. This status quo has locked designers into relatively powerless ‘end-of-pipe’ positions. Regardless of designers’ desire or intent, their briefs and budgets are limited, and subsequently sustainable design approaches are often inhibited. Typically, the client’s brief drives the direction of the creative, which in turn supports a particular economic outcome—increased profit. This push to maximise profit has led to a reliance on ‘standard and tested solutions’<sup>179</sup> as a process shortcut. This is also described by Negus as ‘occupational formulae’<sup>180</sup>, where the same ideas or approaches are rehashed as a solution to the constraints that business requirements place on creative processes.

The ever-present need to respond to time constraints is also evident in the packaging of design thinking as a fast-paced creative process as seen in Google Venture’s 5-day design sprints<sup>181</sup>. The sprint was developed by Knapp et al<sup>182</sup>

174 Springer, “Auditing Communication Design.”

175 Julier and Moor, “Design and Creativity.” p 1-15

176 Katherine McCoy, “Graphic Design in a Multicultural World,” *Design Studies—Theory and Research in Graphic Design, a Reader* (2006).p 203; Julier, *The Culture of Design*. p 52

177 Fry, *Design Futuring*.

178 Ibid.; Fry, *Design as Politics*.

179 Dorland, “Routinized Labour in the Graphic Design Studio.” p 116

180 Keith Negus, “The Work of Cultural Intermediaries and the Enduring Distance between Production and Consumption,” *Cultural studies* 16, no. 4 (2002). p 510

181 Google, “Google Sprint,” Google, <http://www.gv.com/sprint/>.

182 Jake Knapp, John Zeratsky, and Braden Kowitz, *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days* (Simon and Schuster, 2016).

during their time working at Google, and the process has been used extensively within Google to identify business problems and to innovate strategies to address them. The sprint process permits a little research and exploration, design thinking, and rapid prototyping for consideration, all conducted within a tight timeframe and budget. This fast-paced approach satisfies clients' desires to maximise profit and permits designers to create and demonstrate the value of these processes to the client. However, it could also be argued that fast-tracking the creative process also changes expectations for the future. The 'teaser' may fail to sell a deeper exploration and the accompanying bigger budget for future projects, and instead drive demand for more, cheap, fast results<sup>183</sup>, thereby eliminating much-needed time to properly address issues of sustainability or justice through the work.

The vulnerability of creative processes and subsequent use of shortcuts is highlighted in Dorland's study of Canadian practice, where her observations and interviews reveal how susceptible the design process is to budgetary restrictions to meet business needs<sup>184</sup>. Dorland describes the physical space of practice, most commonly called 'the studio' as space of structure rather than play, where auditing and metrics have replaced the unpredictability of creation, providing tools with which to measure the success of design work<sup>185</sup>. Springer discusses metrics and reporting as playing a key role in the operational management of contemporary practices<sup>186</sup>. He describes this reporting as being client-driven and like Dorland, highlights structure rather than play arising from the strong connection between design and business. The importance of recognising time and financial pressures and the frequency of shortcuts taken in typical studios lies in the ramifications for sustainability. A reduction of available time to perform the core creative functions of design also suggests there is limited time to address sustainability through adequate problem definition, research and exploration of alternative solutions.

Time limitations are perhaps most problematic in the context of consumption, which Dauvergne argues is accelerated by the visual and verbal rhetoric provided by designers<sup>187</sup>. Thorpe outlines design for short-term-appeal as a contributor to the reduction of long-term satisfaction and increased consumption<sup>188</sup> and design's connection to accelerated consumption is telling in Matthew Soar's reminder that audience members are more than consumers<sup>189</sup>. In the Global North, consumption and the desire for things has

183 Niki Wallace and Robert Crocker, "Beyond Greener Things: Sustainability within Communication Design Practice," in *Re: Research, International Association of Societies of Design Research (IASDR) Conference* (Cincinnati, OH: International Association of Societies of Design Research, 2017).

184 Dorland, "Routinized Labour in the Graphic Design Studio."

185 Ibid. p 105

186 Springer, "Auditing Communication Design."

187 Peter Dauvergne, "The Problem of Consumption," in *Green Planet Blues* (Philadelphia: Westview Press, 2010).

188 Thorpe, *Architecture and Design Versus Consumerism*. p 57

189 Matthew Soar, "First Things First: Now More Than Ever," in *Looking Closer Four: Critical Writings on Graphic Design*, ed. Michael Bierut, William Drenttel, and Steven Heller (New York: Allworth Press, 2012).

become interwoven with modern notions of well-being<sup>190</sup>, the result of which is mass production, mass consumption and excess waste. It has been argued by many<sup>191</sup> that creative practices such as industrial (and product) design and communication (and graphic) design facilitate this unsustainable behaviour. In fact, the Global North has been so indoctrinated into consumer culture that even tragedies such as the 9/11 terror attacks have been seized by brands as ethically questionable marketing opportunities<sup>192</sup>. Jelly Helm discusses the concept of ethical neutrality in client relationships and asks, ‘if our clients are leading us down a path that is not socially or ecologically sustainable, or that is harmful to human nature, do we resist, and how?’<sup>193</sup> Helm’s essay does not offer any insights or answers to this question, poignant as it may be, but it is an interesting provocation when considering how designers could address consumption through their work. If designers are to work with the principle of ‘do no harm’, to take heed of Papanek’s concept of the ‘designer’s responsibility’<sup>194</sup>, and to embrace Escobar’s notion of design for the pluriverse<sup>195</sup> then it is clear that consumption must be addressed. The biggest challenges in addressing the complexities of consumption lie in the social constructs of Global North designers as consumers (emerging as the designer-consumer), the power dynamics of the client-designer relationship<sup>196</sup>, the ensuing time constraints placed on design processes<sup>197</sup>, and designer’s reliance on the financial rewards that come from projects that accelerate consumption<sup>198</sup>. The consumption problems and the concept of the designer-consumer are both explored in more detail in Chapter 3.

A designer’s positioning within the client-designer relationship has capacity to influence the overall potential for a project’s sustainability to be considered, particularly in relation to consumption. Designers acting as intermediaries between a client and audience are treated as a resource and have less impact on businesses’ decision-making, and this often results in unchangeable briefs for unsustainable end-outcomes. Glaser, Heller, Wild and others have all identified designers’ weak positioning as an area for improvement<sup>199</sup>.

190 There is extensive literature to indicate a connection between reduced levels of well-being and increased levels of consumption. Whilst well-being is a fluid concept, in this context it is discussed in relation to addressing the physiological needs of humans (for example sleep, shelter, nourishment) as well as other areas including happiness and satisfaction. Some of the fluidity in the concept of well-being lies in the perceived nature of desire and happiness; one person may gain happiness from helping others; another may seek it through the ownership of *things*. For more on this see the following: Tim Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption,” in *Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006), p 383; Amartya Sen, “Capability and Wellbeing,” *Oxford Scholarship Online* (2003); Tatzel, *Consumption and Well-Being in the Material World.*; Tim Kasser, *The High Price of Materialism* (Cambridge, US: A Bradford Book, 2003).

191 Thorpe, *Architecture and Design Versus Consumerism.*; Arthur Asa Berger, *Ads Fads and Consumer Culture* (Maryland: Rowman and Littlefield Publishers Inc, 2000); Dickinson, “Selling Democracy: Consumer Culture and Citizenship in the Wake of September 11.”; Tatzel, *Consumption and Well-Being in the Material World.*

192 Dickinson, “Selling Democracy: Consumer Culture and Citizenship in the Wake of September 11.” For more on this see:

193 Jelly Helm, “Saving Advertising,” in *Looking Closer Four: Critical Writings on Graphic Design*, ed. Michael Bierut, William Drenttel, and Steven Heller (New York: Allworth Press, 2002).

194 Papanek and Fuller, *Design for the Real World.*

195 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds.*

196 Glaser, “Ambiguity and Truth.”

197 Dorland, “Routinized Labour in the Graphic Design Studio.”

198 Thorpe, *Architecture and Design Versus Consumerism.*

199 These concepts are explored through a number of essays by various authors in: Bierut, Drenttel, and Heller, *Looking Closer Four: Critical Writings on Graphic Design*, 4.



Examining the client-designer relationship through a lens of power<sup>200</sup>, it is clear that embedded in its reciprocity and co-dependence is not just a power relation, but also a relation of communication and of objective capacities. In the client-designer relationship, the client invokes power through a process of designer engagement and selective information sharing is performed throughout the briefing process. The designer's objective capacities (their power over things or ability to manipulate/modify things) is evoked by the client to their own ends but this is also of mutual benefit to the designer who is rewarded financially, and in some instances, creatively. Of particular interest here is how designers as expert influencers could alter the nature of this power dynamic in ways that could promote change. In this sense, designers use power as a relational force to magnetise a particular action, drawing others towards it<sup>201</sup>. This exercise of power can already be identified in design through the creation of persuasive and influential brands. Whilst it can be difficult to see when/how actions are influenced<sup>202</sup>—power and knowledge combined permits greater freedom of thought, and power's connection to strategy suggests it can be used to serve a particular purpose. Lukes' theory of power<sup>203</sup> discusses three dimensions of power that are tied to influence and argued by Boehnert<sup>204</sup> as identifiable in design. One-dimensional power influences events, two-dimensional power influences agendas, and three-dimensional power influences knowledge about ourselves and the world<sup>205</sup>.

Designers' engagement with theories of power could expand their spheres of influence in ways that are meaningful. By creating work that benefits humanity, the planet and the future, and by addressing the power dynamics that lead to marginalisation, exploitation, extraction and monetization. A positive outcome here relies not only on activating agency by embracing power, but on the knowledge to drive it, and on the self as an empowered influencer. Applying Lukes'<sup>206</sup> discussion of 'securing compliance' to design, demonstrates how design's influence is used in advertising and branding to activate a supreme form of power by operating across multiple dimensions. But design's influence on desire is for hire, which dilutes the designer's power and thereby their potential contribution to the overall process, devalues their expertise as a creative thinker and relegates them as a resource<sup>207</sup>. This can result in myopic design solutions that are unsustainable, an outcome that could also be argued as unethical in its disregard for the designer's responsibility. This diluted, weak positioning can also infringe on designers' creativity, personal values and ethics as they are dampened by business considerations including budgets and deadlines. In contrast, empowering designers could elevate design out of a state of commodification and increase its agency. The designer's influence

200 Michel Foucault, "The Subject and Power," *Critical Inquiry* 8, no. 4 (1982). p 777-795 Keith Dowding, *Power* (Buckingham: Open University Press, 1996).

201 Foucault, "The Subject and Power."

202 Ibid.

203 Steven Lukes, "Power: A Radical View. The Original Text with Two Major New Chapters," (Basingstoke: Palgrave Macmillan, 2005).

204 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 27-37

205 Lukes, "Power: A Radical View. The Original Text with Two Major New Chapters." p 14-29

206 Ibid.

207 Springer, "Auditing Communication Design."

may at first appear invisible, but a knowledgeable designer in a more influential position within the client-designer relationship has an increased capacity to create change.

Sustaining client-designer relationships can preoccupy practitioners, however the day-to-day management of a practice can also involve a variety of operational aspects that revolve around a network of unsustainable spaces, objects, activities and behaviours. The studio is also home to a collection of material things used in the performance of administrative, management and design activities, that if left unconsidered, can contribute to the unsustainable footprint of a practice. Mackenzie describes the significance of the carbon footprint of buildings and argues that buildings and their energy use contribute approximately half of industrialised countries' total greenhouse gas emissions<sup>208</sup>. A building's design, positioning, construction materials and signage impacts energy consumption through subsequent reliance on climate control and lighting. The location of a studio can also impact upon the daily commute of the occupants, distance to clients and other social considerations such as proximity to other amenities.

The studio is furnished with appliances and tools, the perceived value of which is contingent on the currency of their technology. Combining rapid-cycling technological changes with designed obsolescence and a perceived need for currency can result in higher than necessary volumes of e-waste. A studio's technology suite does more than facilitate the day to day operations of the studio, it can also signal success. Peirce's sign theory outlines the way a sign and its object (for example new technology and success) can communicate through their interpreted meaning<sup>209</sup>, and the presence of new technology signals success to those encountering it. This could be interpreted as a validation of the studio as 'advanced', which could in turn impress on clients an inherent value in the services being provided. Interior furnishings can add to these success signals, and Springer highlights how a studio's presentation further reminds clients of their creative value<sup>210</sup>. The impact of equipment and interior furnishings can be analysed through lifecycle analysis (LCA); defined by *The International Organization for Standardization (ISO)* as the 'compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle'<sup>211</sup>. There is a growing body of literature outlining frameworks for conducting LCAs in different contexts and identifying their value<sup>212</sup>, and whilst many advocate for this systems thinking approach to

208 Mackenzie, *Green Design: Design for the Environment*.

209 Charles S Peirce and Peirce Edition Project, *Writings of Charles S. Peirce 1886-1890* (Bloomington, IN: Indiana University Press, 2009); Albert Atkin, "Peirce's Theory of Signs," *The Stanford Encyclopedia of Philosophy* (Summer 2013 Edition), <http://plato.stanford.edu/archives/sum2013/entries/peirce-semiotics>.

210 Springer, "Auditing Communication Design." p 124

211 International Organization for Standardization (ISO), "Iso 14040:2006," ed. International Organization for Standardization (<http://iso.org>; ISO, 2006).

212 For more on this see: Anthony Halog and Yosef Manik, "Advancing Integrated Systems Modelling Framework for Life Cycle Sustainability Assessment," *Sustainability* 3, no. 2 (2011); Gerald Rebitzer et al., "Life Cycle Assessment: Part 1: Framework, Goal and Scope Definition, Inventory Analysis, and Applications," *Environment international* 30, no. 5 (2004); Reinout Heijungs, Gjal Huppes, and Jeroen B Guinée, "Life Cycle Assessment and Sustainability Analysis of Products, Materials and Technologies. Toward a Scientific Framework for Sustainability Life Cycle Analysis," *Polymer degradation and stability* 95, no. 3 (2010); Walter Kloepffer, "Life Cycle Sustainability Assessment of Products," *The International Journal of Life Cycle Assessment* 13, no. 2 (2008).

sustainability, it is also critiqued as being contextual, inflated and reliant on interpretation<sup>213</sup>. A pragmatic approach to auditing and LCA tools permits a deeper understanding of how sustainability is impacted in studio environments, but it is the combination of the space, contents, frequency of replacement/upgrade, usage behaviours and design outcomes that contribute to a studio's overall footprint<sup>214</sup>. Process-related actions such as leaving a computer switched on overnight, or printing more frequently than necessary, not recycling or specifying work using unsustainable techniques may appear to be minor infractions, but they are also cumulative behaviours that contribute to the problem at large.

These behaviours along with other actions inherent in the design process appear to justify technical approaches to sustainability in practice. However technical considerations are often misconceived as the *only* approach to sustainability in design and as indicated by Fuad-Luke<sup>215</sup>, have been too minimal in uptake. The use of sustainable making techniques and materials can also be limited. A lack of understanding of sustainable practices in addition to client budgets and supplier constraints, typically leads to unsustainable making as the norm. The predominant approach to technical solutions is the specification of recycled paper and vegetable inks in design outcomes, however even as a technical approach to sustainability this would be a bare minimum. Boehnert argues for a separation here, between the behaviour of designers and the design industry at large<sup>216</sup>. She outlines the core dilemma as systemic; that the economic system drives the priorities of the design industry to such an extent that ignoring these priorities could lead to a practice's financial ruin. This tension also poses challenges for individual designers who wish to embed values that foster sustainability into their workplaces. While it has already been argued that technical approaches are relatively ineffective in the long term, in the short term they could trigger a values shift by opening up discussions for alternative approaches to briefs.

Design activity relies heavily on tools, some digital some analogue, but all (other than the brain<sup>217</sup>) are impactful to varying degrees. Analogue tools can include sticky notes and paper-based journals usually manufactured in China, or branded notepads, designed and produced on demand and housed in presentation binders or folios. Production of these tools can be impactful, particularly when produced off-shore, and often these are an unconsidered aspect of a studio's footprint. During the research phase a designer may perform a large number of internet searches, each one using the energy

213 For more on this see: John Reap et al., "A Survey of Unresolved Problems in Life Cycle Assessment," *ibid.*, no. 4; *ibid.*; Robert U Ayres, "Life Cycle Analysis: A Critique," *Resources, conservation and recycling* 14, no. 3 (1995); Joram Krozer and JC Vis, "How to Get Lca in the Right Direction?," *Journal of cleaner production* 6, no. 1 (1998).

214 City Switch, "Undertaking a Green Office Audit," City Switch, <http://www.cityswitch.net.au/Resources/CitySwitchResources/Planning,reportingandmonitoring/Planning,reportingandmonitoringarticle/TabId/150/ArtMID/787/ArticleID/605/Undertaking-a-green-office-audit.aspx>

215 Fuad-Luke, *Design Activism*, p 50

216 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

217 Unless of course the brain in question is fuelled by imported asparagus, which has the highest carbon footprint of all foods. For more on these kinds of impacts see: Mike Berners-Lee, *How Bad Are Bananas?: The Carbon Footprint of Everything* (Greystone Books, 2011); *ibid.*

equivalent to boiling a pot of tea<sup>218</sup>. Mark-making and exploratory work may be performed by hand using toxic inks or pigments; pens and markers frequently fall into this category, and once their toxic ink has dried up, the plastic housing usually goes into landfill<sup>219</sup>. Designers working digitally with tools such as iPads or Wacom tablets, may avoid toxic ink and excess paper, but digital devices impact through the mining of their raw materials (the most impactful being ‘conflict materials’ due to their extraction from war torn regions and their devastation of forest and rivers<sup>220</sup>). Added to this is the impact of the manufacturing process (environmentally and socially), the consumption of energy during use and their inevitable transition at end-of-life from functional tool to e-waste. Whether working by hand on paper or tablet, once a design concept becomes digitised the computer becomes a key tool in its development, again involving these same raw materials, manufacturing processes, energy use and contributions to e-waste.

Development phases frequently involve test printing, which uses the energy of the printer in addition to ink and paper, and when a designer is mid-project the potential to leave a computer on overnight increases, as it facilitates a quick pick up from where they left off the day before. The production and implementation of designed outcomes can also add to a studio’s impact. In print design, a hardcopy may be sent to the client for sign off before digital files are sent through to a printer for production. The print process itself is inherently wasteful in its use of energy, paper, inks and water<sup>221</sup>, and in the absence of a full press check, test prints may be couriered to designers for sign off, adding transportation into the equation. Digital projects appear to be a lightweight counterpart, however the uploading of files to cloud-based servers, their subsequent storage and serving of said files upon request are all impactful<sup>222</sup>. The digital footprint is far more invisible than print. New research estimates that the carbon footprint of the internet exceeds that of air travel<sup>223</sup> and in contemporary practice the reliance on digital technologies can also make the digital impact more ubiquitous. Many assume the predominant footprint lies with the device used to access the internet, and devices are certainly impactful, but it could also be argued that devices will be owned and operated whether designers create digital content or not. Devices aside, the energy used to power the multiple servers required to support cloud computing, and to host and serve online content is significant. As more cloud-based services such as Google and Salesforce shift to carbon neutral business models it would appear that

218 Ibid.; Duncan Clark and Mike Berners-Lee, “What’s the Carbon Footprint of... the Internet?,” *The Guardian* 12 (2010); CustomMade The Carbon Footprint of the Internet.

219 International recycling programs for stationery items such as pens and pencils exist through the terracycle program, however they are not commonly known about or used and these objects tend to go to landfill instead of being recycled.

220 Escobar outlines ‘conflict materials’ as a significant problem relating to the politics of sustainability in devices and computers which all require cobalt, gallium, indium, tantalum, platinum, palladium, niobium, lithium and germanium. All these materials are extracted in Africa and South America, in regions where war, unjust eviction, abuse of women and environmental destruction are experienced as part of people’s everyday lives.

221 Finsbury Green, “[Https://finsbury.com.au](https://finsbury.com.au),” Finsbury Green, <https://finsbury.com.au>.

222 CustomMade The Carbon Footprint of the Internet. Baliga et al., “Carbon Footprint of the Internet.” Berners-Lee, *How Bad Are Bananas?: The Carbon Footprint of Everything*; Baliga et al., “Carbon Footprint of the Internet.”

223 CustomMade The Carbon Footprint of the Internet.

this issue is alleviated<sup>224</sup>. However this offers another example of making the ‘bad slightly better’, rather than focussing on the creation of an alternative that is ‘good’. Purchasing carbon credits pays lip service to the impact, and transitioning to renewable energy does little to address the underlying problem of energy-hungry servers, created through the extraction of conflict materials and made accessible through the mistreatment of marginalised people in the tech-industry workforce. This somewhat deeper investigation of the impact of digital design clarifies why shifting from printed artefacts to digital solutions does not adequately address the issues of unsustainability in design.

The positive effects from designers making greener things could be likened to household recycling: it helps, but it does not address the full scope of the problem. If making greener things was the norm for making within practice, design would be a step closer to sustainability. However making greener things does little to address any of the operational issues of unsustainability in practice, or those that relate to position, business tension or consumption. A sustainable approach to practice requires a deeper understanding of these complex problems and a range of strategies to address them, coupled with a deeper understanding of the broader systemic problems that are responsible for structural unsustainability. Acknowledging the breadth of impact a design practice can have is the first step in addressing these issues. After awareness develops, designers can tap into the body of knowledge that is available. Without deeper theoretical knowledge designers will remain limited in their responses. By gaining an understanding of theories such as power, change, and social practices, designers can activate a transformation towards expanded sustainability. Increased knowledge can empower designers. This could also increase their influence and skills, reclaim design’s agency and redirect its goals to address the problems of structural unsustainability.

### 1.2.5 The ethics of sustainability

In the field of design, governing bodies often describe ethics in relation to Papanek’s concept of the designer’s responsibility<sup>225</sup>. Ideas of acting responsibly are captured in fifty years of manifestos, but a manifesto achieves little if too few act; as Fuad-Luke<sup>226</sup> observes, when it comes to sustainability, too few designers are acting. Boehnert argues that ‘social change is never the result of issuing manifestos’<sup>227</sup> alone, because a critique does not change the circumstances, rather, it is socially responsive action that is more important. Nini echoes this sentiment, also arguing for greater consideration of the audience, environment and social change as a part of designers’ ethical concerns<sup>228</sup>. It is clear that designers’ ethical concerns are significant and often

224 Akshat Rathi, “If Your Carbon Footprint Makes You Feel Guilty, There’s an Easy Way Out,” (2017), <https://qz.com/974463/buying-carbon-credits-is-the-easiest-way-to-offset-your-carbon-footprint/>.

225 ICO-D, “International Code of Professional Conduct,” ICO-D, <http://www.ico-d.org/resources/best-practices#international-code-of-professional-conduct.>; AGDA, “Agda Website,” <http://www.agda.com.au>; Papanek and Fuller, *Design for the Real World*.

226 Fuad-Luke, *Design Activism*. p 50

227 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 21

228 Paul Nini, “In Search of Ethics in Graphic Design,” *Voice: AIGA Journal of Design* 16 (2004).

overwhelming. Adopting an approach that is inspired by Escobar's perspective also makes sense here, where an onto-ethico-epistemological approach is required to acknowledge how ethics are inseparable from ways of being and ways of knowing<sup>229</sup>. In this research, the designer's responsibility towards sustainability is viewed through an ethical lens, and critical questioning and deep listening play important roles in the discovery and definition of problems and the exploration of design interventions.

Describing ethics as a mode of questioning and positioning is born out of philosophers' consideration of ethical dilemmas, where primary concerns are with examinations of the life 'well lived' and the virtues that make this possible<sup>230</sup>. According to contemporary philosopher, Grayling, ethics cannot be easily defined, as its concepts are considered in ever-shifting contexts that impact the approach taken<sup>231</sup>. This is certainly applicable to ethics in design, where contexts can vary dramatically. Grayling's reference to Moore's adoption of utilitarianism rings true in this setting, where ethics and notions of 'good' are clearer when demonstrated rather than defined, in the same way that colours are best shown through material examples.

For designers, ethics could also be described as a somewhat contentious study of moral dilemmas surrounding design activity<sup>232</sup> and tension between designers' ethics and the constraints in professional practice have been widely discussed in recent decades. For example, in a reflection on his long career, Glaser questions ethics and the role of the communication designer, he jokes that, 'looking for a cabbage in a butcher's shop might be like looking for ethics in the design field.'<sup>233</sup> Regardless of the jest with which this remark is made, Glaser further demonstrates designers' slippery ethical slope through his *Road to Hell*<sup>234</sup> test: a sliding scale of ethical questioning, beginning with the design of a package to look larger on shelf, and ending with the request to design an advertisement for a product that may result in the user's death. Glaser explains that when 'testing' design students, each group always contains three or four students who are willing to perform every task on the list; demonstrating not only how complex and 'grey' ethical concerns can be, but also the way individuals respond according to their own knowledge and ethical framework (or lack thereof). Tonkinwise discusses the waning of ethics as a culturally embedded concept, and reveals the ethical-cultural problems humanity faces by stating, 'that if you have to talk about it [ethics], you can bet it no longer exists.'<sup>235</sup> This is a more serious take on Glaser's joke about the absence of ethics in design, and it is evident by the volume of 'talk', that treating sustainability as an ethical concern is not commonplace, and acting upon it even less so.

229 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

230 Ian Christie and Lindsay Nash, eds., *The Good Life* (London, UK: Demos, 1998).

231 Anthony C Grayling, *What Is Good?: The Search for the Best Way to Live*, (Weidenfeld & Nicolson, 2011).

232 Media Lab Helsinki, "A Quick Primer for Ethics in Design," [http://mlab.uiah.fi/polut/Yhteiskunnalliset/lisatieto\\_ethics\\_primer.html](http://mlab.uiah.fi/polut/Yhteiskunnalliset/lisatieto_ethics_primer.html).

233 Milton Glaser, "Ten Things I Have Learned," *Lecture at AIGA, London* (2001).

234 "Ambiguity and Truth." p 5

235 Tonkinwise, "Ethics by Design, or the Ethos of Things." p 131

Overlapping an ethic of reciprocity (the golden rule of ‘do unto others’) with collectivist approaches (seeing the bigger picture) appears to hold some weight in the context of ethics in design. Roberts poses that ‘asking the question, “what if everybody did that?” is central to making ethical decisions,<sup>236</sup> a suggestion which is also made by The Ethics Centre<sup>237</sup>. It appears from the literature that communication design practitioners may have omitted this kind of questioning (or the alternative ‘what if nobody does that’) in relation to sustainability, so it can be difficult to locate in practice. Despite this, unsustainable design is outlined by both Boehnert and Holland as one of the primary ethical dilemmas faced by designers<sup>238</sup>; their identification of sustainability as one of the core ethical concerns of designers is significant and is echoed in this research. Calling on Tonkinwise’s thinking—that lacking ethics is lacking the understanding of how to integrate knowledge into practice, rather than lacking personal ethics or sense of morality<sup>239</sup>—illuminates the possibility that neglecting sustainability could be connected to designers’ inability to integrate any knowledge they have about sustainable design into the work they produce. This lack of integration could also be connected to the findings of Dorland<sup>240</sup> and Springer<sup>241</sup>, both of whom discuss the time and budget constraints placed on the design process as impacting the work of designers. The tension arising from this lack of integrated knowledge and time/money constraints is discussed in more detail in Chapter 3. Whilst an abundance of information about sustainability (and ethics) is available to designers, knowledge of how to implement it in practice appears to remain limited as does the time to do so, and the flow on effect is evident in the lack of commercial work addressing the key issues of sustainability.

### 1.2.6 Greenwashing and deception in communication design outcomes

A lack of questioning, of knowledge and eventual integration is clearly demonstrated by the abundance of design work that deceives consumers through the practice of greenwashing; a term coined by Westerveld in 1986 to describe the communication of false or misleading environmental claims<sup>242</sup>. Glaser examines deception through ambiguity<sup>243</sup>, from the fine print disclaimers used in advertising to the reduction of people to consumers, he argues that designers may not always create deceptive content but they are active participants in its transmission. Roberts also acknowledges this, and argues that the designer could be considered to be endorsing the messages they help transmit, and in this sense, should be questioning the nature of

236 Lucienne Roberts, *Good: An Introduction to Ethics in Graphic Design* (New York: AVA Publishing, 2006). p 90

237 The Ethics Centre, “[Http://Www.Ethics.Org.Au/](http://www.ethics.org.au/),” The Ethics Centre, <http://www.ethics.org.au/about/what-is-ethics>.

238 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; DK Holland, “Where Our Wild Things Are - Part 1,” *Communication Arts* 52, no. 1 (2010); “Where Our Wild Things Are - Part 2,” *Communication Arts* 52, no. 2 (2010).

239 Tonkinwise, “Ethics by Design, or the Ethos of Things.” p 131

240 Dorland, “Routinized Labour in the Graphic Design Studio.”

241 Springer, “Auditing Communication Design.”

242 Bruce Watson, “The Troubling Evolution of Corporate Greenwashing,” *Chain Reaction*, no. 129 (2017).

243 Glaser, “Ambiguity and Truth.” p 6

the messages they design<sup>244</sup>. Glaser also comments on the pervasiveness of deceptions we encounter in our daily lives, and our inability to recognise them as such,<sup>245</sup> and he is right. Examples of this deception surround us and locating them is as easy as flipping through the pages of a magazine; from excessively photoshopped imagery to advertisements for disposable must-haves that nobody needs, designed deception is truly ubiquitous and rarely questioned by its designer or its intended audience. Deception is explored by Buller et al as part of the duality of communication<sup>246</sup>, a social interaction that in its simplest form involves a sender and receiver of information. This sender-receiver duality is mimicked in deception, which involves a deceiver-deceived duality. Buller et al outline both parties as active participants in deception, either through initiating deceptive activity or through an interpretation and subsequent reaction to it, and refer to this engagement as interpersonal deception<sup>247</sup>. Interpersonal deception is exemplified in greenwashing, where misleading claims are interpreted and actioned by an audience, for example purchasing a 'green' product under false pretences.

False or misleading information implying sustainability can be found on more than product packaging, it is also abundant in advertising and on other communication collateral such as brochures and websites<sup>248</sup>. A 2009 report from *Terrachoice* revealed that 98 percent of products tested for their 'green' credentials had committed at least one deceitful act of greenwashing, reflecting not only the depth of the problem at the time of publishing, but also the saleability of the 'green' lifestyle. Feinstein highlights the problem greenwashing poses by undercutting genuine organisations and reducing the trust people have in green products, thereby increasing the volume of policing required to maintain standards<sup>249</sup>. Further research from Moisander reveals the complexities connected to pro-environmental behaviour and the use of green products; highlighting how greenwashing impacts the perceived legitimacy of green products<sup>250</sup> rendering them as 'less than' in the audience's mind. There is also a growing body of literature<sup>251</sup> that discusses a 'rebound effect' in green consumption, where a product's green credentials are used to justify increased usage. For example, ownership of a hybrid car can result in increased driving, and installing energy efficient light globes can result in increased lighting usage. In economics this rebound effect is known as the Jevons paradox<sup>252</sup>, and it could also mean that green consumers who fall prey to greenwashing may inadvertently cause more harm than the average consumer, by combining

244 Roberts, *Good: An Introduction to Ethics in Graphic Design*.

245 Glaser, "Ambiguity and Truth."

246 Mosaic Project Services Pty Ltd, "Communication Theory," Mosaic Project Services Pty Ltd, [http://www.mosaicprojects.com.au/WhitePapers/WP1066\\_Communication\\_Theory.pdf](http://www.mosaicprojects.com.au/WhitePapers/WP1066_Communication_Theory.pdf).

247 David B Buller et al., "Interpersonal Deception Theory: Examining Deception from a Communication Perspective," (1998).

248 Nick Feinstein, "Learning from Past Mistakes: Future Regulation to Prevent Greenwashing," *BC Env'tl. Aff. L. Rev.* 40 (2013).

249 Ibid. p 235

250 Johanna Moisander, "Motivational Complexity of Green Consumerism," *International journal of consumer studies* 31, no. 4 (2007). p 407

251 For more on this see: Horace Herring and Robin Roy, Steve Sorrell, Eric Olson, Edgar Hertwich.

252 Blake Alcott, "Jevons' Paradox," *Ecological economics* 54, no. 1 (2005); Richard York, "Ecological Paradoxes: William Stanley Jevons and the Paperless Office," *Human Ecology Review* (2006).



increased usage from the rebound effect with the impact of a product's false environmental claims<sup>253</sup>. This rebound effect is discussed in more detail in Chapter 4.

Greenwashing is designed deception, and if designers are endorsing the messages they transmit as argued by Roberts<sup>254</sup>, then the design of greenwashing communication can be pinpointed as an unethical practice. Identifying it and addressing it must become part of the designer's responsibility. The ongoing acceptance and production of artwork that greenwashes devalues sustainable design by reducing it to rhetoric, giving rise to the potential for sustainable design to lose all meaning. Sustainability is already under-addressed within contemporary practice, greenwashing further taxes its legitimacy and prevents a more complete integration into design discourse.

### 1.3 Sustainability in design

The discourse surrounding sustainability in design frequently badges it as a technical process involving the greening of materials or processes. This research discusses the limitations of this approach and documents a transformation from 'making greener things' to 'design for transitions'. A descriptive typology of design for transitions is presented in Figure 1.1 and aims to describe the key aspects of this design approach. It determines a range of sub-types of design that describe the phenomenon of design for transitions as it has emerged within my practice. As per Collier et al's<sup>255</sup> definition, this descriptive typology outline types of design but does not test any claims nor hypothesise outcomes. This typology seeks to categorise the practices involved in design for transitions and whilst it is underpinned by the literature, it is not presented as concrete, but rather as one possibility of how design for transitions might be practiced.

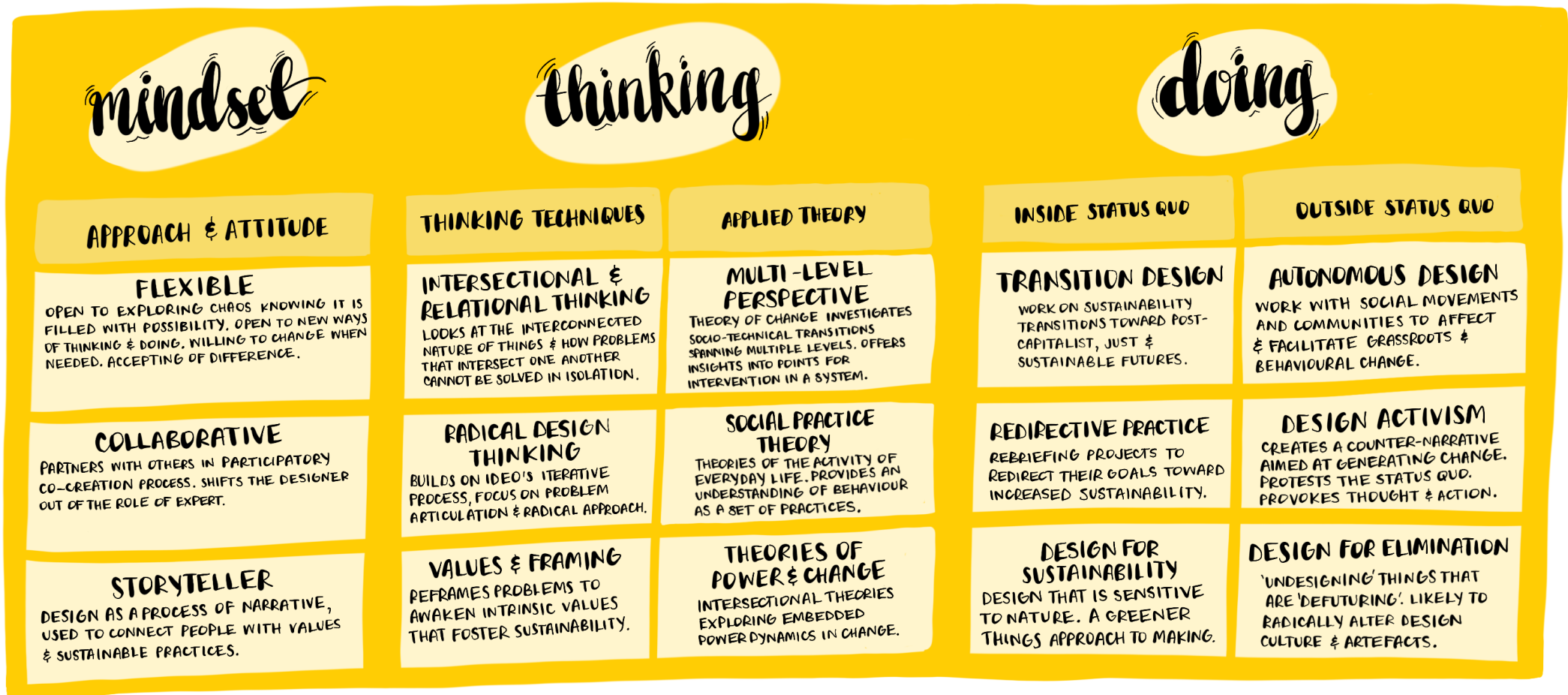
Analysis of this typology reveals that the underlying theories and methods can and often do overlap. Despite this there remains an ease of distinction between the methods, seen in their goals and their contexts. In order to reflect the combined influence of a designer's mindset, their thinking and their actions, each of these is represented in the typology. There is no hierarchy intended, the approaches presented all have independent potential to meaningfully contribute to different outcomes and can be blended together in multiple ways to suit the given context. A distinction has been made in thinking (between thinking techniques and applied theories), and in doing (between activity that occurs inside the status quo and outside the status quo). This represents the different ways thinking occurs and the different contexts where 'doing' might take place. The typology presented in Figure 1.1 outlines the core principles and aims of each approach. Its presentation here seeks to contextualise the link between design and sustainability that has been explored through this review of the literature, and to introduce how the combination of 'mindset, 'thinking'

253 Robert Crocker, "From 'Spaceship Earth' to the Circular Economy: The Problem of Consumption," in *Unmaking Waste in Production and Consumption: Towards the Circular Economy* (Emerald Publishing Limited, 2018).

254 Roberts, *Good: An Introduction to Ethics in Graphic Design*.

255 David Collier, "Typologies: Forming Concepts and Creating Categorical Variables," (2008).

Figure 1.1:  
Typology of  
design for  
transitions



and ‘doing’ has been explored throughout this research. In this sense, design for transitions is presented as an approach that combines ways of being in the world with applications of theory into design practice.

The designer’s approach and attitude both form part of the ‘mindset’ in design for transitions. A flexible mindset creates an openness to exploring chaos knowing it is filled with possibilities; being open to this is also an act of relinquishing control over processes and outcomes. Maintaining an openness and agility in ways of thinking and doing also requires a willingness to listen and to change course when needed. Part of this openness is also an acceptance of difference, which connects with Plumwood’s relational thinking on sameness and difference as a form of ‘precarious balance’<sup>256</sup>, and to Escobar’s consideration of difference as a form of plurality that presents a multitude of possibilities<sup>257</sup>. Collaborative approaches lead to partnerships with other people in participatory co-creation processes. Collaboration as part of a ‘mindset’ helps to shed the role of expert by actively including others in processes and outcomes, and encourages the designer to work *with* rather than *for* people. The third aspect of this ‘mindset’ adopts both the approach and attitude of a storyteller. By using design as a form of narrative that fosters an ecological worldview, storytellers can connect people with values and reimagine everyday life in just and sustainable ways. Creating post-capitalist narratives and designing for these possible futures requires a storytelling ‘mindset’.

The thinking that informs design for transitions draws on a variety of techniques and applications of theory. Intersectional and relational thinking considers the interconnected nature of things and how problems that intersect one another cannot be solved in isolation<sup>258</sup>. Radical design thinking draws from Buchanan’s<sup>259</sup> design thinking but deviates from IDEO’s iterative design thinking process. It gives greater focus to problem articulation, root causes and interconnections with other complex problems, and ethnography supports the typical reliance on designer’s empathy. It aims to create radically different approaches to problems that are iterative, temporal and scalable<sup>260</sup>. Radical design thinking recognises design’s fallibility to ‘solutionism’ under the status quo, and aims instead for radically different approaches to clearly articulated and framed problems. Values and framing is used to reframe problems in ways that can awaken intrinsic values that foster sustainability such as universalism and benevolence<sup>261</sup>. These modes of thinking underpin the application of a range of theories which are detailed in *Part 2: Thinking*. The theories centre around the intersection of change and power, they investigate the way change occurs across multiple levels in socio-technical systems and how behaviours become embedded in these systems as sets of social practices.

256 Plumwood, *Environmental Culture*. p 200

257 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

258 Collins and Bilge, *Intersectionality*; Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Plumwood, *Environmental Culture*.

259 Buchanan, “Wicked Problems in Design Thinking.”

260 Erling Bjögvinsson, Pelle Ehn, and Per-Anders Hillgren, “Design Things and Design Thinking: Contemporary Participatory Design Challenges,” *ibid.* 28, no. 3 (2012); Buchanan, “Wicked Problems in Design Thinking.” See also: <https://hbr.org/2018/09/design-thinking-is-fundamentally-conservative-and-preserves-the-status-quo> Accessed 11 October 2018

261 Tim Holmes et al., “The Common Cause Handbook,” (United Kingdom 2011).

The act of ‘doing’ is central to my practice of design for transitions and this typology recognises that this activity occurs both inside and outside of the status quo. At this point it is worth noting that the desire to draw a hierarchy from this typology should be resisted. There are arguments that could present each of these approaches as more or less valid in the pursuit of systemic change. What this typology intends to communicate is the validity of each approach in different contexts and the potential for blending them together. Working from within the status quo are three approaches that perform different aspects of this work. Through transition design<sup>262</sup> the aim for design to contribute to ‘sustainability transitions’ might be realised, particularly in relation to work with organisations which largely maintain an economic status quo. Redirective practice<sup>263</sup> aims to rebrief projects back to clients in order to redirect their goals away from ‘defuturing’ activity and toward increased sustainability. It plays a particularly key role for designers working with large organisations or projects where impacts are amplified by scale. Design for sustainability<sup>264</sup> provides an approach to the design of outcomes that is more sensitive to nature. It holds relevance despite its ‘greener things’ approach, as the design of material artefacts remains part of design for transitions. Three additional approaches operate outside of the status quo and reposition the designer in community-based projects and as part of movements, thereby increasing the designer’s authorship. In autonomous design<sup>265</sup> the designer has autonomy from clients and partners instead with communities and movements to affect and facilitate grassroots change. Design activism<sup>266</sup> creates counter-narratives aimed at generating change and protests the status quo by provoking thought and action in citizens. Design for elimination<sup>267</sup> is perhaps the most challenging of the three in its endeavour to ‘undesign’ things that are ‘defuturing’. Its process is post-capitalist in its complete disconnect from an economic status quo and it is potentially the most likely to radically alter design culture and the creation of artefacts.

The methods outlined in this typology have been explored through a range of practice-based projects as part of this research, and have frequently been blended together to strengthen project processes and outcomes. Hybridity has been a long running theme within my practice and is explored in more detail in *Part 3: Doing* as an aspect of my process and as an approach in design projects. Throughout this research an intentional fusing of complementary methods has addressed gaps in emergent approaches. Increased ecological and economic literacy, theoretical knowledge and transformation within my personal life and my practice has also informed the approaches taken.

262 Irwin, “Transition Design: A Proposal for a New Area of Design Practice, Study, and Research.”

263 Fry, “Redirective Practice.”

264 CA Bakker et al., “Designing Cradle-to-Cradle Products: A Reality Check,” *International Journal of Sustainable Engineering* 3, no. 1 (2010); Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*; Walker, *Designing Sustainability: Making Radical Changes in a Material World*.

265 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; “Degrowth, Postdevelopment, and Transitions: A Preliminary Conversation,” *Sustainability Science* 10, no. 3 (2015).

266 Fuad-Luke, *Design Activism*; Guy Julier, “From Design Culture to Design Activism,” *Design and Culture* 5, no. 2 (2013); McCarthy, *The Designer As... Author, Producer, Activist, Entrepreneur, Curator & Collaborator: New Models for Communicating*; Matthew Soar, “The First Things First Manifesto and the Politics of Culture Jamming: Towards a Cultural Economy of Graphic Design and Advertising,” *Cultural Studies* 16, no. 4 (2002); Thorpe, *Architecture and Design Versus Consumerism*.

267 Tony Fry, “Elimination by Design,” *Design Philosophy Papers* 3, no. 2 (2005); Cameron Tonkinwise, “Design Away,” *Academia.edu (draft published 26/6/2013)* (2013).

## 1.4 Closing remarks

It is evident from the literature that sustainable design operates within a niche of contemporary practice and is relatively absent from the norms of communication and interaction design as a whole. Whilst the niche has provided a strong recent-history of activity, deeper investigation into the inaction from the majority of practitioners reveals that the barriers to affirmative action are more complex than implementing a series of technical fixes to the design process. Communication designers are limited as first order designers, and while interaction designers have an increased capacity in the third order, it is not utilised. Both are further limited by a weak positioning within the client-designer relationship dynamic. Transition design might be able to contribute more wholly through fourth order design, however its practice is still emerging. The co-dependency that has developed between design and business has resulted in a number of tensions in practice that appear to prevent practitioners from taking affirmative action. Concerns such as ongoing financial security and pressured creativity sit at the apex of a myriad of deeper issues relating to the invisibility of unsustainability within practice, imbalances in client-designer power relationships, and design's ongoing acceleration of consumption.

If designers are to address sustainability holistically, significant changes to practitioner focus and outcomes will be required. Here we can learn from Tonkinwise's thinking<sup>268</sup>, that information is not enough to elicit action; rather true knowledge must be accompanied by an understanding of how to take action and implement effective approaches to sustainability within practice. The literature suggests that addressing sustainability may require design as a form of making to step back and make way for design as a mode of thinking. Connected to this are the transformations required personally and professionally to shift between lower and higher orders of design in order to create change. This transition requires deeper thinking and strong theoretical underpinnings. Conversely, broadening practitioners' understanding of the impact of consumption, building theoretical knowledge, and gaining experience in true collaborations could shift the balance of power in client relationships and facilitate a transition towards sustainable futures.

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268 "Ethics by Design, or the Ethos of Things."

## Chapter 2

### Research design and methodology

This research examines design's role in the unsustainable acceleration of consumption and waste, and explores what designers could do to address this problem through their work. It has been guided by perspectives from Plumwood, Fry and Escobar<sup>269</sup> who each argue for relational thinking, responsible design approaches and ethical interactions with the living world that are currently lacking in communication and interaction design and is framed by a critical pragmatism<sup>270</sup>. Critical pragmatism has roots in pragmatism and Ulrich describes it as 'a philosophy for professionals', combining 'classical pragmatist conceptions of inquiry, meaning, and truth with the critical turn of our notions of rational discourse and professional competence'<sup>271</sup>. Forester describes it as an 'analytic, theoretical perspective' and 'a mode of planning practice' which ties neatly to the idea of 'design for transitions' as an interconnected approach that explicitly links ways of being, theoretical knowledge and design practice.

Using this frame, greater insights into the complex problems of unsustainable consumption and waste were gained through a range of different activities that were undertaken using a mixed-methods approach. The research is presented as a comparative case study that used analytic auto-ethnography and research through design incorporating ethnography and action research in design projects. Analysis was conducted using grounded theory<sup>272</sup> and reflective practice<sup>273</sup>. Using mixed methods provided the necessary flexibility to explore complex problems in diverse ways whilst maintaining academic rigour. Visual summaries of different aspects of the research design are presented in Figures 2.1, 2.2 and 2.3.

269 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; "Degrowth, Postdevelopment, and Transitions: A Preliminary Conversation."; Fry, *Design as Politics; Design Futuring; A New Design Philosophy: An Introduction to Defuturing* (UNSW Press, 1999); *Becoming Human by Design*; Plumwood, *Environmental Culture*.

270 Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations."; "Three Practices of Humanism and Critical Pragmatism."; Werner Ulrich, "Philosophy for Professionals: Towards Critical Pragmatism," *Journal of the Operational Research Society* 58, no. 8 (2007).

271 "Philosophy for Professionals: Towards Critical Pragmatism." p 1112

272 Melanie Birks and Jane Mills, *Grounded Theory: A Practical Guide* (London, UK: Sage, 2011); Phd Barney G. Glaser, Hon. Phd, "Choosing Grounded Theory," *Grounded Theory Review: An International Journal* 13, no. 2 (2014); "Applying Grounded Theory," *Grounded Theory Review: An International Journal* 13, no. 1 (2014); "Introduction: Free Style Memoing," *Grounded Theory Review: An International Journal* 12, no. 2 (2013); Isabelle Walsh et al., "What Grounded Theory Is...a Critically Reflective Conversation among Scholars," *Organizational Research Methods* 18, no. 4 (2015); Judith A Holton, "The Coding Process and Its Challenges," *The Sage handbook of grounded theory*, no. Part III (2007). Please note: Although grounded theory is a commonly used methodological approach, its application in this research was as a method for data analysis. As such it is presented in the methods section as an approach used for coding data rather than discussed here as a complete methodological approach.

273 Gowri Betrabet Gulwadi, "Using Reflective Journals in a Sustainable Design Studio," *International Journal of Sustainability in Higher Education* 10, no. 2 (2009); Cristyne Hébert, "Knowing and/or Experiencing: A Critical Examination of the Reflective Models of John Dewey and Donald Schön," *Reflective Practice* 16, no. 3 (2015); Malene Leerberg, Vibeke Riisberg, and Joy Boutrup, "Design Responsibility and Sustainable Design as Reflective Practice: An Educational Challenge," *Sustainable Development* 18, no. 5 (2010); Donald A. Schön, *Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983); Dvora Yanow, "Ways of Knowing," *American Review of Public Administration* 39, no. 6 (2009); Dvora Yanow and Haridimos Tsoukas, "What Is Reflection-in-Action? A Phenomenological Account," *Journal of Management Studies* 48, no. 8 (2009); Joyce SR Yee, "Methodological Innovation in Practice-Based Design Doctorates," *Journal of Research Practice* 6, no. 2 (2010).

## 2.1 Methodology

### 2.1.1 Critical pragmatism

This research investigates design's role in accelerating consumption and waste and explores the suitability of 'design for transitions' as an approach to shift the goals of design toward just and sustainable futures. Within the context of transitions, this research investigates the living world, the designed world and human interactions with both. It uses critical pragmatism<sup>274</sup> as a frame for investigations into designers' ethics and responsibility to matters of social justice and the environment. Applying Forester's approach to critical pragmatism fosters 'an analytic and practical approach that attends to [both] process and outcome, that challenges us to listen critically to appreciate multiple forms of knowledge.'<sup>275</sup> In this research, a critical pragmatism was guided by views from environmental philosopher, Val Plumwood<sup>276</sup>, design theorist, Tony Fry<sup>277</sup>, and anthropologist, Arturo Escobar<sup>278</sup> who each argue from multiple perspectives for relational thinking as part of overcoming the hyper-separation of humanity and nature. Key to each of these authors' works are ideas of openness and participation, of multiple and communal ways of being in the world, of humanity's ethical responsibility to the living world, and the significant impact of design as a practice in each of these areas. Whilst their individual works are not explicitly framed by critical pragmatism, this philosophy is evident in their approaches which attend to both process and outcome, oppose hyper-separation in favour of plurality, promote ethics and responsibility, and are grounded in real-world practical applications and contexts.

Forester's approach to critical pragmatism comes from planning and its facilitated processes, which often require a balance of skills in planning, mediation and facilitation. This bears similarities to the processes in design for transitions, which balances skills in design and facilitation. His approach investigates root causes of problems and interpersonal conflicts that require mediation during planning processes. He articulates 'a more critical pragmatism that directs our attention not only to moves and consequences and our orienting theories, but to the political and moral conditions of our deliberations in the first place'<sup>279</sup> in order to better understand the 'why' of a process before it begins. This political view values what lies beneath processes as much as the process and outcomes themselves, and recognises the need for plurality in work of this nature. A similar relational and plural approach is also

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274 Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations."; "Three Practices of Humanism and Critical Pragmatism."; Ulrich, "Philosophy for Professionals: Towards Critical Pragmatism."

275 Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations." p 19

276 Plumwood, *Environmental Culture*.

277 Fry, *Design as Politics; Design Futuring; A New Design Philosophy: An Introduction to Defuturing; Becoming Human by Design*.

278 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; "Degrowth, Postdevelopment, and Transitions: A Preliminary Conversation."

279 Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations." p 19

evident in the writing of Plumwood, Fry and Escobar, whose works have guided this research. Forester's approach to critical pragmatism has most closely informed its use in this research.

Plumwood's ecofeminist perspective reveals hyper-separation (of masculine and feminine, of human and other) as a key aspect of the rationalist mentality that views nature as a resource. She presents this 'anthropocentric rationalism' as a key driver in the continual push for extractivist activity that drives structural unsustainability. Throughout her work, Plumwood argues for relationality in thinking and being to achieve a balance of difference and sameness that accepts one without obliterating the other. She calls for ecologically considerate values-based ways of being that position humanity as part of nature rather than separate to it. Her arguments for prudent ethics and modes of living that respect nature rather than exploit it are drawn from indigenous wisdom, which offers alternative relationships with nature than those traditionally held by those in the Global North. Indigenous Australian perspectives are evident throughout her work which also adopts a communal narrative from indigenous culture that says, 'you belong to the land as much as the land belongs to you'<sup>280</sup>. Plumwood also acknowledges the radical inequalities and social privilege embedded in current economic modes of thinking which provides a crucial and much needed social justice perspective to this work. Her critique of social privilege as a celebrant of consumption, and of the accompanying hyper-separation from its outcomes (waste) are highly relevant to this research. Plumwood offers a guiding philosophy for approaches to the consumption and waste problem that are relational and contextualised within the living world.

Adding to Plumwood's philosophy are Escobar's views of autonomy and the communal ways from the Global South<sup>281</sup>. He presents a clear alternative for designers that is interconnected with the political and relational perspectives from both Plumwood and Fry. It is Escobar's view of the ontological that presents design in a different context—as a practice of designing behaviours and ways of being<sup>282</sup>. In this sense, rather than a practice of making things, design becomes a practice of making things happen. In Escobar's radically participatory approach, autonomy is crucial, as is co-creation, and his relational perspectives reveal the importance of plurality in applying this approach to design. The living world is made up of many small worlds, and Escobar presents autonomous design as an opportunity to design for this 'pluriverse'. This plural and relational approach has formed a crucial part of the guiding philosophy in this research.

Fry's political perspective<sup>283</sup> presents apolitical design as a key contributor to 'defuturing' and to the maintenance of an economic status quo facilitating the multiple crises currently faced by humanity. In Fry's view, the designed world is

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280 Plumwood, *Environmental Culture*. p 230

281 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; "Degrowth, Postdevelopment, and Transitions: A Preliminary Conversation."

282 *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. ch 4

283 Fry, *Design as Politics; Design Futuring; Becoming Human by Design*.



breaking the natural world, and the continued disengagement of designers from the impact of their work drives this unsustainable outcome<sup>284</sup>. Fry's framing of design uses a political lens and his critique of design as a predominantly apolitical practice<sup>285</sup> reveals the importance of a designer's empowerment as part of political engagement. Fry's call for the politicisation and redirection of the goals of design has also been key in identifying the need to explore power dynamics as part of this work.

An intertwining of these three authors' perspectives has guided the explorations made throughout this research. Whilst each of these views favours a perspective of the living world and our responsibility to it, they each introduce important themes in their own rights whilst fostering a relational perspective. From Plumwood comes an ecofeminist, prudent relationality, from Escobar, an autonomous, communal relationality, and from Fry, a political, design relationality. These three thinkers link together ideas of nature, participation and design, their push for relational thinking underpins this research and their work has guided the thinking and ethics applied throughout this research.

### 2.1.2 Reflective practice

Reflection is key to this research; it has been performed as processes of critical thinking, knowledge building, sensemaking and synthesis. The core reflection cycles have been outlined in Figure 2.1. Schön defines reflective practice as 'a dialogue of thinking and doing through which [we] become more skillful'<sup>286</sup> revealing that reflection is a process of active engagement. In this research, reflective practice has been guided by a wide body of literature<sup>287</sup> which has fostered an ecological worldview focused on the shared goals of justice and sustainability. The iterative shifts between reflection in/on action and the return to literature is outlined by Yanow<sup>288</sup> who describes the process of interpretation as the first perspective, one that is backed by the second (hermeneutic) perspective of looking to collective knowledge. In analysing this same process, Gadamer calls on Heidegger's description of the hermeneutic circle as a way of describing the influence of the reader's projections of meaning in their interpretation of a text. He explains that 'interpretation begins with fore-conceptions that are replaced by more suitable ones. This constant process of new projection constitutes the movement of understanding

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284 "Design after Design Workshop."

285 Ibid.

286 Donald A Schön, *Educating the Reflective Practitioner* (San Francisco Jossey-Bass, 1987). p 31

287 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Charles Eisenstein, *The More Beautiful World Our Hearts Know Is Possible*, vol. 2 (North Atlantic Books, 2013); Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations."; Fry, *Design as Politics; Design Futuring*; Haughton, "Environmental Justice and the Sustainable City."; Holmes et al., "The Common Cause Handbook."; Plumwood, *Environmental Culture*; Kate Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist* (Chelsea Green Publishing, 2017); Damian White, "Creative Labour/Critical Designs/Just Transitions Imaginaries," in *Transition Together 2018* (Schumacher College, UK2018).

288 Yanow, "Ways of Knowing."

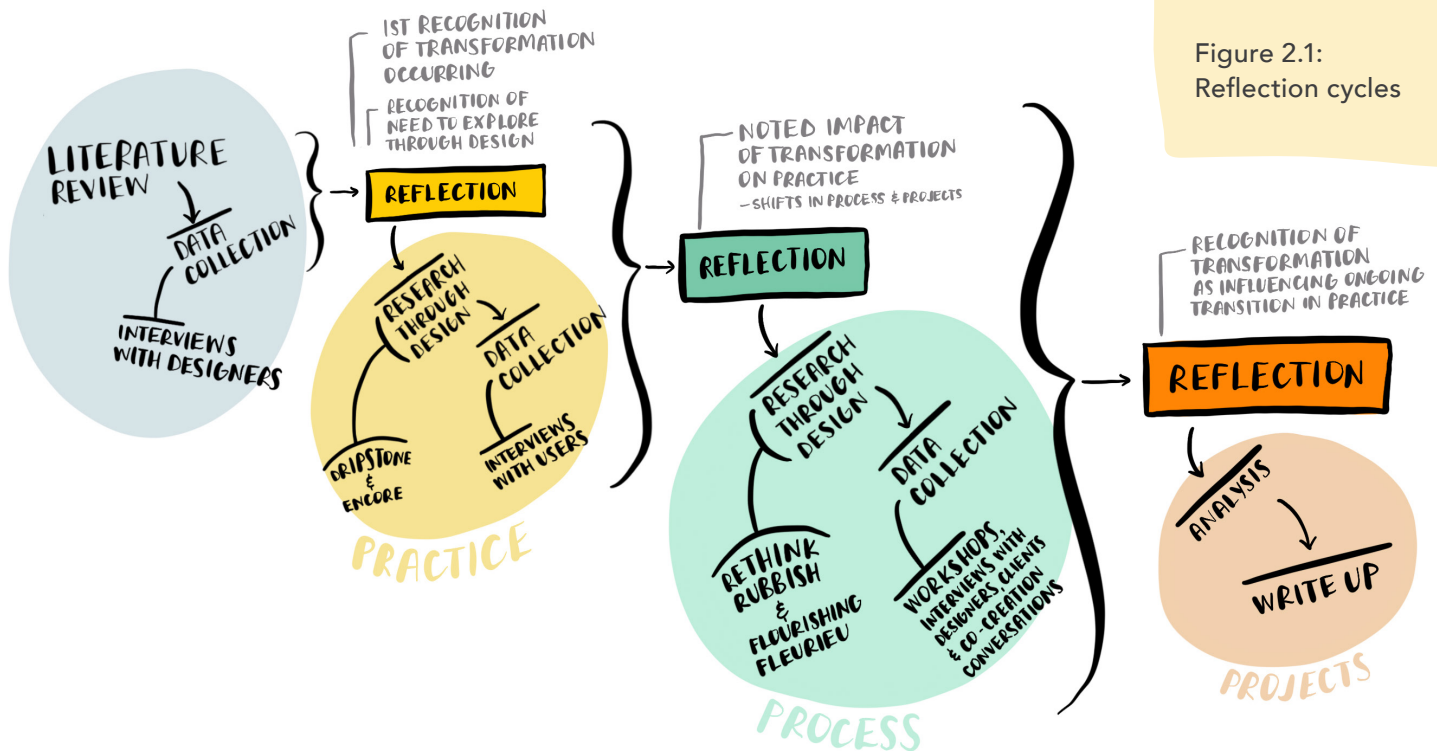


Figure 2.1:  
Reflection cycles

and interpretation<sup>289</sup>. Yanow<sup>290</sup> also discusses how this idea of acceptance is exercised through acknowledgement of what is unknown in order to find out more. She argues for humility as part of reflective practice, as a means of maintaining an open mind to other possibilities, stating that drawing on Schön's 'reflection in-action' requires a willingness to be interrupted by backtalk<sup>291</sup> and to respond accordingly.

Forester extends reflective practice with a political view of reflection that applies a critical pragmatism to the approach<sup>292</sup>. He describes learning and working with people as an aspect of being what he calls a 'deliberative practitioner', who he outlines as 'personally reflective but politically deliberative'<sup>293</sup>. This perspective adds a dimension to reflective practice that is more than reflection in/on action, it is also politicised and future-focussed in ways that are considerate of the consequences of possible actions and processes. Forester also attributes 'listening carefully... [and] participating in diverse "participatory rituals" ranging from storytelling to site visits to sharing meals or drinks to working together'<sup>294</sup> as part of an approach that seeks to more genuinely understand and learn with others through interpersonal connection. Common to each of these 'participatory rituals' is the deliberate act of being present and listening to people in informal situations as part of a larger more formal

289 Hans Georg Gadamer et al., *Truth and Method*, 2nd ed., Continuum Impacts (London ; New York: Continuum, 2004). p 269

290 Yanow, "Ways of Knowing."

291 Schön's backtalk is a way of reflecting on what the materials/task is saying to you as opposed to what feedback from others tells you. For designers, backtalk is often understood as the recognition of 'happy accidents' or 'design surprises' that can lead the designer towards new directions in the work.

292 John Forester, *The Deliberative Practitioner: Encouraging Participatory Planning Processes* (Mit Press, 1999).

293 Ibid. p 2

294 Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations." p 9

process. Whilst Forester acknowledges that this work is yet to fully tackle the intricacies of working with groups that are inherently oppositional or in conflict with one another, it goes some way to recognise the importance of reflecting and deliberating on relationships and values in addition to paradigms as forces of influence in participatory group dynamics.

Embodied reflection has played an integral role in the reflective process. Kinsella describes embodied reflection as ‘aris[ing] through the bodily, lived experience of the practitioner and [in this sense it] is revealed in action’<sup>295</sup>. Embodied reflection has been an important approach for reflection on my self-transformation and has facilitated synthesis between the personal, political and professional dimensions of the transition within my design practice. It has also been highly relevant for reflection on design processes and projects that have involved active engagement and interactions between collected data, literature, theory and the practice of design. Reflection performed by designers draws on tacit designerly skills and knowledge that combine thinking and doing. Escobar suggests that embodied reflection recognises the dance between action and reflection<sup>296</sup>, making the act of reflection an experience in its own right.

The process of thinking during or through drawing demonstrates an act of embodied reflection. This is identified by Cross as a designerly process used for synthesis and to communicate what cannot otherwise be verbalised<sup>297</sup>. Embodied reflection has been performed throughout this research as a mode of active thinking, as a process of sensemaking and as a method for documentation. The act of ‘reflective doodling’ used throughout this research demonstrates a form of embodied reflection. This designerly sensemaking process blends reflective practice with insights drawn through the distinct and recognisable set of thinking and doing practices from design<sup>298</sup> and has played an integral role in knowledge building in this research. Several artefacts produced as part of this ‘reflective doodling’ process are presented as figures in this thesis. Of particular note is the suite of artefacts presented in *Part 3: Thinking*, which have benefited significantly from this process of embodied reflection. One of the artefacts that was developed through ‘reflective doodling’ has been presented in Figure 5.4 as a canvas that forms part of the contribution to knowledge made through this research. Throughout this research, reflective practice has been performed in multiple ways and each has played a key role in shaping the research outcomes.

### 2.1.3 Case Study Research

This research is presented as a comparative case study that documents a transition in my design practice from ‘making greener things’ toward ‘design for transitions’ using a mixed methods approach. An embedded single case

295 Elizabeth Anne Kinsella, “Embodied Reflection and the Epistemology of Reflective Practice,” *Journal of Philosophy of Education* 41, no. 3 (2007). p 396

296 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. p 54

297 Cross, *Designerly Ways of Knowing*. p 6, 15-20

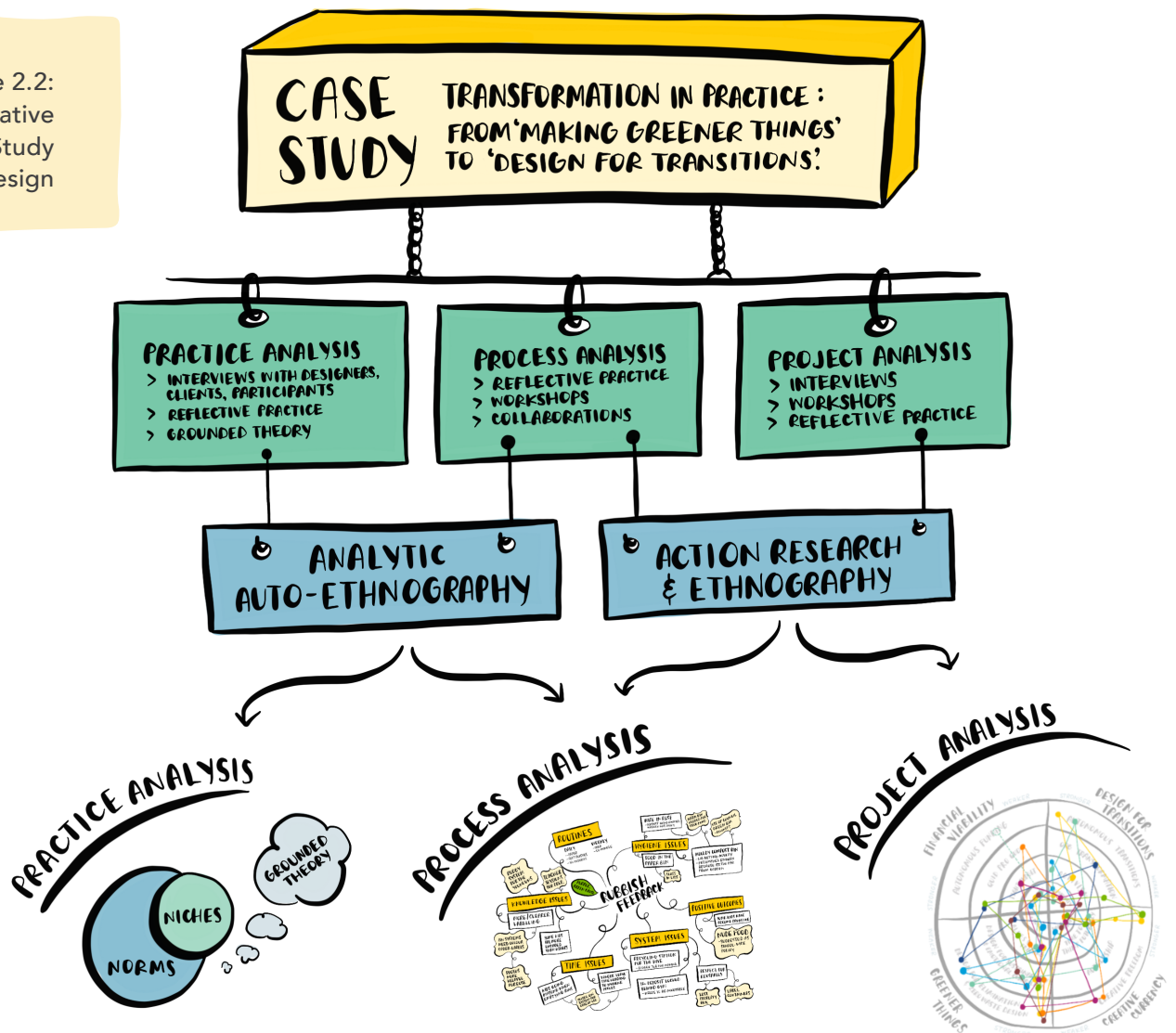
298 Ibid.

design was used to document and analyse multiple units<sup>299</sup>, consisting of design practice, design processes and design projects. The case used analytic auto-ethnography and grounded theory for practice analysis. As a comparative case, it presents typical commercial design practice as contributing to structural unsustainability and documents the attempts made in my own practice to transition away from this norm by comparing design projects and processes.

An analytic autoethnographic approach to the investigation of transitions clearly identifies me as a design practitioner within the research. This positions my design practice under a microscope, where processes of transformation and attempts at 'design for transitions' can be studied. The analytic auto-ethnographic approach recognises that I am a practicing designer studying

299 Barney G. Glaser, "Applying Grounded Theory." p 46-53

Figure 2.2:  
Comparative  
Case Study  
Design



the practice of design. It maintains close connections to literature and theoretical domains<sup>300</sup> while providing an iterative structure to the process of analysis and allowing for the exploration of emergent themes<sup>301</sup>. The temporal nature of transitions is widely recognised in transitions discourse and its associated theoretical domains<sup>302</sup>. This temporality provides the rationale for a longitudinal case approach<sup>303</sup> where reflection on activity has occurred over time.

Research through design has been conducted within the case through a number of design projects that form embedded units of analysis for comparison. Each project has been used to explore the application of theoretical knowledge into design processes and project outcomes. Analysis of these projects has been conducted using grounded theory<sup>304</sup> and reflective practice<sup>305</sup>. Additional insights have been gained through analysis of and reflection on the experience of transitioning and the practice of design for transitions using embodied reflection (see *Reflective Practice* below for more detail). Design projects (embedded units of analysis within the case) have used a combination of action research cycles and ethnographic approaches to explore how design for transitions might be practiced in real-world design projects. A summary of the design of the case is outlined in Figure 2.2 which shows how activity sometimes overlaps multiple methods, a process which has enhanced the analysis and synthesis that has occurred throughout the research.

#### 2.1.4 Analytic Autoethnography

Investigations of practice as a practitioner and researcher have led to the use of an analytic auto-ethnographic methodology. Analytic autoethnography is described by Anderson as a study where the ‘researcher is a full member of the research group... is visible as such a member in published texts [and] is committed to developing theoretical understandings’<sup>306</sup>. This approach differs from traditional autoethnography and evocative autoethnography in its ability to analyse within an explicit theoretical framework<sup>307</sup>. Reflection on contemporary practice with the researcher included as a subject, was supported

300 Leon Anderson, “Analytic Autoethnography,” *Journal of contemporary ethnography* 35, no. 4 (2006).

301 Birks and Mills, *Grounded Theory: A Practical Guide*. p 9-14

302 Transitions discourse includes different types of transitions initiatives and its associated theoretical domains explore theories of change, social practices, complexity and power. See for example: Kenneth Boulding (The Great Transition Initiative), Fritjof Capra (Phase Transitions), Frank Geels (Socio-technical Transitions Theory), John Grin and Johan Schot (Sustainability Transitions), Rob Hopkins (Transitions Town Network), Terry Irwin et al (Transition Design), Steven Lukes (Theory of Power), Ezio Manzini (Social Innovation), Manfred Max-Neef et al (Theory of Needs) and Elizabeth Shove (Social Practice Theory).

303 Robert K. Yin, *Case Study Research: Design and Methods*, 5th ed., vol. 4 (California, USA: SAGE Publications, 2009). p 46-53

304 Birks and Mills, *Grounded Theory: A Practical Guide*; Barney G. Glaser, “Choosing Grounded Theory.”; “Applying Grounded Theory.”; “Introduction: Free Style Memoing.”; Walsh et al., “What Grounded Theory Is...a Critically Reflective Conversation among Scholars.”; Holton, “The Coding Process and Its Challenges.”

305 Schön, *Reflective Practitioner: How Professionals Think in Action*.

306 Anderson, “Analytic Autoethnography.” p 373

307 Carolyn Ellis, Tony E Adams, and Arthur P Bochner, “Autoethnography: An Overview,” *Historical Social Research/Historische Sozialforschung* (2011); Carolyn S Ellis and Arthur P Bochner, “Analyzing Analytic Autoethnography: An Autopsy,” *Journal of contemporary ethnography* 35, no. 4 (2006); Steven Pace, “Writing the Self into Research: Using Grounded Theory Analytic Strategies in Autoethnography,” *TEXT Special Issue Website Series* 13 (2012).

by literature from the fields of design, economics, business, psychology, anthropology, sociology and environmental management. Synthesis of this literature has been substantiated by theories of consumption, power, change, and social practices. It draws on my own experiences as a practitioner and changes in my practice over time have been captured through data collected from semi-structured interviews with designers and workshops with project participants.

As a researcher and practitioner who is investigating transitions in and through design there is a logic to positioning myself and my practice at the centre of this investigation. Anderson's<sup>308</sup> approach to analytic autoethnography permits exploration of the self as an active participant in the research but prevents deviation down too personal a path. The approach taken has also drawn on reflective practice<sup>309</sup> and grounded theory<sup>310</sup>, and the recognition of the self as a subject within the research has been an important aspect of the investigation of the role of self-transformation and transitions. As a designer, I am not exempt from any investigation of sustainability in design practice. In the role of researcher, I have attempted to investigate the practice of others, while simultaneously interrogating my own, through a process of reflection, journaling, sensemaking and visual mapping. As a person whose self-transformation had an obvious impact on their work, exploration of this experience also has relevance to both my practice and this research. Each of these aspects warrant a personal voice in the research, although the gravity of discussions of structural unsustainability call for strong connections back to a theoretical framework. Using a critical pragmatism to frame considerations of ethics and the designer's responsibility to social justice and the environment has ensured critical thinking and a theoretical underpinning.

The connection back to a theoretical framework has been a crucial component in grounding the highly reflective processes involved in the discussion of transformation. This connection is an explicit aspect of analytic autoethnography that provides a sense of balance between the necessary components of autobiography and ethnography. Without the descriptive personal experiences included throughout this body of work, this would be a rigid view of transformation and transition. Without a theoretical underpinning, analysis of these experiences this work would become too personal and would lack the rigour required from a research project. Analytic autoethnography has blended and balanced these two aspects to enrich and deepen the discussions in this thesis.

### 2.1.5 Research through design

Many key insights in this research have been gained by conducting research through design, an approach that uses the act of designing as a method of inquiry. Design-based research is described by Barab as a 'series of approaches,

308 Anderson, "Analytic Autoethnography."

309 Schön, *Reflective Practitioner: How Professionals Think in Action*.

310 Walsh et al., "What Grounded Theory Is...a Critically Reflective Conversation among Scholars."

with the intent of producing new theories, artifacts, and practices that account for and potentially impact learning and teaching in naturalistic settings.’<sup>311</sup> This approach recognises the ‘messiness of real-world practice’<sup>312</sup> and has been integral to the exploration of emergent approaches such as transition design. Design projects have been used to explore approaches to the problems of structural unsustainability by integrating newly acquired knowledge and practicing ‘new ways of designing’. These projects and the processes undertaken in them have been analysed and discussed in *Part 3: Doing* but insights drawn from them have also informed the theorisation in *Part 2: Thinking*. These projects have been approached using action research and ethnography, sometimes independently, but more commonly blending both.

The design processes and projects explored through this research have used cyclical and temporal reflection as a means of documenting change and drawing insights from different stages of transition. Project work used action research cycles to design, implement and assess outcomes using iterative cycles of activity that shifted between thinking and doing. The relevance of action research lies in its blend of the reflective (thinking) and the technical (doing)<sup>313</sup>. In some projects these action cycles were further supported by ethnographic approaches such as interviews and workshops.

Conducting research through design has provided deep insights into the limitations designers face, and into alternative approaches that might overcome these limitations. Insights have been gained through deeper sensemaking processes<sup>314</sup> that adopt Fry’s suggestion of solution-suspension<sup>315</sup>. Suspending the desire to solve ill-defined problems permitted more time to clearly articulate their complexity. This process has allowed additional dimensions of problems to be explored with particular attention paid to their points of intersection. A more complete understanding of the temporal nature of this process and its navigation in practice was gained through design.

### Design projects

The research is informed by four design projects that used emergent methods that aim to create change, particularly transition design and autonomous design. As part of this work, new ways of designing were explored, documented and discussed, and insights from these projects and processes informed theorisation in *Part 2: Thinking*. The project activity is outlined on the timeline in Figure 2.3

There are a number of projects that were undertaken during the course of this research that are not discussed in the thesis. These are displayed on the timeline in Figure 2.3 but were edited out of the narrative in this thesis. This does not downplay their value as design projects or the experimental nature

311 Sasha Barab and Kurt Squire, “Design-Based Research: Putting a Stake in the Ground,” *The journal of the learning sciences* 13, no. 1 (2004). p 2

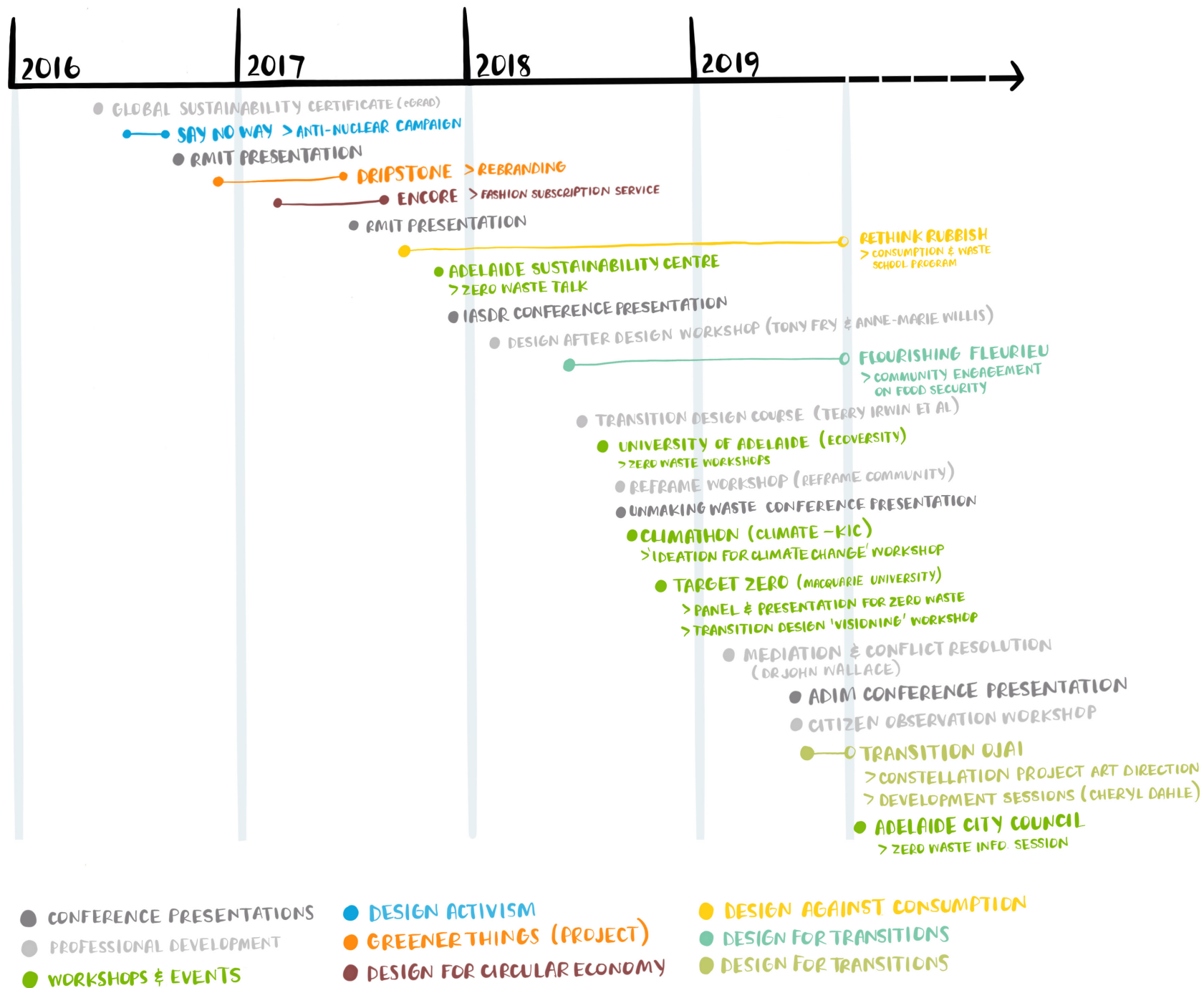
312 Ibid. p 3

313 Herbert Altrichter et al., “The Concept of Action Research,” *The learning organization* 9, no. 3 (2002).

314 Cross, *Designerly Ways of Knowing*. p 12

315 Tony Fry, “Design after Design,” *Design Philosophy Papers* 15, no. 2 (2017); “Design after Design Workshop.”

Figure 2.3:  
Timeline of  
project work





of the design approaches used, but rather responds to the limitations of this research and the need for succinctness. The four projects outlined below were included for their demonstration of the key design approaches explored during the research and for their reflection of the transformation taking place in my design practice.

### **Dripstone**

The *Dripstone* project demonstrates the technically focussed greener things approach through a childcare centre rebranding. The new brand was applied across all touchpoints, including stationery, promotional collateral, uniforms and merchandise, external and internal way finding and signage, social media graphics and website design and development. This project is typical of the kind of projects and approaches that have historically defined my design practice. The process and its outcomes were designed to be meaningful and zero-waste and the design work was created in collaboration with the client and with another designer. *Dripstone* was a relatively successful greener things project that pushed the limits of this kind of design approach. It is presented in the thesis to demonstrate the kind of design work I am transitioning from, but also reflects the limitations of this approach in addressing structural unsustainability.

### **Encore**

The *Encore* project was my first attempt at design for transitions. In this project I designed the brand identity, brand strategy, marketing collateral and service model for a fashion subscription service that aimed to foster a circular economy. The project was a collaboration between myself, a circular economy consultant and a retail fashion business owner. *Encore* was highly structured with a very strict timeline and while participants spoke positively about their experiences, there were too few of them to properly test the service. The project faced other challenges that led to its failure and I chose to limit discussion of the project for these reasons. *Encore* is referenced in the thesis for the insights that could be drawn from its failure. Of particular value to this research was the importance of flexibility, time and space in transitions projects. *Encore* also provided insights into tensions in practice, highlighted the limitations in designers' positioning and demonstrated the need for transformation in practice.

### **Rethink Rubbish**

The planning and actions taken in the *Rethink Rubbish* project, drew on insights gained through *Encore's* failure and was inspired by my personal transformation to zero waste. *Rethink Rubbish* approached the problem of consumption and waste in a primary school setting. It aimed to create cultural shifts in the relations between people and waste that were underpinned by altruistic values such as respect and care. This work was supported by co-creating interventions into the problems experienced by young people in their school. Co-creation was conducted with students, teachers and school community members. These collaborations aimed to centre the students as empowered and active participants and to build their capacity to activate change. The time I invested in the project was funded by my scholarship, but all materials

and other project related expenses were covered by the school. Some were supported by community fundraising efforts including in-kind sponsorship. The *Rethink Rubbish* project demonstrates what is possible when designers step outside of their typical role to explore more autonomous ways of working. It also reflects the ways that I challenged and was challenged by my experience of the designer's double bind. Its inclusion in the thesis demonstrates the shift occurring in my practice towards more experimental ways of working.

### **Flourishing Fleurieu**

*Flourishing Fleurieu* was the least resolved but most sophisticated transitions project undertaken through this research. It is still in a very early stage and the project will continue within my practice once this research has concluded. The project is based in a South Australian regional area (the Fleurieu Peninsula) that is at risk of becoming a food desert. The thesis presents early mapping work that explores the complex network of problems contributing to the food desert. Mapping was performed with one client from the region and with a collaborative working group consisting of other academics from my institution as well as experts from agriculture and IT. This project is presented in the thesis as a representation of further shifts in my practice toward design for transitions. But it also serves another dual purpose, by demonstrating the slower pace of transitions projects and the challenges designers face in funding this kind of work. The project has not yet secured external funding however this continues to be explored outside of this thesis.

## **2.2 Research activity**

Several types of activity have informed this research. Data has been collected through interviews, projects, workshops, and co-creation activities, and synthesised with the literature through research through design and reflective doodling. Design projects have explored emergent design methods that offer alternative ways of approaching the complex problems associated with structural unsustainability. Reflection in action and on action has been supplemented with reflection on time in order to document the activation of transition in my practice as a case study.

### **2.2.1 Ethics Protocol**

The activity in this research is covered by four ethics protocols. Firstly, semi-structured interviews conducted with designers were approved in protocol 35926. The data collected from these interviews provided a view of contemporary design practice as well as comparative points over time that have helped to document the changes occurring in my practice. Secondly, protocol 36550 approved client liaison relating to project work and also included semi-structured interviews with clients. It also covered a trial of the *Encore* project, which explored the co-creation of a sharing service for fashion accessories with the intention of creating a local circular economy for fashion items. Thirdly, the *Rethink Rubbish* project was approved in protocol 200886, which allowed for

a series of workshops to be conducted with students and teachers in a primary school, along with ongoing co-creation activities that also permitted data collection through conversations taking place during this co-creation activity. Finally, protocol 201958 approved the initial workshops and semi-structured interviews for the *Flourishing Fleurieu* project, which permitted the collaborative co-defining of complex problems being experienced by farmers and community members in this region. Each protocol is summarised in the following table:

Protocol number	Protocol name	Protocol Activity Detail
35926	'Beyond greener things'	Semi structured interviews with design practitioners.
36550	'Encore and client liaison'	Part A: Trial run of fashion subscription service including semi-structured interviews with participants. Part B: Liaison with clients in the course of doing project work and semi-structured interviews with clients.
200886	'Rethink Rubbish'	Workshops and co-creation activities with staff and students in a primary school. Additional data collection through anecdotal conversations during co-creation activities.
201958	'Flourishing Fleurieu'	Workshops with community members and semi-structured interviews with five workshop participants.

### 2.2.2 Data collection: Designer interviews

Seventeen designers were interviewed to establish their considerations of the norms and niches of practice and the role sustainability plays in their own work. They held a variety of roles including owners, directors and employees in studio/agency and in-house roles, as well as sole practitioners and freelancers. Most interviewees were specialised in either interaction, communication or service design, three were hybrid practitioners (those who worked across multiple disciplines), and two were design consultants. Of these participants, four practitioners had prior exposure to (or were practicing) transition design and one had experienced a transition in their practice from a commercial focus to more altruistic goals. Conversations with three clients provided additional context during analysis of this data and informed the views of design practice. Interview participants have been coded as outlined in the table below.

Practitioner Type	Coding	Employed (E) or self-employed (SE)	Engaged in transitions	Total Number Interviewed
Communication designer	CD	3E/4SE	0	7
Interaction designer	ID	1E/1SE	2	2
Service designer	SD	1E/1SE	2	2
Communication designer specialising in Illustration	CDIL	1SE	0	1
Hybrid practitioners in CD and ID	CDID	2SE	0	2
Design Consultant (with sub-discipline specialisation)	CDDC IDDC	2SE	0	2
Design Consultant (no sub-discipline specialisation)	DC	1SE	1	1

Notes: Sequential numbers were assigned to each practitioner type, for example, CD03 is the third interviewee to be coded as a communication designer but not the third participant to be interviewed. While employment status is not referenced in the allocated code it was included in the collected data that this table is drawn from.

### 2.2.3 Data collection: Practice-based projects

Each of the design projects previously outlined provided data that contributed to this research. My own data (collected through reflective practice, ‘reflective doodling’, field notes and voice memos) spans all four projects.

Interviews with participants in the *Encore* project provided insights into the experiences of the trial service. Although this data was collected and analysed it is not included in the thesis as the participant numbers were too low to conduct an appropriate and balanced evaluation of the service design.

A series of workshops were conducted as part of the *Rethink Rubbish* project that explored the problem of consumption and waste. Workshops were held with participants from a primary school and involved students (aged between five and twelve) and their teachers. Data was collected through the workshop process and supported by observations and interactions with participants during collaborative co-creation processes. The workshops catalysed a temporal exploration of co-created interventions to the consumption and waste problem. The workshops are part of this project’s constellation of activity, which also includes co-creation projects with students and teachers.

One-on-one mapping was conducted with a client in the *Flourishing Fleurieu* project and data was collected as part of these interactions. A ‘visions and backcasting’ workshop was facilitated with the collaborative working group which also provided data that informed both the project and this research.

Collected data was collated through visual notations, and ‘reflective doodling’ was used as a means of reflecting on designer interviews and participant workshops. This process recognised patterns in the collected data, identified themes and made connections back to the literature, theory and lived experience. Use of coding methods from grounded theory<sup>316</sup>, was also informed by Cross’s ‘designerly ways of knowing’<sup>317</sup> and Schön’s reflective practice<sup>318</sup>, fully utilising techniques of reflection in-action and on-action. Two key ideas have underpinned this reflection: that practitioners know more than they can articulate<sup>319</sup> and that reflection in-action and the ‘tacit knowledge that accumulates out of situated experience are both very compatible with Heidegger’s prioritisation of pre-ontological understanding.’<sup>320</sup> Reflective conversations between myself, my supervisory panel, project participants, and interviewed designers and clients have also guided this data analysis and reflection.

### The role of data

The data collected through this research has been used in a number of ways. Firstly, to establish a view of the role that sustainability plays in the norms of contemporary Australian practice and situate my transitioning practice accordingly. Secondly, to better understand how alternative design methods can activate practice-based transitions toward just and sustainable futures. Thirdly, to investigate the value in collaborative processes. Fourth, to inform thinking and theorisation, and lastly, to better understand the role of designers in approaching problems that contribute to structural unsustainability.

Emergent themes and theories have informed explorations undertaken in my own practice, leading to the identification of a number of ‘projects of significance’ that are embedded units of analysis in the case study. The significance of these projects lies not only in the work performed through them, but also in the insights gained from reflecting on their processes and outcomes. Each project explored a hybrid of methods from the design for transitions typology that was discussed in the previous chapter (see figure 1.1) but most frequently combined autonomous design and transition design. These methods have been examined for their effectiveness in addressing issues of social and environmental sustainability, their creative currency, their economic viability (and subsequent relevance to what many perceive as professional practice), and their transformative potential.

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316 Barney G. Glaser, “Choosing Grounded Theory.”; “Applying Grounded Theory.”; “Introduction: Free Style Memoing.”; Walsh et al., “What Grounded Theory Is...a Critically Reflective Conversation among Scholars.”; Holton, “The Coding Process and Its Challenges.”

317 Cross, *Designerly Ways of Knowing*.

318 Schön, *Reflective Practitioner: How Professionals Think in Action*.

319 Ibid. p 8

320 Willis, “Ontological Designing.” p 85

## 2.2.4 Analysis

Analysis of design practice, design processes, and design projects has taken place in a cyclical fashion using grounded theory<sup>321</sup> and reflective practice<sup>322</sup>.

### Grounded Theory

Grounded theory has a rich base in the social sciences<sup>323</sup> and this research has adopted a designerly use of its coding techniques<sup>324</sup> to ensure objectivity during data analysis. In this sense, it was used as a method rather than a methodological approach. Grounded theory informed a manual data coding process that was used to mitigate any biases and assumptions resulting from the combination of my experiences as a designer and my initial literature review. The analysis process began with collected data from designer interviews and data collection and analysis continued throughout the course of the research. New collected data was analysed and compared against this original data set.

The coding process used colour to identify patterns in the data which created a visual discovery process for themes to be explored. (See example presented in Appendix A.) Themes were mapped to explore how they plotted comparatively to larger themes being explored in the thesis such as values and ethics, tensions in practice, the norms of practice, and power dynamics. Continual comparison of themes (across interviews, into projects and into the literature) was performed through reflective practice, ‘reflective doodling’ and writing. Grounded theory served as an entry point to a larger critical reflection process which informed the conceptualisation of theories put forward in this thesis. Implementing grounded theory as part of a critical pragmatic approach resulted in further critical reflection on different courses of action taken in practice. These actions also contributed to the construction of theories presented.

### Reflection

Reflection was informed by the literature, theory, collected data and lived experience. Practice analysis contrasted my practice with that of others and was performed using data collected from interviews with designers and clients. As analysis of my practice-based transition continued, it became evident that comparative data that investigated transitions would be beneficial. This was performed through engagement with new literature and interviews with four designers engaged with transition design. Reflection on collected data synthesised insights with the literature to formulate a discussion of designers’ experiences of norms and niches in contemporary design practice and to establish where and

321 Birks and Mills, *Grounded Theory: A Practical Guide*; Barney G. Glaser, “Choosing Grounded Theory.”; “Applying Grounded Theory.”; “Introduction: Free Style Memoing.”; Walsh et al., “What Grounded Theory Is...a Critically Reflective Conversation among Scholars.”; Holton, “The Coding Process and Its Challenges.”

322 Gulwadi, “Using Reflective Journals in a Sustainable Design Studio.”; Hébert, “Knowing and/or Experiencing: A Critical Examination of the Reflective Models of John Dewey and Donald Schön.”; Leerberg, Riisberg, and Boutrup, “Design Responsibility and Sustainable Design as Reflective Practice: An Educational Challenge.”; Schön, *Reflective Practitioner: How Professionals Think in Action*; Yanow, “Ways of Knowing.”; Yanow and Tsoukas, “What Is Reflection-in-Action? A Phenomenological Account.”; Yee, “Methodological Innovation in Practice-Based Design Doctorates.”

323 Birks and Mills, *Grounded Theory: A Practical Guide*; Walsh et al., “What Grounded Theory Is...a Critically Reflective Conversation among Scholars.”

324 Holton, “The Coding Process and Its Challenges.”

how transitions were located in design practice. Analysis of and reflection on my practice has occurred at regular intervals spanning a three year period. This temporal process alludes to the pacing of the transition occurring in my practice, and this process of transformation was identifiable in documentation of iterative adjustments of the tools used for analysis, and in the metrics being measured.

Process analysis was linked to project analysis permitting recognition of new and emergent processes through my practice of design. Project analysis provided a different set of data for analysis that is more specific to the projects undertaken throughout this timeframe and to the transition taking place in my practice. Analysis of data collected through interviews, workshops, and co-creation activities was used to craft the sustainability narratives in the projects and within this research. It demonstrates the collaborative processes and responsiveness that design for transitions demands. Project analysis was also used to identify the designer's role in sustainability transitions and to examine how designers' knowledge could be constructed through an application of theory to design projects.

## 2.3 Closing remarks

This work has been guided by relational philosophies that make clear the relations between the living world, people and design. It has been framed by a critical pragmatism that acknowledges the importance of ethics and the designer's responsibility to matters of social justice and the environment. A mixed methods approach has facilitated the exploration of a broad range of interconnected activities. This has been presented as a case study that documents the transition taking place in my practice as well as the processes and projects within it. Analytic autoethnography has provided much needed flexibility to explore the personal dimensions of this transition and to analyse design practice through the lens of a design practitioner. This has been done while maintaining a critical analytic approach. Research through design using action research cycles has permitted designerly explorations that shift between reflection and action. Additional data was collected using ethnographic methods and analysed using grounded theory and reflective practice.

Part 1 of this thesis has situated this research in the field of design with a particular focus on sustainability. It has established the use of a critical pragmatic lens to engage with ethics and the idea of 'designers' responsibility' and to approach problems contributing to structural unsustainability. A review of the literature has revealed design's history of relative inaction and sustainability's subjugated role in niches of practice. It presented analysis of five key unsustainable aspects of design practice, and established the relation between design and sustainability as an aspect of design ethics. The research design has been outlined and has described how the mixed methods approach provided a level of flexibility suitable to the research activities undertaken. The remainder of this thesis is split into two parts: thinking and doing. This structure facilitates a distinction between the theoretical explorations that underpin this research and how they have been applied into practice.

## PART 2: THINKING

In *Part 1: Situating* this research was situated in the field of design, specifically communication and interaction design, and design's contribution to structural unsustainability was discussed. Its focus on the complex problem of consumption and waste was highlighted and the approach taken for the research was outlined.

In *Part 2: Thinking* a theoretical framework is presented through theories of consumption and waste, change, power, and social practices. The discussion throughout aims to contextualise these theories for application in communication and interaction design. It spans three chapters and closes with the presentation of a modified canvas that applies theories of change and social practices to a series of sketches that analyse the problem of consumption and waste.



## Chapter 3

### Practice makes perfect? Design, consumption and waste

The adverse environmental effects of consumption are widely recognised in literature from a range of fields including psychology, social sciences, economics and environmental management<sup>325</sup>. Its social impact has recently gained recognition as the visible aftermath of post-consumer waste overflows in global landfills and marine and land environments. In order to better articulate this problem for designers, and to analyse approaches taken to it through design work, this research has been framed by a critical pragmatism that recognises the importance of relational thinking, plurality, ethics and the designer's responsibility. This framing is guided by the work of Plumwood, Fry and Escobar<sup>326</sup> who all argue for relational thinking, plural approaches and political activation as part of addressing the hyper-separation of humanity and nature. This framing has informed the selection of theories relating to power, social practices, social change and consumption and waste. These theories form the theoretical framework used during analysis of the literature, collected data, and of the comparative case study presented as part of its findings. Each of the theories is worthy of deep exploration in its own right, but limitations on the scope of this research have prompted a succinctness in their presentation.

This chapter's focus is on consumption and waste, and spans two sections: the first provides design practice as a context for their application; the second interrogates the problem of consumption and waste more deeply, framing it as a design problem. The design practice problem is multifaceted and as such its interrogation begins here but continues throughout this thesis. At its core is the contribution made by design to the ongoing acceleration of consumption and waste, with communication and interaction design playing a pivotal role. Designers' inability to acknowledge or take appropriate actions to address this complex problem further complicate it. In *Part 1: Situating*, practice was explored as a locus of unsustainable activity. This chapter opens with further interrogation of this problem. It explores the constraints on design as an industry and its co-dependence on organisations and business for its own financial survival, then examines the unsustainable approaches that are embedded through interactions between clients and designers during project briefing. The broad lack of critical awareness on matters of sustainability is also

325 Beder, *Environmental Principles and Policies: An Interdisciplinary Introduction*. See also: Brekke and Howarth, "Two Alternative Economic Models of Why Enough Will Never Be Enough."; Ken Conca, "Consumption and Environment in a Global Economy," in *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (London, England: MIT Press, 2002); Jost Hamschmidt, *Case Studies in Sustainability Management and Strategy: The Oikos Collection* (Routledge, 2017); Jackson, "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption."; Susan Martens and Gert Spaargaren, "The Politics of Sustainable Consumption: The Case of the Netherlands," *ibid.*; Laurie Michaelis, "Ethics of Consumption," *ibid.*; Paul Ransome, *Work, Consumption and Culture: Affluence and Social Change in the Twenty-First Century* (Sage, 2005); Miriam Tatzel, "The Art of Buying: Coming to Terms with Money and Materialism," *Journal of Happiness Studies* 4, no. 4 (2003); *Consumption and Well-Being in the Material World*; "Money Worlds" and Well-Being: An Integration of Money Dispositions, Materialism and Price-Related Behavior," *Journal of Economic Psychology* 23, no. 1 (2002).

326 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; "Degrowth, Postdevelopment, and Transitions: A Preliminary Conversation."; Fry, *Design as Politics; Design Futuring; A New Design Philosophy: An Introduction to Defuturing; Becoming Human by Design*; Plumwood, *Environmental Culture*.

explored as part of this problem. Examination of a range of unhealthy conflicts in practice suggest designers are susceptible to experiencing a double bind. Unpacking this reveals several conflicts. Firstly, that the values of the designer can conflict with what is required of them in their work. Secondly, that ‘design as making’ in a time of accelerated consumption has become part of the problem. Thirdly, how a fixation on rapid solutions sometimes known as ‘solutionism’ can inhibit the full articulation of a problem and also limit the possibilities of plural approaches to it.

Each of these conflicts can be experienced separately or as a combined set, and typically lead to either inaction or knee-jerk technical approaches such as making greener things. Technical approaches are highlighted as part of the practice problematic, revealing how a ‘rebound effect’ typically affects the interactions people have with greener things. This rebound effect can result in increased usage or more careless behaviours surrounding these things: for example a hybrid or electric car being driven more frequently or compostable packaging being sent to landfill because of the misconception that it will breakdown easily<sup>327</sup>. Over the past decade, approaches to sustainable design have been documented through design research and reveal a focus on addressing waste through reimagining, repurposing or recycling materials. But to date there has been minimal effort from designers to dive into the root cause of the global waste problem: consumption<sup>328</sup>.

The second section explores the complex problem of consumption. The consumption problem combines unsustainable use and disposal of consumer goods with ‘systemic drivers [that] shape the quantities, costs, and benefits of producing, distributing, and dispos[al]’<sup>329</sup> of these goods. Excess consumption is presented as a problem of modern-human making that has permeated privileged societies and is impacting the planet and its living creatures<sup>330</sup>. The environmental impacts of excess consumption are felt through extraction activity, resource mismanagement, and the resulting ecological stresses from displacement and decreased biodiversity. Impacts can also be identified socially through the exploitation of people during the process of raw materials extraction, manufacturing, transportation and end-of-life disposal. These processes predominantly affect more vulnerable humans and non-humans rather than those in positions of power or privilege.

The ubiquity of design’s relationship with consumption is examined and I propose here that as Papanek suggests<sup>331</sup>, the combination of expert training and work experience in the design industry has led to the emergence of a ‘designer-consumer’, whose ability to approach the consumption problem is limited by their framing of design as a form of selling. An investigation of the psychological impacts of consumption on well-being reveals that decreased well-being emerges from a perceived reliance on ‘things’ as a source of

327 Alcott, “Jevons’ Paradox.”; York, “Ecological Paradoxes: William Stanley Jevons and the Paperless Office.”

328 Thorpe, “Design’s Role in Sustainable Consumption.” p 3

329 Dauvergne, “The Problem of Consumption.” p 218

330 Plumwood, *Environmental Culture*.

331 V Papanek, “Edugraphology—the Myths of Design and the Design of Myths,” *Looking Closer* 3 (1999).

happiness<sup>332</sup>. Impacts on well-being are also noted in the devaluing of people by labelling them as consumers<sup>333</sup>, whose worth becomes measured through their acts of consumption<sup>334</sup>. Next, consumption's intersection with waste is explored, revealing waste post-WW2 as a kind of movement, due to the increasing number of goods (disposable and otherwise) moving through (rather than into) our possession<sup>335</sup>. The ineffectiveness of technical responses to this problem is discussed, and the politics surrounding plastic—a significant waste material—are explored. This chapter closes with a discussion of how designers might design behaviours that 'unmake' waste, and explores the role that a slower pace might play as part of this approach. The problems of consumption and waste require critical thinking and urgent action. Designers have the potential to contribute to this process, however their action is currently limited by a number of conflicts and tensions in practice.

### 3.1 The design practice problem

Design practice is typically interconnected with other businesses and a significant gap exists between the theoretical discourse calling for increased attention to sustainability and the actions of practitioners. This disconnect between the outcomes of typical design practices and the global need for sustainable futures is reflected in a set of norms that can limit a designer's capacity to contribute to sustainable futures in meaningful ways. These practice norms have been identified in the literature<sup>336</sup>, and my understanding of them has been complemented by data collected through this research and from lived experience as a design practitioner. Some of these norms were presented in Chapter 1, this section extends on their initial introduction<sup>337</sup>.

This section explores five dimensions of the practice problematic: the design industry, the design brief, critical thinking in design, the designer's double bind, and technical design approaches. It opens with an investigation of design practice as an industry then explores how writing, receiving and responding to project briefs can be an inherently problematic process that could be redirected towards more sustainable goals. It explores critical engagement as a necessary component of any design practice, and provides a case in point that reveals how complex this process of engagement has become. This frames discussions of a series of conflicts that lead to a double bind that can be experienced by practitioners. As previously highlighted, the double bind can evoke feelings of apathy when a course of action (for example a sustainable design approach)

332 Brekke and Howarth, "Two Alternative Economic Models of Why Enough Will Never Be Enough."; Jackson, "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption."; Sen, "Capability and Wellbeing."

333 Soar, "The First Things First Manifesto and the Politics of Culture Jamming: Towards a Cultural Economy of Graphic Design and Advertising."

334 Peter Baehr, "The 'Iron Cage' and the 'Shell as Hard as Steel': Parsons, Weber, and the Stahlhartes Gehäuse Metaphor in the Protestant Ethic and the Spirit of Capitalism," *History and Theory* 40, no. 2 (2001).

335 Jean Baudrillard, *The Consumer Society: Myths and Structures* (London: SAGE Publications, 1998); Max Liboiron, "Modern Waste as Strategy," *Lo Squaderno: Explorations in Space* 29, no. 9-12 (2013); "Redefining Pollution and Action: The Matter of Plastics," *Journal of material culture* 21, no. 1 (2016).

336 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Dorland, "Routinized Labour in the Graphic Design Studio."; Springer, "Auditing Communication Design."

337 For more on the norms of practice please refer to Chapter 8.

feels simultaneously impossible yet necessary. Interrogation of the technical approaches designers commonly apply to sustainability reveals that in failing to design for behavioural change, technical approaches also fail to fully address consumption and waste. Discussion reveals how this leads to a ‘rebound effect’<sup>338</sup> where unsustainable behaviours can be reinforced rather than resolved or redirected.

The sustainability problem is complex and systemic, and a reversal of the current ecological crisis will require collaborative multi-disciplinary approaches. Before designers can move forward, the problems arising from design practice itself and its dependency on business must be acknowledged and addressed.

### 3.1.1 The design industry

It is evident that sustainable approaches are adopted by the few and not practiced by the many. Rather, as Boehnert argues, the design industry is led by the economic system it is situated within<sup>339</sup>. This suggests a belief that the lack of action on sustainability lies with the ‘systemic priorities of the design industry’<sup>340</sup> rather than the individuals acting within it. Pointing to the industry in this way permits an acknowledgement of the contributions made by a niche of practitioners who do address ecological and social needs, and in doing so, operate outside industry norms. This argument also acknowledges that designers are not intentionally or inherently unsustainable, nor lacking in values or ethics or deliberately ignoring them. Rather they are influenced by, and at the mercy of, external forces which are to some extent outside of their control.

Drawing on Giddens’ structuration theory<sup>341</sup>, designers could be described as agents with particular capabilities, whose collective actions contribute to the formation a larger structure (the design industry). In design, the recursive nature of practice has, over time, become increasingly conditioned by the economic context of the design industry. A designer’s actions can be impacted by the design industry, and designers can be influenced by and at the mercy of external forces that feel outside of their control. However, they are also agents who are capable of taking action that contravenes the recursive practices that are visible in industry norms. Structuration theory can be used to describe this constant interplay between agent and structure<sup>342</sup>, but it also reveals the designer’s double bind, where the interplay between structure and agent can generate a continual experience of wanting to action sustainability and feeling structurally inhibited in doing so. The designer’s experience of this double bind will be explored in more detail later this chapter.

338 Horace Herring and Robin Roy, “Technological Innovation, Energy Efficient Design and the Rebound Effect,” *Technovation* 27, no. 4 (2007); Edgar G Hertwich, “Consumption and the Rebound Effect: An Industrial Ecology Perspective,” *Journal of industrial ecology* 9, no. 1-2 (2005); Steve Sorrell, John Dimitropoulos, and Matt Sommerville, “Empirical Estimates of the Direct Rebound Effect: A Review,” *Energy policy* 37, no. 4 (2009); Trevor Zink and Roland Geyer, “Circular Economy Rebound,” *Journal of Industrial Ecology* 21, no. 3 (2017).

339 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 38-40

340 Ibid. p 38

341 Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*: Univ of California Press.

342 Ibid. p 70

Understanding where the limits of control are can increase a designer's leverage. As an industry, design is financially viable because of its participation in and contribution to this economic system. In some design practices, a reliance upon this participation for financial stability also shapes norms that lead to the design of unsustainable outcomes.

This points to a more systemic barrier preventing individual designers from embedding values and ecological priorities into design outcomes. If systemic barriers do inhibit the design of sustainable outcomes, then it could follow that critical engagement on sustainability with clients is needed in order for practitioners to overcome this. Critical thinking in practice is discussed in detail later in this section, but it is worth noting here that critical approaches take different forms. In the design industry this form tends to focus on and celebrate design as a mediator of culture without recognising the negative impacts of this<sup>343</sup>. It could be argued that awards-level critique is less critical, as accolades and awards tend to adhere to an aesthetic rather than an ethic. This suggests that the kind of critical thinking the industry needs in terms of sustainability is not the kind that is predominant in industry celebrations of 'good design'.

### 3.1.2 The design briefing process

One of the problematic norms in practice lies at the very beginning of the design process: the design briefing process. A design brief communicates a client's perceived problem and their desired outcomes to the designer. As these are often pre-determined by the client, the communication in the briefing process is relatively passive from the designer's perspective and the client usually takes the lead. Briefs present a perceived problem and solution to designers as a design project to be quoted on. Briefing meetings are a standard practice in most client-designer relationships; commonly, designers and clients undertake a verbal briefing which is sometimes (but not always) supported by a written document from the client. Typically, a process of questioning facilitates the designer's re-articulation of the problem through a 'response brief'. This documents the brief in writing and provides it back to the client to demonstrate an understanding of the problem, the desired solution and the project costs. Throughout this process the overarching direction of a brief is rarely questioned critically in relation to sustainability. This approach is typical of the briefing processes and positions designers in less powerful positions as receivers of a predetermined brief. In a power dynamic such as this one, the designer becomes relegated as a 'resource' and their agency is curbed<sup>344</sup>. In this subordinate role, the potential contribution that a designer could make to any broader strategy is limited, and the designer's input becomes restricted to the predetermined outcome.

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343 Julier, *The Culture of Design*.

344 Power dynamics and the interplay between power and change is discussed in greater detail in Chapter 4.

Communication designers typically enter projects at an end point. As outlined above, they take a verbal brief and then respond to it in writing, to quote on the project, to demonstrate their understanding of the desired outcomes, and to communicate the approach they will take. This late entry point means briefs are predominantly aesthetic-focussed which significantly inhibits a communication designer's capacity to contribute to strategy or to redirect a brief. However, there is scope for change for those who invest time in proposing alternatives as part of the return brief. Fry describes 'redirection'<sup>345</sup> as an opportunity for designers to respond to briefs in ways that shift projects towards more sustainable outcomes. This process can help educate clients and guide them towards outcomes that are more considered and sustainable<sup>346</sup>. However, to do so also requires eco-literacy and a deeper understanding of what sustainability means in design and how action could be taken. Such an understanding appears to be lacking in the norms of communication design practice and education.

Interaction designers can differ slightly here; an initial briefing meeting can be followed by a client budget allocation to involve a process of discovery or scoping, where designers can explore the problem in more depth in order to make more informed recommendations on suggested approaches. Interaction design briefs are often for longer term projects which when combined with engagement on discovery processes, can provide more opportunity to contribute to an organisation's strategic direction. This situates interaction designers in slightly more powerful positions than communication designers, however in either scenario, designers can lack the knowledge, agency or empowerment necessary to challenge a client's brief, proposed problem or suggested solution. This is where critical thinking on matters of sustainability becomes a crucial component of contemporary practice.

### 3.1.3 Critical engagement with sustainability in design

Without critical engagement around matters of sustainability designers will remain limited in their capacity to address it through their work. Critical thinking is needed not just in design, but in every professional domain in the Global North, where environmental and social issues typically lead to global impacts. A critical pragmatism in this thinking provides relational thinking and plural approaches as a frame for ethical and responsible interactions between humanity and nature. In a design context, critical thinking that is framed in this way and supported by increased ecological and economic literacy and theoretical knowledge such as socio-technical transitions theory<sup>347</sup>,

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345 Fry, "Redirective Practice."; *ibid.*; Fry, *Design Futuring*.

346 "Redirective Practice."

347 Frank W. Geels, "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study," *Research Policy* 31 (2002); Frank W Geels and Johan Schot, "The Dynamics of Transitions: A Socio-Technical Perspective," (2010); Johan Schot and Frank W Geels, "Niches in Evolutionary Theories of Technical Change," *Journal of Evolutionary Economics* 17, no. 5 (2007).

social practice theory<sup>348</sup>, and an understanding of power dynamics<sup>349</sup> could better inform approaches to sustainable outcomes. Critical engagement such as this can also reveal a designer's limitations—perceived or otherwise—as well as missed opportunities that point to knowledge gaps or cognitive biases in a design approach. Fine argues that 'a critical approach to sustainable design must avoid simply criticizing some work as less sustainable or lauding work that improves incrementally upon existing forms.'<sup>350</sup> Rather, this comes through deeper engagement with complex problems, increased eco-literacy and theoretical knowledge. Critical discourse uncovers opportunities for deeper engagement with people, processes and outcomes and can reveal pathways to increased sustainability for designers. It is often through a process of critique that designers expand their understanding of design. Critical engagement must extend beyond design outcomes' aesthetics or their significance as cultural artefacts. Engagement with the ethics and impact of unsustainable outcomes can open up a more critical approach to design that is temporal, and 'ontological'<sup>351</sup>. This could expose practitioners to alternative approaches that tackle the behavioural complexities that both sustainability and contemporary design present.

A packaging project presented as a case study by Fine deftly illustrates this complexity. In the *ReBrand and Re.New* project Fine's students collaborated to develop a low waste packaging solution that also renewed a brand to better reflect consumer's 'genuine and ethical aspirations'<sup>352</sup>. The case study presents a detailed approach to the greening of an existing product with retail presence that can be ingested or used on the body. The students' design process began with research spanning visual audits, a student-led life cycle analysis (LCA) for both the package and the product inside, competitor analysis, consumer analysis and a demographic reimagining with a green profile. The brief demanded a minimum of three interventions be made into the production or consumption of the package—one being a material intervention—and additional steps included the generation of information design systems, naming, taglines and rapid prototyping of the package in collaboration with industrial design students<sup>353</sup>.

348 T. Hargreaves, "Practice-Ing Behaviour Change: Applying Social Practice Theory to Pro-Environmental Behaviour Change," *Journal of Consumer Culture* 11, no. 1 (2011); Tom Hargreaves, Noel Longhurst, and Gill Seyfang, "Understanding Sustainability Innovations: Points of Intersection between the Multi-Level Perspective and Social Practice Theory," (3S Working Paper 2012-13, Norwich: Science, Society and Sustainability ..., 2012); Elizabeth Shove and Mika Pantzar, "Consumers, Producers and Practices: Understanding the Invention and Reinvention of Nordic Walking," *Journal of consumer culture* 5, no. 1 (2005); Elizabeth Shove and Gordon Walker, "Governing Transitions in the Sustainability of Everyday Life," *Research policy* 39, no. 4 (2010); Elizabeth Shove, Mika Pantzar, and Matt Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes* (Sage, 2012).

349 Manuel Castells, "Communication, Power and Counter-Power in the Network Society," *International Journal of Communication* 1, no. 1 (2007); Dowding, *Power*; Foucault, "The Subject and Power.,"; Tim Gee, *Counterpower: Making Change Happen* (New Internationalist, 2011); Steph Lawler, "Rules of Engagement: Habitus, Power and Resistance," *The Sociological Review* 52, no. 2\_suppl (2004); Lukes, "Power: A Radical View. The Original Text with Two Major New Chapters."

350 Fine, *Sustainable Graphic Design: Principles and Practices*. p 16

351 Ontological designing is described by Escobar as designing different ways of being in the world. It is discussed a number of times in this thesis. It is also discussed by Willis, Fry and Tonkinwise.

352 Fine, *Sustainable Graphic Design: Principles and Practices*. p 47

353 *Ibid.* p 47-51

In the case study presented, Fine's students selected a Gillette razor and applied this rigorous process to its redesign and rebrand. Their work was strong and thorough, and considering Fine's comments regarding critiques of sustainable design projects, it seems somewhat unfair to evaluate it. However, in the interests of demonstrating the degree of complexity facing practitioners, there are two critiques I will make of this project: one from an ecological sustainability standpoint, and the second from a socio-political perspective.

The ecological critique is obvious and lies in the product itself—the disposable razor. As one of the most frequently disposed of plastic items in modern bathrooms, a Gillette disposable razor can contain up to 60 different components, many of which are glued together, making it difficult to recycle<sup>354</sup>. It is a prime example of Braungart and McDonough's 'monstrous hybrid'<sup>355</sup>; an apt description for products that merge multiple materials. These hybrids are critiqued by Braungart and McDonough as representative of lost opportunities to collect the 'technical nutrients' that have been locked into their design and become unrecoverable at end-of-life disposal. To further illustrate the impact of such a 'monstrous hybrid', an older (1989) report from the Environmental Protection Agency estimated that two billion razors were being sent to landfill each year<sup>356</sup>. Taking this product's hybridity and disposability into consideration, (including making some allowances for population growth and concessions for possible reductions in product usage due to rising beard trends over the past decade<sup>357</sup>) the packaging is a minuscule portion of the product's overall ecological impact.

For communication designers who are rebranding and redesigning a product's packaging, addressing the product to be packaged may seem outside of their circle of concern, but this is just the kind of concern that designers need to start raising with their clients. The ecological crisis we currently face requires designers to step outside of their comfort zone and question the very nature of the things they design, and for packaging projects this includes the contents within. The crisis we face requires a level of fluidity around traditional disciplinary boundaries, and Boehnert suggests the need for designers to be capable of instigating and navigating such encounters if they are to contribute towards social change<sup>358</sup>. Whilst it may seem naïve to think that these conversations will bring change in any immediate sense, without engaging at this level, designers will remain complicit in the promotion of things that contribute to structural unsustainability. Extending critical thinking beyond the packaging to include a questioning of the broader system of the product itself could open up opportunities to discuss otherwise unconsidered alternatives. This could include business models that in this particular example could foster

354 Johnny Davis, "Inside the Very Weird World of Disposable Razors," *Esquire* 2016.

355 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*. p 98-99

356 Environmental Protection Agency, "Epa Journal," ed. John Heritage (<http://epa.gov>: Environmental Protection Agency, 1989). p 27

357 Rob Brooks, "The True Meaning of the Hipster Beard, According to an Evolutionary Biologist," *Quartz* 2017.

358 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 32



a culture of value and quality rather than one of disposability. If designers were better equipped to critically engage with the product before designing its packaging, they might spark the kind of conversation that could lead to decelerated production and consumption. This conversation is particularly important when designing outcomes that accelerate a culture of disposability and waste. Aspects of this line of questioning are evident in design discourse, but enabling these conversations with clients in the real world requires more from practitioners—more knowledge, more critical thinking, and perhaps even more gumption. These conversations provide an entry point to far deeper engagement, and challenge a status quo that is no longer viable. But challenging that status quo also challenges a practitioner’s personal financial security. The difficulty practitioners have in starting these conversations is understandable.

Adding to the complexity of deeper consultation with clients on matters of sustainability is a necessary engagement with socio-political perspectives. In Fine’s case study these perspectives appear to be lacking in relation to the chosen tagline, *be desired*. This is evident not only in how this tagline attempts to fulfil the project brief’s call to reflect the ‘genuine and ethical aspirations’ of a consumer, but also in how the tagline situates the project in a broader socio-political landscape. Fine discusses feminist politics of consumption, suggesting that designers need to avoid misogynistic rhetoric that has become normalised in modern society<sup>359</sup>. Particular to Fine’s argument here is the way that consumption, production and design appeal to the consumer as gullible or weak, associations that have been assigned to the feminine<sup>360</sup>. There is a significant body of feminist discourse around grooming, identity and desirability that is largely driven by patriarchal notions of beauty and femininity and the notion that the female body is unattractive in its untouched form<sup>361</sup>. The *be desired* tagline reinforces contentious norms around body hair and identity politics, suggesting that in order to be desirable a woman must adhere to a particular set of grooming standards that portray head hair as feminine and body hair as unfeminine<sup>362</sup>. This tagline’s rhetorical appeal is aimed at the female consumer who expresses aspects of their identity through acts of consumption. As a specific driver of consumption, an ecological concern could be raised here, however further to this, the use of such a tagline reinforces the structural problems of an androcentric society that subordinates women in similar ways to its subordination of ecology<sup>363</sup>. Designers have the power to change these narratives by creating alternative stories that challenge the

359 Fine, *Sustainable Graphic Design: Principles and Practices*. p xvii

360 See also: Nicki Lisa Cole, Alison Dahl %J Consumers Commodities Crossley, and Consumption, “On Feminism in the Age of Consumption,” 11, no. 1 (2009).

361 For more on this see: Jennifer Baumgardner and Amy Richards, “The Number One Question About Feminism,” *Feminist Studies* 29, no. 2 (2003); Karin Lesnik-Oberstein, “The Last Taboo: Women, Body Hair and Feminism,” in *The Last Taboo* (Manchester University Press, 2013); Marika Tiggemann and Sarah J Kenyon, “The Hairlessness Norm: The Removal of Body Hair in Women,” *Sex Roles* 39, no. 11-12 (1998); Merran Toerien and Sue Wilkinson, “Gender and Body Hair: Constructing the Feminine Woman” (paper presented at the Women’s Studies International Forum, 2003); Merran Toerien, Sue Wilkinson, and Precilla YL Choi, “Body Hair Removal: The ‘Mundane’ production of Normative Femininity,” *Sex Roles* 52, no. 5-6 (2005).

362 Lesnik-Oberstein, “The Last Taboo: Women, Body Hair and Feminism.” p 1-14

363 Plumwood, *Environmental Culture*.

dominant paradigm, exercising what Gee calls, ‘counterpower’<sup>364</sup>. As Gee outlines in his theory of counterpower, consciousness of a problem’s existence is a necessary first step<sup>365</sup> in confronting social problems such as those relating to the normalisation of patriarchal feminine ideals<sup>366</sup>.

This critique is not intended to downplay the lengths to which these students went under Fine’s instruction. On the contrary, their considered approach is to be commended. Rather this critique aims to demonstrate how much is at stake, how complex design has become, how much the designer must consider, and how challenging and all-encompassing work of this nature can be. Perhaps this goes some way to explain why it is so onerous to incorporate ecologically and socially sustainable approaches into commercial practice, and why practitioners are seemingly locked into a double bind where they feel ‘damned if they do and damned if they don’t’ when it comes to this kind of work.

### 3.1.4 The designer’s double bind

Several conflicts exist in design practice that impact how a designer acts and responds through their work, and what follows here is an attempt to unpack these tensions and to better understand how they can lead to a double bind for practitioners. As previously described, a double bind can be experienced when designers feel a course of action is simultaneously necessary and impossible—a common feeling for those trying to embed sustainability into their work. Double bind theory stems from social anthropology and was originally theorised by Bateson et al to describe a no-win situation experienced in families with schizophrenic communicative relations<sup>367</sup>. Their description of a parent/child relationship where love and affection is denied both when love is expressed and when love is withheld, is perhaps most aptly described as a ‘damned if you do and damned if you don’t’ scenario. Bateson et al hypothesise that a child’s experience of being unable to act while also feeling compelled to do so could lead to the development of schizophrenic symptoms, an experience they refer to as a double bind<sup>368</sup>. Gibney describes the double bind as ‘a communicational matrix, in which messages contradict each other, the contradiction is not able to be communicated... and the unwell person is not able to leave the field of interaction.’<sup>369</sup>

A designer trying to balance the tensions and conflicts present in contemporary practice is constantly challenged by contradictory messages, the most dominant of which may be to fulfil a brief without reinforcing structural unsustainability. The client-designer power dynamic can also prevent a designer from feeling empowered enough to communicate their concerns. Typically, designers are treated like (and often behave as if) they are resources who are reliant on

364 Gee, *Counterpower: Making Change Happen*.

365 Ibid. p 131

366 Counterpower is discussed in more detail in Chapter 4.

367 Gregory Bateson et al., “Toward a Theory of Schizophrenia,” *Behavioral science* 1, no. 4 (1956).

368 Ibid.

369 Paul Gibney, “The Double Bind Theory: Still Crazy-Making after All These Years,” *Psychotherapy in Australia* 12, no. 3 (2006). p 49

the financial reward that comes from performing a particular task. A way forward from this seems impossible, that is, they are unable ‘to leave the field of interaction’. Instead they must fulfil an unquestioned brief that will result in a designed outcome that is unsustainable. If a designer is unable to reconcile this interaction they could also become susceptible to decreased mental well-being. This adds to the stresses already placed on designers’ well-being, which is also compromised by ‘frequent long hours, stressful projects, glass ceilings and frantic working environments’<sup>370</sup>.

The tensions between fulfilling a brief, earning a living and doing the ‘right’ thing are made even more challenging when combined with attempts at designing for sustainability. It could be argued that regularly juggling these challenges has backed designers into a corner from which escape feels impossible. Three core conflicts can be identified that embody a designer’s experience of working in/for the design industry: compromising ethics/values for financial security, action-paralysis on sustainable making, and ‘solutionism’ as a focus in design. While these conflicts can present in several ways in design practice, their manifestation leads to a similar endpoint, the designer’s double bind. The designer’s double bind leads to the design equivalent of business-as-usual, where designed outcomes are created in ways that either completely ignore sustainability or simply fail to adequately address it.

The first conflict is evident in Boehnert’s assertion that the ethics and values of individual designers are not always embedded in work that is realised for the design industry<sup>371</sup>, yet designers are frequently reliant on the financial security that results from work of this nature. This financial reliance can strip designers of the power to attempt any redirection of a brief, and the risk of losing a project (and any accompanying financial rewards) can feel too significant to justify any attempt at redirection. The norms of practice seem to indicate that the only perceptible way forward in this scenario is for designers to answer the brief and design things the way they have always been designed—unsustainably. Reconciling this constant push back on personal ethics and values is a challenge that can leave designers despondent or feeling like they have ‘sold out’. Designers may want to contribute more but over time may feel physically, technically and emotionally incapable of addressing complex and structural problems, which can also lead to the emergence of this conflict. This can give rise to technical approaches that result in ‘greener things’. As the sole action design typically takes, greener things have no ultimate value or contribution to make in mitigating structural unsustainability. Though as part of design’s role in sustainability transitions, greener things provide technical improvements for any material outcomes being designed, and in this sense, may form part of the larger contribution that transitions projects make. An example here might be a communication designer’s specification of recycled stock as the only available option that improves the sustainability of a printed

370 Emily Gosling, “The Links between Creativity and Depression and How the Design Industry Can Tackle Mental Health,” *AIGA Eye on Design*, 12 September 2016 2016.

371 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 39

outcome. A preferable approach such as changing the core of what is being communicated or radically changing the outcome may be impossible due to the position of the designer and the lateness of their entry into discussions about the project's outcomes coupled with a lack of power over the approach being taken. As presented in the theory from Bateson et al, action that is desired but not reconcilable can add to the stress experienced<sup>372</sup> by designers.

The second type of conflict results in action-paralysis. Designers who do attempt to address sustainability through their design work may increasingly find that the very practice of making has become problematic. This additional layer of complexity is revealed when investigating the inherent issues with the actual 'things' made by designers. Whether design outcomes are material or otherwise, the making of desire must also be considered as part of the process of making. Dematerialising design without addressing its acceleration of consumption through manufactured desire does little to address the real problem at hand. In making things that are propellants of consumerism, it could be argued that the designer's actions are problematic regardless of any consideration given to technical or material sustainability. For example, a designer could create collateral and packaging for a brand using minimal and sustainable materials that could be reused in multiple configurations, or they could further dematerialise outcomes through the creation of digital or interactive experiences. These approaches might minimise some impact by reducing waste but underlying such a project is a brand's goal of drawing consumers' attention to goods and making their purchase desirable. In this example, the brand's goal which is achieved with the help of the designer, accelerates consumption. This outcome counteracts any potential for achieving sustainability through the design of collateral or packaging. A designer's cognisance of this could result in action-paralysis, where the designer's ability to take a course of action feels futile, and the lack of tools to adequately measure the sustainability of outcomes can add to this sense of futility.

This second conflict could explain the gap between the discourse in design theory and the action and behaviours of practitioners in relation to matters of sustainability. Comments<sup>373</sup> such as 'it's too big and too hard' and 'I'm not sure what we could be doing' reflect general feelings of helplessness. Lines of questioning that interrogate one's ability to affect change could easily lead to action-paralysis, and there is literature that provides explanations for this action gap from different perspectives. Inaction on matters of sustainability has been argued by Boehnert and Holland as being unethical<sup>374</sup>, a phenomenon that Glaser believes is rife throughout the design industry<sup>375</sup>. In discussions on ethics (or lack thereof), Tonkinwise argues that inaction arises from an inability to

372 Bateson et al., "Toward a Theory of Schizophrenia."

373 Taken from interviews with designers CD07 and CD03 conducted as part of this research.

374 Boehnert, *Design, Ecology, Politics: Towards the Eocene*; Holland, "Where Our Wild Things Are - Part 1."

375 Glaser, "Ambiguity and Truth.>"; Soar, "The First Things First Manifesto and the Politics of Culture Jamming: Towards a Cultural Economy of Graphic Design and Advertising."

convert information into working knowledge in practice<sup>376</sup>. So are designers really unethical, or do they simply require a deeper understanding of the ways in which they could act?

As previously discussed, Boehnert asserts that the problem lies less with the individual designer and more with the industry as a whole<sup>377</sup>, however it could also be argued that the industry is made up of individuals, and the industry's complicity is also an outcome of mass inaction from a group of individual actors. I would argue that this mass inaction is symptomatic of a broad lack of empowerment. The design industry lacks regulation or policy to govern its actions. One way that designers could overcome this is to adopt a conditional commitment approach to action. Conditional commitment is commonly used in collective actions; the idea that 'I will if you will' can provide a sense of strength that is felt from the collective even when acting individually<sup>378</sup>. Could designers who felt the support of their peers be empowered to engage with their clients on matters of sustainability? And how would this differ from any of the manifestos signed by the many but acted upon by the few? In discussions of the exercise of power through design that manufactures desire, Boehnert argues that practitioners 'maintain the illusion that there are no alternatives'<sup>379</sup> to practicing in ways that accelerate consumption. However this could return again to the argument from Tonkinwise that inaction results from a lack of knowledge of how best to act. The notion that empowerment could come from industry-wide conditional commitments is only beneficial if it is adequately supported by access to deeper knowledge of how to act sustainably in an industry-based design practice.

There is a clear pattern emerging here: that effective practice of sustainable design requires more knowledge. Yet as suggested by the conflict that leads to action-paralysis and the conflict of values compromise, even designers holding this knowledge can fail to action it in practice. This suggests that practitioners may also need to consider how they could make alternative contributions through their commercial work that might address sustainability in different ways. In the first instance, engaging in the aforementioned conversations with clients might lay a foundation for thinking differently about sustainability for future projects. This type of organisational transformation work could be undertaken while simultaneously exploring projects that can foster more sustainable futures. The tension between knowledge and (in)action can be complicated by the financial co-dependence that exists between designers and clients. Client projects place limitations on the designer; these include time

376 Tonkinwise, "Ethics by Design, or the Ethos of Things." p 131

377 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 38-40

378 For more information or to see this principle in action see: Roger Hallam, "Introduction to the Design of Conditional Commitment for Political Activists," Radical Think Tank, <https://radicalthinktank.wordpress.com/2015/11/01/introduction-to-the-design-of-effective-political-action-for-london-activists/>; J David Velleman, "How to Share an Intention," *Philosophy and Phenomenological Research* 57, no. 1 (1997); Sustainable Consumption Roundtable, "I Will If You Will: Towards Sustainable Consumption," (2006). Also relevant is the idea of 'awakening' collectivity: Riedy, Chris. "Waking up in the Twenty-First Century." *On the Horizon* 21, no. 3 (2013): 174-86.

379 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 29

constraints, budgetary restrictions, and specific directives in project briefs that eliminate particular approaches—each can rule out more sustainable approaches. Each of these creates significant tensions for designers that will continue to be unpacked throughout this thesis.

The third conflict centres around ‘solutionism’. Giridharadas argues that the fixation many professionals have on solutionism is part of the larger sustainability problem<sup>380</sup>, and I would argue that this solution fixation presents a third type of conflict for designers. ‘Solutionism’ is nurtured in designers who train to be (and subsequently often identify as) problem solvers. For designers, solutionism becomes reinforced through their (potentially shallow) engagement with methodologies such as design thinking and more dangerously through its application to the design sprint method. The sprint method rapidly paces through problem solving processes using design thinking to leap into solutions, rather than sitting with questions and allowing adequate time to think in order to better situate and more clearly articulate problems.

Problem solving as a practice was famously identified by Papanek as a somewhat troublesome approach in the 1970s<sup>381</sup>. In his essay *Edugraphology*, he demonstrates how designers who solve the problem of unsustainable car transport by persuading people to use public transport, do so at the expense of alternative and more sustainable solutions such as walking or riding. In its elimination of choice, the solution falls short in its approach and fails to reach its sustainable potential. Papanek’s argument is an apt demonstration of how this third double bind is experienced by designers, whose roles and responsibilities are frequently defined by this process of problem solving being applied to specific problems with pre-determined desired outcomes. By responding to a brief that is framed by a client-defined problem to solve (in Papanek’s example, the need to sell public transport) the solution is destined to misguide. Yet the designer’s job is to provide this client with this very particular solution. They are bound to the pursuit of a particular action, often by contract and almost always by the need for personal financial security.

These three conflicts can be experienced independently, but they frequently overlap and interact with one another. While each conflict can lead to an experience of the designer’s double bind, their interconnection can further complicate this experience. Considering this, how culpable is a designer in their compliance with this predefined brief? Designers are capable of and also responsible for re-briefing clients with a more nuanced understanding of the problem to be solved. So what risk does the designer face if they refuse to solve this problem in this way? Is it feasible for a designer to refuse to contribute towards projects of this nature, where outcomes are okay but not quite good enough? Have we reached a tipping point in our shared ecological crisis where making concessions in order to pay the bills is unacceptable? If so, what is the designer to do?

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380 Anand Giridharadas, *Winners Take All: The Elite Charade of Changing the World* (Penguin UK, 2019).

381 Papanek, “Edugraphology—the Myths of Design and the Design of Myths.”

One could argue that stepping away from compromising projects is merely making way for another designer to step in one's place. However, a step away that accompanies a voicing of concerns could be another matter. A step away that is supported by such open communication and an industry-wide conditional commitment that others will do the same could place designers in far more powerful positions. This kind of action would also rely on a shared sense of ethics amongst designers, the lack of which has been argued by many as a phenomenon in the design industry<sup>382</sup>. Critical communication between clients and designers is a crucial component here. Unless designers are willing to engage in challenging conversations with clients the prevailing conflicts of values compromise, action-paralysis, 'solutionism' and the resulting double bind will likely remain.

### 3.1.5 Technical approaches and the rebound effect

Adding to the complexities of the designer's double bind(s) is the hubris-filled notion that humanity can design its way out of any impending environmental crisis with technical solutions and design approaches that reconceive materials and their usage. In design, a focus on greening materials fosters technical approaches to the waste problem. In doing so, design fails to properly address the consumption problem, which is behavioural and cultural in addition to being material. What follows is a discussion of the technical processes that are employed in practice as a common approach to sustainability, and the way these might compound unsustainability through a 'rebound effect'.

Approaches to zero waste design presented by Braungart and McDonough as part of their cradle-to-cradle method mimic nature's cycles and consider the usefulness of materials<sup>383</sup>. Cradle-to-cradle principles reimagine materials as part of a circular economy that recovers materials as nutrients that form part of either a biological cycle or a technical cycle<sup>384</sup> which the authors call the biosphere and technosphere respectively<sup>385</sup>. This bold if not utopian view suggests that designers should not maintain a focus on efficiencies for poorly designed legacies; instead they propose a 'concept of eco-effectiveness [that focuses] on the right things... instead of making the wrong things less bad'<sup>386</sup>. The authors propose a new design assignment that focuses on building this new 'right'; a vision that includes energy and nutrient producing buildings and transportation, waste that becomes food or nutrients, and circular economies for product materials that create 'a world of abundance, not one of limits, pollution, and waste.'<sup>387</sup> In many ways this vision's utopian separation from the

382 Clive Dilnot, "Ethics in Design: 10 Questions," in *Design Studies: A Reader*, ed. Hazel Clark and David Eric Brody (Oxford; New York: Berg); Glaser, "Ambiguity and Truth.,"; Phil McCollam, "Redefining Design Ethics: Why Graphic Design Needs Professional Self-Regulation," *Design and Culture* 6, no. 3 (2014); Nini, "In Search of Ethics in Graphic Design.,"; Roberts, *Good: An Introduction to Ethics in Graphic Design*; Soar, "The First Things First Manifesto and the Politics of Culture Jamming: Towards a Cultural Economy of Graphic Design and Advertising.,"; Tonkinwise, "Ethics by Design, or the Ethos of Things."

383 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

384 Ellen Macarthur, "Towards the Circular Economy," *Journal of Industrial Ecology* 1 (2013). p 24

385 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*. p 93

386 Ibid. p 76

387 Ibid. p 91

realities of a wasteful industrial infrastructure follows ideas from Fuller that suggest we should affect change not by fighting the existing (problems/power structures/systems) but by building something new<sup>388</sup>. It also ties neatly into transition design's call for the crafting of compelling narratives for sustainable futures that present people with new ways of being in the world<sup>389</sup>. The call to action outlined by Braungart and McDonough is clear, it reimagines materials and their flows, but it must be acknowledged that in doing so, the approach is also highly technical.

In the cradle-to-cradle approach the 'nutrients contained in the materials shape and determine the design: form follows evolution, not just function.'<sup>390</sup> On the surface this appears to provide designers with an approach that sits neatly within a circular economy, and it is also underpinned with the aforementioned ideal of making 'good' things rather than making existing things 'less bad'. The appeal to designers as makers has merit, and while there may be some positive outcomes from a revised design process that reconceives material use in this way, the authors tend not to acknowledge the impact of consumption, leading to a mono-dimensional approach to the problem of waste. This is evident in communication design, where it could be argued that the cradle-to-cradle approach operates as more of a technofix to the old than a contribution to the new world imagined by the authors. Where a product designer may have the capacity to design for material flows in the biosphere and the technosphere, a communication design outcome following the same processes remains reliant on particular systems having already been addressed. Take for example Fine's packaging case study presented as part of the discussions of critical thinking and engagement in design: the students developing this design outcome maintained control over the external packaging and the branding of the product, but their design brief did not extend their circle of concern to the product inside. Their cradle-to-cradle approach was technically sound—they incorporated processes such as life cycle analysis and zero waste into their research and end design—however this technical focus also limited the overall sustainability of their approach. When creating an outcome such as packaging, the very nature of the role of communication design is to accelerate its contents' desirability and saleability—shelf appeal, brand appeal, and a values appeal all align with a business strategy that helps to do this. What remains in the user's possession after their 'zero waste' packaging has been discarded (hopefully into compost) is an unsustainable disposable product that will likely end up in landfill. In this example, the designers are less likely to contribute to the biosphere and technosphere imagined by Braungart and McDonough and the Ellen McArthur Foundation as part of the circular economy<sup>391</sup>. They are far more likely to encourage the accelerated consumption of a disposable product

388 Fuller, *Operating Manual for Spaceship Earth*.

389 Dan Lockton and Stuart Candy, "A Vocabulary for Visions in Designing for Transitions" (paper presented at the Proceedings of Design Research Society Conference DRS 2018: Catalyst, 2018).

390 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*. p 104

391 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*; Foundation, "Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition."



that is unlikely to contribute to either sphere at its end-of-life. This example demonstrates how technical approaches that maintain a focus on materials may not adequately address an outcome's surrounding behaviours.

A growing body of literature suggests ignoring the impact of human behaviours can lead to greener design solutions that contribute to negative influence<sup>392</sup>. The Jevons paradox<sup>393</sup> is an oft-cited example describing a 'rebound effect' that appears to accompany the design, manufacture and use of greener or more efficient things. This theory was developed by the 19<sup>th</sup> century British economist, Stanley Jevons<sup>394</sup>, and relates specifically to coal-efficiencies which York analyses from two perspectives<sup>395</sup>. The first is a classical-economic reading where increased efficiencies in industrial coal use led to a decrease in the cost per unit for goods in production. York presents the outcome of these efficiencies as the prompt for a perception of coal as an efficient form of energy production, thereby increasing its overall consumption and subsequently increasing investments in its technologies. The second perspective provided by York uses political-economic reasoning to describe how the capitalist endeavour (to increase profits) is in part achieved through improved efficiencies, and in part by increasing revenue. The latter is achieved by expanding the volumes of production thereby leading to increased usage despite any efficiencies gained<sup>396</sup>. A second paradox is presented by York to give this rebound effect a more contemporary setting, which he calls the paperless office paradox<sup>397</sup>. In this paradox, the increased use of computers and email-based communication results in expectations of decreased paper usage. However in York's argument, the ubiquity of networked printers and the computer's ease of access to files results in increased use of paper consumables. Both these paradoxes reveal the rebound effect in action, and both point to the behavioural aspects that are left unaddressed in each scenario. In York's words, 'relying on technological advances alone to solve our environmental problems may have disastrous consequences.'<sup>398</sup>

The literature presented here draws on the Jevons paradox to argue how green efficiencies including greener materials also impact usage behaviours. A greener car may be driven more, a greener light bulb may be left on for longer, and so on—it would seem that the greener the thing, the more wasteful are the behaviours surrounding it. These wasteful behaviours can feel justified to an end-user because the increased eco-efficiencies of the product at hand make its usage seem 'less bad'. Similarly, 'fat free' or 'sugar free'

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392 Alcott, "Jevons' Paradox.,"; Robert Gifford, "The Dragons of Inaction: Psychological Barriers That Limit Climate Change Mitigation and Adaptation," *American Psychologist* 66, no. 4 (2011); Herring and Roy, "Technological Innovation, Energy Efficient Design and the Rebound Effect.,"; Hertwich, "Consumption and the Rebound Effect: An Industrial Ecology Perspective.,"; York, "Ecological Paradoxes: William Stanley Jevons and the Paperless Office."

393 Alcott, "Jevons' Paradox."

394 William Stanley Jevons, *The Coal Question* (Рипол Классик, 2007).

395 York, "Ecological Paradoxes: William Stanley Jevons and the Paperless Office."

396 Ibid. p 143-145

397 Ibid. p 145-146

398 Ibid. p 146

food-labelling can justify overeating<sup>399</sup>. The prevalence of the rebound effect provides sound reasoning for the necessity of addressing human interactions and behaviours in addition to materials. Material changes pay lip service to one small part of a much larger and more complex problem—that of human behaviours and interactions as part of larger industrial and technical systems. Without some modification of behaviour, the greening of materials and processes in manufacturing will continue to fail to address problems relating to consumption. The replacement of single use plastic with compostable plastics is a prime example of this. On the surface this material change appears to address the mounting problem of plastic waste, however it does little to address the culture of disposability that underlies the problem, a culture that exists by design. This is discussed in more detail in the second section of this chapter.

Further to the issue of the rebound effect, are paradigmatic concerns that situate the technical zero waste approach within a linear economic mindset where continued growth is a desirable outcome. Linear economics adopts a ‘take-make-dispose’ approach that gives little or no consideration to a product’s end of life<sup>400</sup>, nor to any blips in a waste radar that might ping during each of the five lifecycle stages (raw material extraction, manufacture, packaging and transport, use, end-of-life disposal). Price plays a role in perpetuating the linear economy, as continued efficiencies in production lead to increased volumes with cheaper per-unit prices, making the economy reliant on faster disposal cycles in order to ‘keep up’ with production<sup>401</sup>. Value, usefulness and purpose (or rather a perceived lack thereof) are key aspects of this linear mindset that prevent a circularity in material flows. This often results in the linear economy’s endpoint sitting in the hands of consumers, who lack the access or knowledge required to keep materials in flow. Linear economic thinking could also strengthen the double bind for designers whose practices nest within it, provide services to it, and who are dependent upon it for their own economic survival. In her disruptive design method, Acaroglu promotes a life cycle thinking model based on the LCA methodology in order to shift thinking from linear to more circular modes<sup>402</sup>. Boehnert also discusses the need for designers to understand alternative economics in order to shift designers away from thinking that serves linear economics<sup>403</sup>. If greater consideration could be given to design interventions that foster circular economies, we could begin to transition away from design outcomes that continue to bolster the linear economy.

Cradle-to-cradle is a technical approach that frames waste as a design flaw, but it does not fully acknowledge its surrounding systems. As a design model it signposts the potential for a circular economy, but it should be recognised

399 Maeve A Kerr, Mary T. McCann, and M. Barbara E. Livingstone, “Food and the Consumer: Could Labelling Be the Answer?” (paper presented at the Nutrition Society 74.2, 2015).

400 Foundation, “Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition.”

401 Tim Jackson, “Prosperity without Growth?: The Transition to a Sustainable Economy,” (Sustainable Development Commission, 2009).

402 Acaroglu, *Disruptive Design Method Handbook*, p 43-45

403 Joanna Boehnert, “Anthropocene Economics and Design: Heterodox Economics for Design Transitions,” *She Ji: The Journal of Design, Economics, and Innovation* 4, no. 4 (2018).

that cradle-to-cradle is more than a design approach. Its success relies not only on design, but also on broad changes to business strategies and consumer behaviours in order to mediate material flows from a linear economy into a circular economy. In this sense, designers' actions may be limited, as cradle-to-cradle design does little without the necessary support systems in place. Since the linear economy's endpoint is frequently in the hand (or the rubbish bin) of consumers, the circular economy's success will also be reliant on well communicated behavioural change. Part of this communication would also need to address consumption. As Boetzkes argues, while potentially revolutionising the making aspects of design, 'the cradle-to-cradle system does not challenge the prevailing economy of resource harvesting, consumption, and profit'<sup>404</sup>—all of which are features of the linear economy. This failure to account for the structural inseparability of the problem of waste from the problem of consumption places cradle-to-cradle in a predominantly utopian setting, unable to be applied in most 'real' contexts.

Notions of nourishment for the planet and life are often presented and interpreted as utopian, yet these utopian views reveal great potential for the kind of world that is possible if Global North societies could transition to more sustainable modes of living. Despite this potential, it remains clear that a future based in more altruistic values will only be realised after an economic paradigm shift has occurred. This leaves designers to sit with the rising tension between acting upon their theoretical understandings of what it means to live and work sustainably, whilst remaining in a practice that may not permit any realisation of sustainability. Even with an understanding of the implications on inaction, a designer must earn a living wage, so for many the double bind remains. Despite this, for those who are open to it there is more to consider, and opportunities or projects that could release the double bind may present themselves. However any designer choosing to step away from the status quo will rapidly discover that design and consumer culture exist conjointly, and the endeavour to decouple them is a challenging one.

### 3.2 Understanding the problem of Consumption

The rapid emergence of consumption as a significant contributor to the ongoing global issues of sustainability reveals the urgent social and environmental need for positive change. This section aims to build a deeper understanding of the complex problems of consumption and waste and situates them as intersectional design problems that cannot be addressed independently of one another. This section explores designers' indoctrination into consumer culture, firstly through their education and secondly through their experiences working in the design industry. It discusses the impact of this indoctrination and presents the concept of the 'designer-consumer', whose expert mediation of consumer culture inhibits their ability to design against consumption. This leads to a study of the social aspects of consumption and an investigation of its impact on well-being.

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404 Amanda Boetzkes, "Resource Systems, the Paradigm of Zero-Waste, and the Desire for Sustenance," *Postmodern Culture* 26, no. 2 (2016). p 14

The focus then shifts to the interwoven problems of consumption and waste which leads to a discussion in the fourth and final section of ‘unmaking’ waste through the design of behaviours.

Rather than addressing consumption, design accelerates it<sup>405</sup> through the creation of a visual and experiential culture that revolves around designed things and the coercive promotion of their use<sup>406</sup>. Analysis and critique of consumption draws on a broad multidisciplinary body of literature. Papanek clearly articulated how ingrained consumption is in his critique of education that often results in designers who are ‘competent and competitive consumers rather than creative and autonomous individuals’<sup>407</sup>. Woodham’s investigation of design culture as a historical contributor to the consumption problem<sup>408</sup> has been queried as ‘not only hostile towards but contemptuous of design practice’<sup>409</sup> by respected design critic, Richard Buchanan. Julier<sup>410</sup> appears to avoid this criticism by analysing the social constructs of consumption and interrogating its ubiquity without drawing any conclusion on the social or environmental impact or the connection between design, consumption and sustainability. However, Thorpe fully acknowledges the impact of design’s connection with consumption<sup>411</sup>, and calls on Jackson’s analysis to reiterate the ‘vested interest’ that designers have in consumer culture<sup>412</sup>. This connection may be too close for comfort for some designers, and an investigation of it may feel like an unpicking of the professional threads that practitioners have fought for decades to weave together. In any case, the uncomfortable truth remains, and investigating consumption as both a social construct and a social/ecological problem could broaden perspectives and increase designers’ understanding of how to address it with clients and through design outcomes.

The social function of consumption is analysed by Jackson who reveals that value exchanges are considered by anthropologists as a necessary aspect of all societies. Baudrillard argues the superfluity of consumption is also part of the human condition, that it is through excessive (or surplus) consumption that individuals and societies ‘feel not merely that they exist, but that they are alive.’<sup>413</sup> Whilst Baudrillard’s view might feel odd at first, one could interpret this description of consumption as attached to a type of freedom that is common to life in the Global North. That the freedom to consume and the ability to do so creates a ‘life worth living’ often referred to as ‘the good life’. That all society wastes and that all societies have always wasted is central to the social function argument, but in the Global North, advertising and design have

405 Thorpe, “Design’s Role in Sustainable Consumption.”; Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” p 389 Manzini, “Design, Ethics and Sustainability: Guidelines for a Transition Phase.” p 10

406 Julier, *The Culture of Design*. ch 4

407 Papanek, “Edugraphology—the Myths of Design and the Design of Myths.” p 254

408 Jonathan M Woodham, *Twentieth Century Design*, vol. 5 (Oxford Paperbacks, 1997).

409 Richard Buchanan, “Twentieth Century Design,” *Journal of Design History* 11, no. 3 (1998). p 261

410 Julier, *The Culture of Design*. ch 4

411 Thorpe, *Architecture and Design Versus Consumerism*; “Design’s Role in Sustainable Consumption.”

412 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” p 389

413 Baudrillard, *The Consumer Society: Myths and Structures*. p 43

fuelled this wasteful behaviour<sup>414</sup> thereby accelerating consumption and the subsequent waste. Baudrillard outlines the sequencing of consumption as firstly, seeking happiness, and secondly seeking out objects that provide satisfaction<sup>415</sup>. The ‘fatal flaw’ of consumption is this myth of satisfaction, and many have argued that materialism and decreased well-being go hand-in-hand<sup>416</sup>.

Jackson describes the common aim underpinning the pursuit of satisfaction through consumption is to seek meaning and stave off anomie—‘a potentially catastrophic loss of meaning’<sup>417</sup>. Whilst this pursuit presents differently from one society to the next, the aim remains the same, and in the Global North much of this meaning is made through the culture of design. In affluent societies the accumulation of things that can signify success or belonging (colloquially referred to as ‘keeping up with the Joneses’). This is understood in social psychology as appeasement behaviour; one that provides the consumer with feelings of satisfaction and well-being<sup>418</sup>. According to Sen, this is an attempt at living a life without shame<sup>419</sup>, and Jackson believes this results in a need for individuals to more deeply investigate the self as a social construct<sup>420</sup>. Such an investigation may reveal how the consumption of a particular set of goods connects with a desire to be seen in a particular way—to reflect a particular lifestyle. Slater emphasises the individual in consumer culture; individual choice, individual culture (personal taste) and identity construction are key in his analysis of consumer culture<sup>421</sup>. But for Baudrillard, it is not the individual things that have social significance, rather their configuration and relationship to one another that provides an ‘overall social “perspective”’<sup>422</sup>. In other words, it is the variations in possessions that signify a social position and conformity to a social set. Here Baudrillard connects narcissism with consumption—that the desire to consume is driven by the desire to be perceived by others in a particular way—and he points to advertising as providing the motivation and the means for immediate appeasement of these desires through the acquisition of things. Advertising and design are also pinpointed by others in their creation of desire and subsequent push to satisfy it through acts of consumption<sup>423</sup>.

Whilst many communication design practitioners would argue that advertising and design are distinct and separate disciplines, this argument cannot go unchallenged, as these two disciplines are also connected and overlapping

414 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Dauvergne, “The Problem of Consumption.”; Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” Thorpe, *Architecture and Design Versus Consumerism*.

415 Baudrillard, *The Consumer Society: Myths and Structures*. p 69

416 For more on this see Ken Conca, Tim Jackson, Armatya Sen, Miriam Tatzel, Ann Thorpe, and Nigel Whiteley

417 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” p 368

418 Ibid.

419 Sen, “Capability and Wellbeing.”; “The Living Standard,” *Oxford Economic Papers* 36 (1984). See also Elias and Freud

420 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” p 373-375

421 Don Slater, *Consumer Culture and Modernity* (Polity, 1997). ch 1

422 Baudrillard, *The Consumer Society: Myths and Structures*. p 59

423 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Dauvergne, “The Problem of Consumption.”; Thorpe, “Design’s Role in Sustainable Consumption.”; Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” p 389 Packard and McKibben, *The Waste Makers*.

in their aims. Most frequently, the end-goal for communication design (and interaction design too) is to drive profitability for a client. When this presents as an advertisement, the sales-driver is more obvious, however many designed outcomes are an obfuscated version of this, and whilst a particular designed end-outcome may look and feel different to an advertisement, its aims can be the same—to increase profit, profile or market share for a client. As such, Bourdieu and others consider both advertising and design together as cultural intermediaries<sup>424</sup>. Acknowledging design's role in accelerating consumption is a necessary step in adequately addressing it as part of the considerations of sustainability in a design context, and the added challenge this poses to designers is considerable.

### 3.2.1 Design as performed by the designer-consumer

Consumption plays a significant yet ubiquitous role in a designer's life. Traditional client-designer relationships often revolve around the aim of accelerating consumption as a means to raise a brand's profile, and to increase profits and market share for clients and their stakeholders. As identified in Papanek's argument<sup>425</sup>, designers are trained as consumers. I would argue that as a result the designer emerges as an expert consumer, who I call the 'designer-consumer'. Their implicit understanding of how to fabricate desire and their expert mediation of consumer culture limits their ability to think outside of a consumer mindset. Another way of understanding this concept is through Conway's Law, which in simplistic terms, states that a digital product's structure will reflect the organisational structure of its makers<sup>426</sup>. Applying Conway's Law in an interaction design context could result in a website that reflects the concerns of an organisation rather than addressing the needs of its users, or a piece of software that is modular rather than monolithic because it has been engineered using a small teams approach. In both examples, the end product reflects the communicative abilities and organisational structure of the makers. Here I suggest that in communication design, 'designer-consumers' perpetuate consumer culture through their work as an ongoing reflection of themselves as expert consumers. Furthermore, designing anything other than a tool of consumption poses a challenge for any designer whose thinking has been engrained by a neo-liberal capitalist society, where consumption is the main process through which individual and social value is realised. Julier writes that 'design takes advantage of and normalizes the transformations that neoliberalism provokes.'<sup>427</sup> This suggests that design culture under neo-liberalism has not only become more complex, but also that design nurtures the competitive mindset of neo-liberalism through its engagement in the work of

424 Pierre Bourdieu, *Distinction: A Social Critique of the Judgement of Taste* (Cambridge, Mass.: Cambridge, Mass.: Harvard University Press, 1984); Lisa De Propris and Samuel Mwaura, "Demystifying Cultural Intermediaries: Who Are They, What Do They Do and Where Can They Be Found in England?," in *Discussion Paper*, ed. Birmingham Business School (University of Birmingham, 2013); Justin O'Connor, "Intermediaries and Imaginaries in the Cultural and Creative Industries," *Regional studies* 49, no. 3 (2015).

425 Papanek, "Edugraphology—the Myths of Design and the Design of Myths." p 254

426 Gene Kim, "How to Design with Conway's Law in Mind," (2016), <https://dzone.com/articles/how-to-design-with-conways-law-in-mind>.

427 Julier, *The Culture of Design*. p 241

‘differentiation’. From unique brand propositions to packaging that maximises shelf appeal to rise above its category, much of post-1980s design mediates culture through these competitive acts of differentiation. While this process of mediation is often presented as a linear sequence that situates design between production and consumption, design’s mediation of culture is far more complex and embedded than this linear positioning can adequately communicate<sup>428</sup>. It is highly dependent upon the scale, density or proximity of elements of a design culture, the dynamics of that culture in terms of the temporality of its transmission, and the materiality of design itself. In this sense, design’s role as a cultural mediator of consumption and production is dynamic, interactive, place-based and constantly engaged in exchange cycles, generating value and transmitting culture through a series of interconnected moments. These moments take a number of forms (from places to products to experiences and events<sup>429</sup>). These combine as part of the social practices that are accelerating unsustainable levels of consumption in the Global North.

Very few Global North designers are exempt from this because very few Global North designers operate outside of this structure. Even those designing for the health sector can be influenced by an underlying neo-liberal agenda. For example, designing medical packaging and ensuring a high level of information design for instructional leaflets and accessibility for packaging can be helpful for ailing individuals, but beneath this it is building profit for pharmaceutical companies, sometimes at the expense of the actual health and well-being of patients. This is a challenging argument to make, as improved information and accessibility in medication can save lives. Yet it is also in the pharmaceutical industry’s interests to sell medication rather than offer it in conjunction with healthy alternatives such as lifestyle changes.

Not unlike Papanek’s public transport example, the work produced by designers in the health sector can help sell one option at the expense of another. There are obvious limitations to this argument, particularly in relation to the treatment of life-threatening illnesses, but a counterargument also exists. The extent of these limitations is perhaps best demonstrated by recent industry data that reveals ninety percent of pharmaceutical companies spend more on marketing than on research and development<sup>430</sup>. This same data set reveals that one of the industry’s largest corporations, Johnson and Johnson, spends twice as much on marketing as they do on research and development,<sup>431</sup> making their economic priorities and corporate politics clear. So when it comes to the health sector, what are designers really designing? Information for a population of happy healthy humans, or information that garners corporate profits from the continued poor health of its customers?

428 Ibid. p 13-17

429 Ibid. p 249-253 Bjögvinsson, Ehn, and Hillgren, “Design Things and Design Thinking: Contemporary Participatory Design Challenges.”

430 Rebecca Hill, “Big Pharma Infographic: Profits over People,” (2016), <https://emedcert.com/blog/big-pharma-infographic>.

431 Statista, “Johnson and Johnson Statistics & Facts,” Statista, <https://www.statista.com/topics/1517/johnson-and-johnson/>. See also: <https://www.statista.com/statistics/266407/research-and-development-expenditure-of-johnson-und-johnson-since-2006/>

The decisions we make as designers reflect our humanity and help define the kind of world we live in. In a Heideggerian sense these decisions and actions are contributing to a designer's *dasein*, or way-of-being-in-the-world<sup>432</sup>. A deeper engagement with the theories of consumption could empower designers to make an 'ethico-political' commitment to address issues of consumption within their commercial projects. Supporting this 'ethico-political' commitment with personal engagement through a changed way of being in the world can amplify the outcomes in practice. This kind of realignment of a designer's priorities could begin as a shift in practitioner mindsets—from designer-consumer to a kind of designer-transformer. Such a shift could enable the creation of work that might sit outside of neo-liberal capitalist structures, that might decelerate consumption and waste and in doing so might foster more sustainable ways of being in the world.

### 3.2.2 Consumption and well-being

Consumption is not just an environmental problem, but also a social one that impacts well-being. Literature from many disciplines tells a compelling story about the human impacts of consumption; from the mistreatment of people in manufacturing/supply chains to the reduction of well-being in consumerist societies<sup>433</sup>. There is also a wide body of literature that investigates material goods as part of seeking satisfaction, revealing the connection between consumption and well-being as part of an overall pursuit of happiness<sup>434</sup>. These works describe how seeking well-being and fulfilment through excess consumption is futile and report that the opposite is in fact true: that excessive consumption and materialism reduce well-being. The interrogation of consumption is predominantly an economist's endeavour, but sociological interest in the human aspects of consumption as a temporal and incremental social practice suggest it is much more than an economic concern.

Consumer theory typically focuses on the economics of consumption as the act of buying and consuming goods and services. Lancaster's perspective on consumer theory interrogates the characteristics of goods, and explores how they multiply and overlap to provide utility (used in this sense to describe the usefulness or enjoyment of goods)<sup>435</sup>. Of interest in Lancaster's new consumer theory is the investigation of utility as a characteristic and how this connects with Sen's ideas<sup>436</sup> of functioning and capabilities as part of human well-being. Sen discusses how some determinations of a 'standard of living' view utility as a desire to be fulfilled without measuring the satisfaction gained, but for Sen, both desire and satisfaction must be considered relationally as part of utility<sup>437</sup>.

432 Martin Heidegger, *Being and Time* (Suny Press, 2010).

433 Mihaly Csikszentmihalyi, "The Costs and Benefits of Consuming," in *Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006); Dauvergne, "The Problem of Consumption."; Jackson, "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption."; Tatzel, "Money Worlds" and Well-Being."; Thorpe, "Design's Role in Sustainable Consumption."

434 Authors discussing this include Tim Jackson, Ken Conca, Ann Thorpe, Miriam Tatzel, Ezio Manzini

435 Kelvin J Lancaster, "A New Approach to Consumer Theory," *Journal of political economy* 74, no. 2 (1966).

436 Sen, "Capability and Wellbeing."; "The Living Standard."

437 "Capability and Wellbeing."; "The Living Standard."



His functioning/capabilities approach explores well-being as the relation between what we could potentially do, what we are able to do and what we choose to do. Sen's idea of capabilities (things we are able to do and choose to do) and functionings (things we can achieve or do in life) are explored as interconnected aspects of self. He explains that functionings can be simple (being nourished) or complex (being respected) and offers the concept of well-being as the combination of simple and complex functioning with the capability to live a life of your own choosing. For example, a rich person who has chosen to fast is choosing malnourishment, their well-being is not impacted as they have the freedom to choose to eat—they are able and can choose (capabilities) and are doing what they choose (functioning). By contrast, a starving person who is living in poverty is not choosing malnourishment, so their well-being is compromised as a result of their lack of freedom to choose to eat. Sen sees capabilities and functioning as intrinsic aspects that contribute to the achievement of well-being, but suggests there are 'positive freedoms' associated with capability<sup>438</sup>. Being capable of something but feeling/being unable to choose it equates to a lack of capability which in turn reduces well-being. To return to the food example, being capable of eating (that is, having access to food and the ability to eat it) but choosing not to eat out of fear (for example food phobias experienced with eating disorders) reduces well-being, as the person's fear decreases their freedom and capability to nourish themselves.

Sen's construction of well-being provides an important foundation for interpreting consumer theory from a human perspective. Where consumer theory focuses on the characteristics and utility of goods, Sen focuses on the personal—what someone can do or achieve as a result of consuming goods<sup>439</sup>. This is echoed by Manzini and Walker, who investigate this concept of capability through systems of enablement and disablement<sup>440</sup>. Manzini and Walker recognise that much of consumption is tied to goods that disable people by eliminating skills that maintain capabilities. For example, growing food and/or preparing a meal from whole ingredients versus the mixing and heating of pre-prepared goods. Manzini argues that convenience goods and services are disabling people, and that design has contributed to these systems of disablement<sup>441</sup>, and Walker calls for a reassessment of wealth creation through these systems<sup>442</sup>. This notion of the maintenance of capabilities shares some similarities with Max-Neef et al's theory of needs<sup>443</sup>, which suggests multiple needs can be met through satisfiers that are part of our everyday practices. Expanding on the aforementioned example of food, growing food from seed, preparing a meal from those whole ingredients and eating that meal with family or friends, satisfies needs beyond subsistence. This somewhat slower

438 "Capability and Wellbeing."

439 Ibid.; Amartya Sen, "Freedom of Choice," *European Economic Review* 32 (1988).

440 Ezio Manzini and Stuart Walker, *Enabling Solutions for Sustainable Living: A Workshop* (University of Calgary Press, 2008).

441 Ibid. p 15

442 Ibid. p 28

443 Manfred Max-Neef, Antonio Elizalde, and Martin Hopenhayn, "Development and Human Needs," *Real-life economics: Understanding wealth creation* (1992). p 204-210

process also satisfies the need for participation, creation and affection<sup>444</sup>, thereby creating opportunities for multiple needs to be satisfied through this set of daily practices. Whilst these food-related everyday practices are slower than their convenient but disabling counterparts, they contribute more to well-being by maintaining the necessary capabilities to foster well-being outside of consumption.

Disabling and enabling systems are both measured as part of economic analysis through the gross domestic product (GDP) output, with high GDP volumes reported as a success. For example, increased spending on pre-prepared food would be recorded as GDP growth, however the disabling aspects of nourishment provided via pre-prepared food would not be reflected as a negative aspect of this growth. Research conducted by Tatzel<sup>445</sup> points to the GDP measuring stick as flawed in its assumptions that all growth is good and that resources are both infinite and at our disposal. Her research reveals that materialism and reduced well-being go hand-in-hand and that social needs cannot be met by possessions. Yet in the Global North the measurement of consumption (through GDP) is used as the principal gauge of success, disregarding well-being as an important part of a functioning society. Jackson suggests that a new approach is necessary<sup>446</sup>, one where social and environmental value takes precedence over financial and material wealth. Thorpe reiterates this through her suggestion that well-being should be addressed through alternative means such as connection, activity, mindfulness, learning and cooperative behaviours<sup>447</sup>. These alternatives are also in line with thoughts from Csikszentmihalyi<sup>448</sup>, who offers states of ‘flow’ as a way of achieving happiness outside of consumption. He suggests that flow comes from engagement in creative activities such as playing music or drawing and that conversely, material wealth does not add to flow, rather—at a certain threshold—will detract from our existing flow. These alternative approaches to seeking happiness connect back to Manzini’s enabling solutions, to Max-Neef et al’s satisfiers, and to Tatzel’s suggestion that reducing the desire to consume can improve overall contentment<sup>449</sup>. Thorpe suggests that design can support these alternative means to happiness, she encourages designers to disconnect as ‘commercial actors’ and instead focus on creating ‘strategies that help us meet needs with fewer purchased solutions’<sup>450</sup>. This correlates with suggestions from Fry<sup>451</sup> and Escobar<sup>452</sup> that ‘autonomous designers’ are better able to

444 For more on this see: Manfred Max-Neef and Gideon Kossoff.

445 Tatzel, *Consumption and Well-Being in the Material World*; ““Money Worlds” and Well-Being.” See also literature from Sen (1976) Max-Neef (1995); Boulding (1945); Offer (2000).

446 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.” p 389

447 Thorpe, *Architecture and Design Versus Consumerism*. p 66

448 Csikszentmihalyi, “The Costs and Benefits of Consuming.”

449 Manzini and Walker, *Enabling Solutions for Sustainable Living: A Workshop*; Max-Neef, Elizalde, and Hopenhayn, “Development and Human Needs.”; Philip B Smith and Manfred A Max-Neef, “A Human Economics for the Twenty-First Century,” in *Economics Unmasked: From Power and Greed to Compassion and the Common Good* (Green books Totnes, Devon, 2011); Tatzel, *Consumption and Well-Being in the Material World*. p 2

450 Thorpe, “Design’s Role in Sustainable Consumption.” p 15-16

451 Fry, “Design after Design Workshop.”see also Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

452 *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

address sustainability by disconnecting from commercial practice and clients and working outside of the status quo<sup>453</sup>. A focus on meeting needs rather than selling wants not only encourages more sustainable modes of consumption, it could also approach the problems of upstream and downstream waste.

### 3.2.3 Consumption and waste

The issue of waste as a by-product of consumption poses an immediate ecological and social threat. Waste management challenges the Global North, where the push to consume is frequently coupled with an inability to adequately manage the consequences. The historical reliance on selling waste as a commodity to China has meant much of the waste created in the Global North has been sent offshore, however China's recent decision to stop buying most of this waste has resulted in a necessary rethinking of how this waste is managed in Australia and other Westernised countries<sup>454</sup>. The wasteful culture prevalent in the Global North exists by design. Liboiron outlines how the post-WW2 values-shift from reusables to disposables was designed by American industry to move goods through rather than into our possession<sup>455</sup>. This concept of goods as a throughput to waste is also discussed by Baudrillard who argues that 'we live to the pace of objects, live to the rhythm of their ceaseless succession.'<sup>456</sup> Baudrillard's discussion of what he calls 'object pathways' reveals how consumers are moved logically from one object to the next. This is easily identifiable in upgrade behaviours surrounding mobile devices<sup>457</sup> and it closely connects with Liboiron's description of waste post-WW2 as a kind of movement<sup>458</sup>, where a pivot from war-time frugality changed the material nature of goods to increase their disposability. This in turn increased their circulation, boosting the economy and with it, the volume of waste. But changing material goods from durable to disposable was more than an economic endeavour; Packard<sup>459</sup> reveals how this was amplified by an intentional (designed) shift of cultural and social values through the fabrication of desire. He describes how this economic and social stimulation strategy was amplified in the mid-1950s first through policies that supported designed obsolescence as an economic growth strategy, followed by an intentional expansion of personal consumption to meet policy-induced increased production capabilities<sup>460</sup>. A mere decade later the social impact of this was evident in the naturalisation of disposables and the maturation of materialistic culture<sup>461</sup>. Opportunities for embracing a more circular economy exist, however

453 This will be discussed in more detail in Chapter 6.

454 James Conca, "Incentive to Innovate: China Will No Longer Take Our Junk for Recycling," *Forbes*, <https://www.forbes.com/sites/jamesconca/2017/11/16/china-will-no-longer-take-our-recycled-junk/#628cb9d72122>; Phil Lasker, Jenya Goloubeva, and Bill Birtles, "China's Ban on Foreign Waste Leaves Australian Recycling Industry Eyeing Opportunities," *ABC News*, <http://www.abc.net.au/news/2017-12-10/china-ban-on-foreign-rubbish-leaves-recycling-industry-in-a-mess/9243184>

455 Liboiron, "Modern Waste as Strategy." p 9

456 Baudrillard, *The Consumer Society: Myths and Structures*. p 25

457 Robert Crocker, "Getting Closer to Zero Waste in the New Mobile Communications Paradigm: A Social and Cultural Perspective," in *Designing for Zero Waste* (Routledge, 2013).

458 Liboiron, "Modern Waste as Strategy."

459 Packard and McKibben, *The Waste Makers*.

460 *Ibid.* ch 3

461 Liboiron, "Modern Waste as Strategy." p 10

the sheer volume of waste that is produced by the Global North could prove problematic without first addressing the underlying issue of excess consumption.

The designer's typical response to this problem is to redesign the materials being used by 'greening' them. Thorpe explains that this is led by the designers' commercial mindset and the subsequent inability to generate ideas that sit outside of the realm of commerce<sup>462</sup>. This has resulted in a reliance on making greener things, or 'making consumerism "better"'<sup>463</sup> as default responses. Unfortunately these responses tend to reinforce rather than address what is unsustainable. To return to an example raised in the first section of this chapter—many single-use plastic products are now being replaced with single-use compostable plastic versions. Whilst a compostable replacement is certainly more desirable than its not-always-degradable counterpart, its approach to the waste problem and the system as a whole does not address the disposable mindset that underlies it. Furthermore, single-use compostable plastics contribute to the reinforcement of other sustainability problems such as monocultures, the decline of pollinators, soil degradation, mistreatment of farmers and farm workers and issues of food security as a consequence of the rising incidence of land desertification. Making waste out of seemingly better materials does little to address the full complexity of the problem at hand, and further to this, waste is not the root-cause of the problem, consumption is.

Consumption drives the waste problem. In Sweden, this is seen as an opportunity to solve an energy problem: by burning waste at high temperatures and capturing the energy released through steam to provide electricity<sup>464</sup>. Several countries are exploring waste-to-energy as a 'solution' to the waste problem, including Australia<sup>465</sup>, however these facilities still create significant air pollution and they are disproportionately situated in under-privileged communities<sup>466</sup>. Whilst the waste-to-energy process is 'sold' as being less polluting than coal, considering the volume of renewable energy options available, its relevance as a 'solution' is barely debatable. The dangerous rhetoric surrounding the burning of waste has badged it as a renewable energy, however much like the issue of compostable single-use products, the 'solution' that waste-to-energy facilities present, reinforces structural unsustainability and environmental injustices. As argued by White, any shift towards sustainable futures should be just in its actions and outcomes<sup>467</sup>. The environmental injustices embedded in an approach such as waste-to-energy is evidence of a failure to fully address the needs of societies, present and future. Waste-to-energy facilities contribute to what Fry calls 'defuturing'<sup>468</sup> in a number

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462 Thorpe, "Design's Role in Sustainable Consumption."

463 Ibid. p 15

464 Jonas Fredén, "The Swedish Recycling Revolution," <https://sweden.se>, <https://sweden.se/nature/the-swedish-recycling-revolution/>.

465 Jewel Topsfield, "Waste to Energy Plant Planned for Melbourne's West," (2018), <https://www.smh.com.au/environment/sustainability/waste-to-energy-plant-planned-for-melbourne-s-west-20181019-p50asd.html>.

466 Ana Baptista, "Garbage in, Garbage Out: Incinerating Trash Is Not an Effective Way to Protect the Climate or Reduce Waste," <https://theconversation.com/garbage-in-garbage-out-incinerating-trash-is-not-an-effective-way-to-protect-the-climate-or-reduce-waste-84182>.

467 White, "Creative Labour/Critical Designs/Just Transitions Imaginaries."

468 Tony Fry, *Design Futuring*.

of ways; the plants require significant energy to operate<sup>469</sup>, they create a demand for waste leaving the underlying problems relating to consumption unaddressed<sup>470</sup>, and they reduce well-being through increased pollution and environmental injustices<sup>471</sup>. Their upfront investment costs alone are significant enough to lock down unsustainable energy production processes for many years to come.

The technologies that make ‘solutions’ like compostable plastics and waste-to-energy facilities possible are remarkable, however these technologies are limited in their approach to the waste problem and fail to address underlying problems of consumerism and disposable/convenience cultures. As solutions they are inhibited by their technocracy; that is to say, they are disconnected from the social and political aspects of the problem they approach. Take the example of compostable plastics: it is a brilliant technology. A troublesome piece of waste that is causing significant damage to the environment, particularly to marine life, has been seemingly neutralised by this material change. However this environmental impact is but one dimension to the plastics problem. The use of plastic in packaging and in products themselves has become ubiquitous, increased efficiencies in its manufacture have led to significant reductions in its cost, and its use has increased exponentially. The social dimensions to this problem reveal a very human aspect that is locking this material into our lives—disposable culture. Notwithstanding the issues of disposability are far more extensive than weekly use of a few takeaway coffee cups or a handful of straws. Without also addressing the culture around single-use and disposable products there is little that a material change can do other than marginally reduce the impact of a waste stream while increasing cross-system impacts.

A growing culture of disposability frames many things in the Global North as disposable, from coffee cups to relationships and everything in between<sup>472</sup>—there is very little that maintains any perceived permanency. This disposability is evident in emerging data from social media interactions that reveal transient sharing through Instagram stories or Snapchat gaining traction over longer term account functions such as newsfeed sharing<sup>473</sup>. We have reached a time where even electronic goods that would traditionally be repaired and used for long periods of time, are now treated more like disposable products<sup>474</sup>—best captured in the much-heard phrase, ‘it’s cheaper to buy a new one’. Compostable plastics slot neatly into this culture. The advent of this disposable

469 Richa Kothari, V. V. Tyagi, and Ashish Pathak, “Waste-to-Energy: A Way from Renewable Energy Sources to Sustainable Development,” *Renewable and Sustainable Energy Reviews* 14, no. 9 (2010).

470 Hervé Corvellec, “Recycling Food Waste into Biogas, or How Management Transforms Overflows into Flows,” in *Coping with Excess: How Organizations, Communities and Individuals Manage Overflows.*, ed. Edward Elgar (Cheltenham: 2014).

471 Jenkins Kirsten et al., “Energy Justice: A Conceptual Review,” *Energy Research & Social Science* 11 (2016).

472 Charlie Sorrel, “Our Disposable Culture Means We Toss Relationships as Quickly as We Throw Away Objects,” (2016), <https://www.fastcompany.com/3057089/our-disposable-culture-means-we-toss-relationships-as-quickly-as-we-throw-away-objects>.

473 Josh Constine, “Stories Are About to Surpass Feed Sharing. Now What?,” (2018), <https://techcrunch.com/2018/05/02/stories-are-about-to-surpass-feed-sharing-now-what/>.

474 Tim Cooper, “Durable Consumption: Reflections on Product Life Cycles and the Throwaway Society” (paper presented at the proc. of lifecycle approaches to sustainable consumption workshop, 2002); Crocker, “Getting Closer to Zero Waste in the New Mobile Communications Paradigm: A Social and Cultural Perspective.”

culture reveals the political dimensions of plastics, which is gaining visibility through an increased media presence discussing the personal politics in the use of plastics, as well as a billion-dollar industry driving the policies surrounding use of these materials. At the personal level, the politics of plastic has had a noticeable effect on consumer behaviour, and Australia-wide plastic bag bans are in the process of being implemented<sup>475</sup>, opposed and obstructed based on consumer responses<sup>476</sup>. In some South Australian supermarkets, posters that advocate the use of brown paper bags virtue-signal<sup>477</sup> sustainability to customers. Meanwhile, supermarkets in other states treat reusable plastic bags as single-use and provide them free of charge to irate customers who demand them<sup>478</sup>. Those who follow a zero waste lifestyle aim to reduce all their waste—plastics or otherwise—in an effort to live more simply<sup>479</sup>. Others approach ‘plastic-free’ at such evangelical levels that they can become blinded to plastic’s useful qualities, instead vilifying all use of the material<sup>480</sup>. Of particular interest here are the considerations of people with disabilities who may rely on some plastic items (for example straws in order to safely drink). Not to mention the many other applications for plastic that enable better living conditions for marginalised peoples and under-privileged communities, such as PVC piping in water sanitation projects in developing countries, and 3D printing highly customisable prosthetics for people with disabilities. The material itself is not the problem, but its overuse and disposal within a linear economy is truly problematic. This points to the plastic problem as both political and economic, and as such it must be addressed through a combination of radical policy change that support transitions in people’s behaviours as well as in the surrounding production, consumption and waste systems.

The politics of plastic are further exposed in a review of a history of contentious safety testing for one type of high performance plastic, Bisphenol A (BPA). Some studies have been conducted by governing bodies, others within the plastics industry<sup>481</sup>. Additional studies have been funded by companies with a vested interest in the outcomes, including corporations such as ExxonMobil Foundation and Phillip Morris, and some of the published results have proven to be fraudulent<sup>482</sup>. A lack of rigour was noted between 1997-2005, when 90

475 Shireen Khalil, “Australia-Wide Bag Ban Leads to 1.5 Billion Fewer Plastic Bags in the Environment,” (2018), <https://www.news.com.au/lifestyle/real-life/news-life/australiawide-bag-ban-leads-to-15-billion-fewer-plastic-bags-in-the-environment/news-story/678f21eb838fb6706baa370bc3b3ec29>.

476 Gary Mortimer and Rebekah Russell-Bennett, “Why Australia’s Plastic Bag ‘Ban’ Triggered a Shopper Mutiny,” (2018), <https://www.lifehacker.com.au/2018/08/why-australias-plastic-bag-ban-triggered-a-shopper-mutiny/>.

477 I suggest this is virtue-signalling as a paper bag’s carbon footprint is technically higher than a plastic bag’s, but because the paper bag ‘feels’ more sustainable to consumers it is often used as a signifier of sustainability.

478 Melissa Cunningham, “‘Bringing Reusable Bags Has Been a Challenge’: Woolworths Backflip on Plastic Bags,” (2018), <https://www.smh.com.au/business/consumer-affairs/bringing-reusable-bags-has-been-a-challenge-woolworths-backflip-on-plastic-bags-20180629-p4z0gb.html>.

479 Stephen Leahy, “How People Make Only a Jar of Trash a Year,” (2018), <https://www.nationalgeographic.com/news/2018/05/zero-waste-families-plastic-culture/>.

480 André Picard, “For Many with Disabilities, Plastic Straws Are Essential - Not Frivolous,” (2018), <https://www.theglobeandmail.com/opinion/article-for-many-with-disabilities-plastic-straws-are-essential-not/>.

481 Sarah A. Vogel, “The Politics of Plastics: The Making and Unmaking of Bisphenol a “Safety,”” *American Journal of Public Health* 99 (2009).

482 Ibid. p 7-9

percent of government-funded reports revealed safety concerns in the use of BPA, but none of the industry funded studies reported any such concern<sup>483</sup>. For many years BPA was used in a wide range of products, including lining the interior of tin cans used for food storage. This technocratic packaging solution is believed to create far deeper problems in both the health and well-being of humans<sup>484</sup> and indeed all life on the planet<sup>485</sup>, yet debates about BPA's safe use continue<sup>486</sup>. BPA exposure is believed to increase risk of birth defects and a number of cancers in humans, furthermore, BPA is also contributing to the growing problem of microplastics polluting the environment<sup>487</sup>. This human and planetary health problem is also more likely to be experienced by those in under-privileged, marginalised or climate-affected communities, where consumption of canned goods is disproportionately higher, and/or where microplastics are more prevalent due to inadequate regulation or technical capability in recycling<sup>488</sup>. Without increased transparency in reporting, adequate policies around synthetics such as plastics cannot be formed, and studies will remain contentious with a flow on effect to plastic waste handling practices.

Any industry that is willing to risk the health and safety of life and the planet in order to increase their profits makes their own politics quite clear. Boehnert argues that technocracy services powerful constituencies by facilitating and maintaining power and privilege in governments, corporations and the media<sup>489</sup>. She highlights the political aspects of this problem as existing in the ways that technology is organised by society and is therefore influenced by existing inequalities. This leads to 'types of technology that serve the interests of some people at the expense of others'<sup>490</sup>, as demonstrated in the example of plastics. This reflection of inequality and injustice is a likely outcome in technocratic fixes, it is also evident when applying the concepts from

483 Ibid. p 16-17

484 Leo F Doherty et al., "In Utero Exposure to Diethylstilbestrol (Des) or Bisphenol-a (Bpa) Increases Ezh2 Expression in the Mammary Gland: An Epigenetic Mechanism Linking Endocrine Disruptors to Breast Cancer," *Hormones and Cancer* 1, no. 3 (2010); Tessie Paulose et al., "Estrogens in the Wrong Place at the Wrong Time: Fetal Bpa Exposure and Mammary Cancer," *Reproductive toxicology* 54 (2015); Kristen Weber Lozada and Ruth A %J Biology of reproduction Keri, "Bisphenol a Increases Mammary Cancer Risk in Two Distinct Mouse Models of Breast Cancer," 85, no. 3 (2011).

485 Luís Gabriel Antão Barboza et al., "Marine Microplastic Debris: An Emerging Issue for Food Security, Food Safety and Human Health," *Marine Pollution Bulletin* 133 (2018); Anderson Abel de Souza Machado et al., "Microplastics as an Emerging Threat to Terrestrial Ecosystems," *Global change biology* 24, no. 4 (2018); Eleonora Guzzetti et al., "Microplastic in Marine Organism: Environmental and Toxicological Effects," *Environmental toxicology pharmacology* (2018); Amy Lusher, "Microplastics in the Marine Environment: Distribution, Interactions and Effects," in *Marine Anthropogenic Litter* (Springer, 2015); Suman Thodhal Yoganandham et al., "Microplastics Distribution and Characterization as Vector Toxicity in Marine Environment as Contaminant: A Short Review," *Research Journal of Chemistry and Environment* 22, no. 11 (2018).

486 breastcancer.org, "Exposure to Chemicals in Plastic," <https://www.breastcancer.org/risk/factors/plastic>; Jon Hamilton, "Plastic Additive Bpa Not Much of a Threat, Government Study Finds," <https://www.npr.org/sections/health-shots/2018/02/23/588356360/plastic-additive-bpa-not-much-of-a-threat-government-study-finds>

487 Barboza et al., "Marine Microplastic Debris: An Emerging Issue for Food Security, Food Safety and Human Health."; Guzzetti et al., "Microplastic in Marine Organism: Environmental and Toxicological Effects."; Barboza et al., "Marine Microplastic Debris: An Emerging Issue for Food Security, Food Safety and Human Health."

488 Frederic Gallo et al., "Marine Litter Plastics and Microplastics and Their Toxic Chemicals Components: The Need for Urgent Preventive Measures," *Environmental Sciences Europe* 30 (2018). p 8

489 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 160-169

490 Ibid. p 164

Conway's Law to the broader creation of new technologies, in that technology is influenced by those creating it. As such, critical perspectives on power are also highlighted by Boehner<sup>491</sup> as being a necessary aspect of the rigorous analysis undertaken by designers as changemakers<sup>492</sup>. These examples help to demonstrate how the materials used in designed outcomes are not the only problem. Greater complexity is revealed in the politics and human behaviours that are entangled with the materials in use. Designers are uniquely positioned to help address these issues and the persuasive skillset that is currently applied to the creation of consumer culture remains useful. Once designers are re-educated to increase ecological literacy and theoretical knowledge, design labour can be redirected towards environmental and social change. In this setting, designers can contribute to the design of behaviour change and to outcomes that make this change desirable.

### 3.2.4 Designing behaviour to unmake waste

Environmental disasters such as the Great Pacific Garbage Patch<sup>493</sup> reflect another aspect of the accompanying behavioural problem—the disposal of plastic. The interactions between design and consumerism sit at the core of the waste problem; they perpetually generate waste, both physically through by-products such as pollution and post-consumer waste, and energetically through an overuse and loss of resources. Waste is an inevitable byproduct of systems that lack critical approaches to manufacturing, production and promotion of goods to be consumed. In a design context, using systems thinking to consider waste requires investigations to extend beyond those in the design process. The cradle-to-cradle design method considers waste to the extent that it pertains to the design problem, but falls short in considering the relations between goods and consumers and the overall acceleration of production and manufacture. In short, technical approaches such as cradle-to-cradle design do not design for the new behaviours that are required to unmake waste. Instead, design continues to be driven by the same cheaper-faster mentality that is accelerating Global North production, where decreases in manufacturing costs, have decreased profit margins for manufacturers.

The typical response is an attempt to recapture profits by increasing volumes in order to maximise profits, and design steps up to help drive volume sales. Design approaches that cater to these technological systems of production do so at the expense of craft, quality and the value placed on raw materials. Rather than considering how best to respond to a push for increased growth, the better question for design is: how might designers help clients recapture value, instead of pushing volume to capture more profit? The slow design movement aims to address this by intentionally slowing down the processes that typically respond to the fast pace of accelerated consumption<sup>494</sup>. Manzini and Tassinari describe slow design as an approach that uses design interventions to encourage more

491 Ibid. p 166

492 Power dynamics are discussed in more detail in Chapter 4.

493 Dauvergne, "The Problem of Consumption."

494 Fuad-Luke, *Design Activism*. p 158



communal and meaningful relations between people, planet and things.<sup>495</sup> Slow design has roots in Carlo Petrini's Slow Food movement<sup>496</sup> which has inspired a global slow movement spanning domains such as cities, design, transport, and consumption, to become a growing global trend. The ideas underpinning the slow design movement are more reflective than typical design processes, an aspect that is visible in a variety of design approaches to sustainability<sup>497</sup>. These include Walker's 'Design for Sustainability'<sup>498</sup> and Irwin et al's 'Transition Design'<sup>499</sup> approach which I would argue in its connection to slow localism through transition towns, could (as a design method) be considered as part of this slow movement.

Slow design's guiding principles<sup>500</sup> are as much principles for the design method as for living a more sustainable life. They directly respond to waste as a form of movement—of fashion, of people, of ideas and of what is viewed as desirable—by slowing down these systems and our experience of them. It is becoming increasingly obvious that the rate of acceleration of fast moving consumer experiences and their subsequent waste go hand-in-hand, and slow design provides a temporal alternative to this rapid pace. Decreasing this pace necessarily addresses the behaviours and interactions with these systems. In slow design, the interrogation of artefacts reveals a greater potential for deeper experiential engagement through conscious rather than conspicuous consumption. This includes more participatory and collaborative approaches to design processes, an expanded understanding of use that extends beyond those intended in the original artefact. This also leaves space for emergence 'from the dynamic maturation of artefacts, environments and systems over time'<sup>501</sup>. The temporality of the slow design approach and its collaborative nature permit a greater focus on behaviours and also investigate and test the kinds of artefacts that might support sustainable transitions in people's everyday lives. This 'everyday approach' is discussed in more detail in the next chapter.

### 3.3 Closing remarks

This chapter has explored the connected problems of consumption and waste in the context of design. It has demonstrated how critical designers must be in responding to sustainability problems and how challenging practicing sustainable design has become as a result of the increasing complexities designers face. An argument has been presented for critical engagement with sustainability in design as a necessity in order to take action. Without critical thinking and engagement, it is likely that designers will either continue to

495 Ezio Manzini and Virginia Tassinari, "Sustainable Qualities: Powerful Drivers of Social Change.," in *Motivating Change: Sustainable Design and Behaviour in the Built Environment*, ed. Robert Crocker and Steffen Lehmann (Routledge, 2013).

496 "Slow Food: The History of an Idea," <https://www.slowfood.com/about-us/our-history/>.

497 Manzini and Tassinari, "Sustainable Qualities: Powerful Drivers of Social Change.."

498 Walker, *Designing Sustainability: Making Radical Changes in a Material World*.

499 Irwin, "The Emerging Transition Design Approach.," Irwin, Kossoff, and Tonkinwise, "Transition Design Provocation.," Irwin, Tonkinwise, and Kossoff, "Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions."

500 Slow Research Lab, "Slow Research Lab Website," <https://www.slowlab.net>.

501 Fuad-Luke, *Design Activism*. p 158

approach structural problems in superficial ways or experience action-paralysis, both of which form part of the designer's double bind.

A sustainable design case study was critiqued in order to demonstrate the complexities facing designers in relation to structural problems. This critique highlighted how challenging it can be to address structural unsustainability through design and provided some reasoning for the inaction from the bulk of designers. Discussion of the conflicts experienced by designers was supported by literature which suggested that without a kind of collective 'awakening' or the necessary skills to apply sustainability knowledge, designers will remain unable to act<sup>502</sup>. Discussion revealed that designers can experience multiple conflicts that lead to a double bind, and in some instances these conflicts can be experienced simultaneously. Critical communication was also presented as a crucial component in designers' engagement with clients (and peers) on matters of sustainability.

Explorations of the extent of the waste problem and its root cause, consumption, further clarified the inadequacy of favouring technical and material approaches. Technocracy was explored through a discussion of broader technologies and through interrogations of technical design approaches which revealed their limitations. Theories of consumption and waste provided insights into the full scope of these problems and revealed their interconnectedness. Explorations of the intersections between these theories, in conjunction with analysis of the interactions between education and industry revealed that designers who are trained as designer-consumers hold a worldview that is challenged by design that operates outside of the status quo. This finding provided a deeper understanding of designers' need for transformation. Following this line of thinking I presented the 'designer-consumer' as incapable of addressing consumption and waste without first transforming their own relationship to consumption and waste. The waste problem was situated culturally, revealing the potential for design as a culture-making discipline to 'unmake' waste by slowing down the movement of artefacts and by designing the space and supporting artefacts for more sustainable behaviours to emerge. Structural problems such as those highlighted throughout this chapter often feel 'out of scope' for designers, particularly communication and interaction designers. A more agnostic or hybrid view of design disciplines might be helpful as design continues to mature. It is at this junction that transitions become an important area of knowledge-building for designers. Designing for transitions using methods such as transition design and autonomous design provide the means for communication and interaction designers to move into the fourth order, where they are better positioned to design at scale and respond to structural unsustainability. These emergent approaches are discussed in more detail in Chapter 6, but first, the next chapter will discuss theories that are relevant to their practice. These theories demonstrate how designers might address sustainability through engagement with sustainability transitions.

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502 Riedy, "Waking up in the Twenty-First Century,"; Tonkinwise, "Ethics by Design, or the Ethos of Things." p 131

## Chapter 4

### Power, Change and Alternative Economies: theories for transitions

The multifaceted and systemic nature of structural unsustainability requires a collaborative multi-disciplinary approach, particularly if the overarching aim is to avoid tokenism and earnestly attempt to mitigate the current ecological crisis facing humanity. The previous chapter presented the challenges facing design as a practice and an industry, and introduced the complex problem of consumption and waste. If design is to meaningfully contribute to change and approach problems of this magnitude, then the focus of practice will also need to change. Power dynamics can influence how and when this occurs. This chapter focuses on theories that explore the intersection of power and change, and discusses alternative economies that might aid in transitions.

Power and privilege currently hold neo-liberalism firmly in place across the Global North, and as discussed in the previous chapter, the design industry plays a role in this through its mediation and active expansion of an unsustainable consumer culture. In order for design to positively influence the way sustainability is embraced, designers must expand their understanding of design as a cultural mediator for ‘good’ by increasing their eco-literacy and theoretical knowledge. A deeper understanding of power dynamics is also required, including their cultural embeddedness and how they can either accelerate or decelerate socially unjust and ecologically unsustainable ways of being. This chapter is presented in three main sections, power, change, and alternative economies. It explores how working with these theories might shape the transition of a designer and their practice.

Sustainability transitions are argued as a significant opportunity for humanity to address the immediate threat of climate change through structural change and changes made to everyday actions<sup>503</sup>. As such these transitions consider all aspects of daily life. Contemporary transitions discourse and its connected initiatives and practices<sup>504</sup> define transitions as processes of change in complex systems. These changes can be manifested or emergent and are predominantly slower paced<sup>505</sup>. The emergence of transition design as an area of research and practice is connected to this broader transitions movement. It ‘proposes design-led societal transition toward more sustainable futures’<sup>506</sup> and aims to design transition plans and pathways<sup>507</sup>. Transition design presents designers with an alternative for their daily labour, but it requires a vastly different skillset to the

503 Grin, Rotmans, and Schot, “Conclusion: How to Understand Transitions? How to Influence Them?: Synthesis and Lessons for Further Research.”; *Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change*.

504 This discourse includes transitions perspectives from Kenneth Boulding (The Great Transition Initiative), Fritjof Capra (Phase Transitions), Frank Geels (Socio-technical Transitions Theory), John Grin and Johan Schot (Sustainability Transitions), Rob Hopkins (Transitions Town Network), Terry Irwin et al (Transition Design) and Ezio Manzini (Social Innovation).

505 Terry Irwin et al., “Transition Design,” *Pittsburgh, PA: School of Design, Carnegie Mellon University* (2015).

506 Terry Irwin, “<https://Transitiondesign.Net>,” <https://transitiondesign.net>.

507 Peter Scupelli, “Designed Transitions and What Kind of Design Is Transition Design?,” *Design Philosophy Papers* 13, no. 1 (2015). p 3

industry-honed skills practiced in typical commercial design. It draws on a broad range of knowledge to underpin a critical redirection of design's focus to transitions toward just and sustainable futures.

Articulation of the consumption problem as part of the designer's responsibility suggests that practitioners who maintain a commercial focus will face rising tensions in their work, and on some level, a disconnection from the status quo will eventually be required<sup>508</sup>. Divorce from business-as-usual would reposition designers, giving them autonomy from the design industry, which could also lead to embracing autonomous design principles. Autonomous Design is described by Escobar as 'design decoupled from defuturing activity and redirected at world-making projects'<sup>509</sup>. Fry suggests<sup>510</sup> this process of disconnection from the status quo is a necessity in the face of our current global crises and poses autonomous design as a more effective mode of sustainable practice for the Global North. Autonomous design is highly participatory and collaborative, with roots in communal approaches from the Global South<sup>511</sup>. Both Fry and Escobar suggest this is a radical but necessary shift for design. This approach is introduced in this chapter and discussed in more detail in *Part 3: Doing*.

The call to action for industry-wide change is not new; historically it has provided the fodder for many a design manifesto—most of which have resulted in minimal progress<sup>512</sup>. Despite the lack of progress this call to action remains a necessary component in the transition towards sustainable futures<sup>513</sup>. Acknowledgement of the brevity of the problem and necessity of action is the first step in empowering change. Explorations of theories relevant to transitions also reveal the necessity for shifts in designers' foci, from consumerism to community. By investigating power and change as intersecting theoretical domains, their somewhat hybridised ontology becomes more visible and their significance in transitions is revealed.

The first two sections of this chapter explore the relations between theories of power and change. Firstly the ideologies that tend to lock in structural problems are discussed, with particular focus on neo-liberalism, a form of economic policy that favours a free market economy and the transfer of control from public to private sectors by insisting on 'user pays' outcomes<sup>514</sup>. Discussions of the negative impacts of neo-liberalism reveal designer empowerment as a necessary aspect of enacting change. Thirdly, Gee's theory of 'counterpower'<sup>515</sup> is presented as a theory that challenges existing power structures with the aim of removing power from an individual or group. Counterpower is presented as a means of navigating relational power dynamics in practice. Boehnert argues that design's reproduction of cultural assumptions is a form of symbolic

508 Thorpe, "Design's Role in Sustainable Consumption." p 15

509 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. p 167-168

510 Fry, "Design after Design Workshop."

511 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. ch 6

512 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 19-20

513 Irwin, Kossoff, and Tonkinwise, "Transition Design Provocation." p 3

514 Harvey, *A Brief History of Neoliberalism*.

515 Gee, *Counterpower: Making Change Happen*.

violence<sup>516</sup>, a term adopted from Bourdieu that describes ‘the result of systems of representation that normalize the hierarchical devaluation of certain people’<sup>517</sup>. Design’s mediation of culture is a form of power that frequently reinforces this dynamic and Gee’s theory of counterpower provides an important method of exposing and countering these oppressive power structures. Counterpower is evident in many important social movements and can be identified in some contemporary approaches to sustainable design. The fourth and final exploration focuses on relational power dynamics that might aid designers transitioning into facilitation roles, where the outputs of designer labour could shift from mediating consumer culture to mediating collaborative groups.

Section two explores theories of change that are relevant for the kind of global participation that will be required in any transition towards just and sustainable futures. According to Irwin et al, every aspect of humanity will be challenged by such a transition<sup>518</sup> and as evidenced by the twelve (now eleven) year timeframe for action outlined in the 2018 United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) report<sup>519</sup> the urgency of action increases daily. Increased ecological and economic literacy and applied knowledge of theories of change (and power) could guide the thinking required to start creating real and sustainable changes in practice. It is probable that a transition of such enormity will confront designers whose design outcomes are closely connected with the systems being challenged. Of particular note are designers who partner with clients involved in extraction and pollution industries, as well as those in corporate business, retail and finance. As discussed in the previous chapter a double-bind stemming from multiple tensions and conflicts in practice will likely exist for most designers whose financial security relies on these kinds of projects. Theories of change that could help designers navigate both structural and everyday change are also presented. This presentation opens with socio-technical transition theory using Geels’ multi-level perspective<sup>520</sup> (MLP), which examines the different ways that societies can change. Next, social practice theory (SPT) examines the way social norms are impacted by the social practices in place within a society. Through the lens of social practice theory an understanding of the many ‘little things’ that make up our daily lives is explored, and these social practices are examined as potential leverage points for behaviour change. To build on this understanding of social practices and societies, I explore the social norms

516 Boehnert, *Design, Ecology, Politics: Towards the Eocene*. p 27-37

517 Bourdieu in: *ibid.* p 27

518 Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”

519 United Nations, “Global Warming of 1.5 °c,” (<http://ipcc.ch>: Intergovernmental Panel on Climate Change, 2018).

520 Frank W. Geels, “The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms,” *Environmental Innovation and Societal Transitions* 1, no. 1 (2011); Frank W Geels, “Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective,” *Research policy* 39, no. 4 (2010); Geels and Schot, “The Dynamics of Transitions: A Socio-Technical Perspective.”; “Typology of Sociotechnical Transition Pathways,” *Research policy* 36, no. 3 (2007); Schot and Geels, “Niches in Evolutionary Theories of Technical Change.”

embedded in these ‘little things’ through Kossoff’s ‘Domains of the Everyday’<sup>521</sup> and Sen’s theory of well-being<sup>522</sup>. A focus on ‘little things’ is maintained throughout these examinations of behaviour change in everyday life.

Section three explores alternative economies through communal approaches, circular systems, and new economic thinking that could hold relevance for designers engaged in transitions. This begins with an investigation of the sharing economy, which comprises of platforms and activities that facilitate sharing<sup>523</sup>. A critique of its current incarnation as a capitalist endeavour highlights how it might be redirected through ‘ontological design’ to encourage collaborative consumption and justice in labour. Willis defines ontological design as ‘a way of characterising the relation between human beings and lifeworlds’<sup>524</sup>, and Escobar describes it as designing for different ways of being in the world<sup>525</sup>. Discussion reveals that a successful post-capitalist<sup>526</sup> sharing economy would be reliant on ontological considerations. Ontological design is explored here as an aspect of the behavioural dimensions in reimagining the role of business/organisations as part of sustainability transitions.

The circular economy is presented as an alternative to the current linear economy, which could reduce and eliminate waste through fostering greater symbiosis between local enterprises. This section also investigates how cradle-to-cradle design methods might encourage the design of circular economies that are more mindful of the systems of consumption and waste surrounding them. Critiques of the cradle-to-cradle design method (my own and others) highlight the approach as utopian in its separation from consumption and surrounding systems. It is presented here as a necessary component of transitions to circular economies, but not without these behaviour and systems related caveats.

This section closes with a presentation of Raworth’s doughnut economics<sup>527</sup> as a framework to underpin alternative economic thinking. The doughnut framework is a new approach to economics that uses seven key considerations to guide economic thinking, and maps ecological limits and social needs as a set of boundaries intended to limit economic growth. It is presented here not only as a tool to guide thinking, but also as a framework that could be used to drive the kinds of policy changes needed to outlaw any disregard of these boundaries.

This chapter concludes with the proposition that the sustainability of a design practice could be expanded by engagement with these theories through the practice of transition design and autonomous design. A sense of sub-disciplinary hybridity is common to both methods which seem to encourage designers to extend their disciplinary reach. Both have the potential to influence large-

521 Gideon Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society,” *Grow Small, Think Beautiful: Ideas for a Sustainable World from Schumacher College* (2011); Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”

522 Sen, “Capability and Wellbeing.”; “The Living Standard.”; “Freedom of Choice.”

523 Frederik Plewnia and Edeltraud Guenther, “Mapping the Sharing Economy for Sustainability Research,” *Management Decision* 56, no. 3 (2018), p 576

524 Willis, “Ontological Designing,” p 70

525 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*, ch 4

526 The term post-capitalist is used here to describe a possible future that is not dominated by the economic thinking that is entrenched within capitalist and neo-liberal ideologies.

527 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*.

scale change with a greater sensitivity to temporality than is currently adopted within the design industry. Rather than continuing to address activities occurring within disciplinary silos across systems, the breadth and scope of autonomous and transition design might permit a more relational view. This could foster deeper collaborative approaches that shift systems and policies and incubate conscious consumption, cradle-to-cradle design, and alternative economies as part of sustainability transitions.

Power and change are investigated in this research as an intersection. Although each is a significant domain worthy of exploration in its own right, their intersectional nature creates challenges in addressing them independently of one another. This justifies a relational approach to the investigation.

## 4.1 The intersection of power and change

Power dynamics play a significant role in matters of sustainability. This section examines the intersection of power and change, and focuses on four main areas: ideologies of power, the need for empowerment, counterpower and relational power dynamics. The interconnected nature of power and change demands an intersectional approach to their analysis. Intersectionality describes the overlapping relations between things<sup>528</sup>, for example the intersection of gender and race creates overlapping discriminatory experiences for women of colour that are not wholly addressed by considering gender or race as independent problems. By considering power and change as a point of intersection they can be explored relationally and wholly, rather than separately and thus incompletely. This section opens with considerations of how an economic paradigm reflects and maintains a very particular set of power dynamics, and how these dynamics tend to lock in structural unsustainability. It also considers how ideologies of power can inhibit affirmative action on sustainability. An exploration of the need for designer empowerment in order to enact change leads to a discussion of power dynamics' impact on a designer's overall agency. Gee's theory of counterpower<sup>529</sup> is then presented as a relevant intersectional theory for designers that considers power in relation to change. Lastly this section closes with a discussion of power relations in group dynamics, an important consideration when working collaboratively on complex problems.

### 4.1.1 Ideologies of power

Ideologies reflect power relations that shape societies' norms<sup>530</sup>. The current dominant ideology in the Global North is 'neo-liberal capitalism'. It is a mindset that values competition and economic growth at any expense, even to the detriment of its own context, earth<sup>531</sup>. Harvey argues that neo-liberalism is not an ideology but rather a 'theory of political economic practices'<sup>532</sup>. However,

528 Intersectionality is a term developed by Kimberlé Crenshaw to describe overlapping or interconnected problems such as gender and race. For more see: Kimberle Crenshaw, "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color," *Stan. L. Rev.* 43 (1990).

529 Gee, *Counterpower: Making Change Happen*.

530 Castells, "Communication, Power and Counter-Power in the Network Society." p 1

531 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 18

532 Harvey, *A Brief History of Neoliberalism*. p 2

Monbiot argues it is neo-liberalism's pervasiveness that prevents its recognition as an ideology. He suggests that this stems from neo-liberalism's namelessness (or perhaps more accurately, everyday people's inability to name it) and that this leads to a lack of acknowledgement of it as an ideology<sup>533</sup>. Many argue<sup>534</sup> that the lack of an alternative narrative locks neo-liberalism firmly in place; yet there are a number of alternatives to this narrative, most of which foster an ecologically and socially considerate worldview based on altruistic values. Despite these blossoming possibilities, neo-liberalism remains the dominant ideology, and incorporates mindsets of extractivism, fiscal reductionism and mechanism. Extractivism promotes a 'dominance-based relationship with the earth'<sup>535</sup> and it goes hand-in-hand with reductionism which reduces everything down to a monetary form that can be bought and sold as a resource. Both stem from a mechanistic worldview that separates humans as dominant, treats anything non-human as a resource and promotes infinite economic growth in a finite world<sup>536</sup>. These mindsets view nature as a profit-bearing resource, and the economic entanglement of corporations and governments ensures corporate interests are met and maintained. The power of the neo-liberal ideology is perhaps best demonstrated by the actions following the 2008 Global Financial Crisis (GFC) where despite a wide acknowledgement of the failings of the global economy, bank bail-outs were executed in order to overcome the GFC and continue conducting business-as-usual<sup>537</sup>. This was perhaps the most significant 'missed opportunity' in recent times where shifting the status quo was truly possible yet still deemed improbable. This is the power of the neo-liberal ideology.

Neo-liberalism preferences unbridled growth and economic thinking, and over the years, has also prompted significant investments in unsustainable activities involving raw material extraction and pollution. As Klein argues, this is the combined outcome of a lack of governance and inequalities in relation to political access and power.<sup>538</sup> Considering such investments with an economic paradigm firmly in place leads to 'sunk costs' in unsustainable activities<sup>539</sup>. 'Sunk costs' are unrecoverable investments made in infrastructure and activities that cannot achieve a full return—coal fired power stations are a relevant Australian example<sup>540</sup>. Historical investments in coal appear to make this unsustainable extraction activity difficult to decelerate, as opportunities for continued profit entice further financial contributions. The 'sunk cost effect' is evident in global

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533 Monbiot, "Neoliberalism—the Ideology at the Root of All Our Problems."

534 See for example: Joanna Boehnert, Charles Eisenstein, Naomi Klein, and George Monbiot

535 Klein, *This Changes Everything: Capitalism Vs. The Climate*. p 169

536 Plumwood, *Environmental Culture*. See also: Futures Centre, "Futures Centre Website," <https://thefuturescentre.org/articles/17293/values-and-guidelines-transform-our-mechanistic-worldview>.

537 Klein, *This Changes Everything: Capitalism Vs. The Climate*. p 150-152

538 Ibid. p 151

539 Robert Crocker, "From Access to Excess: Consumerism, 'Compulsory' consumption and Behaviour Change," in *Motivating Change: Sustainable Design and Behaviour in the Built Environment* (Routledge, 2013); Christer Sanne, "Willing Consumers—or Locked-In? Policies for a Sustainable Consumption," *Ecological economics* 42, no. 1-2 (2002). p 4-18

540 Crocker, "From Access to Excess: Consumerism, 'Compulsory' consumption and Behaviour Change."



debates surrounding the use of renewable versus non-renewable energies,<sup>541</sup> and in the push for energy-based technofixes<sup>542</sup>. When reviewing energy debates with the ‘sunk cost effect’ in mind, it is easy to see how damaging this effect can be. Shifting unsustainable activities involves more than challenging a corporate extractivist power dynamic. It also confronts issues of perceived national interests that imply fiscal reliance on unsustainable activities (such as coal mining for the Australian energy sector)<sup>543</sup>.

Power contributes ideologically to structural unsustainability, in part by maintaining this focus on an economic paradigm, and in part through the pursuit of technologies that can serve it. Despite mounting evidence suggesting alternative action is required, power and money have prompted a ‘double-down’ approach in relation to action against climate change<sup>544</sup>. This leads to the pursuit of ever-advancing technological fixes as a means to maintain business-as-usual. The urge to implement them is strong and rarely resisted—particularly where a technological fix can maintain or improve on current economic performance. Whilst some of these technologies are quite remarkable and innovative, their medium and long-term social and ecological impacts are frequently ignored in favour of their short-term economic gain. The rising popularity of technocracy and technofixes under neo-liberalism is readily connected to power relations—technofixes appeal to the powerful because they ‘serve the interests of powerful constituencies’<sup>545</sup>. Maintaining power and by corollary privilege, further locks the structural power dynamics that also embed injustices such as racism and sexism into the fabric of societies. Power and the neo-liberal ideology also maintain control over ecology, which in turn provides unfettered access to natural resources and the profits that stem from their use. This is ‘anthropocentric rationalism’<sup>546</sup> in action, which is argued by Plumwood, Fry and many others as being humanity’s potential downfall<sup>547</sup>.

#### 4.1.2 The need for empowerment

There is an alternative narrative to the demise of humanity at the hands of ‘anthropocentric rationalism’<sup>548</sup>, one in which the seemingly powerless rise up through empowerment to create social change. With economically-driven ideologies locking power dynamics in place, designers will need to feel

541 See for example: Sarah Hanson-Young et al., “Stability and Affordability: Forging a Path to Australia’s Renewable Energy Future,” (<https://parlinfo.aph.gov.au>: Australian Government, 2017); Katharine Murphy and Amy Remeikis, “Turnbull Rejects Efforts to ‘Dumb Down’ Energy Debate into Renewables V Coal,” (2017), <https://www.theguardian.com/australia-news/2017/sep/21/turnbull-rejects-efforts-to-dumb-down-energy-debate-into-renewables-v-coal>; John Quiggin, “The Queensland Election’s Renewables Versus Coal Debate Isn’t About Jobs. It’s a Culture War,” (2017), <https://www.theguardian.com/commentisfree/2017/nov/22/the-queensland-elections-renewables-versus-coal-debate-isnt-about-jobs-its-a-culture-war>.)

542 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 160-169

543 Fry, *Design Futuring*; Robert Crocker, *Somebody Else’s Problem: Consumerism, Sustainability and Design*. (Routledge, 2017); Gifford, “The Dragons of Inaction: Psychological Barriers That Limit Climate Change Mitigation and Adaptation.”

544 Klein, *This Changes Everything: Capitalism Vs. The Climate*. p 56-63, 141-152

545 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 161

546 Plumwood, *Environmental Culture*.

547 See for example: Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Fry, *Design Futuring*; Klein, *This Changes Everything: Capitalism Vs. The Climate*; Plumwood, *Environmental Culture*.

548 Fry, *Design Futuring*; Plumwood, *Environmental Culture*.

empowered in order to step up as agents of change. Dowding discusses two concepts of power relevant to this notion: power to (outcome power) and power over (social power)<sup>549</sup>. In outcome power an actor has the power to affect or bring about an outcome, and in social power there is a social relation between multiple actors (two or more) that de-incentivises/incentivises another actor or actors to bring about outcomes. Most frequently both social and outcome power are visible together, and Dowding suggests they can be difficult to separate when in action.

In an analysis of these two concepts of power, Dowding uses game theory to build an understanding of outcome power as more cooperative and social power as more likely to involve conflict<sup>550</sup>. The strategic interactions observed by Dowding provide a way of analysing the power dynamics in interactions between people. How and when people cooperate and when/why that cooperation reverts to competition can be seen in relation to rational strategic decision making; not unlike the rational decision making underpinning the economic paradigm. Dowding suggests that cooperation will occur when people will mutually benefit from cooperating; however any perceived disadvantage resulting from cooperation will lead instead to competitive responses<sup>551</sup>. This flip between cooperation and competition is evident in the sometimes-egocentric struggles of design collaborations, where idea ownership can become a sticking point for some. The dominance of extrinsic over intrinsic values also play a role here; designers maintaining a competitive mindset can also be driven by the same extrinsic values that dominate thinking in neo-liberalism. Dowding's application of game theory<sup>552</sup> is helpful in explaining the seemingly irrational rationalisations made under the neo-liberal ideology as being driven by strategic responses to competition, and loss aversion that may arise from cooperation.

Conversely, under-acknowledging power dynamics can inhibit empowerment, consequently change, particularly structural change which can feel out of reach or out of scope for many designers. A deeper understanding of power dynamics aids critical thinking and can provide designers with a sense of empowerment by helping them to recognise and enact their agency<sup>553</sup>. This brings with it the potential to approach change in situations that can otherwise feel impossible. The combination of outcome power and social power is evident in client-designer relations and it is easy to identify the less powerful position designers often hold in this relationship<sup>554</sup>. Designers are frequently treated like a resource<sup>555</sup> and a designers' financial security is typically reliant on a continuing relationship with their clients<sup>556</sup>; but it should be acknowledged that there is a symbiotic aspect

549 Dowding, *Power*. p 4-18

550 Ibid. p 8-17

551 Ibid. p 8-17

552 Ibid. p 8-17

553 Yoko Akama, "Politics Makes Strange Bedfellows: Addressing the 'Messy' Power Dynamics in Design Practice," (2009).

554 Ibid.

555 Ibid.; Lesley Burgess, "Human Resources: Artists, Craftspersons, Designers," *Teaching Art and Design* (2000); Dorland, "Routinized Labour in the Graphic Design Studio." See also Glaser in: Soar, "The First Things First Manifesto and the Politics of Culture Jamming: Towards a Cultural Economy of Graphic Design and Advertising."

556 Akama, "Politics Makes Strange Bedfellows: Addressing the 'Messy' Power Dynamics in Design Practice."; Dorland, "Routinized Labour in the Graphic Design Studio."

to this relation. The client is also reliant on the skills, experience and expertise of the designer, an outcome which can balance the power dynamic. This is particularly true of longer-term relationships where the designer's knowledge of their client's business holds greater value, thus making the designer's role less interchangeable in the client's view. I propose that in this relationship, an empowered designer can evoke both outcome and social power to lead their clients in more sustainable directions, however the opposite is also true, and an unempowered (or under-empowered) designer's ability to enact change is likely limited by a shallow perception of power dynamics.

### 4.1.3 Counterpower

Wherever power is present, the opportunity to evoke counterpower also exists. Castells asserts that counterpower is one of the few natural laws of society—that wherever there is domination there is always resistance<sup>557</sup>, thereby extending the idea of counterpower from an opportunity to a probability. Gee's theory of counterpower<sup>558</sup> is an intersectional theory of power and change that provides a kind of scaffolding for a potential agency through design. In his theory, Gee flips the concept of power drawn from Dahl's definition as 'the ability for [person] A to get [person] B to do something B would not otherwise have done'<sup>559</sup>. Instead, Gee theorises that person B can strip person A of their power—thus invoking counterpower. Counterpower consists of four stages (consciousness, co-ordination, confrontation and consolidation) and three types (idea, economic and physical)<sup>560</sup>, and Boehnert outlines how counterpower's stages and types all connect to design through social movements and design activism<sup>561</sup>. Another alignment can be drawn here with Castells argument—that any attempt to change the norms of a society is tantamount to an attempt to change the power relations in that society<sup>562</sup>. This suggests that counterpower is also a useful theory of change for transition design which aims to design multi-level multi-stage change. It slots neatly into the intersection of design for change and power and might address the 'conflict gap' identified by Willis<sup>563</sup> in the theories underpinning transition design. Avelino et al, Boehnert, Dahle and Willis all discuss the need for power dynamics as part of the transitions discourse<sup>564</sup> revealing it to be an important consideration for designers. Power creates tensions and conflicts at personal, professional and societal levels, but without first understanding how power dynamics operate, designers are limited in their attempts to counter it<sup>565</sup>.

557 Castells, "Communication, Power and Counter-Power in the Network Society." p 11

558 Gee, *Counterpower: Making Change Happen*.

559 Ibid. p 17

560 Ibid. p 16-39

561 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

562 Castells, "Communication, Power and Counter-Power in the Network Society." p 12

563 Anne-Marie Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism," *Design Philosophy Papers* 13, no. 1 (2015).

564 Flor Avelino et al., "The Politics of Sustainability Transitions," *Journal of Environmental Policy & Planning* 18, no. 5 (2016). Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Cheryl L. Dahle, "Transition Design Lectures," (Schumacher College, UK, 2018); Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.," Flor Avelino et al., "The Politics of Sustainability Transitions," *Journal of Environmental Policy & Planning* 18, no. 5 (2016).

565 Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."

Willis argues that these limitations stem from education and training that is intentionally superficial in order to avoid ‘analysis-paralysis’ in designers, but this process leads directly to superficial artefacts or technical approaches such as greener things. These approaches—often realised as campaigns or websites that raise awareness—mimic typical design artefacts, but in their superficial aim to be ‘designerly responses’ to sustainability they reduce the designer’s capacity to contribute more deeply<sup>566</sup>. This goes some way to explain why designers emerge from their training/education as unempowered actors who are trapped by the perceived boundaries of their discipline. Willis suggests that briefly sidelining design might aid the study of key elements in structural power and structural unsustainability, particularly in relation to technology and how it shapes us<sup>567</sup>. By approaching power and change as an intersection through Counterpower, these intertwined dynamics can be more wholly addressed. In this sense, transition design might incorporate power dynamics into its framework as an intersectional aspect of change rather than as an independent body of knowledge. Whilst power is a significant area for study, it is power dynamics’ relation to and impact on change that is most relevant for transitions discourse. That intersection can be explored through Counterpower.

The stages of counterpower can be fluid, flowing on from one another but also intertwining in non-linear ways. Gee recognises this fluidity but describes these stages linearly, beginning with consciousness. To be conscious of a problem ‘creat[es] the conditions for Counterpower<sup>568</sup>’, without consciousness the problem to be overcome is not visible. Consciousness leads to the second stage, coordination, where efforts focus on building a movement that can challenge the problem. This is a strength building exercise that can also continue to raise consciousness, particularly as a movement gains momentum. The third stage of counterpower is confrontation, which as the name suggests involves a movement’s active confrontation to directly challenge the target’s power. During the confrontation stage it is expected that efforts to raise consciousness and coordinate will continue. In order to maintain the new balance of power, the fourth and final stage, consolidation ensues. Consolidation could be likened to an adjustment period where new power balances are struck and lead to tangible change. Whilst Gee clarifies there are no hard and fast rules that apply, these stages have proven beneficial for changemakers in their provision of a morale boost coupled with strategic direction. Castells, Gee and Boehnert all describe how counterpower is evident in historic movements, from anti-slavery and worker’s rights to democracy, civil rights and women’s rights<sup>569</sup>.

In most transformational movements all three types of counterpower (idea, economic and physical) are used. Gee explains that whilst there have been movements that used only one or two types, these movements typically fail to gain traction. Idea counterpower is ‘the practice of forming ideas that challenge the status quo and then communicating them.’<sup>570</sup> Idea counterpower is evident

566 Ibid.

567 Ibid.

568 Gee, *Counterpower: Making Change Happen*. p 130

569 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p32-33 Castells, “Communication, Power and Counter-Power in the Network Society.” p 11-15 Gee, *Counterpower: Making Change Happen*. p 16-39

570 *Counterpower: Making Change Happen*. p 19

in Fry's 'redirective practice'<sup>571</sup>, where in the context of communication and interaction design, briefs are challenged with counterproposals for more sustainable approaches. Fry argues that redirective practice must be enacted in multiple domains. Most notable for this research (outside of the redirection of commercial design practice) is the redirection of education, which Fry argues has become an increasingly instrumental service industry<sup>572</sup>. To demonstrate (an albeit theoretical) application of idea counterpower that is supported by economic and physical counterpower, I will synthesise Fry's argument for redirected education with Papanek's critique of design education and the designer-consumer theory proposed in the previous chapter. If tertiary design education prepares designer-consumers for an industry career, then it could be argued that an 'onto-epistemological'<sup>573</sup> redirection is required in order to transform designers and the outcomes of their labours away from design that accelerates consumption. Idea counterpower would be evident in such a transformation as changes unfold through transformed curricula, however economic counterpower would also need to support it. Economic counterpower is described by Gee as 'the refusal to work or the refusal to pay'<sup>574</sup> perhaps most easily recognised through actions such as strikes or boycotts. What would happen if design educators refused to deliver course content that was destined to 'defuture', demanding instead a revised curriculum that embodies new and more sustainable directions? How would such an action be addressed at an institutional level and could this refusal to work be escalated to a physical counterpower by way of institutional occupation? If educators maintained their positions of power and taught a revised program regardless, their institutional occupation could be an active embodiment of physical counterpower. By way of interest, how would this same example read if the demands came not from educators but from their students? If tertiary education is a service industry, as argued by Fry, then service provision would need to consider such demands or risk financial collapse. In this example, idea counterpower is evident in the recognition of the need for a new epistemological approach; economic counterpower is evident in the refusal to pay to learn a 'defuturing' curricula; and physical counterpower would be evident in any occupation of institutions.

Counterpower describes the power that every citizen holds yet is frequently unaware of; it is the ability of the many to overturn the power of the few. Without recognition from individuals that we hold such a power, and without a full engagement through its different stages and types, it is unlikely to be used to challenge the status quo in any significant way. It must be acknowledged that designers evoking counterpower will still be reliant on some base level of individual agency and empowerment, but once empowered, the combined use of these different types of counterpower could yield positive results.

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571 Fry, "Redirective Practice."; *Design as Politics*.

572 *Design as Politics*. p 191

573 Onto-epistemology is a term used by Escobar to represent the intersectionality of theories of being and theories of knowing. Escobar also includes ethics in this term (onto-ethico-epistemology) to reflect the inseparability of these concepts. For more on this see: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

574 Gee, *Counterpower: Making Change Happen*. p 24

The inherent power in design lies in its persuasive potential, which can be used to reinforce or challenge the status quo. In challenging the status quo designers may also challenge their sense of self, their agency and their own economic and social role. This kind of counterpower provocation can lead to an ontological design agency that requires a more nuanced understanding of what we create, why we create it, how it might be used, and what it might go on to design<sup>575</sup>. It has been widely argued in decolonial discourse that in order to perform this work in ways that are just, design must be decolonised<sup>576</sup>. This discourse acknowledges the many forms of designing (and being/knowing) that have been subordinated through colonisation, and how design has been colonised by discourse that centres around Eurocentric notions of what design is, and what constitutes ‘good design’. Decolonial design can be thought of ‘as a form of radical hope for an ethical life with earth.’<sup>577</sup> Any transition towards sustainable futures must embrace this notion in order to foster what White refers to as a ‘just transition’<sup>578</sup>; where indigenous and pastoral perspectives are recognised, where labour is considered and where imbalances of power are addressed. ‘Just transitions’ recognise that the Global North perspective is but one of many, and that design as defined by Simon’s ‘preferred futures’ is somewhat flawed in its predominantly westernised, patriarchal approach to modernity. As posed by Escobar: Whose preferred future? What kind of modernity? What kind of future will this preferred future prefigure? Could we design ontologically instead in order to embody the new or emergent? Escobar describes ontological design as decolonial<sup>579</sup>; instead of consumerism, it promotes conviviality, it is socially and culturally inclusive.

Ontological design asks more of design (and designers) than what design can make or build, it asks what we could do and what we could be.<sup>580</sup> To design ontologically is also to shift away from the dualism of subject/object and towards the possibility of alternative ways of being in the world. Escobar argues<sup>581</sup> for more critical engagement with social justice and ecology as part of ontological design; as well as critical acknowledgement of power dynamics, of the need for reconnection (to self and to place) and of what design can go on to design. A strategy for transitions could arise from this critical engagement; but without first decolonising design we risk replicating the problems from ‘anthropocentric rationalist’ modes of being, instead of embracing more relational ways of being in the world. As Plumwood advocates,

575 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. p 124-126 Fry, “Design after Design Workshop.”; “Elimination by Design.”

576 See for example: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; “Response: Design for/by [and from] the ‘Global South.’” *Design Philosophy Papers* 15, no. 1 (2017); Fry, “Design for/by “the Global South.””; Ramón Grosfoguel, “The Epistemic Decolonial Turn: Beyond Political-Economy Paradigms,” *Cultural studies* 21, no. 2-3 (2007); Suzanne M Spencer-Wood, “Feminist Theorizing of Patriarchal Colonialism, Power Dynamics, and Social Agency Materialized in Colonial Institutions,” *International Journal of Historical Archaeology* 20, no. 3 (2016); Madina Tlostanova, “On Decolonizing Design,” *Design Philosophy Papers* 15, no. 1 (2017); Rolando Vazquez, “Precedence, Earth and the Anthropocene: Decolonizing Design,” *ibid.*

577 “Precedence, Earth and the Anthropocene: Decolonizing Design.” p 78

578 White, “Creative Labour/Critical Designs/Just Transitions Imaginaries.”

579 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. ch 4

580 Terry Winograd and Fernando Flores, *Understanding Computers and Cognition: A New Foundation for Design* (Intellect Books, 1986). p 179

581 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. ch 4

a kind of prudent ethics that is non-dualist and decolonial is needed in order to ‘balance sameness and difference’<sup>582</sup> as part of relational dynamics. This ecofeminist way of thinking also embraces the communal narrative that is prevalent in decolonial discourse from the Global South and in Australian indigenous culture, which recognises that ‘you belong to the land as much as the land belongs to you’<sup>583</sup>. To underpin critical thinking in design with a decolonial relationality and ecological prudence is an ontological endeavour that I propose is in itself an act of counterpower against the design industry.

#### 4.1.4 Relational power dynamics

Addressing structural problems relating to power dynamics may seem out of scope for most designers, however this presents opportunities for communication and interaction designers who are transitioning or redirecting the goals of their practice. As previously discussed, the power dynamics in the client-designer relationship can impact a designer’s capacity to address change in their work. But in fourth-order design, an understanding of power dynamics can act as a core addition to the broader theoretical underpinning required to design for transitions<sup>584</sup>. In this context, designers may step out of their traditional ‘making’ roles into facilitating roles, where they design the space for participants and project partners to work toward the goal of sustainability. Understanding power dynamics is key to successfully navigating this kind of stakeholder relation—particularly when engaged in system or problem mapping—and is certainly helpful for reading the dynamics of a roomful of people during collaborative processes<sup>585</sup>. Dowding’s concepts of outcome and social power also point to an important consideration in collaborative group dynamics. Those who sense a benefit from collaborating may be more capable of maintaining a values-based approach and may therefore be less likely to evoke a competitive mindset in their interactions with other participants. Designer-facilitators working with full cognisance of this will be better positioned to recognise the power dynamics in collaborative working groups and facilitate groups accordingly. This could ensure beneficial experiences and outcomes for all participants.

It is important to note that creating beneficial outcomes/experiences does not mean that all participants ‘win’, rather that they can all perceive a benefit in an agreed upon outcome. The desire to win stems from a competitive mindset, where values like achievement and power are prioritised<sup>586</sup>. For someone who is driven by extrinsic values such as these, a beneficial outcome or experience may require a compromise of sorts, with the understanding that a desire to win could be redirected towards something more benevolent or universally beneficial. For example, an outcome that protects the environment is beneficial for ecology which by extension is beneficial for participants who are part of said

582 Plumwood, *Environmental Culture*. p 200

583 Ibid. p 230

584 Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.”

585 Dahle, “Transition Design Lectures.”

586 Holmes et al., “The Common Cause Handbook.”

ecology. The language here is important. Speaking in terms of winning and losing plays into an extrinsically motivated value-set, however communicating ‘benefits’ rather than ‘wins’ permits a greater flexibility in the perception of outcomes as positive or beneficial and encourages a collaborative mindset.

The kind of collaboration that might be required in order to take action is made possible by maintaining an openness to multi-disciplinarity and to contributions that come from experts and non-experts alike. The relational dynamics of highly diverse groups can be challenging to navigate, and language plays an important role in aiding successful communication. In a collaborative group, co-learning how to communicate could be likened to a form of ‘proactive mediation’<sup>587</sup>, where conflict is expected, and collaborative mediation techniques can be used to prevent it. The involvement of all participants ensures successful outcomes, and deep collaborations that are underpinned by open sharing—of language, theoretical knowledge and real-life experiences—allow collaborators learn how to move together. Inclusivity also plays a significant role and holding space for marginalised voices can help ensure justice in moving forwards.

In any collaborative setting it is crucial to develop an understanding of how power impacts marginalised peoples; this is a particularly important perspective for privileged designers who have little or no lived experience of being marginalised. The same power dynamics that promote the economic status quo are also responsible for environmental injustices impacting marginalised communities. This is conducted through the mistreatment of people and disproportionate positioning of polluting activities in communities with a lower socio-economic demographic<sup>588</sup>. Decolonial and post-colonial discourse can provide some insight into these experiences for privileged designers, as can increasing eco-literacy. An understanding of power dynamics is key to successfully navigating a facilitating role and this is particularly true where outcomes can impact underprivileged communities. The relational dynamics at play here can be fraught with misunderstanding and require more nuanced thinking in order to grasp the underlying concepts of sameness and difference. As previously mentioned, Plumwood’s argument for relational thinking reveals a ‘precarious balance of sameness and difference, of self and other involved in experiencing sameness without obliterating difference.’<sup>589</sup> The two concepts are interdependent and experienced daily in relations between humans and the environment, and between different genders and cultures. Without this balance, assimilation, instrumentalisation and commoditisation will rule supreme. And without an understanding of relational power dynamics and theories of change the designer’s role remains limited, and their work could potentially cause more harm than good. Whilst designers might desire to contribute to positive change, a lack of understanding of relational dynamics can unintentionally contribute to ‘defuturing’ activities and/or reinforce existing power structures.

587 This concept is discussed in more detail in *Part 3: Doing*.

588 Plumwood, *Environmental Culture*. ch 4

589 *Ibid.* p 200



## 4.2 Theories of change for designers

Exploring theories of change builds working knowledge that facilitates designing for sustainable futures. The design industry tends to avoid critical engagement with theory outside of that which applies directly to form, function and design culture. In contrast, the emergent approach of transition design is underpinned by theoretical knowledge that guides thinking and design activity<sup>590</sup> to focus on holistic approaches to sustainability. Without these theories and the altered mindset that accompanies them in transition design, a designer's capability to respond to sustainability transitions is limited. Shifting mindsets from a profit-motive, to design that is led by the goal of sustainability, requires an understanding of the nature of complex problems, where they exist, and how they can be approached. This permits design approaches to sustainability problems that are enriched by theoretical knowledge of change at a personal, social and systems levels. Transition design is discussed in greater depth in *Part 3: Doing*, for now the focus remains on some of the theories that underpin transitions discourse.

### 4.2.1 Socio-technical transition theory

Socio-technical transition theory is concerned with social systems and studies historical socio-technical change to gain insights into how societies change over time<sup>591</sup>. Geels outlines a multi-level perspective (MLP)<sup>592</sup> for socio-technical transitions that consists of three key levels of activity: niches, regimes and landscapes. These levels exist at different scales but are not an ordered hierarchy, they are better understood as holarchies or nested hierarchies<sup>593</sup>. Niches are smaller in terms of influence; their size permits agile, fast-paced, small-scale changes that are often more radical or exploratory by nature. The experimental quality of niche activity is protected from external market forces, often existing as a research and development lab or a small market, making the niche a good testing ground for novel ideas<sup>594</sup>. Socio-technical regimes are larger than niches and the activity within regimes is representative of social norms<sup>595</sup>. Socio-technical regimes could be understood as a stable centre-point of social practices<sup>596</sup>. Regimes are influenced by the rules and regulations that create a society's structure; for example, modes of thinking, shared beliefs, practices, capabilities and lifestyles all situate within a socio-technical regime. The socio-technical regime also houses a number of sub-regimes including

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590 Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*; "Transition Design Provocation."; Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions."

591 Geels and Schot, "Typology of Sociotechnical Transition Pathways."; Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions."

592 Geels, "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study."

593 Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions." p 4-6

594 Geels and Schot, "Typology of Sociotechnical Transition Pathways." p 400

595 Ibid. p 400

596 Ibid. p 400

socio-cultural, policy, science and technological, and whilst breakthroughs can be co-ordinated across sub-regimes, tensions also exist between them<sup>597</sup>. Regimes and niches are ‘housed’ within a socio-technical landscape, which can influence both the regime and niche levels, but is not as easily influenced by them in return<sup>598</sup>. Socio-technical landscapes are home to what Geels describes as ‘a set of deep structural trends’<sup>599</sup>—easily likened to global or universal trends—that are slow moving in relation to change. Many of the systemic problems connected to consumption and the broader issues of climate change and sustainability exist in these landscapes and are subsequently locked in place within the regime<sup>600</sup>.

There are social structures that span the MLP which over time become ‘locked’ in place, however opportunities for influence exist through alignments between the levels<sup>601</sup>. For example, experimental niche ideas can penetrate the regime through an alignment with policies, rules or markets, facilitating incremental innovation within the regime. It is at times of destabilisation that such opportunities arise and these levels can influence one another, however this is rarely performed in isolation and is usually the result of multiple drivers. Whilst no ‘recipe’ for de-stabilisation exists<sup>602</sup>, changes that arise through necessity demonstrate these multiple drivers. An impending example of necessary change is evident in the many social and environmental impacts arising from increasing displacement as a result of weather events.

Christensen’s updated theory of disruption also holds relevance as part of the MLP<sup>603</sup>, where disruptive innovation cuts through markets resulting in changed business practices. The disruption of taxi services by Uber is an oft-cited contemporary example of this, yet it should be noted that Uber is also an example of failure in the uptake of the niche practices that form part of the sharing economy<sup>604</sup>. (The sharing economy is discussed in more detail in section three of this chapter.) Uber’s underperformance as a sharing model demonstrates how challenging it can be to amplify niche activity when it shifts from the niche into the regime, and Geels describes how ‘niche-innovations in an embryonic state do not pose a threat to the regime’<sup>605</sup>. This suggests niche activity that has not fully developed can either fail to penetrate the regime or

597 Geels, “The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.” p 27

598 Arie Rip and René Kemp, “Technological Change,” *Human choice and climate change* 2 (1998).

599 Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.” p 1260

600 “The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.”; “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”

601 Geels and Schot, “The Dynamics of Transitions: A Socio-Technical Perspective.”

602 Alfonso Martínez Arranz, “Lessons from the Past for Sustainability Transitions? A Meta-Analysis of Socio-Technical Studies,” *Global Environmental Change-Human And Policy Dimensions* 44 (2017). p 126

603 Stephen Denning, “Christensen Updates Disruption Theory,” *Strategy & Leadership* 44, no. 2 (2016).

604 The sharing economy describes a niche practice of shared goods and services such as peer to peer, also understood as a form of collaborative consumption and touted as an important aspect of sustainable consumption. For more see: Juho Hamari, Mimmi Sjöklint, and Antti Ukkonen, “The Sharing Economy: Why People Participate in Collaborative Consumption,” *Journal of the Association for Information Science and Technology* (2015); Harald Heinrichs, “Sharing Economy: A Potential New Pathway to Sustainability,” *Gaia* 22, no. 4 (2013); Mareike Möhlmann, “Collaborative Consumption: Determinants of Satisfaction and the Likelihood of Using a Sharing Economy Option Again,” *Journal of Consumer Behaviour* 14, no. 3 (2015).

605 Geels and Schot, “Typology of Sociotechnical Transition Pathways.” p 406

can become distorted or influenced by other more stable norms present in the regime. In the example of Uber and the sharing economy, the stable norms of ordering a car service for personal use remained intact, and the niche experiments in sharing modes of transport within a community were only partially realised. Instead, Uber has stabilised in the regime a tech-platform taxi service with a more exploitative business model, more aptly described as part of the gig economy<sup>606</sup> than the sharing economy. This outcome is indicative of the types of challenges faced in shifting between levels in the MLP, and also highlights the crucial role that behaviours play in approaches to sustainability problems. Socio-technical transitions theory and social practice theory inform interrogations of these practices and their inter-level shifts in this research, and both are part of the ‘theories of change’ presented in the transition design framework.

The lack of traction of sustainable design principles suggests that designers approaching sustainability through their work may feel overwhelmed by the scope of the problems faced, which can be broad, structural, complex and largely behavioural. As discussed in the previous section, Willis has also described the limited impact of sustainable design as connected to a superficiality in designers’ approaches<sup>607</sup>. Tonkinwise also discusses this as a limitation in lower orders of design, where the aim for a ‘once-and-for-all innovative solution’<sup>608</sup> is never realised—usually due to constraints on time or money. This superficial (or incomplete) approach is contrasted with the emergent practice of transition design. Through an analysis of design orders, Tonkinwise positions transition design as a higher (fourth) order of design<sup>609</sup>. He describes how transition design builds upon existing/lower orders and extends their reach to a new level of complexity, and that in doing so also acknowledges explicitly that there is a temporality to transition design—implied through its reference to ‘transition’<sup>610</sup>. Its iterative approach calls for observation and reflection to assess emergent alternatives, thus it is also considered a multi-stage approach. Transition design creates multiple often over-lapping interventions that contribute to an ever-evolving web of activity, as opposed to the once-and-for-all endeavour for the ‘perfect’ solution that is common to lower orders. It is a multi-stage, multi-level approach, thus the MLP is a key theory that informs its practice. The MLP and its use in transition design is explored in more detail in the next chapter.

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606 The gig economy describes a rising trend in unstructured working arrangements that see workers perform a series of jobs or ‘gigs’ as an external contractor rather than an employee. This is increasingly common in the free market economy where greater flexibility in financial commitments is achieved through reduced employee on-costs. For more see: Katharine G Abraham et al., “Measuring the Gig Economy: Current Knowledge and Open Issues,” (National Bureau of Economic Research, 2018).

607 Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.” p 72-73

608 Tonkinwise, “Design’s (Dis)Orders & Transition Design.” p 12

609 Ibid.

610 Ibid. p 11-13

### 4.2.2 Social practice theory

Social practice theory interrogates societal change by focussing on the ‘little things’ that combine to create a set of social practices<sup>611</sup>—how we eat, bathe, shop, work, transport ourselves are all social practices, and each has the potential to be sustainable or unsustainable<sup>612</sup>. For example, in the social practice of transporting ourselves, one person could drive their car to get from A to B, while another rides their bicycle the same distance. In this comparative example, driving is a less sustainable social practice than cycling, however the sustainability of the practice of driving could be improved by sharing use of/access to the car with others. Whilst cycling is still more sustainable than driving, the sustainability of cycling would be decreased if the cyclist powered their ride with a hamburger compared to a banana. Small changes made to social practices add up quickly because they occur so frequently and ubiquitously. There is an ‘everydayness’ to this problem, and the coupling of practices with goods and services presents an opportunity to redesign consumption by detaching it from everyday practices. This is also recognised in Kossoff’s ‘Domains of the Everyday’, where everyday practices are identified as the locus for more sustainable modes of living<sup>613</sup>. Changing the culture of our everyday practices—for example shifting from a disposable culture to a reusable culture—could dramatically reduce the impact of everyday consumption. Applying social practice theory in a sustainability context means these ‘little things’ can be examined, and their cumulative impact can be recognised.

My transformation to conscious consumption and a zero waste lifestyle (spanning home and work) has provided a lived experience that informed how I designed interventions to the problems of consumption and waste. Over a three-year period this transformation has altered all of my social practices; this experience has provided unique insights into social practice theory in action. Moreover, the political endeavour embedded in these lifestyle choices also serves as an ethical guide that influences and informs decision making in my practice. It is evident that this ongoing transformation continues to inform and facilitate the larger transition taking place in my design practice. Escobar might describe this as an ‘onto-ethico-epistemic’ political endeavour<sup>614</sup>. It is existential in nature and as such cannot be neatly compartmentalised into personal or professional boxes, despite the attempts in this thesis to do so. Changing multiple ‘little things’—personally and professionally—has facilitated a broader transition within my design practice. This direct application of social practice theory in both the personal and professional domains has been a formative aspect of this research. Embodied reflection on this has clearly identified the impact that comes from changing these ‘little things’.

611 Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*; Shove and Walker, “Governing Transitions in the Sustainability of Everyday Life.”

612 Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”

613 Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”

614 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

From a recognition of the cumulative impact of ‘little things’ comes the potential to use transition design to address this impact. Irwin et al have identified that positive impacts on everyday life will require more than one singular theory or approach<sup>615</sup>. By combining insights from the MLP with the plethora of ‘little things’ that form social practices, and addressing them within the context of everyday life, transition design can create change at both a large and small scale. This is by nature a slow approach but could potentially affect change exponentially. As previously discussed, the slow movement has gained traction over the past decade and has permeated a number of social practices. It can be seen in food production, through small-scale micro-farming and the gradual resurgence of cooking from scratch using whole ingredients; in entertainment through mindful activities and crafts such as knitting and colouring-in; and even through the rise in slower modes of transport such as bicycles rather than cars<sup>616</sup>. Manzini and Tassinari<sup>617</sup> draw designers’ attention to the slow movement and discuss how its creation of meaningful and engaging work enables communal relationships between the land, people and material things, and fosters sustainable skills and capabilities. This focus on the communal and the temporal is echoed by Escobar<sup>618</sup> and Kossoff et al<sup>619</sup> as key in the realisation of Manzini’s ‘cosmopolitan localism’<sup>620</sup>, globally interconnected small scale localised activity that fosters sustainable social practices. These small-local-slow-social concepts are key to design that is temporal and sustainable, and could help realise the goals of both transition design and autonomous design.

Reflection on my own transformation towards a simpler and slower lifestyle revealed how slow behaviours often evoked a flow state<sup>621</sup>, and how they formed a web of behavioural change that was interconnected with values like universalism and benevolence. These values demonstrate care for the environment, inner harmony, and meaningful action<sup>622</sup> and are common to the endeavours of transition design and autonomous design. Stern theorises that behavioural change—such as that experienced through my own transformation—is connected to ethics and values and the way they are impacted by attitudes, beliefs, behaviours, norms and contexts<sup>623</sup>. His Attitude-Behaviour-Context (ABC) and Value-Belief-Norm (VBN) theories discuss how pro-environmental behaviour can be encouraged by awakening altruistic values and he suggests adopting a tiered approach that addresses attitudes,

615 Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.” p 7

616 Footprint Choices, “The Slow Movement,” Footprint Choices, <http://www.slowmovement.com>.

617 Manzini and Tassinari, “Sustainable Qualities: Powerful Drivers of Social Change..”

618 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

619 Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”

620 Ezio Manzini, “Resilient Systems and Cosmopolitan Localism—the Emerging Scenario of the Small, Local, Open and Connected Space,” in *Economy of Sufficiency*, ed. Uwe Schneidewind, Tilman Santarius, and Anja Humburg (Wuppertal Institute for Climate, Environment and Energy, 2013).

621 Csikszentmihalyi, *Creativity*.

622 Holmes et al., “The Common Cause Handbook.”

623 Paul C Stern et al., “A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism,” *Human ecology review* 6, no. 2 (1999).

capabilities, contexts and habits (norms). There are connections between Stern's theories of change<sup>624</sup>, Kossoff's 'Domains of the Everyday'<sup>625</sup>, and social practice theory's focus on habits<sup>626</sup>. A connection between sustainable modes of living and increased capabilities through slower, more sustainable life skills is also made by Manzini and Walker<sup>627</sup>.

The timing of change is a key consideration, evident in Fry's comment that, 'comfort is the antithesis of change'<sup>628</sup>, and the importance of timing is emphasised in Fogg's behaviour model in reference to 'kairos'—a Greek word that describes 'the right thing at the right time'<sup>629</sup>. Fogg's model focusses on enacting a triggered behaviour; he identifies the need for motivation, trigger, and ability in order to change behaviours, and acknowledges that the timing of a trigger is crucial for successful change. Unlike other theories of change, Fogg's model seeks fast change, and perhaps holds more relevance in the design of interactions rather than significant behavioural shifts. However his application of 'kairos' is significant in the context of transformations, where it could also be applied to the 'low hanging fruit' of social practices (for example fast behaviour/practice changes like swapping the use of a disposable plastic bag for a reusable shopping bag).

Fogg's concept of mass interpersonal persuasion (MIP)<sup>630</sup> also has relevance to this research. Fogg presents MIP as having six components (persuasive experience, automated structure, social distribution, rapid cycle, huge social graph, and measured impact) that prior to the launch of Facebook had not been combined in any one platform<sup>631</sup>. In MIP, behaviour change is amplified through online activity, particularly in social networks, where message reach is extended through the combination of user networks and online triggers embedded in social media platforms. Fogg's view considers not only the persuasive ability of friends (through invited activity) but also the added persuasion of transparent metrics<sup>632</sup>. For example, displaying the number of daily downloads for an app, for new users added to a group or new signatories on a petition, promotes the item's popularity and increases the momentum of uptake, a concept Fogg calls 'social proof'<sup>633</sup>. Fogg's presentation of MIP was formulated during Facebook's infancy, and the author maintains a sense of optimism for the potential of MIP. Reflecting on MIP through a post-Trump/Cambridge Analytica lens<sup>634</sup> reveals the darker side to social media persuasion

624 Paul C Stern, "New Environmental Theories: Toward a Coherent Theory of Environmentally Significant Behavior," *Journal of social issues* 56, no. 3 (2000); Stern et al., "A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism."

625 Kossoff, "Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society."

626 Shove and Walker, "Governing Transitions in the Sustainability of Everyday Life."

627 Manzini and Walker, *Enabling Solutions for Sustainable Living: A Workshop*.

628 Fry, "Design after Design Workshop."

629 B.J. Fogg, "A Behaviour Model for Persuasive Design," *Proceedings of the 4th International Conference on Persuasive Technology - Persuasive '09* (2009).

630 B.J. Fogg, "Mass Interpersonal Persuasion: An Early View of a New Phenomenon" (paper presented at the International Conference on Persuasive Technology, 2008).

631 *Ibid.* p 23

632 *Ibid.*

633 *Ibid.* p 30

634 See for context: Philip Bump, "All the Ways Trump's Campaign Was Aided by Facebook, Ranked by Importance," (2018), [https://www.washingtonpost.com/news/politics/wp/2018/03/22/all-the-ways-trumps-campaign-was-aided-by-facebook-ranked-by-importance/?noredirect=on&utm\\_term=.c869c9528b5a](https://www.washingtonpost.com/news/politics/wp/2018/03/22/all-the-ways-trumps-campaign-was-aided-by-facebook-ranked-by-importance/?noredirect=on&utm_term=.c869c9528b5a).

and ‘social proof’. New research shows how social media algorithms can create information bubbles filled with biased content<sup>635</sup> but also demonstrates how they can be harnessed to mobilise people as part of social movements<sup>636</sup>. While the principles of MIP could contribute to social change as part of transitions, MIP should also be approached with full cognisance of the combined limitations of social media algorithms and biases in audiences.

Most theories of change—such as those from Stern<sup>637</sup> and those identified in the Transition Design Framework<sup>638</sup>—recognise that change occurs slowly and incrementally, and these theories are better applied in the context of large scale change. Nevertheless this temporality does not render Fogg’s faster technology-based models irrelevant. Their application to the ‘little things’ could help influence the personal transformations that are a necessary undertaking as part of enacting large scale change.

Personal transformations are also discussed by Irwin et al and others, who argue that self-transformation precedes the transformation of anything else (for example, organisations or systems)<sup>639</sup>. Transition design’s connection of theories of change to the everyday also makes their application to the social-self far clearer, and from this connection, pathways towards sustainable futures begin to emerge. Social practice theory is examined further in the next chapter.

### 4.2.3 Changing everyday life

It is everyday life that keeps humans occupied and it is through everyday life that our needs can be satisfied<sup>640</sup>. Everyday life is tangible and accessible, at times mundane and at others exhilarating, but for the most part, it is within our individual control. Actions undertaken as part of everyday life become the practices that are encapsulated as part of social practice theory, but some literature suggests that despite its importance, the domain of everyday life is a relatively under-studied area<sup>641</sup>. Kossoff’s framework for the ‘Domains of Everyday Life’<sup>642</sup> connects the satisfaction of everyday needs with social practice theory (SPT) and the MLP, and uses Max-Neef et al’s theory of needs<sup>643</sup> to describe how needs can be met through a range of satisfiers that are unique to the context (time/place/culture). As previously discussed, these

635 Abdallah Alsaad, Abdallah Taamneh, and Mohamad Noor Al-Jedaiah, “Does Social Media Increase Racist Behavior? An Examination of Confirmation Bias Theory,” *Technology in Society* 55 (2018); Elisabeth Lex, Mario Wagner, and Dominik Kowald, “Mitigating Confirmation Bias on Twitter by Recommending Opposing Views,” *arXiv preprint arXiv:1809.03901* (2018).

636 Sean N Blas, “Social Media and the Arab Spring,” (United States: Maxwell Air Force Base, 2018).

637 Stern et al., “A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism.”

638 Irwin, “The Emerging Transition Design Approach.”; Irwin et al., “Transition Design.”

639 Fry, “Design after Design Workshop.”; Irwin, “The Emerging Transition Design Approach.”; Irwin et al., “Transition Design.”; Scupelli, “Designed Transitions and What Kind of Design Is Transition Design?”

640 Max-Neef, Elizalde, and Hopenhayn, “Development and Human Needs.”; Smith and Max-Neef, “A Human Economics for the Twenty-First Century.”

641 Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”; Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”; Grin, Rotmans, and Schot, *Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change*.

642 Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”

643 Max-Neef, Elizalde, and Hopenhayn, “Development and Human Needs.”

ideas connect with Sen's concept of standards of living and well-being, where needs are considered as forms of functioning which can be simple or complex. Drawing on Sen's theory, any attempts to create change in everyday life must be approached with the understanding that well-being is impacted not only by what we have the potential to do, but also by what we are capable of doing and what we choose to do. These interconnections become key considerations when designing interventions; they require relational thinking to examine everyday life at multiple levels. The scalability and impact on the domain of the everyday is a vital consideration in the context of modern society's consumption as an attempt to satisfy needs. Designers' ability to map modes of satisfaction and address them through considered design outcomes holds potential for a deeper engagement that could positively influence well-being in ways that are distinct from the satisfaction that is connected to consumption. But creating change in everyday life requires more than designing outcomes focussed on individual change, organisations play a significant role here too.

Organisations can heavily influence the sustainability of everyday life, particularly in the Global North where many people are reliant on them not only as consumers of their products and services but also for their employment. Polluters, extractors, institutions and corporations appear to require the most significant transformation in order for broader societal change to occur, and designers will likely need to work with these organisations to encourage their active participation in sustainability transitions. This offers another angle for enacting change in the domain of the everyday. Collaborating with these organisations could become an important aspect of the work for transition designers. Whilst 'clean' cause-related work can amplify sustainability, it is the transformation of 'dirty' corporations and institutions that could better address structural unsustainability. As transition design's traction increases, organisations might present some of the biggest challenges to transition designers. Intrinsically motivated designers might grapple with the contradictory nature of work that aims to change the system it is embedded within, but the metaphoric dirt beneath their fingernails might be reconciled by the knowledge that this work also contributes to transitions. Of further importance here is the recognition that this work is performed collaboratively—change is a participatory process, it is done *with* people, not *to* them. I propose that designers might approach this work as a kind of 'proactive mediation'<sup>644</sup>. Wherever an organisation's actions are in conflict with the need for sustainability, designers could mediate more sustainable approaches. As discussed by Whetten and Cameron<sup>645</sup>, any conflict resolution or mediation that is performed collaboratively has an increased likelihood of successful resolution. Without a collaborative approach, change is more likely to be resisted or refuted, but through the co-definition of problems and the co-creation of solutions, a truly collaborative shift can take place.

644 This concept is discussed further in *Part 3: Doing*.

645 David A. Whetten and Kim S. Cameron, *Developing Management Skills*, 8 ed. (Pearson Education, Inc., publishing as Prentice Hall, 2011).



It is here that the everyday aspects of transition design's framework<sup>646</sup> reveal the potential for design's relationship with business to change. Engaging in deeper collaborative processes with organisations that map and visualise complex problems can help co-define how and where structural unsustainability is being reinforced. From this collaborative articulation, transition pathways can be designed that aim to shift the normative social practices being upheld by organisations, including economic activity. Work of this nature would shift relationship dynamics significantly, from client-designer to collaborative partners with shared goals for sustainability transitions. This has the potential to change the everyday labour of designers and of an organisation's labour workforce, which offers an additional perspective to the ideas presented that discuss the sustainability of everyday life. It also leads to a necessary consideration of economics as part of sustainability transitions.

### 4.3 Alternative economies

As outlined in part one of this chapter, contemporary Global North societies are dominated by a neo-liberal ideology that favours economic approaches and accelerated growth. Under neo-liberalism the economy is linear, this creates opportunities for unbridled profit from unbridled growth<sup>647</sup>. In this 'take, make, use, dispose' linear economic model, (see Figure 4.1) people and nature are treated as cheap resources and branded as forms of capital. People become 'human capital', natural environments become 'natural capital', and both are provided for sale in a free market economy. There is a dangerous rhetoric surrounding the concept of natural capital, particularly in its non-renewable forms, where depletion in the present is justified by temporal compensation strategies through other forms of capital in the future<sup>648</sup>. But as Boehnert argues, 'the assumption that one ecosystem service can be substituted for another is inherently wrong... [because] money cannot fix extinct species, collapsed ecosystems, [or] climate change'<sup>649</sup>. The linear economy treats people and the planet like resources to be converted into perpetual profits until they are depleted, making a linear growth economy unsustainable in every sense of the word. Putting a price tag on nature does not protect it, rather, it offers it up for sale<sup>650</sup>.

It is widely understood that the current growth model propelling the linear economy is not only unsustainable but is also guaranteeing future demise<sup>651</sup>. Yet those profiting from this linear economy remain fiercely resistant to change.

646 The transition design framework is discussed in more detail in Chapter 7. The framework consists of four mutually reinforcing areas of knowledge including 'mindset and posture', 'theories of change' such as the MLP, 'new ways of designing' including systems mapping and stakeholder engagement, and 'visions for sustainable futures'. For more on this framework see also the range of literature from Terry Irwin et al.

647 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; "Anthropocene Economics and Design: Heterodox Economics for Design Transitions."

648 Dieter Helm, "Natural Capital: Assets, Systems, and Policies," *Oxford Review of Economic Policy* 35, no. 1 (2019).

649 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 156

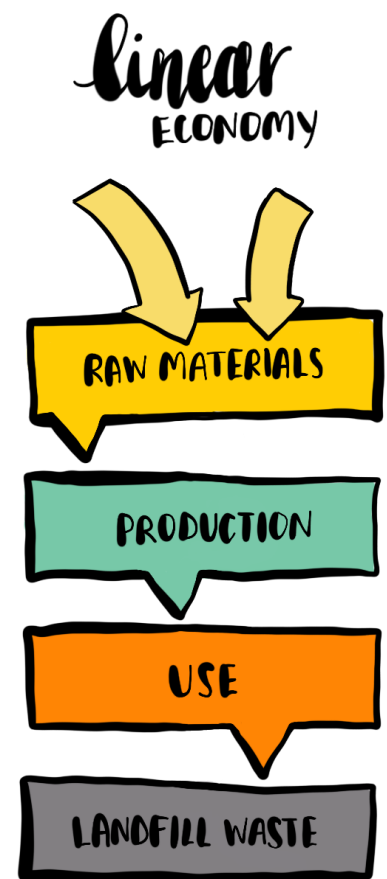
650 Ibid. p 158-159

651 See for example: ibid.; Fry, *Design Futuring*; Jackson, "Prosperity without Growth?: The Transition to a Sustainable Economy."; Klein, *This Changes Everything: Capitalism Vs. The Climate*; Plumwood, *Environmental Culture*.

Post-cautionary approaches are prevalent in the growth economy. They continually ignore the science warning us of impending crises and normalise unsustainable levels of production and consumption<sup>652</sup>. As the ecological and social crises facing humanity become more visible, the arguments for alternatives to mainstream economics will need to be taken seriously.

Despite the need for economic reform, de-growth strategies that aim to reduce the scope of the market economy can be viewed unfavourably as either a threat to the deregulated market or conversely, as ‘eco-compatible capitalism’<sup>653</sup>. Some argue that de-growth lacks a radical critique of capitalism<sup>654</sup>, but at its core, de-growth ‘is not about doing “less of the same” but about living with less and differently, about downscaling while fostering the flourishing of life in other terms.’<sup>655</sup> While a de-growth strategy might appear suitable for the Global North, in many societies, particularly in the Global South, perceptions that more growth is needed are contributing to a North-South/ developed-undeveloped binary. Escobar argues that this binary should be replaced with more ‘pluriversal perspectives’<sup>656</sup> that consider the many possible ways of being. Furthermore, Rodríguez-Labajosa et al<sup>657</sup> present research indicating that market growth is not always the problem in the Global South, rather it is a desire for profit and power rather than growth that causes the greatest impact. This argument suggests that in some instances, the issue to be tackled is not growth per se, but rather the connection between the market economy and the subsequent power it gives to an elite few. With this understanding in mind it is evident that de-growth strategies could fall short of addressing the ‘institutionalised domination of human being over human being and the consequent idea of dominating nature’<sup>658</sup>. This gives Escobar’s pluriversal perspectives some immediate context—one solution will not fit all and maintaining a plural focus (transitions, economies, futures, worlds) becomes an important distinction to make if humanity is to move forward without leaving anyone or anything behind.

Figure 4.1:  
The linear  
economy turns  
raw materials into  
landfill



652 Crocker, *Somebody Else's Problem: Consumerism, Sustainability and Design*.

653 Takis Fotopoulos, “Is Degrowth Compatible with a Market Economy?,” *Inclusive Democracy* 3, no. 1 (2007).

654 See for example: Beatriz Rodríguez-Labajosa et al., “Not So Natural an Alliance? Degrowth and Environmental Justice Movements in the Global South,” *Ecological economics* 157 (2018). and *ibid*.

655 Escobar, “Degrowth, Postdevelopment, and Transitions: A Preliminary Conversation.” p 458

656 *Ibid*. p 460

657 Rodríguez-Labajosa et al., “Not So Natural an Alliance? Degrowth and Environmental Justice Movements in the Global South.” p 179

658 *Ibid*.

There is validity to fears from the market that accounting for true sustainability will dampen profits and destroy the economy. Research from Linnenleucke et al<sup>659</sup> shows that the fossil fuel industry would be unviable if it accounted for the currently unpaid social cost of carbon. Boehnert discusses similar results in research from the UN which also shows that a full accounting for sustainability is not profitable<sup>660</sup>. What does this say about the methods ‘defuturing’ industries use to build profit? Is an economy that cannot survive without destroying its larger ecological context even worth saving? It is ridiculous to entertain the notion that there is any real choice to be made between survival or a linear economy. Affirmative actions against ‘defuturing’ activities are not a decision, they are imperative. With this need for actions (plural approaches), Jackson’s argument for ‘prosperity without growth’ captures the spirit of the kinds of alternative economies that could strive for equity and justice as part of economic reform. Because ‘inequality, it turns out, is not an economic necessity: it is a design failure’<sup>661</sup> that could be addressed in multiple and contextual ways, through redirected design approaches as part of sustainability transitions.

If sustainability transitions are to address concerns of economic collapse from economists and the corporate sector alike, then a strong model for economic reform will need to be developed. But without first changing the goal of growth measured by the GDP we will remain bound to systems that are designed to grow unsustainably<sup>662</sup>. Raworth believes economic reform should occur by design,<sup>663</sup> and Boehnert argues that the social dimensions of design can foster the creation of alternative economies, but only if design practice is redirected towards such ends through increased eco-literacy and exposure to alternative economics<sup>664</sup>. It is widely agreed that valid alternatives to the linear economy exist; however, they are also reliant on change within surrounding systems as well as change in people’s everyday behaviours. Perhaps most importantly, they require a post-capitalist ideology that adopts an ecologically and socially considerate worldview. This section explores how alternative economies might be designed to contribute to transitions.

This section opens with an interrogation of the sharing economy. Its current realisation through capitalism is critiqued and more communal modes of sharing are presented, including co-operatives and collectives. It then explores the circular economy, a concept that has been discussed throughout this thesis, particularly in relation to cradle-to-cradle design approaches. Here the explorations delve into the opportunities this kind of economy presents, what its limitations might be, and how it might play a central role in transitions.

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659 The authors show that the sum of fossil fuel industry profits/emission trading scheme carbon permit/carbon tax revenue (US\$7tn for 1995-2013) would not cover their unpaid social cost of carbon (estimated US\$12.7-15.5tn for the same period). See Martina Linnenleucke, Tom Smith, and Robert E. Whaley, “The Unpaid Social Cost of Carbon: Introducing a Framework to Estimate “Legal Looting” in the Fossil Fuel Industry,” *Accounting Research Journal* 31 (2018).

660 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 155

661 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. p 29

662 Ibid. p 31-60; See also literature from Sen (1976) Max-Neef (1995); Boulding (1945); Offer (2000); Kubiszewski et al., (2013).

663 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. p 29

664 Boehnert, “Anthropocene Economics and Design: Heterodox Economics for Design Transitions.” p 373

Then Raworth's 'doughnut economics'<sup>665</sup> is presented as a way of underpinning economic thinking that maps economic performance against a range of ecological and social considerations. This is proposed for use in outlawing any activity that threatens social and ecological well-being.

It should be acknowledged that I am not an economist. Whilst I have been exposed to alternative economies through my work as a designer and through my involvement in a collective, what is presented here draws heavily on knowledge I have built through engagement with economic and sociological literature. It is complemented by my own experiences working with these alternative economic approaches. The discussions in this section are limited by this non-economic background and are contextualised within design.

### 4.3.1 The sharing economy

In its broadest definition, the sharing economy includes platforms and activities that facilitate the sharing of things, services, money, knowledge, and more, in both for-profit and not-for-profit formats<sup>666</sup>. The sharing economy could potentially alter models of ownership and the surrounding behaviours and interactions with things in ways that could foster more collaborative modes of consumption. To do this, human behaviours and interactions could be designed ontologically, in ways that consider how behaviours need to change in order to foster communal approaches that can thrive within a sharing economy. An ontological approach is also one of perpetual versioning, it prompts continued observation and reflection on an outcome's impact on behaviour and surrounding environments. Tonkinwise describes this as part of a process that 'rethink[s] the way society is organised, shifting values, and significantly altering business models and economic thinking'<sup>667</sup>. These approaches utilise radical design thinking, shift between design and experience, and acknowledge power dynamics<sup>668</sup>. They are presented here as a consideration for design as part of the sharing economy, and are also discussed throughout this thesis as a necessary aspect of both autonomous design and transition design.

In their current incarnations, collaborative consumption, the commons, peer to peer and traditional forms of sharing (between family and friends) are niche activities that appear to have less traction in the norms of the socio-technical regime. Instead, the sharing aspects of the sharing economy have become diluted<sup>669</sup>, the regime has become home to neo-liberal-tech-giants and the sharing economy has morphed into a gig economy. In a contemporary capitalist setting, this so-called sharing economy promotes economically driven activity that brokerages labour through a gig economy—more often than not,

665 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*.

666 Plewnia and Guenther, "Mapping the Sharing Economy for Sustainability Research." p 576

667 Tonkinwise in: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. p 132

668 Ibid. ch 4

669 Mike Bulajewski, "The Sharing Economy Was Dead on Arrival," Jstor Daily, <https://daily.jstor.org/the-sharing-economy-was-dead-on-arrival/>.

unfairly. It has even been dubbed as worse than capitalism<sup>670</sup>; in part due to the disparate comparative earning capacity of tech-owners, tech-workers, and platforms' labour-forces, and their somewhat parasitic use of shadow-assets<sup>671</sup> (Uber uses your car, AirBnB uses your home and so on). Where governance is absent, the conditions for exploitation exist<sup>672</sup>; Uber and AirBnB present versions of the sharing economy that lack democratic governance, instead using sharing rhetoric with a capitalist business model that profits by both making and saving money. Arvidsson argues that while some academics positively view the potential for the sharing economy to foster sustainable consumption, most are far more pessimistic about its uptake because of its 'coloniz[ation] by the instrumental economic logic of big multinational corporations, generating new and more intense forms of exploitation'<sup>673</sup>. This perspective is valid, and exploitation is evident in the capitalisation of the labour and assets of participants in platform models in what Scholz refers to as 'crowdfleeing'<sup>674</sup>, where the crowd does all the work while profits are funnelled to the platform owner. In these versions of the sharing economy, platforms and their workers are misclassified as tech companies with partners rather than labour companies with workers<sup>675</sup>.

It is argued that exploitation in the sharing economy arises from its overlaps with the gig economy, making it a platform that is less about sharing and more about the exploitation of the underemployed seeking additional income sources<sup>676</sup>. The aforementioned Uber example draws success from this exploitation and deviates from any early conception as car/ride sharing. It is merely a brokerage platform for labour/ride-access. Let us consider three examples of a transport sharing economy using a 'purer' understanding of sharing: firstly, a community of users might co-own a car and negotiate shared care of and access to it, thereby increasing the vehicle's utility and reducing the overall number of vehicles on the road. Secondly, a car that is travelling from A to B might fill its seats with passengers who are also looking to travel from nearby A to nearby B at a similar time, thereby sharing the ride. Thirdly, a ride-access service might be offered by a platform cooperative that is owned and operated collectively by workers. These forms of sharing are vastly different to those enabled by Uber's platform, where a techno-taxi model adds idle cars and drivers to roads to wait for service requests<sup>677</sup> while platform owners 'crowdfleece' their labour force for profits<sup>678</sup>.

670 Trebor Scholz, "Platform Cooperativism Vs. The Sharing Economy," *Big Data & Civic Engagement* 47 (2014).

671 Chelsea Rustrum, "The Sharing Economy — a Social Movement Dying to Become an Economic One," <https://hackernoon.com/the-sharing-economy-a-social-movement-dying-to-become-an-economic-one-5bbebdddad96b>.

672 Trebor Scholz, *How Platform Cooperativism Can Unleash the Network* (re:publica, 2016).

673 Adam Arvidsson, "Value and Virtue in the Sharing Economy," *The Sociological Review* 66, no. 2 (2018). p 291

674 Scholz, *How Platform Cooperativism Can Unleash the Network*.

675 Ibid.

676 Ibid.; Juliet B. Schor and William Attwood-Charles, "The "Sharing" Economy: Labor, Inequality, and Social Connection on for-Profit Platforms," *Sociology Compass* 11 (2017).

677 Toon Meelen and Koen Frenken, "Stop Saying Uber Is Part of the Sharing Economy," (2015), <https://www.fastcompany.com/3040863/stop-saying-uber-is-part-of-the-sharing-economy>.

678 Scholz, *How Platform Cooperativism Can Unleash the Network*.

To further complicate notions of sharing as part of the pursuit of sustainability, shared ownership of a vehicle might not remove as many cars from circulation as one might expect. Zink and Geyer discuss a study of over 6,000 users that showed 58 percent of car sharing was adopted by people who did not previously own cars, thus their transportation was redirected from more sustainable modes towards car use<sup>679</sup>. Their own research suggests that estimations of reduced cars on roads are overstated, and that each shared car only prevents the production of half of one car<sup>680</sup>. This is only marginally positive and far less impactful than estimates from Zipcar that a single shared car could remove fifteen cars from the road<sup>681</sup>. The key takeaway for designers is that no one aspect makes something sustainable, and the sharing economy is not a ‘silver-bullet’ solution. Zink and Geyer suggest it is a combination of green things (for example a hybrid car) produced in green ways (for example cradle-to-cradle design and green manufacturing) and used with green behaviours (for example shared access) that creates what they refer to as a ‘net green’ outcome<sup>682</sup>. They argue that in lieu of an ultimate green product, green assessments should consider design, manufacture/production, sale, service and usage in order to provide a net average of overall sustainability. ‘Net green’ is a more relational view that considers the whole rather than individually assessing the parts; in this sense, the sharing economy can contribute to achieving ‘net green’ but should not be judged in isolation.

Communication and interaction designers aiming to contribute to the achievement of ‘net green’ might also be challenged by the lack of assessment tools for design outcomes. For many designed outcomes no industry-wide assessment criteria exist. Instead, designers must determine their own metrics for assessment. This process is limited by the designer’s understanding of ‘net green’, their biases and eco-literacy. In an effort to fill this gap, the Re-Nourish website<sup>683</sup> offers a tool for the measurement of printed outcomes that suggests changes to material specifications to decrease the ecological impact of an outcome. The tool assesses the technical materials of ‘greener things’ without questioning the things themselves. A prime example of the limitations of such an assessment is the presentation of a Walmart catalogue promoting disposable party favours and junk food to illustrate the ‘top tier’ of sustainable design<sup>684</sup>. If communication and interaction designers are to contribute to ‘net green’ goals, more critical measurement of design’s contributions will be needed. The goals of Zink and Geyer’s ‘net green’ make clear that measuring impact is more than the measurement of one thing. Addressing design’s current assessment gaps and finding ways to measure impact more wholly will be an important step for designers, particularly those wishing to contribute to the sharing economy.

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679 Trevor Zink and Roland Geyer, “There Is No Such Thing as a Green Product,” (Stanford Social Innovation Review, 2016).

680 Ibid. p 30

681 Ibid. p 30

682 Ibid. p 30-31

683 Eric Benson and Yvette Perullo, “Re-Nourish Website,” <http://tools.re-nourish.org>.

684 Ibid. See for case study example: <https://re-nourish.org/case-studies/> Accessed 12 August 2019

A designer's comprehension of the sharing economy as a part of broader 'net green' goals could inform more critical thinking when attempting to shift niche practices into the regime—this process might also benefit from ontological design approaches. Uber currently monetises a platform irrespective of sharing behaviours, but what would Uber look like if it was designed ontologically? Reimagining the human-car relationship by rethinking the interactions between human-vehicle/human-technology/human-time, and by reconceiving transportation practices, convenience culture, and perceptions of ownership and sharing, could radically alter the way a transport platform is realised. An ontological redesign of Uber has potential to transform its business model, realign it with the sharing economy and truly disrupt social practices around transport.

Despite the capitalisation of the sharing economy, it is not a lost cause, and designing ontologically for the sharing economy could help to shift behaviours towards more collaborative modes of consumption. However if this design is performed through the lens of the designer-consumer, a 'net green' aim might not be realised. A sharing economy that is embedded in a neo-liberal society will likely be influenced by competitive mindsets seeking to profit by either making or saving money, rather than fostering acts of sharing. But the sharing economy is more than this commoditised version, and there are other communal business models and approaches that are thriving in a global niche, most commonly experienced as cooperatives or collectives.

Collectives work together to achieve a particular goal and are not necessarily driven by a desire to make money. In the growing sport of roller derby, collectivism has led to the emergence of a global phenomenon of skater-owned, skater-operated leagues. As one of the fastest growing sports worldwide<sup>685</sup> this is of particular importance for several reasons: firstly, roller derby is one of the few women's sports that is not gender-prefixed<sup>686</sup> (netball is the other most common one). It empowers women and often provides a safe-haven or outlet for women facing crises. Secondly it is an inclusive sport, anyone who identifies as a woman (including transgender women and intersex women) can play, and women of all ages, shapes, sizes and ability can contribute meaningfully to gameplay<sup>687</sup>. Thirdly, the collective business model that has been most

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685 Leah McLennan, "Is Roller Derby the Fastest Growing Sport in Western Australia?" (2016), <https://www.abc.net.au/news/2016-05-13/roller-derby-in-albany/7412444>; Apex, The. "5 Reasons Why Every Sports Fan Should Tune in for Wftda Champs This Weekend." <https://thederbyapex.com/5-reasons-why-every-sports-fan-should-tune-in-for-wftda-champs-this-weekend-8e41ad22c0a7>.

686 It should be noted that whilst the majority of roller derby leagues are women's leagues, there are men's leagues/teams and mixed gender teams, and men also contribute to the community through referee roles.

687 As a skater I have played with teammates aged between 18-51 and have coached juniors aged 7-17, ferocity has no age limit. I have skated with a mix of transgender women and cis women, women of colour and different ethnicities, and every single skater has given their all. Some skaters were smaller than five-foot others were over six-foot tall, some were a size zero, others as large as size 24, all were menacing on the track for different reasons. Some skaters have had health disorders or mental health problems that they managed on and off the track with the support of their fellow skaters. While injured, I coached my team from the bench, managing lineups and strategic gameplay from my wheelchair—a role that is also sometimes filled by skaters who remain on their team during pregnancy. While literature on this is limited, I would argue that in my experience, roller derby is one of the most inclusive communities. For more on inclusivity in roller derby see: WFTDA, "Wftda Website," <https://resources.wftda.org>. See in particular: <https://resources.wftda.org/womens-flat-track-derby-association-statement-about-gender/>

commonly adopted by derby leagues requires active participation from all skater-members. This provides women with skills<sup>688</sup> not only in the sport itself but also interpersonal skills, business operations, finance, event management, marketing and PR, planning, coaching, governance and leadership skills<sup>689</sup>. Lastly and perhaps most endearingly, roller derby connects women globally through an ever-growing skater community. A skater who is travelling will always have somewhere to stay (couch surfing and billeting is common practice in the community), likeminded people to socialise with, as well as people to cross-train and skate with. Furthermore, roller derby appears to have created a global support network, if you are part of the collective locally, you also appear to benefit from it and gain access to it globally—a phenomenon worthy of study in its own right.

The rich community spirit embedded in these collectives is something that I have experienced personally through my own involvement with the sport as a skater, commentator, coach and sponsor. Sharing is profoundly embedded in this community. Skaters share skills—teams that compete against each other also train together and coach one another. Skaters share gear—if one skater’s equipment fails another will offer help/spare parts/spare skates. Skaters also care deeply for one another and offer unconditional support— if a skater is injured their league mates will help care for them by cooking meals, offering lifts and support where needed, and some seriously ill skaters have even had medical treatment crowdfunded by the skater community. Although competition is fierce (and full-contact) this community spirit is felt profoundly by most involved with the sport, reflected in the shared experience that ‘roller derby saved my soul’<sup>690</sup>. Many derby leagues share beyond this, through community engagement, by creating space at bouts (public games) for local makers to sell their wares, and by staging immersive events that allow fans to experience this connection and to share it through a love of the sport. Roller derby serves as an example of what is possible through a collective underpinned by true values of sharing.

Cooperatives are another form of shared ownership, however they differ from collectives in their aim to not only offer a sense of belonging, but also to provide members with an income. Of particular interest to this research are platform cooperatives, a cooperative approach that sees communal ownership of and contribution to the creation and operation of a technological platform such as a service accessed via a website or an app. In the creative industry awareness is growing for this style of cooperativism, evident in the emergence of sites such as stocksy.com<sup>691</sup>, a photographer-owned and operated stock photo platform. Stocksy provides photographers with an alternative to the contribution of profits to stock photo giants such as Getty Images. Stocksy’s creatives have

688 Barbara Masberg and Andrea Eklund, “Benefits of Roller Derby: The Roller Girl Perspective.,” *ACTIVE: Journal of Physical Education, Sport, Health and Recreation* 7, no. 3 (2018).

689 WFTDA, “Wftda Website”. see in particular: <https://wftda.org/faq/starting-a-league>

690 This is a common saying in the roller derby community, where those who come to derby during times of crises receive much needed support and an outlet for their emotions leading to a feeling of being ‘saved’ by joining the community.

691 “Stocksy Website,” <https://www.stocksy.com>.



reclaimed their artistic and worker rights by building a communally owned and democratically governed platform through which they provide stock photography to end-users. This business model is aimed at creating a fair income for its members while also contributing to the creative commons. A designer's critical approach to cooperative models could realise White's 'just transitions'<sup>692</sup> and help address inequities in existing modes of labour as part of sustainability transitions.

The sharing economy has the potential to connect communities through mutual interests and genuine sharing, to foster new and more collaborative ways of conducting business, and to change how we consume. Conversely, it also holds the potential to make it easier to spend money and to increase efficiencies through platform centralisation and labour brokerage. How the sharing economy is organised and integrated—socially and economically—will determine whether it contributes positively or negatively to post-capitalist futures. In a post-capitalist post-employment setting, the sharing economy might offer more participatory ways of living and working, and in doing so could foster thriving communities that (to borrow from Jackson) prosper without growth. As part of sustainability transitions, the sharing economy could also contribute to circular economies.

### 4.3.2 The circular economy

The circular economy draws on living systems theory's study of non-linear systems that are regenerative, rich in feedback loops, and self-organising. It creates a circularity to material flows that honours materials' usefulness and embodied energy by recycling them back into production. The model has matured since its early conceptualisation by economists<sup>693</sup>, and its potential to affect positive change is clearly articulated in Jackson's argument for 'prosperity without growth'<sup>694</sup> as a way of addressing issues of consumption and production that fuel the linear economy. Jackson has suggested that transitions towards a circular economy are not utopian, but rather are 'a financial and ecological necessity'<sup>695</sup>. Though this may be true, recent critiques of the circular economy provide a more balanced view of its true capacity to create a more sustainable economy as reliant on additional factors beyond material flows. Zink and Geyer believe the circular economy has potential to continue to promote growth in unsustainable ways<sup>696</sup>. Their critique discusses the potential rebound effect that is possible if secondary production (that is, production using materials that are recirculating rather than raw) does not displace primary production (see Figure 4.2 Circular Growth Economy). The potential for this to prompt market growth instead of market stabilisation is one concern, another is that circulating recycled materials without displacing raw materials could delay rather than

692 White, "Creative Labour/Critical Designs/Just Transitions Imaginaries."

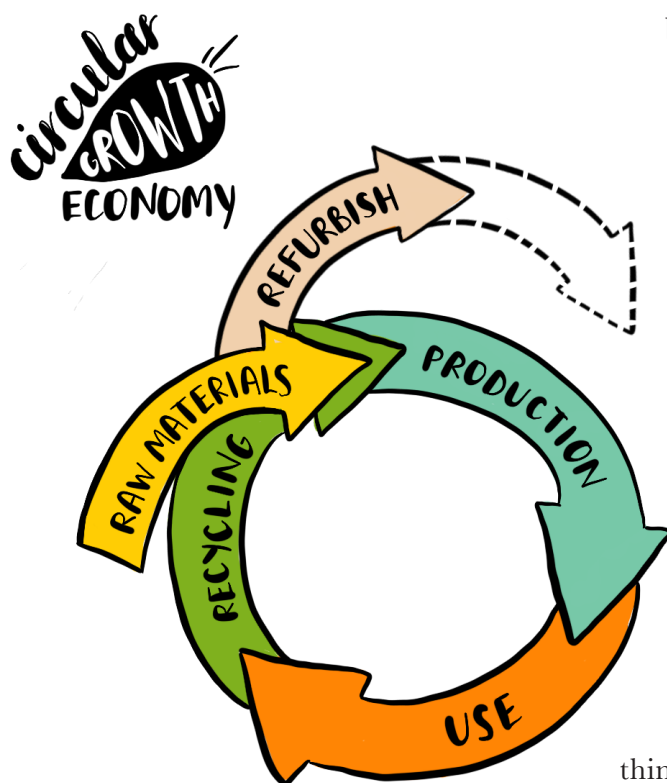
693 Jackson, "Prosperity without Growth?: The Transition to a Sustainable Economy.," David Pearce and R. Turner, "Economics of Natural Resources and the Environment," ed. R. Turner (1990).

694 Jackson, "Prosperity without Growth?: The Transition to a Sustainable Economy."

695 Ibid. p 12

696 Zink and Geyer, "Circular Economy Rebound."

Figure 4.2:  
Circular Growth  
Economy



reduce landfill disposal. This could lead to an increase rather than decrease in raw material extraction<sup>697</sup>. This potential for negative impact reveals the importance of underpinning the circular economy's design and implementation with relational thinking, and an understanding that it is not an economic

'cure-all'. There is likely a need for multiple alternatives in order to achieve the aim of 'net green' proposed by Zink and Geyer<sup>698</sup>, a notion that also aligns with Escobar's 'pluriversal considerations'.

Alternative economies must consider the combined impact of systems of production and consumption, economic factors such as supply and demand, and the behaviours of actors within and across each of these systems. Without these relational considerations a circular economy could remain a utopian vision or worse, it could be implemented in ways that accelerate unsustainable production and consumption.

Over the past twenty years the circular economy has been continually evolving and has become a useful framework to guide thinking in ways that can prevent waste. This

economic model shifts away from linear 'take-make-dispose' models and builds upon reuse principles instead. A circular economy encourages circular flows of materials that could eliminate waste by keeping materials active as 'nutrients' that contribute to either a biosphere or a technosphere<sup>699</sup>. In the biosphere, nutrients are returned to the earth, sequestering carbon and adding nitrogen back into the soil. In the technosphere, nutrients that are typically sent to landfill as waste are instead harvested and recirculated as the materials for production<sup>700</sup>.

The model has been widely promoted by the Ellen MacArthur Foundation<sup>701</sup> and it is this foundation's reports, combined with Jackson's articulation of the circular economy as an economic and business opportunity and Zink and Geyer's critique of it that have most significantly influenced this research. Braungart and McDonough's cradle-to-cradle design approach also ties into the circular economy<sup>702</sup> and Boetzkes' critique of the cradle-to-cradle approach demonstrates how a transition towards a circular economy will intersect

697 Ibid. p 594

698 Zink and Geyer, "There Is No Such Thing as a Green Product."

699 Foundation, "Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition."

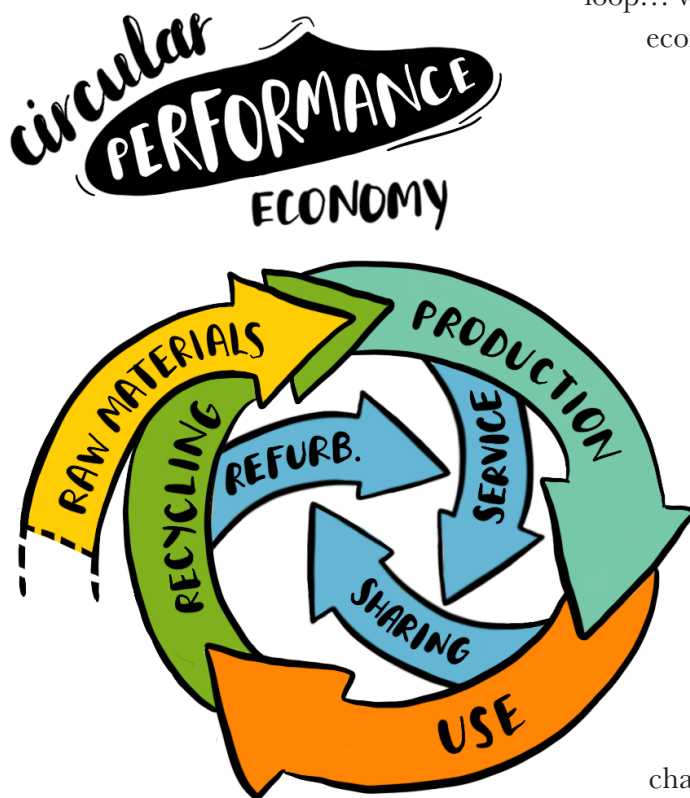
700 Ibid.

701 Ibid.

702 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

multiple systems and domains<sup>703</sup>. This transition spans more than materials and things; to be effective, behaviours and practices must be considered as part of the transition<sup>704</sup>. Research shows recycling has short term advantages, but at scale it becomes less economic as secondary resources accumulate and create an oversupply<sup>705</sup>. This demands a closer consideration of behaviours. Stahel suggests a transition to a dematerialised service economy or ‘performance economy’ would help to overcome this<sup>706</sup> by shifting focus to the ‘optimization of the utilization (or performance) of goods and services’<sup>707</sup>. Shifts of this nature manage existing wealth by adopting a more custodial approach to goods and services, rather than focussing on the perpetual growth that is synonymous with the linear economy and a very real potential outcome of a circular economy. A performance economy not only reduces material use, but Stahel theorises that an altered focus on service ultimately shifts the nature of how

Figure 4.3:  
The circular  
performance  
economy



goods are valued in the Global North. This ‘product responsibility loop... would lead to better products in a more efficient economy’<sup>708</sup> rather than better recyclability in materials and products. Of course a performance economy would also rely on behaviour change, new policy and strategies to support it.

In Figure 4.3 the Circular Economy Model has been modified to show how designing behaviours that encourage refurbishment/reuse, services and sharing could contain material flows, limit growth and encourage a circular performance economy.

Designing behaviours and ways of disrupting unsustainable daily practices is an ontological endeavour that is an increasingly significant area for designers to explore. This approach is also supported by literature from Jackson, who argues that systemic changes are needed that are supported by policy change and reinforced by personal behaviour changes<sup>709</sup>.

The multiplicity of changes required will make this a complex process. But its necessity and currency for contemporary societies presents adaptations of circular economies as a unique opportunity to create the kind of

703 Boetzkes, “Resource Systems, the Paradigm of Zero-Waste, and the Desire for Sustenance.”

704 Laura Piscicelli and Geke DS Ludden, “The Potential of Design for Behaviour Change to Foster the Transition to a Circular Economy” (paper presented at the Proceedings of DRS 2016, Design Research Society 50th Anniversary Conference, 2016).

705 Walter Stahel, *The Performance Economy* (Springer, 2010); Walter R Stahel, “From Products to Services: Selling Performance Instead of Goods,” *IPTS Report 27*, no. 1998 (1998); Zink and Geyer, “Circular Economy Rebound.”; “There Is No Such Thing as a Green Product.”

706 Stahel, *The Performance Economy*; Stahel, “From Products to Services: Selling Performance Instead of Goods.”

707 “From Products to Services: Selling Performance Instead of Goods.” p 2

708 Ibid. p 6

709 Jackson, “Prosperity without Growth?: The Transition to a Sustainable Economy.”

large-scale changes that are needed. Transitions at this scale would span every aspect of societies—from the landscape through to the regime and niche—and could help to propel us towards just and sustainable futures.

Circular economies can be designed then implemented, but they can also be emergent. In the case of Kalundborg in Denmark, a circular economy has emerged as a result of symbiosis that has developed between businesses in the area<sup>710</sup>. The waste from one business provides the materials needed by the next, a process widely referred to as industrial symbiosis (IS). This type of emergent circular economy has been documented through a wide body of literature<sup>711</sup> and its processes are formalised and promoted through the Symbiosis Center Denmark<sup>712</sup>. IS processes such as those found in Kalundborg are being explored in China as a way of designing circularity into production and manufacturing in the region<sup>713</sup>. As one of the most significant producers of things, the implementation of circular material flows in China is a significant step towards more sustainable manufacturing and production. However an eco-industrial park does little without also addressing the behaviours surrounding manufactured goods. It is increasingly evident that without also addressing consumption behaviours, IS and circular economies could continue to serve neo-liberalism by way of ever-increasing efficiencies and material flows. This has been clearly articulated by Zink and Geyer who present research demonstrating the rebound effect in the use of green products<sup>714</sup> and in recycling, where displacement is anticipated but not always achieved<sup>715</sup>. Their recycling example shows how new smartphones are unlikely to be displaced by refurbished smartphones as the refurbished phones are ‘typically sold in developing countries where the alternative is no phone at all.’<sup>716</sup> Interestingly this also aligns with their study on car sharing, where 58 percent of car sharing participants had not previously owned a car, thereby leading to increased car usage rather than the expected decrease<sup>717</sup>. With this in mind, it is important for designers to consider the relationships between production and consumption (particularly as these are mediated by design<sup>718</sup>) as well as the economic impacts of supply and demand that may be unforeseen. People’s consumption practices might be altered through an ontologically designed circular economy, complemented by their participation in a sharing economy. How this occurs

710 Marian Chertow and John Ehrenfeld, “Organizing Self-Organizing Systems: Toward a Theory of Industrial Symbiosis,” *Journal of industrial ecology* 16, no. 1 (2012).

711 See for example: Teresa Domenech and Michael Davies, “Structure and Morphology of Industrial Symbiosis Networks: The Case of Kalundborg,” *Procedia-Social and Behavioral Sciences* 10 (2011); John Ehrenfeld and Nicholas Gertler, “Industrial Ecology in Practice: The Evolution of Interdependence at Kalundborg,” *Journal of industrial Ecology* 1 (1997); Scott Victor Valentine, “Kalundborg Symbiosis: Fostering Progressive Innovation in Environmental Networks,” *Journal of cleaner production*, no. 118 (2016).

712 Symbiosis Center Denmark, “Symbiosis Center Denmark Website,” <https://symbiosecenter.dk/en/>.

713 Hua Cui et al., “Understanding the Evolution of Industrial Symbiosis with a System Dynamics Model: A Case Study of Hai Hua Industrial Symbiosis, China,” *Sustainability* 10, no. 11 (2018). John A Mathews, Hao Tan, and Mei-Chih Hu, “Moving to a Circular Economy in China: Transforming Industrial Parks into Eco-Industrial Parks,” *California Management Review* 60, no. 3 (2018); Qingsong Wang et al., “Robustness of Eco-Industrial Symbiosis Network: A Case Study of China,” *Environmental Science and Pollution Research* 25, no. 27 (2018).

714 Zink and Geyer, “There Is No Such Thing as a Green Product.”

715 “Circular Economy Rebound.”

716 Ibid. p 594

717 Zink and Geyer, “There Is No Such Thing as a Green Product.”

718 Julier, *The Culture of Design*.

could be an important area for future research and its initial consideration is reflected in Figure 4.3. The thinking that underpins economic transitions will need to be relational, but would also benefit from a framework that situates the limitations and expectations that any alternative economy should serve, and Raworth's 'doughnut economics'<sup>719</sup> could play an important role here.

### 4.3.3 The doughnut economy

In Raworth's concept of 'doughnut economics', traditional linear economic thinking is challenged by a new economic framework that offers seven new ways to think about economics<sup>720</sup>. The visualisation of this framework is a doughnut that maps planetary and social boundaries to demonstrate the limits that an economy should respect, and the model clearly communicates where we are currently exceeding these boundaries (see Figure 4.4). Raworth uses this doughnut to demonstrate why in the first instance, changing the goal of the economy is so necessary—from growth mapped through the GDP to

'human prosperity in a flourishing web of life.'<sup>721</sup> Inside the doughnut's boundaries is a 'safe and just space' for humanity to thrive. Using Raworth's model it

is easy to identify what is at risk as a result of the negative impact of the exponential economic growth, a goal that has been consistently strived for and achieved under neo-liberal capitalism. The model also provides economists with a more telescopic view of growth, making growth-models' limitations clear while communicating their broader impacts.

The clear articulation of an ecological ceiling and social foundation provides boundaries that must be respected and maintained in order to create a safe and just space for humanity that is supported by a regenerative and distributive economy. In the doughnut model, Raworth presents nine key ecological factors that should not be overshoot, and twelve elements that must avoid a shortfall in order to form a social foundation<sup>722</sup>. Raworth's presentation of the model clearly demonstrates the impact that unbridled economic growth has had: four ecological

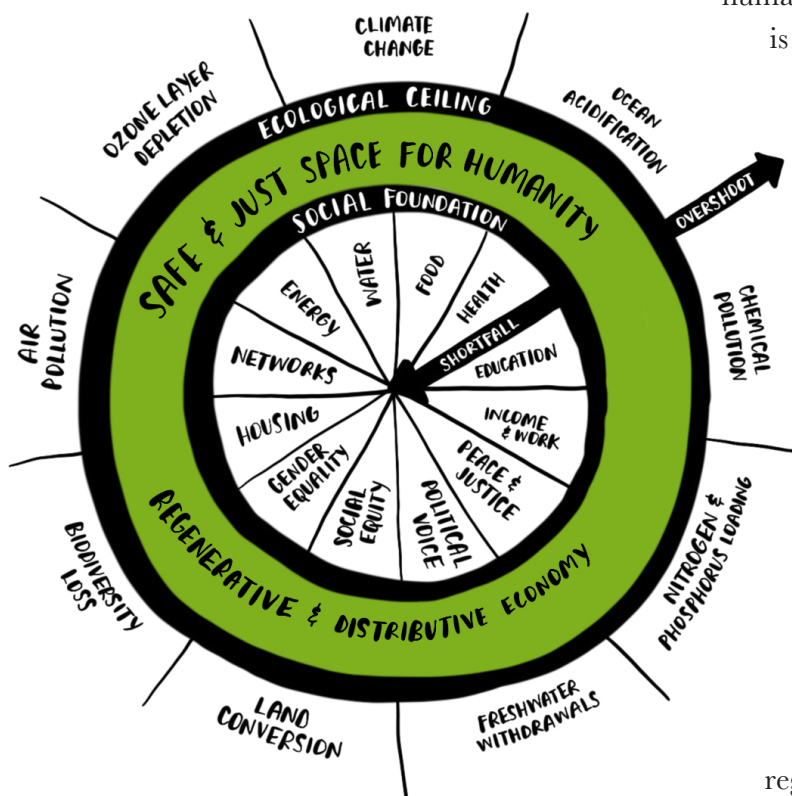


Figure 4.4:  
The doughnut  
economy. Drawn  
from figure by  
Kate Raworth,  
Licensed under  
CC BY-SA 4.0

719 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*.

720 Ibid.

721 Ibid. p 55

722 Ibid.

boundaries have been exceeded and all twelve aspects of the social foundation are experiencing a shortfall<sup>723</sup>. A linear economy might seem good for those profiting from it, but for the majority of people and the planet it guarantees multiple interconnected crises.

Raworth's model was applied to the research of Stopper et al<sup>724</sup> who used it as a way of restricting business activities in manufacturing that had the potential to cause harm. Their combination of doughnut economics with green manufacturing and corporate social responsibility customised the doughnut model for a small to medium (SME) manufacturing setting. In doing so they reveal its practical importance in addressing limitations around pollution, water and material use and waste disposal that are common aspects of manufacturing. The researchers describe the original model as too comprehensive in parts, stating that 'it needs to be adapted especially for countries with higher social standards'<sup>725</sup> and also to the specific conditions in SME manufacturers. Stopper et al propose their customised 'SME Manufacturing Doughnut' model provides a new concept for sustainable governance for manufacturing SMEs that extends views beyond daily operations to consider and integrate sustainability more deeply<sup>726</sup>. Their research demonstrates the flexibility of this new economic framework and how its customisation can guide thinking and governance in specific and measurable ways.

The doughnut model provides a new framework for thinking about economics. It expands on the 'triple bottom line' presented by Elkington<sup>727</sup>, revealing its inadequacies by providing the kind of granular detail that is truly needed to fully articulate the ecological and social needs that an economy must serve. This new conceptual framework could shift thinking away from growth strategies and linear economics towards an economics that respects its boundaries and serves its people for generations to come. The framework outlines clear social and ecological requirements, not as forms of capital that can be used or abused for a price, but rather as a limited context for economic activity that must be preserved to ensure social and ecological well-being.

Terms such as 'natural capital' and 'human capital' work to obscure the true (non-monetary) value of ecology and people, and these terms are already becoming part of an economic eco-rhetoric<sup>728</sup>. In her exploration of the 'green economy', Boehnert compares several alternative economic approaches to liberalism and neo-liberalism and discusses how new environmental economic theories (Green Economics) factor in the externalities that are typically ignored by liberal and neo-liberal economists<sup>729</sup>. As already discussed in this chapter, these theories reinforce data from the UN that 'indicates that none

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723 Ibid. p 51

724 Markus Stopper, Anja Kossik, and Bernd Gastermann, "Development of a Sustainability Model for Manufacturing Smes Based on the Innovative Doughnut Economics Framework" (paper presented at the International MultiConference of Engineers and Computer Scientists, Hong Kong, 2016).

725 Ibid. p 6

726 Ibid. p 8

727 Elkington, "Enter the Triple Bottom Line."

728 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p152-159

729 Ibid. p152-159

of the world's top industrial sectors would be profitable if environmental costs were fully integrated.<sup>730</sup> This same finding is reiterated in research from Linnenluecke et al<sup>731</sup>. Boehnert suggests 'we will not protect the environment by creating the conditions for it to be sold'<sup>732</sup>, and it is with this understanding, that the doughnut economics framework could be used to outlaw ecological and social damage that occurs as a result of a linear growth-economy. Rather than reducing nature and people to a dollar value and exploiting their worth in a new 'green' market, we have the opportunity to step away from this kind of thinking and create real and significant change. Using the doughnut framework to underpin the thinking for alternative economies could help to create the conditions under which we might thrive, ecologically, socially and economically.

#### 4.4 Closing remarks

Transitions to sustainable futures appear to be taking shape as part of niche activity, and are visible in transition movements and in the emergent practices of transition design and autonomous design. However, in order to affect real change this activity needs to shift from the niche into the socio-technical regime where it can stabilise as a norm. This chapter presented relevant and intersectional theories of power and change and explored alternative economies. It discussed how designers' contributions to transitions will be greatly enhanced by increased theoretical knowledge around power, change, and social practices, in addition to increased eco-literacy. It also built on the theories of consumption and waste introduced in chapter three by exploring the roles played by power, change and economics as part of sustainability transitions.

The impact of power dynamics was identified in the ideologies that dominate contemporary thinking, in the relations between people and the action/inaction of designers. Throughout this chapter, discussion of these dynamics has demonstrated why designers need an understanding of power dynamics in order to become empowered agents of change. Building this knowledge increases designers' potential to leverage their client relationships, to strategise transitions as part of their work and within their design practice, and to better manage group dynamics during collaborative processes. Furthermore, I have argued that a designers' increased knowledge of power dynamics provides an understanding of design's power to either reinforce or challenge the status quo, and that through counterpower, a designer's capacity to strategise and enact change can be amplified.

Change has been discussed through a number of theories that hold significance within transitions discourse. Analysing transitions using the MLP provided a way of exploring potential leverage points for the design of transitions. An

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730 Ibid. p153

731 Linnenluecke, Smith, and Whaley, "The Unpaid Social Cost of Carbon: Introducing a Framework to Estimate "Legal Looting" in the Fossil Fuel Industry."

732 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p159

examination of social practice theory discussed the construction of social norms and how the ‘little things’ that are practiced in our daily lives could be the locus for an ‘everyday’ sustainability. I have argued that designing for the satisfaction of needs outside of acts of consumption, could increase designers’ potential to participate in more ontological design processes. Ontological design was discussed for its consideration of ways of being in the world and for its potential to design for the kind of behaviours that are needed as part of transitions. In Jackson’s words, this would be designing for ‘prosperity without growth’. Synthesis of social practice theory, the satisfaction of needs and the MLP has built a designerly understanding of how societies form and how they change. This synthesis has opened up the possibilities for ontological design approaches that could contribute to transitions toward just and sustainable post-capitalist futures.

Economic approaches that offer a valid alternative from the dominant linear economy in the Global North were also discussed as a crucial part of the transition towards sustainable futures. Analysis of the sharing economy revealed how its current capitalist approach could be redirected to foster a truer sense of sharing. A critique of Uber’s tech-platforms revealed what might be possible with a more ontological approach to the design of a sharing economy. The circular economy was presented as a way of minimising waste by maintaining circularity in material flows from design through to production, use and disposal. With circular economies in place, a greater symbiosis could be designed between businesses as part of transitions. As part of this, consumption was recognised as a precursor to waste and the sharing economy was provided as a linkage to the ontological design of collaborative consumption. The cradle-to-cradle design method was presented in this context, as less utopian and more pragmatic in its approach, offering designers new ways of unmaking waste. Ontological design approaches were offered as new ways of mediating culture—by designing greener behaviours rather than greener things. This was presented in a figure that showed how a circular performance economy might incorporate behaviours of sharing, reuse/refurbishment and services to maintain circularity without encouraging growth. Raworth’s ‘doughnut economics’<sup>733</sup> was presented as a framework to guide economic thinking in ways that avoid the unsustainable pitfalls of the status quo. It considers the planetary boundaries and social needs that an economy must serve, and could scaffold the circular economy. Designers working with these theories and practicing in the emergent areas of autonomous design and transition design are not only better positioned to design ontologically for transitions, but might also contribute to how change is identified and actioned across systems.

The practices of relational thinking and mapping of interconnected systems approached in designerly ways, could provide new insights into how these systems are analysed and what actions might be taken as a result. This kind of sensemaking activity taps into designers’ existing skillsets but is considerably

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733 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*.



strengthened by a deeper understanding of consumption and waste, power, change and social practices. The theoretical knowledge outlined in this chapter amplifies the designer's ability to make sense of and communicate the relations between systems. The next chapter explores this process of sensemaking in more detail by using the MLP and social practice theory to further analyse the problem of consumption and waste.

## Chapter 5

### Putting theory into practice: the multi-level perspective and social practice theory

The previous chapter explored a range of relevant theories that underpin the thinking in design for transitions. This chapter explores how the theoretical knowledge drawn from Geels' multi-level perspective (MLP)<sup>734</sup> and social practice theory (SPT)<sup>735</sup> might inform design when applied to mapping and sensemaking processes. As described in the previous chapter, the MLP is concerned with how socio-technical transitions occur in systems and spans three levels: the niche (home to faster paced innovations), the regime (a stable centre point of rules and norms) and the landscape (slow moving externalities such as economic/environmental factors, such as the price of oil). The MLP adopts a vertical, telescopic view of change. It observes the temporal and systemic nature of societal change and is a useful theory for engagement with sustainability transitions. SPT adopts a more horizontal view of change, as described in the previous chapter it interrogates the 'little things' we do that combine as practices enacted in our daily lives. It investigates how these different practices (for example eating, bathing, relaxing) become bundled together and span multiple systems. The explorations of SPT in this research draw on the work of Shove, Shove and Walker and Shove and Pantzar<sup>736</sup> and have been expanded by views from Hargreaves et al<sup>737</sup>, Spaargaren<sup>738</sup> and Kossoff<sup>739</sup>. The view of practices is extended beyond individual performances without pushing to a systemic focus, but also works in conjunction with the MLP. Hargreaves et al have also explored how SPT and the MLP intersect<sup>740</sup>, and in transition design both theories are used to inform the design of societal transitions towards just and sustainable futures. While social theories are

734 Geels, "The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.," "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study."

735 Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*; Shove and Walker, "Governing Transitions in the Sustainability of Everyday Life." See also: Kossoff, "Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.," Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions."

736 Elizabeth Shove, "Putting Practice into Policy: Reconfiguring Questions of Consumption and Climate Change," *Contemporary Social Science* 9, no. 4 (2014); "Beyond the Abc: Climate Change Policy and Theories of Social Change," *Environment and planning A* 42, no. 6 (2010); Shove and Pantzar, "Consumers, Producers and Practices: Understanding the Invention and Reinvention of Nordic Walking.," Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*; Shove and Walker, "Governing Transitions in the Sustainability of Everyday Life."

737 Tom Hargreaves et al., "Sustainability Transitions from the Bottom-Up: Civil Society, the Multi-Level Perspective and Practice Theory," (CSERGE Working Paper, 2011); Hargreaves, Longhurst, and Seyfang, "Understanding Sustainability Innovations: Points of Intersection between the Multi-Level Perspective and Social Practice Theory."

738 Gert Spaargaren, "Theories of Practices: Agency, Technology, and Culture: Exploring the Relevance of Practice Theories for the Governance of Sustainable Consumption Practices in the New World-Order," *Global Environmental Change* 21, no. 3 (2011).

739 Kossoff, "Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society."

740 Hargreaves et al., "Sustainability Transitions from the Bottom-Up: Civil Society, the Multi-Level Perspective and Practice Theory.," Hargreaves, Longhurst, and Seyfang, "Understanding Sustainability Innovations: Points of Intersection between the Multi-Level Perspective and Social Practice Theory.," Hargreaves, Tom, Noel Longhurst, and Gill Seyfang. "Up, down, round and round: connecting regimes and practices in innovation for sustainability." *Environment and Planning A* 45, no. 2 (2013): 402-420.

not necessarily intended for application within design contexts, they are helpful in contextualising the social change that transition design aims to achieve.

Throughout this research explorations of literature<sup>741</sup> have been synthesised with theoretical knowledge and collected data through sensemaking processes including ‘reflective doodling’ and mapping. Insights gained through these processes have underpinned explorations in practice-based projects, permitting an interrogation of the consumption and waste problem through a variety of design processes and projects. In addition to informing problem analysis and articulation, theories and principles from the MLP and SPT have also been applied into projects which are further discussed throughout *Part 3: Doing*.

This chapter presents canvases that explore an application of the MLP and SPT used to articulate the consumption and waste problem. This work draws on the canvases that were created by Irwin et al as part of the transition design workshop tools<sup>742</sup>. The modifications presented here offer an operationalisation of the MLP and an extension to Irwin et al’s work and are dependent upon key concepts drawn from transition design, the MLP and SPT. The canvases draw on established theoretical knowledge and modify how this knowledge is communicated and implemented in the practice of transition design. This operational model adds two sub-levels to Geels’ heuristic model of landscape, regime, and niche, to explicitly reference the thinking that impacts upon the heuristic model’s original levels and to provide ecology as the larger context of socio-technical systems.

In the practices surrounding consumption and more particularly, waste, meaning is made ideologically through mindsets of disposability and convenience. I foreground ideologies and mindsets to make the cultural frames of disposability and convenience more targetable. This approach is informed by earlier chapters of this thesis that explore the role of designers as cultural mediators. It is also informed by transitions discourse that discusses the historical challenges in operationalising the MLP in its heuristic state<sup>743</sup>. Relevant to this research are the challenges associated with the lack of focus on socio-cultural aspects and the lack of agreement on functional distinctions between levels as conceptual or empirical<sup>744</sup>. Further to this, Geels and Schot also recognise the benefits of multi-paradigm approaches and describe how agency is conceptualised differently using different paradigms<sup>745</sup>. They outline the MLP as a global model that is less attentive to the role of actors while acknowledging that this limits the MLP’s ability to reflect ‘different “local” subplots’<sup>746</sup>. The operational model theorised here attempts to use sub-levels as representative of local aspects that focus ‘on the micro ideas, decisions, actions

741 This literature has been drawn from the fields of design, economics, sociology, anthropology, business, environmental management and philosophy.

742 Terry Irwin, “Transition Design Lectures,” (Schumacher College, UK, 2018); Terry Irwin and Gideon Kossoff, “Mapping Ojai’s Water Shortage: A Workshop.”

743 Genus, Audley, and Anne-Marie Coles. “Rethinking the multi-level perspective of technological transitions.” *Research policy* 37, no. 9 (2008): 1436-1445.

744 Ibid.

745 Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, 36(3), 399-417. p 414-415

746 Ibid. p 415

or events of particular developmental episodes<sup>747</sup>. In this case, those relating specifically to consumption and waste. This is presented with the intent of making a contribution that does not make any canonical claim, but rather is an attempt to apply MLP theory in design practice. This operationalisation of the MLP aided in problem articulation and the identification of intervention points for the *Rethink Rubbish* project.

What follows is a continuing discussion of the thinking behind the modifications and a description of how the research problem has been articulated using the MLP and SPT. This chapter also aims to demonstrate how designerly sensemaking could benefit from these canvases to analyse complex problems and inform the design of interventions to complex socio-cultural problems.

## 5.1 Modifying the Transition Design MLP Canvas

Mapping socio-technical transitions using the MLP has provided transitions discourse with a way of understanding the historical emergence of systemic problems as part of shifts in ways of living and working. Geels presents case studies of historical transitions<sup>748</sup> to indicate how technological change can create shifts across multiple levels of a society, and a typology<sup>749</sup> that explores variables in how these levels can influence one another<sup>750</sup>. Geels' approach has not been without critique<sup>751</sup> and the relevance and validity of the MLP continues to be explored<sup>752</sup>. Designers undertaking problem mapping processes might engage the MLP to consider possible leverage points for interventions. Its provision of a 'bird's eye view' offers designers a useful perspective of the organisational structures and actors that impact sets of stabilised social practices in the regime. To this end, canvases using Geels' MLP have been developed and implemented in this research. These canvases were drawn from the transition design toolkit<sup>753</sup> and have been modified during and after use in both independent and collaborative explorations.

The first modification gave more prominence to the role of ideologies and mindsets, as a means of more fully representing their impact over the stabilisation and maintenance of norms in both the landscape and regime levels. The second modification further adapts the canvas to explicitly represent the ecological context that situates all activity being explored through the MLP. Lastly, the canvas was vertically split to communicate the historical evolution of a problem, to better frame a view of its present conditions and to sketch out a possible future.

747 Poole, M. S., & Van de Ven, A. H. (1989). Toward a general theory of innovation processes. *Research on the management of innovation: The Minnesota studies*, 637, 662. p 643

748 Geels, "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study."

749 Geels and Schot, "Typology of Sociotechnical Transition Pathways."

750 Geels, "The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.;" "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study."

751 Geels, F. W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), 24-40. doi:10.1016/j.eist.2011.02.002

752 Genus, A., & Coles, A.-M. (2008). Rethinking the multi-level perspective of technological transitions. *Research Policy*, 37(9), 1436-1445. ; Smith, A., Voß, J.-P., & Grin, J. (2010). Innovation studies and sustainability transitions: The allure of the multi-level perspective and its challenges. *Research Policy*, 39(4), 435-448.;

753 Irwin, "Transition Design Lectures."

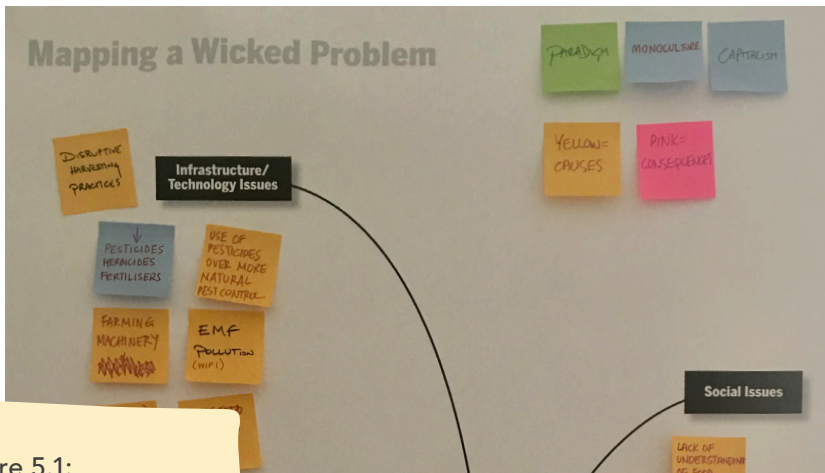


Figure 5.1:  
Recognising notes  
in the margins

Geels describes the socio-technical landscape as encapsulating dominant worldviews<sup>754</sup>, and while this is not disputed here, the impact of ideologies can be easily overlooked or forgotten during sensemaking exercises using the MLP. As part of ‘reflection on-action’, a pattern was recognised in the frequent ‘notes to self’ made in the margins of maps and other canvases used in sensemaking. Notes mainly

referenced paradigms or dominant modes of thought, and were primarily made as a means of reminding myself of these somewhat invisible aspects of systems (See Figure 5.1). Reflection on the notes’ references to paradigms led to deeper considerations of this aspect of the MLP. Discussions of thinking in the MLP often centre around paradigms (a pattern or model of thought) or worldviews (a philosophy of life or conception of the world) which as Geels outlines<sup>755</sup>, are held in the landscape. In the context of socio-technical systems, thinking significantly impacts activity in the regime. This is noted particularly in relation to economics, politics and policies that influence the rules of the regime and in the web of practices that make up social norms. This suggests that ideologies (systems of ideas and ideals) and mindsets (attitudes held by people) are also key considerations that could influence how the regime is analysed.

Geels describes ontological interconnections in the origins of the MLP<sup>756</sup>, which drew on interpretivism/constructivism (actors engaged in continuous sensemaking) and evolution theory (heterogenous actors). He also indicates that considerations of power structures could be beneficial<sup>757</sup>. A conflict ontology can be identified in the different ideologies governing actors in the regime and niche, seen for example through niche social movements’ struggle against dominant ideologies in the regime. This is particularly relevant to the discussions of power and change presented in the previous chapter and reveals overlaps between Gee’s theory of Counterpower<sup>758</sup> and a reading of Geels’ MLP using a lens of conflict ontology<sup>759</sup>. Crossovers to this conflict ontology are evident in the stabilisation of the regime through power structures and politics, and Geels suggests further benefits might be gained through a crossover with social movement theory<sup>760</sup>. Whilst such a crossover is outside of the scope of this research, it is an area of interest for future research.

754 Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”

755 Ibid.

756 Geels, “Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective.” p 504-505

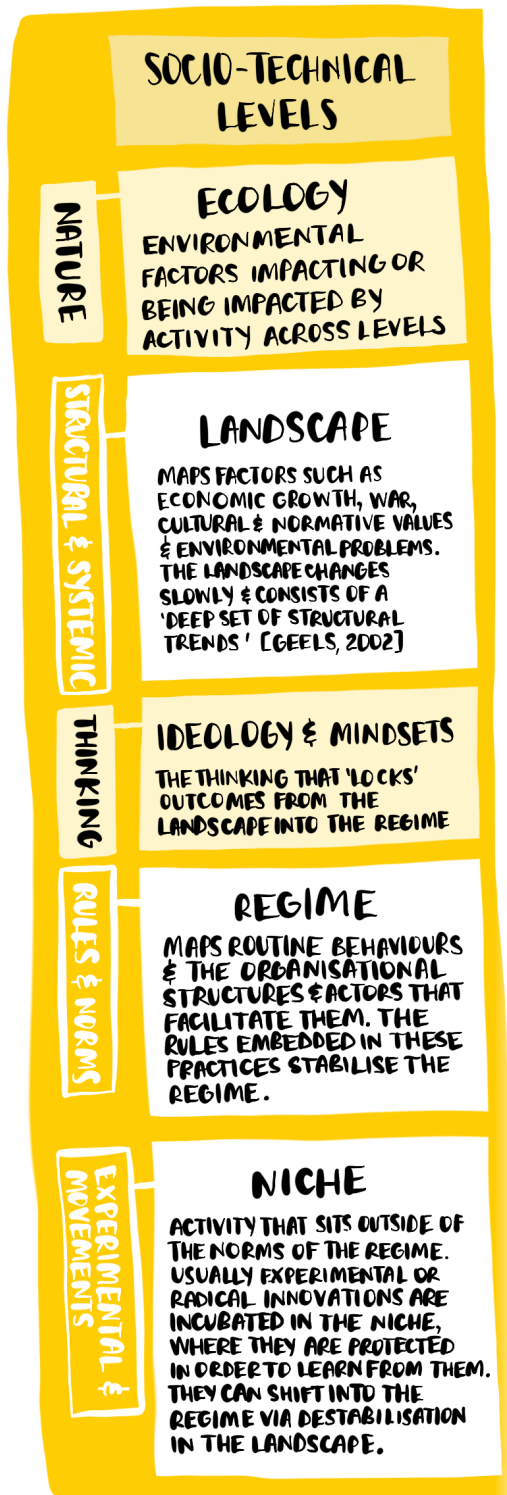
757 Ibid.

758 Gee, *Counterpower: Making Change Happen*.

759 Geels, “Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective.” p 501-502

760 Ibid. p 506-507

Figure 5.2:  
Sketch showing  
the position of  
proposed sub-  
levels



Recognising ideological impacts can guide thinking during mapping and analysis, and can aid in the identification of possible ontological crossovers; this permits a helpful alteration of the lenses used during analysis. Geels suggests that these ontological crossovers and adjacencies to social theories add to the perspectives gained from the MLP<sup>761</sup> by extending the view of transitions across multiple ontologies. This indicates the significant impact of ideologies and mindsets in transitions, and suggests they can be identified as a 'locking mechanism' in both the socio-technical landscape where they contribute to paradigms, and in the socio-technical regime where they appear to influence the rules and norms of the regime. I would argue that the potential for ideologies and mindsets to 'lock down' significant portions of both the regime and the landscape warrants their explicit representation in mapping canvases that use the MLP.

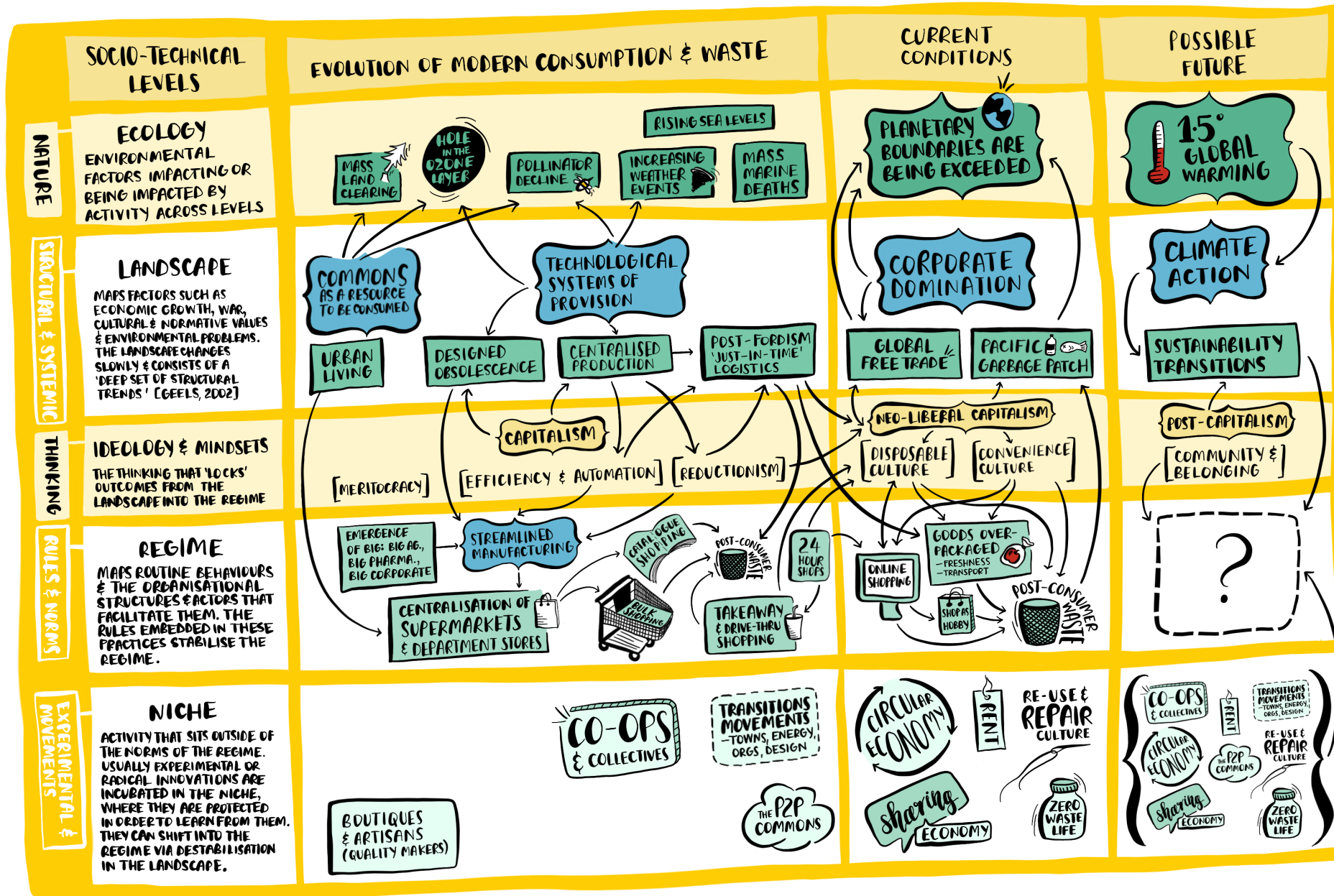
In line with this thinking, I began modifying the transition design MLP canvas to reflect this 'lock down' effect and communicate these ideologies and mindsets with more clarity. This was done in the first instance by adding a sub-level between the landscape and regime levels called, ideology and mindsets.

As presented in Figure 5.2, a column on the far left of the canvas indicates where newly added sub-levels have been inserted and includes descriptions of each level of the MLP. This adaptation aims to increase the accessibility of the canvas for its intended future use in collaborative mapping exercises, by ensuring that knowledge-gaps in socio-technical transition theory do not limit participation in mapping a problem using the MLP. The modifications discussed below are proposed as a way of operationalising the MLP and increasing the functional communication of the canvas with the overarching aim of making it more usable and accessible as a tool for non-experts. Providing new or non-expert collaborators with more detailed information on the map invites their active participation in mapping processes regardless of their prior knowledge in the MLP, thereby increasing the usability of the canvas as a tool for mapping. For the

purpose of clarity in presentation, Figure 5.2 displays a close up of the canvas's modified column and sub-levels. A blank canvas is presented in Appendix B for use as a mapping tool.

761 Ibid. p 508

Figure 5.3:  
MLP canvas  
(designed for  
viewing at A1 size)



The ‘notes to self’ that served as the initial inspiration for this modification referenced the paradigm. Making paradigms explicit appeared to be validated by Meadows’ acknowledgement of paradigms as one of the most influential leverage points within a system<sup>762</sup>. But despite this ability to be influenced, a paradigm is also one of the most challenging points to leverage<sup>763</sup>. Considering this resistance, the canvas was further modified to explicitly map the ideology and mindsets in systems, with the intent of providing more granularity in approaching the broader pattern of thought—the paradigm—as a leverage point. As previously discussed, this modification also provides ideologies and mindsets as a ‘local’ aspect of this canvas.

### 5.1.1 Articulating the problem of consumption and waste

Figure 5.3 presents a sketch using the modified canvas. It maps the evolution of modern consumption and waste, to reveal its current conditions and to present a possible future. It includes two sub-levels, one for ecology and another for ideologies and mindsets, as well as two additional columns that communicate the temporality of the problem. This more clearly communicates the evolution of this complex problem over time, its current conditions, and a possible future. A series of sketches have been included in Appendix B that show the progression of this sketching process. Some of these sketches also demonstrate alternative (unsuccessful) approaches to operationalising the MLP.

In column one, the canvas shows how under capitalism—an economic focussed ideology that promotes private ownership of the means of production—services have become privatised, and along with living arrangements, have also become centralised. This has led to further centralisation in shopping practices, facilitated by the increased access to chain stores, department stores and supermarkets that accompanies urbanisation. This centralised shopping activity also aligned with streamlined manufacturing and was supported by post-war ‘designed obsolescence’ policies that served as an economic strategy. Once coupled with the accompanying mindset of efficiency (cheaper-faster-more) the practice of shopping was altered from one performed in small volumes more frequently through local providers to one performed in larger volumes less frequently, through centralised services. In the 1970s, centralisation transitioned towards post-Fordist<sup>764</sup> production models. This created carefully designed distribution networks permitting ‘just-in-time’ logistics, thereby shifting the waste problem away from producers and into the hands of consumers. This is reflected in the regime through the changing nature of shopping practices and reveals the growing impact these practices have on post-consumer waste.

762 Donella Meadows, “Leverage Points,” *Places to Intervene in a System* (1999), p 3

763 Ibid. p 17-19

764 The post-Fordist debate encompasses transitions that respond to changing socio-technical conditions, from the industrial Ford model (streamlined production) to a post-industrial, or post-Ford model (flexible production). There are wider aspects and implications to its theories, but of relevance here is how lean post-Fordist approaches referred to as ‘just-in-time’ logistics have impacted consumption and waste. Post-Fordist approaches are evident in the tech industry through methodologies such as ‘lean’ and ‘agile’ and through increasingly flexible labour arrangements. For more on this see: Ash Amin, “Post-Fordism: Models, Fantasies and Phantoms of Transition,” *Post-Fordism: a reader* 1 (1994); *Post-Fordism: A Reader* (John Wiley & Sons, 2011); Bob Jessop, “Fordism and Post-Fordism: A Critical Reformulation,” in *Pathways to Industrialization and Regional Development* (Routledge, 2005).



Centralisation and post-Fordism also changed perceptions of value. A landscape example might see the commons ‘valued’ as a resource to be exploited thereby permitting increased production and requiring increased consumption. A regime example might see food valued for longevity rather than freshness, achieved through pre-packaged food that is bundled for sale in larger quantities with increased food and packaging waste. Valuing longevity is an emergent outcome of changes to shopping frequency, resulting from the shift from buying locally grown (and sold) fresh whole foods, to a centralised food system where extended transport and storage times impact food’s freshness. Food that is packaged can be produced, transported and sold in different ways. This has further implications for consumers, whose life skills become disabled as a result of packaged food which decreases their need to practice cooking skills<sup>765</sup> and whose individual waste to landfill/recycling increases as a result of their responsibility for packaging end-of-life disposal.

In column two, the canvas maps the more recent dominance of neo-liberal economic thinking, revealing how neo-liberalism’s accompanying free-trade market has influenced the emergence of cultures of disposability and convenience, which in turn has further influenced shopping practices in the regime, accelerating consumption through increased access and accelerating post-consumer waste through increased packaging. This influence on the practice of shopping has converted it from a practice of necessity to one of pleasure, using advertising and design as cultural mediators to drive desire. While capitalism created the conditions for this practice, neo-liberalism has accelerated it. Desirability is increased through acts of cultural mediation and the practice of shopping as recreation emerged. Under neo-liberalism, excessive shopping practices are justified by the highly disposable nature of contemporary things. Reductionist mindsets contribute to the neo-liberal ideology, encouraging disposability and excess by reducing the problem of designed obsolescence to a simple solution that aims to replace rather than repair. This is evident in the pervasiveness of the ‘cheaper to buy a new one’ attitude. This reinforces efficiencies by driving demand, all of which is facilitated by the global free-trade market and guaranteed access to 24-hour shopping through a combination of brick and mortar stores and online shops.

The canvas uses the MLP to identify how these particular outcomes are influenced by landscape and niche activity and highlights the role that ideologies and mindsets have played. Outcomes are not affected exclusively by any ideology or mindset, they are still subject to influence across the MLP levels. Making ideologies and mindsets more explicit aids the process of analysis and the identification of linkages across the levels, providing them as cultural aspects that could be redesigned and remediated through design for transitions.

On the far right hand side, a third column represents a possible future that could emerge from top-down pressures in the landscape combined with a groundswell of bottom-up sustainable niche activity (see Figure 5.3). This is

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<sup>765</sup> See for example discussions of ‘enablement and disablement’ from Ezio Manzini, ‘capabilities and functionings’ from Amartya Sen, and ‘endogenous and exogenous’ satisfiers from Manfred Max-Neef et al.

intended as a communicative device that encourages the exploration of an idea or intervention for change as part of the MLP mapping process, or as a secondary process performed post-reflection. In the example provided in Figure 5.3, the regime in the possible future remains intentionally open. Instead of prescribing this detail, arrows indicate what might fill it, by pointing at activity from the landscape, ideology/mindsets and niche levels. Arrows have been used to indicate how changes at the landscape level could catalyse a shift of several related niche practices into the more stable norms of the regime. Whilst not made explicit in this illustrated version, the aim for this possible future is for sustainable niche practices to replace those previously mapped in the existing regime, with consideration given to how the existing rules and norms of the niche might impact their uptake. Carefully designed transition pathways would be needed in order to affect these changes and the accompanying interventions would likely benefit from an ontological design approach that designs for new ways of being on the world.

The modifications made to this canvas evolved organically and increased its flexibility as a canvas for both personal sensemaking and for use in collaborative mapping exercises with non-experts. Explicit acknowledgement of ideologies and mindsets in the MLP helped guide my analysis of the consumption and waste problem by contextualising their influencing patterns of thought. Continued interaction with the canvas led to additional changes that would further alter how it communicates. This is illustrated in Figure 5.3 where the inclusion of a new ecological band provides an overarching ecological context for the entire canvas. This modification to the way the canvas communicates the MLP serves multiple purposes: firstly, it explicitly positions all socio-technical levels (the built environment) within an ecological context (the natural environment). Secondly, situating the MLP in an ecological context keeps environmental considerations front of mind during mapping—a valuable aspect for considerations involving economics, that serves as a reminder that ecological limits must be respected<sup>766</sup>. Thirdly, it allows the canvas to be used as a narrative device that reveals how activity from the other levels impacts at an ecological level, or conversely, to show how an ecological event might impact the other levels. This storytelling aspect might be useful during stakeholder engagement as a means of illuminating how ecology impacts on or is impacted by particular activities.

Traditionally, the MLP maps ecological events as part of the socio-technical landscape<sup>767</sup>, and while this is a logical position, one of the challenges facing humanity stems from a disconnect from nature that can render ecological concerns invisible. This invisibility is often compounded by an ‘anthropocentric rationalist’ approach to raw material extraction and use, where the commons are treated as a resource to be exploited and sold. The inclusion of a separate band for ecology explicitly contextualises the MLP’s socio-technical systems within ecology, thereby keeping ecological concerns visible during analysis and

766 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*.

767 Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”

fostering a more ecologically considerate worldview throughout the process. This modification was made with the intention of helping to guide thinking during transition periods where new ecologically-focussed mindsets can easily backslide to old economically-focussed mindsets.

### 5.1.2 Representing the MLP as a holarchy

Further reflection on the MLP's intent to represent a holarchy<sup>768</sup> rather than an ordered system of levels of control, has prompted a reconsideration of how the canvas communicates. The structure provided by the formatting of a canvas with columns and rows unintentionally communicates a hierarchy. Rows and columns lead readers through a top-to-bottom, left-to-right reading process that suggests an order or a power of one thing over another. However interactions between levels in the MLP can occur in a number of ways, and shifts on the canvas represent these multiple possible directions. The levels were intended to suggest scale rather than order<sup>769</sup> but in doing so should not imply a geographical scale. In this sense, the niche can contain localised activity that is also a global phenomenon, for example the emergence of zero waste lifestyles is global but is performed in very localised ways.

In transition design literature<sup>770</sup> the MLP is presented as a nested holarchy, where levels are theorised as holons that are both parts of and wholes. This reflects the penetrability of each layer and their potential for influence upon one another. In an attempt to present this more accurately in visual representations using the MLP, the canvas shown in Figure 5.4 has been re-imagined as a series of nested organic shapes that aim to eliminate the unintended visual hierarchy, and represent this nested holarchy instead. This canvas aims to overcome unintended hierarchy in the previous canvas, and shows the role that ecology and ideologies and mindsets play in enacting transitions. As I learned through project work, transitions rely on clear goals, collaboration and a niche that understands its context and the rules that can impact its ability to shift to the regime. In this sense, visually nesting the niche within the regime represents the interplay between these two levels. A real-world example of this can be drawn from the zero waste niche. It is protected and somewhat separate from the rules and norms around consumption and waste, but it is also impacted by a need for access to certain goods (such as food and medicines) and services (such as recycling) that are only provided in the regime. The new sub-level for ideologies and mindsets still nests between the regime and the landscape, providing the same explicit recognition of multi-level influence. The addition of these sub-levels makes their influence on the landscape and regime more explicit, this creates more granular entry points that might be leveraged for systems interventions. By presenting the findings from MLP mapping exercises in an organic shape, the MLP is more accurately represented as a holarchy,

768 Geels and Schot, "The Dynamics of Transitions: A Socio-Technical Perspective." p 19

769 Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions." p 4-7

770 Ibid.

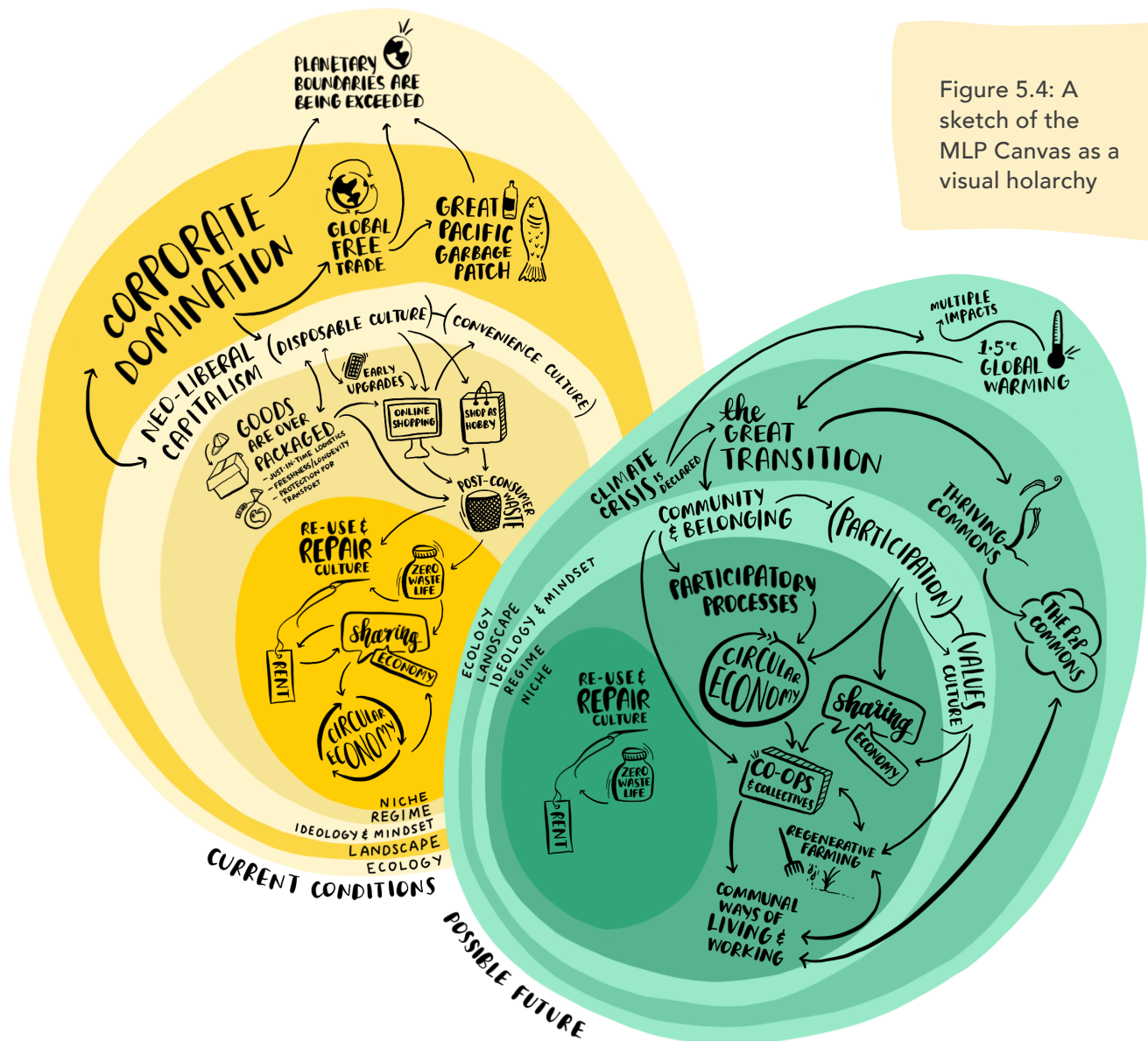


Figure 5.4: A sketch of the MLP Canvas as a visual holarchy

which brings with it an increased understanding that change can activate from multiple directions. A visual holarchy reflects this more dynamic understanding of relationships in socio-technical systems, and shifts away from the hierarchy implied by rows and columns. In doing so this canvas contributes another way of looking at socio-technical systems that is operational and practice-based.

Studying the historical emergence of systems brings insights into how change might be activated in the future. Not as a strictly top-down nor bottom-up process, but rather, as both. Despite the knowledge that big things (systems) change slowly, embedded in these systems is a plethora of little things (practices) that make up the fabric of a society. Practices are recursive and are mediated culturally, providing designers (as cultural mediators) with an immediate leverage point. Particularly those designers who are sensitive to the potential for ontological design approaches. Using the MLP in conjunction with social practice theory allows additional insights into how these little things can also activate change as part of a multi-level, multi-stage approach to the design of transitions.

## 5.2 Applying social practice theory using the MLP

Social practice theory<sup>771</sup> and the Domains of the Everyday<sup>772</sup> focus on smaller things, aspects of daily life, that contribute to larger societal problems in both socio-technical regimes and landscapes. As the global population continues to grow these ‘little things’ combine to create something of great significance. This is easily evidenced through the mounting problem of post-consumer waste, where the ‘I’m just one person’ attitude towards single-use disposable plastics has had an obvious cumulative impact. Shove and Walker argue<sup>773</sup> that everyday practices are underrepresented in the MLP, which has adopted a more telescopic view, as opposed to social practice theory which is more microscopic in its approach. Geels has also acknowledged the benefit of considering the MLP in conjunction with social theories<sup>774</sup>. Understanding how these theories relate to one another before designing interventions aimed at changing behaviours is crucial, and the relational nature of social practices and the MLP will become more evident as this discussion continues.

Social practices mediate relations between images, skills and materials, and are performed in a repetitive fashion which leads to their stabilisation as social norms<sup>775</sup>. For example, brushing our teeth involves an understanding or mental image of what it means to have clean teeth, combined with the skills to perform the act of brushing, and the materials or tools needed to brush. A change to any one of these aspects can create a ripple effect in the practice<sup>776</sup>. For example, brushing with your non-dominant hand due to a broken arm might alter what is deemed acceptable or achievable as an image of clean teeth, as clumsy brushing skills might fail to brush as thoroughly. Frustration from this clumsiness might prompt a reconsideration of what constitutes a suitable material for brushing your teeth and could lead to the purchase and use of an electric toothbrush. Similarly, changing from a squeeze-tube of minty-fresh toothpaste to a charcoal-based tooth powder creates ripple effects as the skill of brushing your teeth must be altered in order to get tooth powder into your mouth without making a powdery-black mess. The likelihood of staining caused by charcoal often increases the need to clean a sink or basin as part of brushing, which might lead to a location change for tooth brushing for example from the bathroom to the laundry, where mess might be less of a concern. Using tooth powder changes other skills and materials too—a scoop might be needed to get

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771 Hargreaves et al., “Sustainability Transitions from the Bottom-Up: Civil Society, the Multi-Level Perspective and Practice Theory.”; Hargreaves, Longhurst, and Seyfang, “Understanding Sustainability Innovations: Points of Intersection between the Multi-Level Perspective and Social Practice Theory.”; Shove, “Beyond the Abc: Climate Change Policy and Theories of Social Change.”; Shove and Pantzar, “Consumers, Producers and Practices: Understanding the Invention and Reinvention of Nordic Walking.”; Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*; Shove and Walker, “Governing Transitions in the Sustainability of Everyday Life.”; Spaargaren, “Theories of Practices: Agency, Technology, and Culture: Exploring the Relevance of Practice Theories for the Governance of Sustainable Consumption Practices in the New World-Order.”

772 Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”

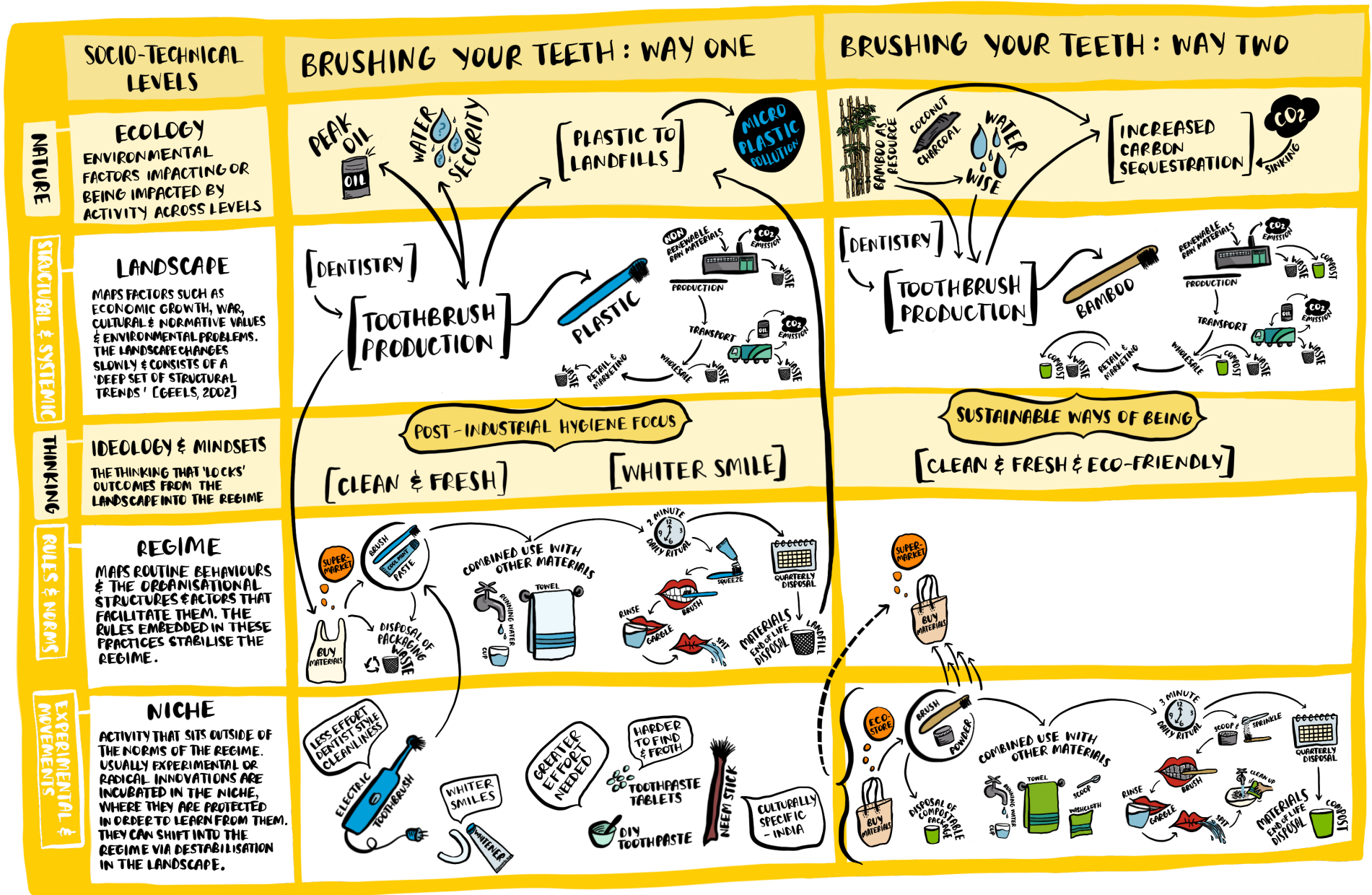
773 Shove and Walker, “Governing Transitions in the Sustainability of Everyday Life.”

774 Geels, “Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective.”

775 Shove and Pantzar, “Consumers, Producers and Practices: Understanding the Invention and Reinvention of Nordic Walking.”; Alan Warde, “Consumption and Theories of Practice,” *ibid.*, no. 2.

776 Kirsten Gram-Hanssen, “Understanding Change and Continuity in Residential Energy Consumption,” *Journal of Consumer Culture* 11, no. 1 (2011).

Figure 5.5: Mapping social practice of toothbrushing with an alternative practice



the powder from its package to your mouth, and an extra cleaning cloth might be used to mop up any charcoal stains. Changes to image, skills or materials can alter the consumption patterns surrounding the practice of brushing your teeth, which in turn have impacts in the surrounding systems of production and waste. While the simple act of brushing your teeth feels personal and individual, the MLP canvas can be used to track it horizontally using SPT and vertically using the MLP. This reveals its relationships across systems and its stabilisation in the regime through social norms of cleanliness. The MLP canvas could also help to identify how the impact of a practice might differ as a result of cultural differences, skill changes, material access or lifestyle choices (see Figure 5.5).

In Figure 5.5 the telescopic view of the MLP has been merged with the more granular view of social practice theory to show how an individual practice is horizontally connected across multiple systems in the socio-technical regime. In order to communicate what happens when changes are made to a practice, two alternative modes of teeth brushing have been mapped side-by-side to invite comparative analysis. The niche practice calls on a different image, and altered skills and materials but is only marginally different from the dominant practice outlined in the regime. Arrows have been used to indicate how this niche practice is shifting, evidenced by the shelf presence of versions of these alternative materials in mainstream supermarkets.

The modified canvas discussed throughout this chapter is flexible enough to be used to map both the telescopic view from the MLP and the macroscopic views from social practice theory and has been used for both. Drawing insights from the telescopic view makes the systemic impact of concentrations of practices (norms) more visible and permits further analysis and insights into the impact of a practice. The additional column on the right hand side of the canvas permits mapping of either a possible future (MLP) or the impact of a practice change (SPT). This provides designers with a multipurpose canvas that can be used for visual thinking, a process that I call, ‘reflective doodling’. Thinking that generates visual outcomes is a designerly sensemaking process that permits visual thinkers to ‘see’ the problem and the emergent possibilities more clearly. The designerly ‘code’ that is embedded within sketching and drawing processes provides a means of communication for what might be difficult to otherwise verbalise<sup>777</sup>. Throughout this research synthesis was often achieved through ‘reflective doodling’, and communicating this application of theoretical knowledge also appears to have benefitted from this designerly approach.

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<sup>777</sup> Cross, *Designerly Ways of Knowing*, p 19-22 Janet Daley, “Design Creativity and the Understanding of Objects,” *Design Studies* 3, no. 3 (1982).

### 5.3 Closing remarks

Active engagement with theoretical domains through designerly sensemaking processes has informed the approaches taken throughout this research.

This chapter has explored two particular areas of knowledge: the multi-level perspective and social practice theory and how they complement one another in their application into this research. It presented a sensemaking approach to mapping problems and practices through the modification of a transition design canvas using the MLP and SPT. Using this canvas with the MLP has disseminated theoretical knowledge throughout the thinking and doing aspects of this research. It has demonstrated the value of the MLP as a ‘middle-range theory’<sup>778</sup> and has discussed the reasoning for its application to modified canvases used in transition design. This same canvas has been used to demonstrate how SPT’s horizontal view works with the vertical view of the MLP and highlights the complementary nature of these two theories.

Several iterations of the modified canvas have been presented to operationalise the MLP. They demonstrate three things: firstly, to show how making different aspects of the MLP more explicit on the canvas can encourage more relational thinking. Secondly, the canvas’s progression demonstrates the outcome of an active process of reflection in-action and on-action as part of action research cycles. Thirdly the iterations demonstrate a flexibility in the canvas’s use. The modified canvas is suitable for mapping the MLP and SPT (both separately and together), for use in collaborative mapping exercises and for communicating this thinking in ways that allow problems/situations to be ‘seen’. The modified versions of these canvases have been created as part of this research and used throughout it.

Discussion of the origins and ontological crossovers in the MLP has helped position it as a useful partner to social practice theory. Understanding the ontological crossovers in the MLP has also helped reconcile the ontological (and paradigmatic) variations between actors at different levels in relation to sustainability transitions. Future use of the MLP might benefit from adopting a similarly flexible approach to the ontological lenses used for analysis across the different socio-technical levels. Geels’ analysis of sustainability transitions using a lens of conflict ontology<sup>779</sup> has been particularly relevant to the discussions of power dynamics that preceded this chapter. Analysis using this lens has facilitated identification of the stark differences between the dominant neo-liberal economic paradigm and the post-capitalist ideologies that challenge it. Geels’ identification of a potential crossover between the MLP and social movement theory has been noted as an area of interest in my future research, and might provide further insights into paradigm shifts as part of sustainability transitions.

778 Geels and Schot, “The Dynamics of Transitions: A Socio-Technical Perspective.” p 19

779 Geels, “Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective.”



## PART 3: DOING

This part marks the shift in this thesis from thinking to doing. The theoretical framework presented in *Part 2: Thinking* underpins the activity presented in *Part 3: Doing*, and informs the analysis of this research activity. In this sense, there is an obvious interconnection between these two acts of thinking and doing, however the practical focus that *Part 3* adopts will be evident through the presentation of findings and analysis that discuss what design could do to address structural unsustainability. This part discusses three approaches for designers that might facilitate this process: collaboration, transition design and autonomous design. It analyses them through process and project explorations and reflects on the transformation in my practice.

## Chapter 6

### Design against ‘defuturing’

As the design industry has become increasingly tied to business it has also contributed to activity which negates possible sustainable futures, otherwise termed as ‘defuturing’. This word of Fry’s making describes unsustainable activity that robs us of a future. It ‘recognises that the future is not a vast void, but a time and place constituted by directional forces of design’<sup>780</sup> and that the design outcomes from the past and present have a direct impact in and on the future. Fry’s argument picks up where Papanek’s left off, and he maintains that designers have not only the capacity but also a responsibility to address ‘defuturing’ through their work. Yet Fry also indicates that there is very little comprehension amongst designers of the complexity, transformative ability and ongoing impacts of design. He argues that designers unintentionally ‘defuture’ due to a lack of understanding of how the things we design continue designing—that our creations continually shape us as people and change the built and natural worlds we inhabit<sup>781</sup>. The implications of this unknowing action are far reaching, and as public awareness and concern for issues such as climate change grows, continuing ignorance and inaction within the design industry is increasingly unacceptable.

General awareness of the sustainability crisis is growing, but the extent of damage resulting from or connected to ‘defuturing’ activity appears to be more exclusive knowledge. As more time passes, action against ‘defuturing’ becomes exponentially more critical. This chapter explores how design might respond to ‘defuturing’ through collaborative design approaches and alternative modes of practice. It discusses co-creation and collaboration as an important ‘way’ of designing for transitions to just and sustainable futures. This approach can be challenged by those who are resistant to working with others, and a discussion of how these challenges have been navigated in this research is introduced here and discussed further in the chapters that follow. Collaboration is practiced in two emergent approaches to design—transition design and autonomous design—which are presented in sections two and three as important alternatives for designers. Both approaches offer pathways for designers seeking to redirect their daily labour away from ‘defuturing’ activity. This section also considers the shifts that might occur in a design practice as a result of these approaches being embraced.

In the second section, transition design is introduced through its influencing factors and framework. These are explored as part of an investigation into how transition design might be used to shape sustainable behaviours, and to influence sustainability transitions in organisations and/or commercial projects. Discussions of autonomous design in section three, present it as a more existential and ontological approach to design. This is primarily due to

780 Fry, *A New Design Philosophy: An Introduction to Defuturing*, p preface

781 Ibid, p 12

its connection with projects that are more akin to lifelong endeavours and its focus on fostering alternative ways of being in the world. Its emergence from the Autonomía movement in the Global South is explored, and its relevance to the Global North in approaching sustainable futures with more plurality and flexibility is recognised. This section finishes by outlining the necessity of transitioning design practices towards increased sustainability in order to counter ‘defuturing’ activity. Discussions of what might be possible in addition to what might be necessary for a practice to transition extend throughout the chapters that follow.

## 6.1 Collaboration and co-creation

The idea that ‘we are better together’ underpins the collaborative approaches in this research, which have aimed to work with people (rather than for them) and to use co-creation to involve them more deeply in projects. The process of co-creation addressed here was born out of participatory design in Scandinavia in the 1970s where end-users of a design outcome participated in the design process<sup>782</sup>. Co-creation is best described as a collaborative creative process, and a wide body of literature<sup>783</sup> describes how design can embrace co-creation in many forms, including co-design, co-creation, participatory design, contextual inquiry or user-centred design. Under the banner of co-creation these methods can all be understood as processes of involvement, and while each method is unique, there are frequent overlaps in language, process, desired outcomes and the inherent challenges within them<sup>784</sup>.

Sanders and Stappers describe the emergence of co-creation in the US as a process that typically treats end-users as subjects to study<sup>785</sup>. While this approach is a valid means of providing designers with a feedback loop that informs iterative design processes, it is less collaborative than the Northern European participatory model, where end-users are considered partners in design processes. Despite this distinction, both of these approaches are often referred to synonymously as co-creation. This synonymy can confuse designers leaving them to interpret whether co-creation is a user-research feedback loop or a collaborative and participatory process of creation. In this research, co-creation has been embraced in ways that are truer to the dictionary definition of collaboration: ‘to work jointly with others or together especially in an intellectual endeavor’<sup>786</sup>. This definition is devoid of design jargon. There is no

782 Elizabeth B.-N. Sanders and Pieter Jan Stappers, “Co-Creation and the New Landscapes of Design,” *CoDesign* 4, no. 1 (2008); Marc Steen, “Co-Design as a Process of Joint Inquiry and Imagination,” *Design Issues* 29, no. 2 (2013).

783 “Co-Design as a Process of Joint Inquiry and Imagination.”; Pelle Ehn, “Participation in Design Things,” in *Design Things*, ed. Ken Friedman and Erik Stolterman (Cambridge, Massachusetts: MIT Press, 2011); Sanders and Stappers, “Co-Creation and the New Landscapes of Design.”; Bjögvinsson, Ehn, and Hillgren, “Design Things and Design Thinking: Contemporary Participatory Design Challenges.”; Ingrid Mulder and Pieter Jan Stappers, “Co-Creating in Practice: Results and Challenges” (paper presented at the Collaborative Innovation: Emerging Technologies, Environments and communities, Leiden, The Netherlands, 2009); Helena Karasti, “Infrastructuring in Participatory Design,” (2014).

784 Bjögvinsson, Ehn, and Hillgren, “Design Things and Design Thinking: Contemporary Participatory Design Challenges.”

785 Sanders and Stappers, “Co-Creation and the New Landscapes of Design.” p 8

786 <https://www.merriam-webster.com/dictionary/collaboration> accessed 29 April 2019

human centredness in the approach and no one end-user or group of users is centred or studied and designed for. There is also no implied hierarchy in the project team, and collaborators are not invited and/or dismissed at different project stages, nor is the designer positioned above collaborators as a process expert. The intended approach used throughout this research is collaboration in its purest form.

The collaborative approaches in each project have endeavoured to create inclusive, non-hierarchical, shared experiences, and despite being part of a research project, have tried not to be exclusive, over-designed or overly intellectual. Due to the ease with which terms can be appropriated, misinterpreted or adapted over time, I have tried as much as possible to refer to these processes as ‘collaborations’ rather than ‘co-creation’. This has been done to avoid any possible obfuscation in the processes which have been genuine attempts to work with people towards a common goal rather than feedback loops provided through user research.

Research from Sanders and Stappers outlines the potential for co-creation methods to be applied to complex problems such as sustainability, claiming, ‘participatory thinking is antithetical to consumerism’<sup>787</sup>. The use of co-creation for fluid design processes is explored by Bjögvínsson et al<sup>788</sup> who highlight the importance of collaboration for projects with unknown outcomes. This need for a growing comfort with fluidity in design also connects to aspects of Fry’s ‘redirective practices’, to autonomous design and to transition design not only in their temporality but also in their undertaking of transitions towards unknown futures. These truly collaborative approaches hand over designerly processes to the group allowing designers to step into facilitation roles, and Steen highlights that underpinning this process with virtues such as curiosity, cooperation and creativity is key to successful collaboration<sup>789</sup>. Further to this is the importance of deep listening to gain real insights and perspectives from others. When made explicit, this process creates the space to co-define problems so that the collaborators can better understand how the problem is experienced from different and multiple perspectives. For projects investigating sustainability, this process of co-definition provides a far clearer articulation of the full complexity of the problems at hand and indicates where needs for multiple design interventions lie. This need for plurality can also help to mediate the dynamics in the collaborative group by maintaining group focus on multiple beneficial approaches rather than becoming distracted by the competitive aim of one ‘winning’ solution. As previously discussed, language is important in collaborative settings, and these plural aims might be better verbalised as ‘beneficial approaches’ rather than ‘winning ideas’ or ‘solutions’. This language

787 Sanders and Stappers, “Co-Creation and the New Landscapes of Design.” p 9

788 Bjögvínsson, Ehn, and Hillgren, “Design Things and Design Thinking: Contemporary Participatory Design Challenges.” p 104

789 Marc Steen, “Cooperation, Curiosity and Creativity as Virtues in Participatory Design,” in *Desire* (Eindhoven, The Netherlands 2011).

also recognises that structural unsustainability is too big to ‘solve’ and that its problems can only be approached using multiple interventions at different levels, stages and scales.

Working cooperatively on complex problems could be described as a process of co-motion, or as Esteva describes it, ‘moving forwards, together’<sup>790</sup>. Esteva’s concept of co-motion is significant for collaborative working groups where gaining consensus can be challenging. The extrinsic language that is common in many organisations tends to divide groups into winners and losers which fosters competition rather than collaboration. Taking on board the principles of co-motion creates an acceptance of more inclusive aims—to move a group forwards without leaving anyone behind. Groups with large numbers of stakeholders—particularly stakeholders with opposing worldviews—might find stepping away from a win/lose binary opens up a group’s collective understanding of beneficial movement towards a shared goal. Shared goals also require a shared understanding that some outcomes or interventions might have more personal benefit than others, but that a shared goal provides a broad benefit to all. For example, the shared goal of increasing a community’s resilience to climate change involves a constellation of different design interventions. A farming practices intervention could differ markedly from a regional employment intervention however both would contribute to the community’s shared goal and therefore provide a broad benefit to all stakeholders. This shared understanding would help farming stakeholders to appreciate the benefit of a regional employment intervention despite them not perceiving a personal gain from this intervention, and vice versa. The exercise of mapping stakeholders’ hopes and fears in transition design workshops helps to facilitate this process, which then extends to inform the creation of future visions and project pathways.

Drawing on Dowding’s application of game theory to power dynamics, it could be argued that collaborative working groups who perceive a benefit from working together are more functional than those who compete for outcomes<sup>791</sup>. Designers who combine conflict resolution skills with this understanding of power will likely perform well in facilitating roles, by ensuring collaborative mindsets are maintained through what I call a ‘proactive mediation’ process. This process is informed by Forester’s views of critical pragmatism in balancing difference and sameness during collaboration<sup>792</sup>, and of mediation as a form of collaboration from Whetten and Cameron<sup>793</sup>. Mediation is a form of intervention that seeks to understand opposing views and find common ground in order to solve problems<sup>794</sup>. In mediation all voices are heard without judgement, and when mediation adopts a collaborative approach, all parties make collaborative decisions about how to move forwards<sup>795</sup>. I propose

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790 Gustavo Esteva, “Regenerating People’s Space,” *Alternatives* 12, no. 1 (1987).

791 Dowding, *Power*.

792 Forester, “On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations.”

793 Whetten and Cameron, *Developing Management Skills*.

794 *Ibid.*

795 *Ibid.* ch 7

‘proactive mediation’ as a way of managing group dynamics that avoids potential conflicts by holding a stance of conflict resolution through mediation. ‘Proactive mediation’ assumes there is a potential for conflict and adopts a mediation stance in order to manage conflict before it arises. Whilst not all collaborative groups will be prone to conflict, tensions are an inherent aspect of group dynamics. Disagreements typically stem from a misalignment between the unique perspectives each group member brings with them. Proactive mediation requires the facilitator to create a space that is open, honest and inclusive and adopting this stance begins with the understanding that in any group, every unique perspective belongs. As a collaboration progresses the facilitator’s observation of group dynamics is an important aspect of this process. Observing a group’s behaviour and responding accordingly allows the facilitator to step in and out of mediation-mode as a means of encouraging collaborative connections whilst also preventing conflict from escalating. Adopting a stance of proactive mediation has been beneficial during stakeholder engagement as part of this research, and is discussed throughout *Part 3: Doing*.

Collaboration plays a significant role in the approaches taken in transition design and autonomous design. Both design methods acknowledge the importance of engaging stakeholders in co-defining problems and co-designing outcomes, while also appreciating how challenging collaborative processes can be. These emergent methods are introduced below and their use in projects continues to be discussed in the chapters that follow.

## 6.2 Transition design and ‘slow work’

The Global North is governed with a neo-liberal economic mindset that actively promotes ‘defuturing’ through economic reform and policy that favours unsustainable activities<sup>796</sup> and the design industry currently plays a significant role in this unsustainable activity<sup>797</sup>. Transition design is an emergent practice that simply put, is a method for designing for uncertain futures. Further to this it is a method for designing in ways that could prevent ‘defuturing’ activity by instead fostering other possible sustainable futures. It can also be described as a multi-level, multi-stage approach that explores interventions across multiple leverage points and scales of time. In some respects, this temporality and uncertainty can make transition design feel just as complex as the problems it approaches. It is influenced by a wide body of knowledge drawn from a variety of disciplines and fields, and as an emergent practice is also continually evolving. Transition design also draws upon the skills/outputs of all design sub-disciplines (communication, product, interaction, service, social innovation) to design interventions, whilst operating as a higher order (similarly to service design/social innovation) in its approach to complex and systemic problems.

<sup>796</sup> Klein, *This Changes Everything: Capitalism Vs. The Climate*.

<sup>797</sup> This argument is supported by a wide body of literature from Joanna Boehnert, Arturo Escobar, Tony Fry, Terry Irwin, Naomi Klein, Gideon Kossoff, Ezio Manzini, Ann Thorpe, Cameron Tonkinwise and Stuart Walker.

Its practice is reliant on the predictive intuition in Cross's 'designerly ways of knowing'<sup>798</sup> being guided by research-based models that understand the implications of systems-level change, and it maps the aims of design approaches accordingly. Its overarching aim of creating multi-level, multi-stage activities that activate transitions to a new system from within the old one is influenced not only by the intersection of power and change, but also by the social practices within the systems it aims to transition. The theories explored in Chapter 4 will be contextualised in the discussions below, but the limitations of this research prevent a more detailed discussion of every aspect of transition design. This section aims to provide insights into the kind of practice it is and discusses its relevance as an approach to 'defuturing'.

### 6.2.1 Influencing factors in transition design

Transition design is influenced by a wide range of thinking from different domains and fields<sup>799</sup>. At transition design's core is the consideration of holistic sustainability. It is an ecologically contextualised design that is influenced by principles from nature such as living systems theory, which 'explores phenomena in terms of dynamic patterns of the relationships between organisms and their environments'<sup>800</sup>. The foundations of its practice are built upon an understanding of theories of change, specifically, how the structures of society are formed and reinforced, and how they might be penetrated and changed. This aspect also features in the Transition Design Framework which is discussed in the next part of this section. Comprehension of social practice theory provides designers with everyday life as a design context—an area that is treated as the locus for nurturing behaviours that can foster sustainable futures. This emphasis on social practices rather than artefacts and things, can also guide designers' focus toward behaviour change, which could also inform more sustainable design outcomes. This is not to say things disappear. Interaction designers might design interactive things that encourage sustainable behaviours, and communication designers might design the information that makes these behaviours achievable. In this sense the changed focus of the designer changes the nature of the things they design.

Within this everyday life context is the exploration of needs and satisfiers. Max-Neef et al<sup>801</sup> argue that needs are finite while satisfiers are not and can be influenced by other factors such as culture, location and mindset. Exploring satisfiers as part of sustainable lifestyles connects social practice theory with this theory of needs. Both these theories are supported by the concept of cosmopolitan localism, a term that describes place-based approaches that are grounded in the 'smaller-local' while remaining connected to the 'larger-global'<sup>802</sup>. Added to this place-based approach is knowledge informed by

798 Cross, *Designerly Ways of Knowing*.

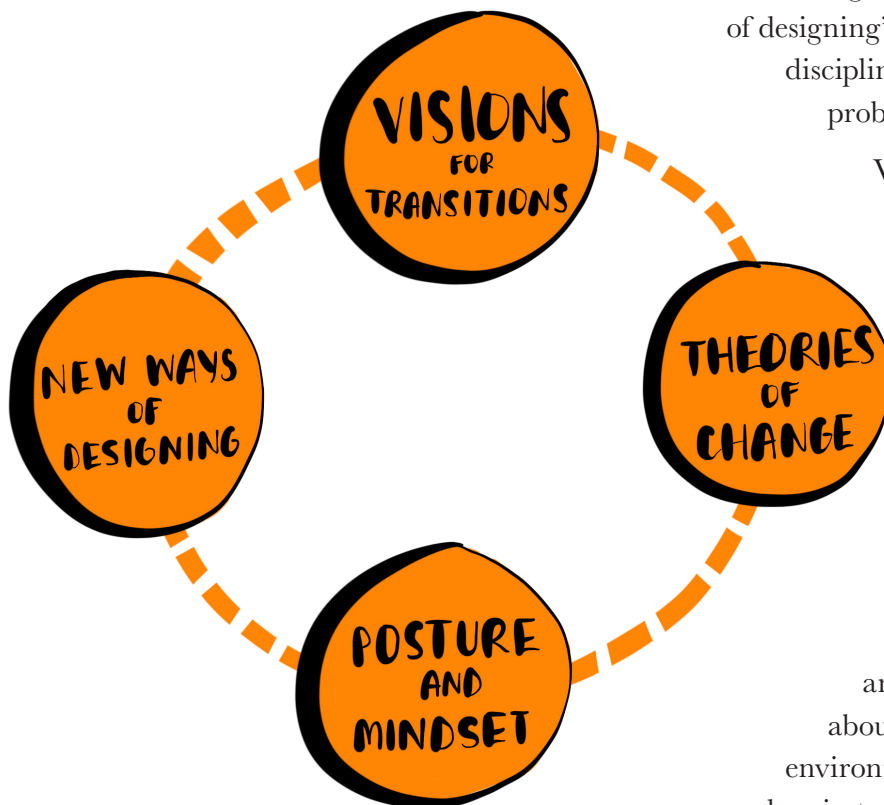
799 Irwin, Tonkinwise, and Kossoff, "Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions."

800 Ibid. p 17

801 Max-Neef, Elizalde, and Hopenhayn, "Development and Human Needs."

802 Manzini, "Resilient Systems and Cosmopolitan Localism—the Emerging Scenario of the Small, Local, Open and Connected Space."; "Small, Local, Open and Connected," *Sustainability in Design: Now!* (2010).

Figure 6.1:  
The transition  
design framework.  
Drawn from Irwin  
et al. Licensed  
under CC BY-SA 3.0



indigenous wisdom that is ‘slow’ and localised and could foster a greater symbiosis between design and ecology<sup>803</sup>. Alternative economics are also an influencing factor in the development of solutions that operate outside of the dominant economic paradigm.

### 6.2.2 The Transition Design Framework

The Transition Design Framework (see Figure 6.1) developed by Irwin et al comprises of four reinforcing areas of knowledge: ‘visions for transition’, ‘theories of change’, ‘posture and mindset’ and ‘new ways of designing’. These areas cover broad multi-disciplinary ground in order to approach problems that are complex and systemic.

Visions for transitions provide an entry point to the framework; it is recognised that without a compelling vision for a possible future any movement towards it will be challenging. These visions are granular in their approach and provide a sense of an everyday life that is in symbiosis with ecology. They reimagine how life might be experienced in a place-based but globally connected future and are informed by new knowledge about the natural, social and built environments. An understanding of the MLP and socio-technical transition theory (outlined in previous chapters) is a crucial part of the ‘theories

of change’ that underpin transition design<sup>804</sup>. Without an understanding of the MLP, designers are unable to function across the landscape, regime and niche levels simultaneously—a function that Irwin et al argue is essential for transition designers to operate effectively<sup>805</sup>.

Where most design focuses on short term solutions, transition design has a much longer range. In part this temporality comes from the futuring aspects of its practice, in which compelling narratives for long-term sustainable futures are co-created<sup>806</sup>, but it is also a necessary aspect of the approach which typically takes place over long periods of time. This temporality also facilitates reflective processes where outcomes can be observed and adjusted accordingly. These observation and adjustment processes see its practitioners

803 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

804 Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.” p 19-22

805 Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*.

806 Lockton and Candy, “A Vocabulary for Visions in Designing for Transitions.”



adopt versioning approaches not unlike those used in interaction design, where prototyping permits a gradual approach at a problem with continual reflection and adjustment of outcomes.

This process requires restraint and resilience. The designer must suspend the desire to leap to solutions whilst repeatedly reflecting on and re-approaching the problem at hand. In some respects, this is the art of leaving things unfinished, of doing enough to test the potential without doing so much that a reapproach is too hard. Fry recognises this in his call for designers to act with urgency without rushing<sup>807</sup>; he suggests rushing has the potential to reinforce rather than resolve structural unsustainability.

### 6.2.3 Enablement as part of transitions

Structural unsustainability impacts the lives of everyday people in ways that are ubiquitous and frequently unrecognised and enabling sustainable behaviours will play a crucial role in transitions. Enablement is described by Manzini as a process of building skills and capabilities that facilitate increased sustainability in everyday life<sup>808</sup>. The aforementioned issues with the food system exemplify enablement (and its counter, disablement) and are briefly explored in the passage following as a case in point. The global food system is insecure; it is filled with social injustices and devastating environmental impacts. Examining this system reveals disabling solutions that are ‘defuturing’. Manzini describes disabling solutions as those that decrease our capabilities<sup>809</sup> and in the case of food, disabling solutions fill supermarket shelves in the form of pre-prepared and processed food. As cooking requirements decrease, the skill of cooking becomes diluted, and future generations of humans become less capable of enacting it. Centralised food systems cement this disablement whilst also interconnecting with other sustainability issues such as soil degradation through monoculture farming, wholesale food waste, declining pollinator numbers, increased post-consumer waste, food security in marginalised and rural communities, deforestation, and displacement of human and non-human others. The complexity of the structural unsustainability of food production is amplified by food’s nature as a most basic human necessity. As food production becomes further removed from food consumption the risk of disablement increases. Yet this same food system could be harnessed to build capabilities instead of disabling them, with design playing a key role in transitioning towards enabling solutions. A radically different, more localised approach to growing and sourcing food would be required, as would a renewed interest in preparing and cooking whole foods rather than processed or pre-prepared food. Fourth-order designers play a role here in facilitating a transition of this magnitude, but an expansive transition project such as this would also greatly

807 Fry, “Design after Design Workshop.”

808 Manzini and Walker, *Enabling Solutions for Sustainable Living: A Workshop*.

809 Ibid.

depend upon first order design skills to communicate change and make the transformation desirable<sup>810</sup>. Practitioners moving into this space are likely engaged in their own transitions, personally and professionally, and this process is a necessary step in transitioning practice towards increased sustainability. In this sense, understanding enablement as an aspect of designing behaviour change might also be described as an ontological endeavour that asks more of designers than the typical commercial design brief.

#### 6.2.4 Transforming commercial work as part of transitions

The composition of a transitioning practice is constantly evolving, and for the immediately foreseeable future, transition design might remain embedded (and to a certain extent, incubated) within academia while it continues to mature. The practice composition outlined below is discussed in greater detail in Chapter 9: *Personal, Political, Professional: The case of a practice in transition*. Throughout the duration of a practice's transition, it is most probable that practitioners will remain entangled in the weeds of commercial work. Commercial work is unlikely to disappear overnight, nor should its existence hinder the overall transition of a practice. A focussed effort on the 'redirection' of design briefs towards more sustainable outcomes remains an important avenue for exploration. The temporality of practice-transitions also presents opportunities for practitioners to engage in regular conversations about transformation and transitions with commercial clients. Further to this, commercial work can provide some financial stability for a practice while it develops transition design projects that might be less profitable or otherwise subject to pressures from restricted or limited funding.

Organisations make up a significant portion of the fabric of society and their influence is far reaching—particularly under neo-liberal governmental rule—where money has the power to persuade policy. According to Ravasi and Schultz<sup>811</sup>, an organisation's culture is comprised of a shared set of assumptions and beliefs that create their behavioural norms. Much of the culture within large organisations is driven by a corporate mindset which favours unlimited growth and unrestricted access to natural resources<sup>812</sup>. Kotter suggests that underpinning every culture transformation project is one of two goals: to increase profit/decrease cost, or to become more efficient, and that often the aim is for a combination of both<sup>813</sup>. As part of these culture transformation projects, a focus on collaboration and improved functionality amongst teams might form part of the endeavour of achieving increased efficiencies. Whilst on the surface this might appear to be a missed opportunity to transform towards sustainable business models, these transformation projects lay a solid

810 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Fry, "Design after Design Workshop."

811 Davide Ravasi and Majken Schultz, "Responding to Organizational Identity Threats: Exploring the Role of Organizational Culture," *Academy of Management* 49, no. 3 (2006).

812 Klein, *This Changes Everything: Capitalism Vs. The Climate*.

813 John Kotter, *Steps to Accelerate Change* in 2015, (Kotter International), p 6

foundation for transition design by encouraging more collaborative mindsets within otherwise competitive environments. This suggests large organisations undergoing ‘typical’ culture transformations might become pre-primed for the more significant transformations required as part of sustainability transitions.

In order to actively participate in work of this nature, practitioners will need a deeper understanding of organisations, how they operate, how they transform, and how they might be resistant to change. Whilst this is not entirely outside of every designer’s skillset, it is an unlikely area of expertise for the typical designer, meaning new knowledge will be required to facilitate culture transformation projects as part of the work of transition design. As discussed in the previous chapter, those practitioners who are engaging with organisations might start by initiating priming conversations that openly discuss the need for strong visions and narratives for sustainable futures.

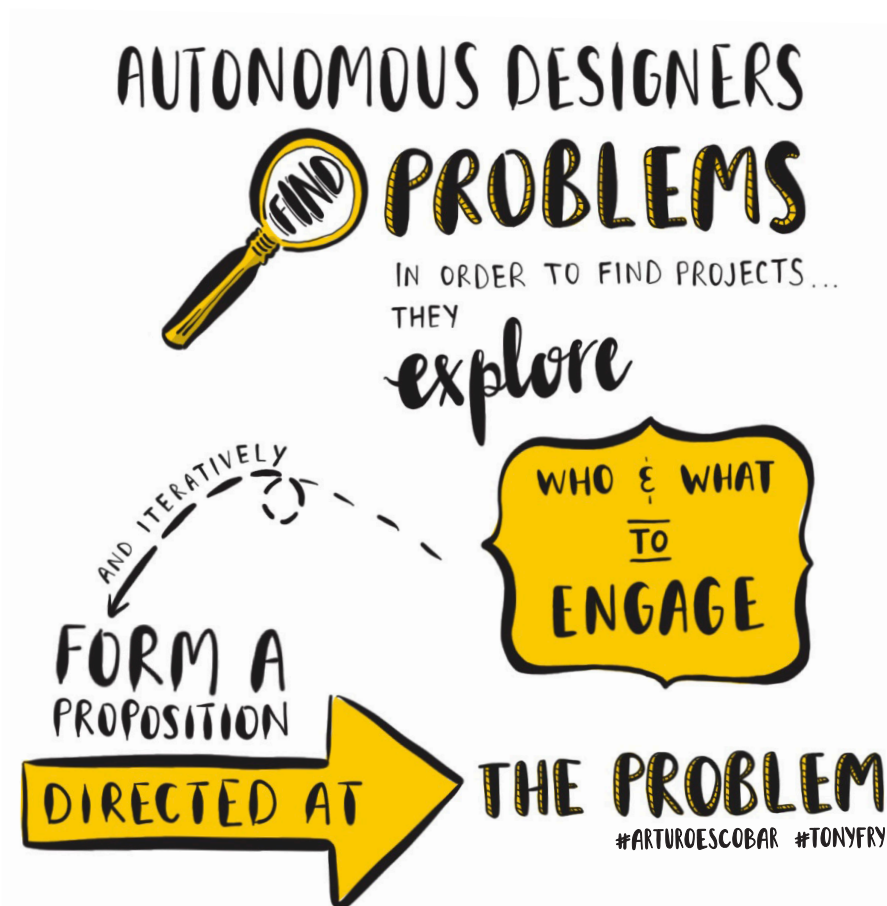
Transition design holds great potential as an approach to design against ‘defuturing’, but the significant body of knowledge it requires could also be perceived as both a help and a hindrance to practitioners. On one hand transition design calls for a much-needed foundation of theory that informs design approaches and outcomes. In doing so it also asks a lot of practitioners, most of whom do not currently hold this knowledge, nor have the time needed to acquire it. Despite the volume of this body of knowledge already posing a challenge, it would benefit from the inclusion of power dynamics as an additional area for study. Whilst this would add more to what is already large and overwhelming, studying power is particularly relevant in practice, where designers are frequently engaged in power relations with stakeholders. The goal of contributing to structural change would be greatly hindered by an inability to address the intersection between power and change.

Ongoing incubation in academia provides a privileged few with access to valuable resources, and more particularly, the time needed to build this knowledge. As a beneficiary of such privilege I can attest to the rewards I have felt from it. Knowledge building and project-based experience gained through explorations of transition design have been incubated within this research with the support of an academic institution. Does this make transition design a practice of privilege? Could this privilege restrict transition design’s potential to become more widespread? Or is its current incubation period par for the course for an emergent practice? In any case, the explicit desire for transition design to be shared widely is evident in the open source publication approach adopted by Irwin et al and in their online publication of a transition design curriculum. While the pursuit of transition design is likely privileged, it also appears that this privilege is being used for good.

### 6.3 Autonomous design and ‘life’s work’

At this juncture many business-savvy designers might ask, ‘who is the client for such work?’ but there is no simple answer to this question and in some instances it would appear that no client exists. Structural sustainability problems require temporal approaches that are perhaps better understood as what Sartre would call ‘existential projects’<sup>814</sup> or what d’Anjou would call the ‘fundamental project’<sup>815</sup> or what Willis describes as ‘life’s work’<sup>816</sup>. For Escobar and others, autonomous design emerges in this space<sup>817</sup>; it presents an all-encompassing approach to design—one that follows organically from a particular (sustainable and just) way of being in the world. Autonomous design has its roots in the Autonomía movement from the Global South, which holds an anti-capitalist mindset without swinging far left into socialism<sup>818</sup>. In the

Global North’s interpretation of autonomous design, client projects are replaced by approaches to problems that are the focus of the designer’s ‘life’s work’. In this sense, ‘the system’ becomes the operative client and designers seek independent funding for projects that serve the ‘pluriverse’ rather than projects that maintain the status quo. Escobar’s concept of the ‘pluriverse’ envisages a world (earth) in which many worlds (ways of being) can fit<sup>819</sup>. Embracing this plurality acknowledges that the dominant ‘way of being’ in the Global North is not the ‘only’ way for societies to function. A pluriversal approach accepts that the many different ‘ways of being’ that exist now (and others that may exist in the future) are just as credible and deserving of space and consideration.



This communal approach decentres neo-liberal capitalism, instead favouring communal or community enterprises. The ‘pluriverse’ calls for a more radical

814 Sartre, *Being and Nothingness*.

815 Philippe d’Anjou, “The Existential Self as Locus of Sustainability in Design,” *Design Philosophy Papers* 5, no. 3 (2015).

816 Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.”

817 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Fry, “Design after Design Workshop.”; “Design for/by “the Global South”.”; d’Anjou, “The Existential Self as Locus of Sustainability in Design.”

818 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. p 181

819 Ibid.

democracy, shifting away from representative democracy towards more participatory modes. Autonomous design posits ‘community as an alternative to individualistic societies’<sup>820</sup> and offers this as a valid alternative to the dominant neo-liberal narrative of competition and growth. The Autonomía movement recognises that ‘when we fail to have our own proposals we end up negotiating those of others’<sup>821</sup>; and autonomous design is underpinned by this same principle, evident in its aims to co-create alternative possibilities. With expanding autonomy, the ‘pluriverse’ rises up as a community of communities where relationality takes over from rationality; the aim is not to change existing worlds but rather to build new ones.

Autonomous designers practice inside this communal context, where new narratives can be incubated and developed in ways that offer designers real alternatives to commercial modes of practice. For the Global South this is an endeavour to realise the communal and defend relational ways of being. For the Global North this is changing the way we change—not through force, or through competitive necessity, but by embracing relationality, by diversifying actions and by creating alternatives to neo-liberalism that provide a compelling narrative for change.

## 6.4 Closing remarks

This chapter focused on how design might confront ‘defuturing’ activities firstly by discussing the importance of collaboration, and secondly through a discussion of transition design and autonomous design. These emergent areas of design research and practice could be pursued by designers wanting to engage more critically with sustainability in their practice. As Fry argues, designers have the agency to prevent ‘defuturing’ through alternative modes of practice and he calls for a ‘redirection’ of project briefs towards more sustainable outcomes. Design that stands in opposition to ‘defuturing’ requires different approaches to the commercial norm. The community-based approach outlined in autonomous design and the multi-level multi-stage approach such as that adopted in transition design are both real yet challenging alternatives to this norm. Both are temporal in nature but whilst urgent action is required, the outcomes of these slower design processes cannot (and should not) be rushed. Both these approaches whether used independently or combined challenge the typical business structure of a commercial design practice, they demand greater agility in order to build multidisciplinary collaborative teams and to partner appropriately with communities and movements. Responding to each requires a different mindset and skillset in order for both the practitioner and their design practice to flourish. While conflicts arising from the management of power dynamics in collaborative groups were somewhat resolved by merging the approach of transition design with the approach of autonomous design, a financial tension in the practice of both remains.

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820 Ibid. p 183

821 Ibid. p 173

The core principles of ‘redirective practice’ are evident in both transition design and autonomous design, both of which present alternatives for the direction of designers’ daily labour. Autonomous design was presented as an approach that might assist in the broader transition of design practice by decoupling a practice from the status quo. This collaborative community-based approach could reduce tensions arising from the designer’s double bind through the pursuit of projects that foster social change. The dimensions of both these approaches continue to be unpacked throughout this thesis, and I am hopeful that my integration of their principles might resonate with other designers looking to take affirmative action within their practices.

Whilst these design methods actively build sustainable futures they also require greater restraint and resilience from designers, as well as an understanding of theories of power and change, and an awareness of social structures and constructs of the self. Their success also appears to rely on relational thinking, altruistic values, creativity, business acumen, and on a practitioner’s persuasive ability to enact cultural shifts within ‘defuturing’ organisations. But prior to changing an organisation, a practitioner must first turn their gaze inwards and acknowledge the ways in which they might also need to change, as a human and as a designer.

Crucial to all the activity discussed in this chapter is its social connections—collaborative approaches bring people together through shared experiences that foster co-motion. As processes of involvement they are natively participatory and are always inclusive. Both approaches call for a different ‘mindset and posture’ from the designer compared to commercial projects. The role of expert is substituted for the role of collaborative facilitator, the designer ego is cast aside, control is relinquished and working in multi-disciplinary teams is embraced. The different ways in which collaboration, transition design and autonomous design have contributed to this research are explored over the next three chapters. These chapters discuss in more detail the explorations of research through design performed throughout this research, the insights gained from it and the resulting transformation taking place in my practice.

## Chapter 7

### Research through design: The Rethink Rubbish Project

Aspects of this project were presented at the 2018 *Unmaking Waste* conference, and a paper summarising the first 12 months of activity in the project will be published in a book of essays. The discussion that follows draws on and expands upon this earlier documentation of the project. First it situates the relevant theory informing this project, then outlines the practical dimensions spanning the activity and the outcomes, which is followed by a discussion of the project's insights and findings.

Throughout the duration of this research, several projects were undertaken to explore how theoretical knowledge could be integrated into practice. In order to discuss this process in more depth, this section will focus on one particular project, *Rethink Rubbish*, which best encapsulates the aims of this research. The *Rethink Rubbish* project began in late 2017 and the discussion that follows is a reflection on the first 18 months of this project. This section summarises the project's aims and outcomes to date, draws some conclusions and discusses some findings from the processes undertaken so far, while recognising that work on this project is continuing beyond the duration of this research.

The central focus of this project has been an exploration of the connected problems of consumption and waste which has been performed in a school community. Throughout the project a number of design interventions were co-created with staff and students. The community's experience of both the problem and the design interventions that approach it were documented through this research. Data was collected through a number of experiential workshops run with both students and teachers, through co-creation activities and through the process of documenting design interventions. These included a zero waste jar provocation, which challenged the school community to rethink rubbish, to become more actively engaged with their consumption and waste and to relinquish their bins in the process.

This project explores a more autonomous approach to design, and in doing so investigates the power dynamics encountered as part of activating a transition in a school environment. It used theories such as the MLP and SPT to articulate the consumption and waste problem, and through mapping this problem identified the cultural aspects of disposability and convenience as points for intervention. The project is a niche experiment in scaling up a zero waste transition that is being performed in an institution in the regime (a primary school) that is governed by pedagogical requirements that are locked in at a landscape level. Whilst an analysis of this project using the MLP is possible, this was not the primary goal of this project. As such the project is presented as a demonstration of an alternative approach to design that is ontological, underpinned by theoretical knowledge, and builds capacity in a community by encouraging altruistic values that foster a culture of care and respect.

## 7.1 Using design to approach the consumption and waste problem

In order to approach the problem of mounting waste in landfill and recycling centres around Australia, it is pertinent to first acknowledge that waste is not the primary problem, but rather a symptom of another more deeply social problem: consumption<sup>822</sup>. To approach the waste problem without addressing consumption could be likened to placing a mattress at the base of a cliff instead a fence at the top of it. Where the focus of designers' attention lies has a significant impact on the types of solutions that are created, and a continued focus on the highly visible waste issue has resulted in the pursuit of technical approaches such as material changes. Designers are facing a metaphorical cliff and seem to be caught in a loop, creating bigger and better mattresses to soften the impact of waste at the cliff's base, instead of thinking about how to intervene at the top with fences that might change and control how we consume. This project aims to build a metaphorical fence, by collaborating with a community to explore the problem of consumption and waste using autonomous design and transition design in the approach.

### 7.1.1 Articulating the design problem

The ABC's *War on Waste* docu-series has drawn significant public attention to the waste issue bringing it into a spotlight for everyday Australians. In doing so, waste continues to garner attention while the interconnected problem of consumption remains largely under-addressed. Some authors point to the economic status quo as the primary barrier to addressing consumption<sup>823</sup>. As this research has argued, design's focus on reducing waste through material interventions while continuing to manufacture desire and cultivate a culture of disposability exacerbates both problems. If design can exacerbate the problem then how could the goals of design be redirected in order to mitigate the problem instead? First the problem must be acknowledged and investigated with momentous urgency.

The consumption problem has not always been treated with the same gravitas as the waste problem, and considering the potential economic implications of doing so, the reasons why are quite apparent. In the Global North consumption is used as an economic tool, an approach that first emerged post-WW2 as a means of kickstarting the economy<sup>824</sup>. As a booster-strategy, consumption does little to address the fundamental problems with the economy. Rather, it serves as an excellent way of masking them, and in doing so, shifts nations' fiscal responsibilities onto citizens to finish with the illusion of success<sup>825</sup>. This seemingly functional model for economic reform has been

822 Jackson, "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption."

823 Fry, *Design Futuring*; Dauvergne, "The Problem of Consumption."

824 Dickinson, "Selling Democracy: Consumer Culture and Citizenship in the Wake of September 11.;" Jackson, "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.;" Packard and McKibben, *The Waste Makers*.

825 Dickinson, "Selling Democracy: Consumer Culture and Citizenship in the Wake of September 11."



repeated during and after subsequent economic recessions, thereby embedding unsustainability into the social practices that contribute to the norms of consumption in the Global North<sup>826</sup>.

It is no surprise that economics remains one third of the typical sustainability ‘triad’ model (the intersection of economy, ecology, society) as economics has underpinned decision-making for almost a century. What remains under-acknowledged is how the rhetorical use of this ‘triple bottom line’ relinquishes environmental and social well-being for the sake of economic growth<sup>827</sup>. Approaches that pose any disadvantage economically-speaking, or that ‘ignore’ economics by prioritising earth and those creatures living in it (human and other) tend to be situated in niches of society as micro-level activity. They are not the norm and are particularly rare for designers<sup>828</sup>. Acknowledging excess consumption as a design problem that accelerates the waste problem would also highlight cracks in the neo-liberal economic veneer. It would seem that this is a highly unpopular viewpoint, however those who hold it speak about it unashamedly<sup>829</sup>.

Addressing such complex problems through design is a challenge. In part due to the fact that designers are trained to implement a solution (singular) that solves a problem (again, singular). The consumption and waste problems are too complex (and plural) to be ‘solved’ in this way. Adding to this complexity is a blindness that many designers have to consumption as a design problem, which can lead to a perpetuation of the problem through their work. As previously proposed, it is the designer-consumer who suffers most from this blindness. Tertiary design education coupled with labour in the design industry focuses on the aforementioned goal of problem solving, and as part of this endeavour is the ultimate goal: to sell a product or service, build a brand or increase profits or market share for a client. Typically, design approaches that explore sustainability on behalf of clients lean towards the technical (such as material changes) and the superficial (such as awareness campaigns, or worse, greenwashing), and commercial clients who are willing to explore sustainability with depth and a true desire to create significant change are rare.

### 7.1.2 Redirecting the goals of design

Understanding the futility of the technical and superficial approaches so common in design initially filled me with a sense of dread—if the approaches I had been trained to pursue were useless, what should I be designing?

Understanding the rarity of clients who might provide alternative projects led me to ask: What could I do that might make a difference, in my design practice and in the world?

826 Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”; Shove, “Putting Practice into Policy: Reconfiguring Questions of Consumption and Climate Change.”; Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*.

827 Boehmert, *Design, Ecology, Politics: Towards the Ecocene*; Fry, *Design Futuring*.

828 Thorpe, “Design’s Role in Sustainable Consumption.”

829 See for example: Fry, *Design as Politics*; *Design Futuring*; Plumwood, *Environmental Culture*; Thorpe, *Architecture and Design Versus Consumerism*.

Many have argued for altered thinking in approaching the sustainability problem<sup>830</sup> and this is evident in methods emerging in new niches of design practice. Emergent approaches including transition design, autonomous design and radical design thinking have shaped this project, positioning it outside of the norms of traditional design practice, and in some respects outside of the status quo<sup>831</sup>. Before approaching design using different methods, first the underlying goal of design must change, from one that fabricates desire in order to solve business problems, to one that thinks more critically about the kinds of problems to be solved. By redirecting these goals, design could make a just and sustainable future more desirable, but first designers must understand more about the kinds of problems design could engage with if it was redirected.

In his March 2018 workshop, *Design After Design*, Fry presented a Global North interpretation of Escobar's concept of autonomous design<sup>832</sup>. He proposed it as an important alternative design method; one where designers seek problems and build projects around them, and in doing so operate (to a large extent) outside of the status quo. This description had resonance; it felt appropriate for this project and was helpful in situating its aims and objectives. Autonomous design in the Global North might be best understood as design for communities rather than business, as autonomous designers are not led by clients and their associated economic concerns; rather autonomous designers lead their own projects, seek independent funding and then approach problems incrementally, through a process of perpetual versioning. This more gradual approach is grounded in a community-based context—for this project, a school community—and is less solutions-focused than traditional design methods, instead focusing more on the problem. It sequesters design tools such as visual and verbal rhetoric and creative thinking and making and reapplies them in projects that foster deeper sustainability goals.

This method of designing shares similarities with transition design, and both could be described as temporal, or working in the medium of time<sup>833</sup>, a concept that is discussed in more detail in the next chapter. This temporality is evident in this 18-month documentation of the project—it captures the beginning of what will be a much longer process of transition. Temporality is an important consideration in light of the complexity of the problems being addressed through methods such as autonomous and transition design, most particularly those related to environmental and social sustainability. The set-and-forget solutions that are typically found in design practice do not apply here. Rather, continued engagement is a key aspect of the temporal nature of designing in this way. It is also a factor in any project that aims to change behaviours, as it takes time for new behaviours to supersede the old. Problems

830 Acaroglu, *Disruptive Design Method Handbook*; Fry, *Design Futuring*; Tonkinwise, "Design Away."; Irwin, Kossoff, and Tonkinwise, "Transition Design Provocation."; Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."

831 "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."

832 As previously discussed, Autonomous Design's roots are in the Autonomía movement from the Global South. For more, see: Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

833 Fry, "Design after Design."; Cameron Tonkinwise, "Is Design Finished? Dematerialisation & Changing Things," *ibid.* 2, no. 3 (2004). This is discussed in more detail in Chapter 7.

contributing to structural unsustainability are not typically approached by communication or interaction designers, and as the literature suggests, this kind of higher order design requires critical and more relational thinking and a theoretical underpinning that includes theories of change, social practices and complexity<sup>834</sup>. Others acknowledge the need for an understanding of theories of power and social structure<sup>835</sup>; these theoretical underpinnings are currently lacking in design education and are typically absent in practice too<sup>836</sup>, obscuring them from designers' immediate vision. Sustainability problems such as those related to consumption and waste are complex and fraught with power dynamics; they lack a perceptible end point and require continual efforts from multiple disciplines, leading to projects that are collaborative and iterative by default.

It would appear that a designer's ability to utilise the skills of practice without feeling limited to playing a particular role is important when designing for transitions. As is having the resilience required to work iteratively in collaborative teams that are independently funded. Understanding how this approach differs from commercially focussed design is a necessary aspect of redirecting design, as is the ability to question the goals and the outcomes of design more critically—less 'how' and more 'why'. Asking 'how..?' begins to roadmap a solution, but asking 'why..?' leads to a deeper investigation of the problem. From Fry's *Design After Design* workshop, it was clear that practitioners must navigate this reflective space like an inquisitive child, with the constant question of 'why' in order to remain focussed on the problem and to suspend the desire to leap to a solution.

Cross's 'designerly ways of working'<sup>837</sup> are evident in this process of thinking through design, which throughout this project was often performed through a process of 'reflective doodling'<sup>838</sup>. This thinking and reflecting process is performed actively with pen and paper (or their digital equivalents). The deeper theoretical thinking underpinning the project also redirected the nature of reflection, from the typical focus on form and function, to the redirected goal of sustainability that considered the possible future impact of an outcome. This created opportunities to draw more explicitly on theory and to design outcomes with this knowledge front of mind. Throughout this project, Schön's 'reflection in-action' and 'reflection on-action'<sup>839</sup> were complemented by

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834 Buchanan, "Design Research and the New Learning.;" Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.;" Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*; Plumwood, *Environmental Culture*; Tonkinwise, "Design's (Dis)Orders & Transition Design.;" Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."

835 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Cheryl L. Dahle, "Designing for Transitions: Addressing the Problem of Global Overfishing," *Design in Perspective: Transition Design Monograph 73* (2018); Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."

836 Fry, "Design after Design.;" Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."

837 Cross, *Designerly Ways of Knowing*.

838 Reflective doodling is also discussed in *Part 1: Situating (Research Design)* and in *Part 3: Doing (New ways of designing)*.

839 Schön, *Reflective Practitioner: How Professionals Think in Action*; Yanow, "Ways of Knowing.;" Yanow and Tsoukas, "What Is Reflection-in-Action? A Phenomenological Account."

reflection in-time and reflection on-time. A continual return to reflect upon and assess design outcomes and approaches, and monitor the community members' experiences with them over time, provided deeper insights into the project. As part of this, reflection was also conducted on the self as a subject, focussing on my transitioning design process and on my approach to design as facilitation. Reflection has played a crucial role in the project's ongoing development. Methods of design that hold greater potential to address structural problems also call for deeper reflection on what might come as a result of the designed approach coming into being. They consider future impact and ask, 'is it worth it?'<sup>840</sup>.

Redirecting the goals of design in this project to focus on the problems of consumption and waste demanded significant reflection to consider potential environmental and social impacts. Returning to the 'why' kept the goal focussed and avoided repeating design's historic connections to triggers such as post war economic boosters, narcissistic success signalling and false desires. The 'why?' served as a continual reminder of how rapid-cycling technology and disposable conveniences combine with these triggers to drive modern consumption, thus reinforcing the reasons for setting this new goal. The rhetoric currently used to accelerate consumption could be redirected by designers; reflection revealed that to a certain extent this endeavour must be coupled with a willing detachment from the status quo. It should be acknowledged—at least for designers from the Global North—that stepping away from the status quo is also an exercise of privilege. But in this position of privilege, sequestering the designer's toolbox can also become a form of activism, taking arms against business-as-usual and using privilege for a benevolent good. The approaches taken in the *Rethink Rubbish* project aimed to redirect the goals of design towards sustainable futures with the objective of making transformations to sustainable consumption more desirable. The attempts to redirect design in this way embraced the complexity of the problem with the understanding that it would not be solved by any one approach. Rather, the endeavours were reconciled as a contribution to the gradual process of chipping away at the problem, slowly over time. 'Approaches to' rather than 'solutions' becomes an important language shift for designers.

### 7.1.3 Mapping the problems of consumption and waste

To gain deeper insights into the problems of consumption and waste literature from design, sociology, economics and anthropology was synthesised with theoretical knowledge through a process of visual mapping. This began with a mind map (see Figure 7.1) that investigated different aspects of the consumption and waste problems contextualised in everyday life. The mind map highlighted social practices and behaviours such as shopping as a form of retail therapy and success signalling, a decreased attention to life skills and intrinsic values and an increased reliance on technical fixes to overcome problems. It also explored convenience and disposability, the emergence of increased apathy

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840 Fry, "Elimination by Design."; Tonkinwise, "Design Away."

and the experience of time constraints. Analysis of this map revealed the multi-dimensional nature of the consumption problem at a personal level and showed how even at a personal level there are often conflicting behaviours. It also highlighted how the systemic nature of the problem frequently intertwines with its more personal dimensions. For example, the experience of apathy as a form of disconnection can stem from feeling that a problem is impossible to solve, this can lead to a deeper disconnection from the problem and ultimately, a justification of inaction. This experience of personal apathy could be likened to the designer's experience of the double bind. Influences on behaviour became evident during observations of the overlap of designed obsolescence, persuasive advertising and success signalling, all of which can lead to the treatment of durable objects such as mobile phones with a sense of disposability, actioned through the normalisation of early upgrades<sup>841</sup>.

Historically a sense of citizenship has been used to accelerate consumption and lift the economy out of recession, and this was also noted as a potential point of intervention where model-citizen-behaviour could instead be triggered to decelerate consumption or to reduce the use of single-use items. Mapping the problem in this way and coming back to this map at different points in time allowed new connections to be made, and permitted the space to consider how different interventions worked and what needed to change for future iterations. For example, a 'shock therapy' approach might have an initial impact spurring concern and even action at an individual level, for example being affected by watching a video of a straw being removed from a turtle's nose. But this approach could also lead to apathy over time, as distance from the initial shock increases, the content that was once shocking becomes normalised, thereby creating a pathway to disconnection. From here attitudes such as 'I know it's bad but I'm powerless to change it' begin to emerge. This kind of lapse into an apathetic state could be likened to the desensitisation seen with acts of violence in the media that become less shocking with increased exposure<sup>842</sup>. Whilst the realities of the consumption and waste problem are initially shocking, a continued presentation of shock-content may fail to have the desired effect, instead leading to a desensitisation and ultimate acceptance of the problem as too big to approach.

Using the mind map to understand how individual behaviours could be impacted by systemic problems laid an important foundation for investigations of the structural nature of the problems of consumption and waste. The system is not some mystical untouchable thing that appears out of nowhere.

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841 Crocker, "Getting Closer to Zero Waste in the New Mobile Communications Paradigm: A Social and Cultural Perspective."

842 L Rowell Huesmann, "The Impact of Electronic Media Violence: Scientific Theory and Research," *Journal of Adolescent Health* 41, no. 6 (2007).

# wasteful LIVING



**STATUS QUO**  
NORMS REMAIN UNQUESTIONED AS EVERYTHING IS UNDERPINNED BY ECONOMICS



**DISPOSABLE SOCIETY**  
CONVENIENCE NOW, PAY LATER

**DESIGNED OBSOLESCENCE**  
CHEAPER TO UPGRADE THAN REPAIR  
"THEY DON'T MAKE 'EM LIKE THEY USED TO."



**PERSUASIVE ADS**  
WE THINK WE NEED SOMETHING BECAUSE ADVERTISING IS PERSUASIVE AND WE ARE SUCKERS!



**RETAIL THERAPY**  
WE THINK STUFF MAKES US HAPPY, DESPITE OVERWHELMING RESEARCH SHOWING THE OPPOSITE



**SIGNALLING SUCCESS**  
WE THINK FANCY STUFF MAKES US LOOK MORE SUCCESSFUL TO OTHERS

**KEEPING UP WITH THE JONESES**  
WE THINK THAT SOCIAL ACCEPTANCE HANGS OFF HAVING THE SAME STUFF AS THOSE AROUND US

**DOING OUR PART**  
CITIZENSHIP IS OFTEN CONNECTED TO CONSUMPTION (EG POST WW2, 911) IS DONE BY CITIZENS' SHOPPING - BUT THIS PUTS CITIZENS IN DEBT AND WE HAVE TO WORK HARDER TO RECOVER. WORK MAKES US SAD SO WE SHOP AS RETAIL THERAPY, PERPETUATING A SHOP-WORK-SHOP CYCLE.

## APATHY

A DISCONNECTION FROM THE PROBLEM MAKES IT EASY TO DISMISS IT, THE DISCONNECT ALSO ACTS AS A BARRIER TO CARING, THE SYSTEMIC PROBLEMS FEEL IMPOSSIBLE TO SOLVE SO WE SWITCH OFF



## LAZY VS TIMEPOOR

PEOPLE HAVE BECOME TOO COMPLACENT AND AN OVER ABUNDANCE OF CONVENIENCE ITEMS TO SAVE US ALL PRECIOUS TIME HAS INCREASED LAZINESS



## SHOCK THERAPY

CREATE CONTENT THAT AWAKENS PEOPLE #WARONWASTE

## CHALLENGE ABILITIES

FORCED REALITY CHECK - 30 DAYS  
EG NO SPEND NOVEMBER  
FRUGAL FEBRUARY ETC

## ACTION OPPORTUNITIES

AWARENESS OF HOW EASY ACTION CAN BE - AS EASY AS PICKING UP LITTER OR SAYING NO TO A STRAW.



**Ad**  
**EDUCATION**  
LIFE SKILLS AND VALUES EDUCATION LACK FOCUS



**MEDIA**  
CONSUMPTION OF MEDIA IS ALSO PART OF THE FUEL - TOLD WE LACK TIME, SHOULD BE SCARED, NEED STUFF TO HELP US ETC - IT'S A NUMBING & DUMBING PROCESS.

## TECHNOLOGY

NEW DEPENDENCE ON TECH FIXES PROMOTES AI TO THINK FOR US - DISABLING US.  
- HOW CAN WE CHANGE THIS RELATIONSHIP?



## KNOW THE PSYCHOLOGY

WHY WE BEHAVE WASTEFULLY  
HOW TO ENCOURAGE FRUGALITY  
HOW TO STOP BEING A SUCKER

## CHANGE THE THINKING

AWAKEN THE AGENCY IN CITIZENS, REMIND THEM TO THINK INSTEAD OF CONSUME



Figure 7.1: Mind Map of Wasteful Living

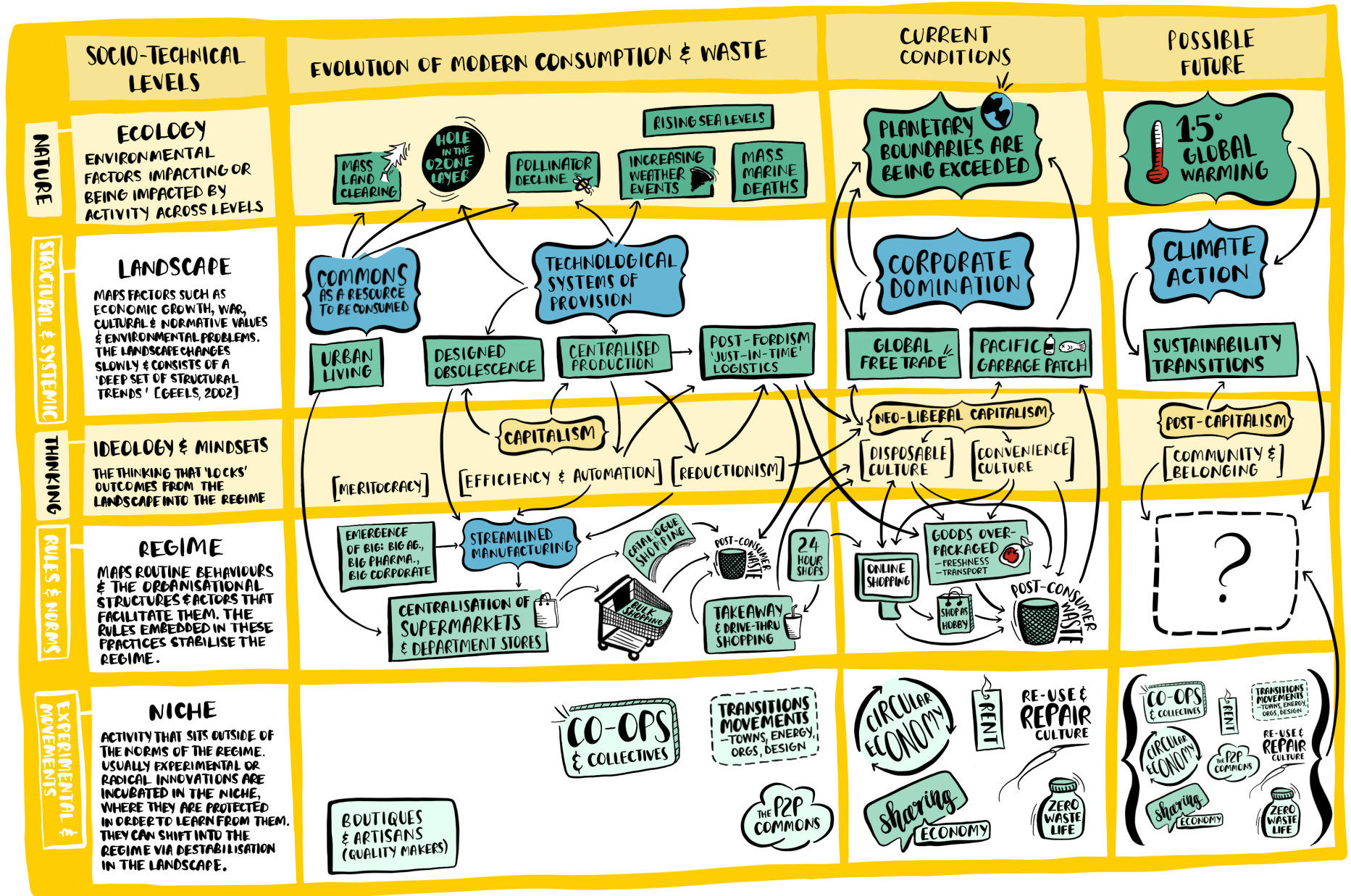
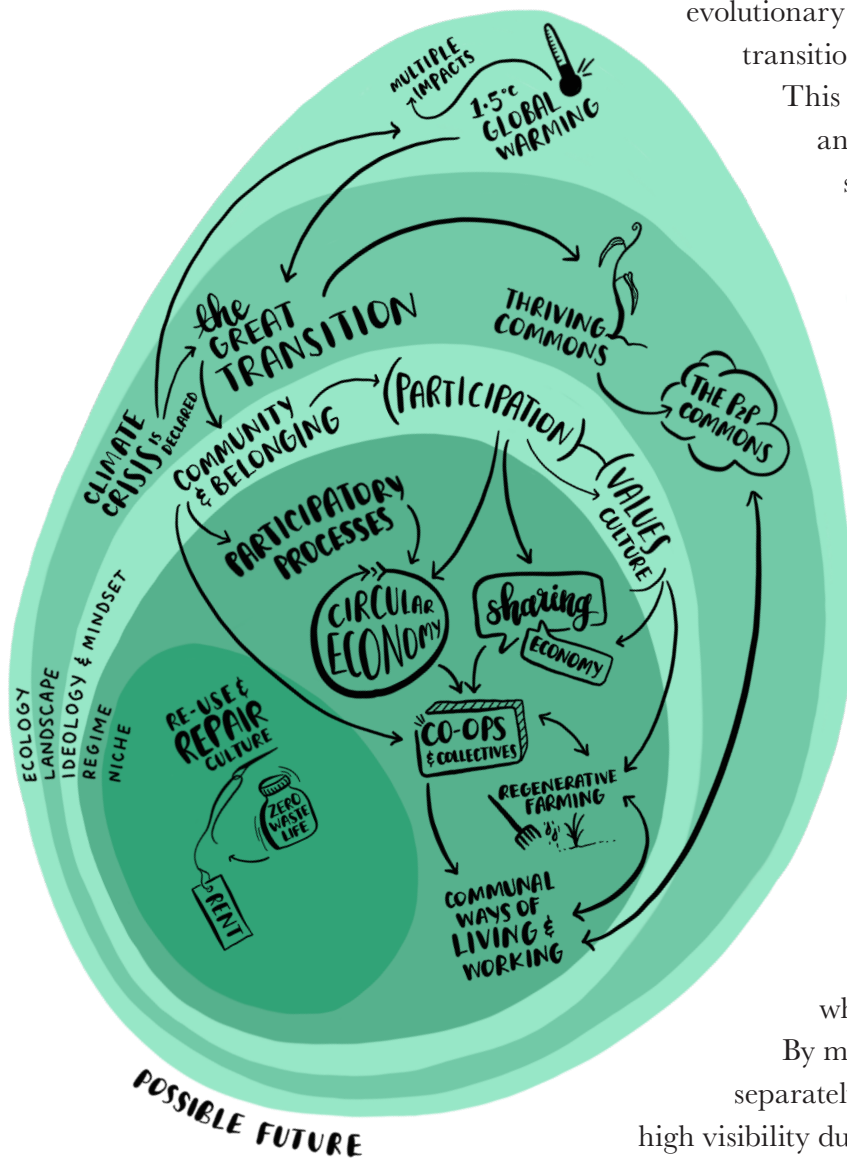


Figure 7.2: Sketch of MLP (repeated from Figure 5.3)

Figure 7.3:  
Possible  
Future



It is constructed over time as a result of specific events and contexts, and the common rules and norms in a consumer society emerge as a result of concentrated individual behaviours and long-term landscape trends. Geels<sup>843</sup> multi-level perspective (MLP) was used to map this

evolutionary process on a modified version of the transition design MLP canvas (refer Figure 7.2).

This permitted exploration of the ideologies and mindsets, major systemic shifts, and social norms that have contributed to the consumption and waste problem as it is experienced today. The MLP was also used to reflect on current and historical niche activity that might have potential to penetrate the regime as a result of the threat of climate change. Sensemaking through mapping permitted a conscious reflective process on the historical emergence of consumption as part of a dominant consumer culture in the Global North, and on the social practices and norms that continue to hold it in place.

Drawing insights from the MLP also facilitated a deeper engagement with the systems at play to better understand where intervention points might exist<sup>844</sup>.

By mapping the ideology and mindsets separately on the canvas they maintained high visibility during analysis.

In Meadows' proposal, changing the paradigm of a system and having the power to transcend paradigms are the two most effective ways to change a system. However she goes on to acknowledge that whilst an individual can change their paradigm in a millisecond, at a societal scale, the paradigm is the hardest point to intervene<sup>845</sup>. Noted from this was the value of the individual—their mindset and their actions—for it is the actions (practices) of many individuals that make up the norms in any society. Whilst individual action cannot change systemic aspects of a problem, collective affirmative action from individuals can create a ripple effect that makes sustainable ways of being in the world more visible and therefore more normal. Furthermore, dedicated

843 Geels, "The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.," "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study."

844 Meadows, "Leverage Points."

845 Ibid. p 18



collective action can influence policy changes that impact the rules and norms in the regime. As previously discussed, this has been evidenced recently in Australia with the implementation of policy changes made to single-use plastics, a process that faced challenges in its early implementation but is slowly changing the norms around disposable plastics such as straws and plastic bags.

Mapping the problem of consumption and waste on the modified canvas using the MLP highlighted the futility of individual

change without systemic change, and vice versa.

Both are needed if the possible future that has also been mapped is to have any potential for existence (see Figure 7.3).

The possibility of this future comes from relations across the levels.

Interactions spanning ecological disruption at the landscape level, sustainability transitions influencing rules at the regime level, a different (post-capitalist) ideology changing the dominant paradigm, and niche activity penetrating the regime could be coordinated with the long-term goal of creating a new set of social norms. This should not imply any ‘formula’ for enacting change and it should be noted that shifting activity at the regime level is highly reliant on successfully coordinating multiple changes across multiple systems. Sustainability transitions

aim to coordinate this effort by encompassing changes at

policy level that span these systems to enact change en masse, as an organised effort. Relational considerations of this problem reveal the intrinsic roles that organisations and individuals play, as systemic changes become integrated into everyday life and form new social practices (and new norms) that span how we live and work. As Fry has argued ‘comfort is the antithesis of change’, and the individual lives we currently lead are (for the most part) comfortable, so encouraging a shift away from comfort towards what might be perceived as disarray could be one of the most significant challenges for transition designers to face. Designers’ ability to adequately define these problems in order to approach them will be a necessary first step away from the typical desire to step in and solve them. Problem mapping has a role to play in this process.

The relations between systems and levels in the MLP appear to be complemented by a recognition of the relations between people who are stakeholders in a project. Understanding how these relations can influence project activity informs the approaches to interventions. In the *Rethink Rubbish*

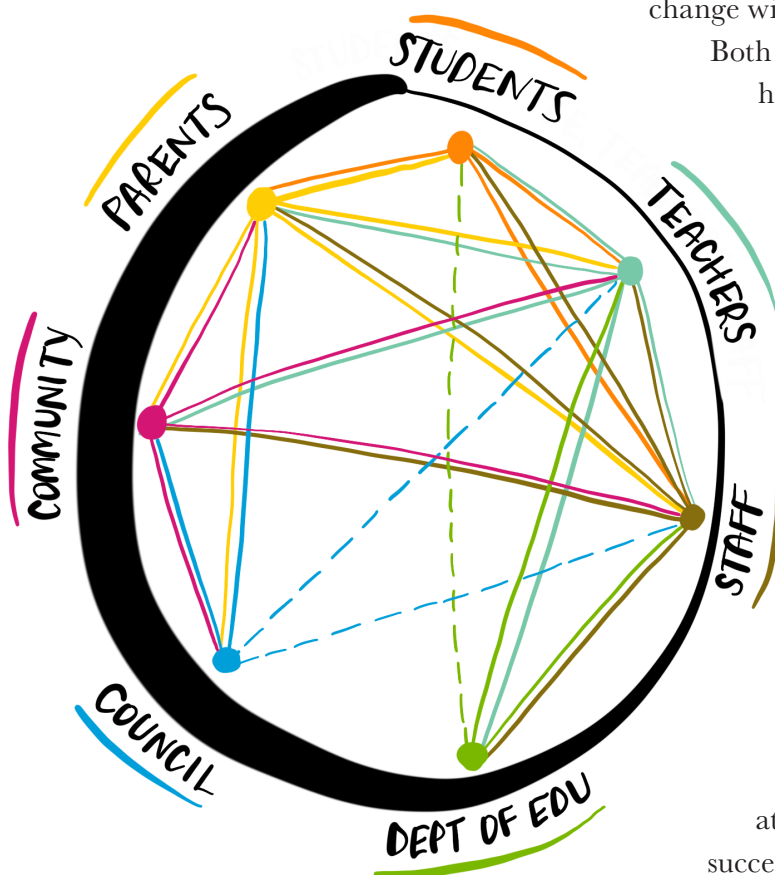
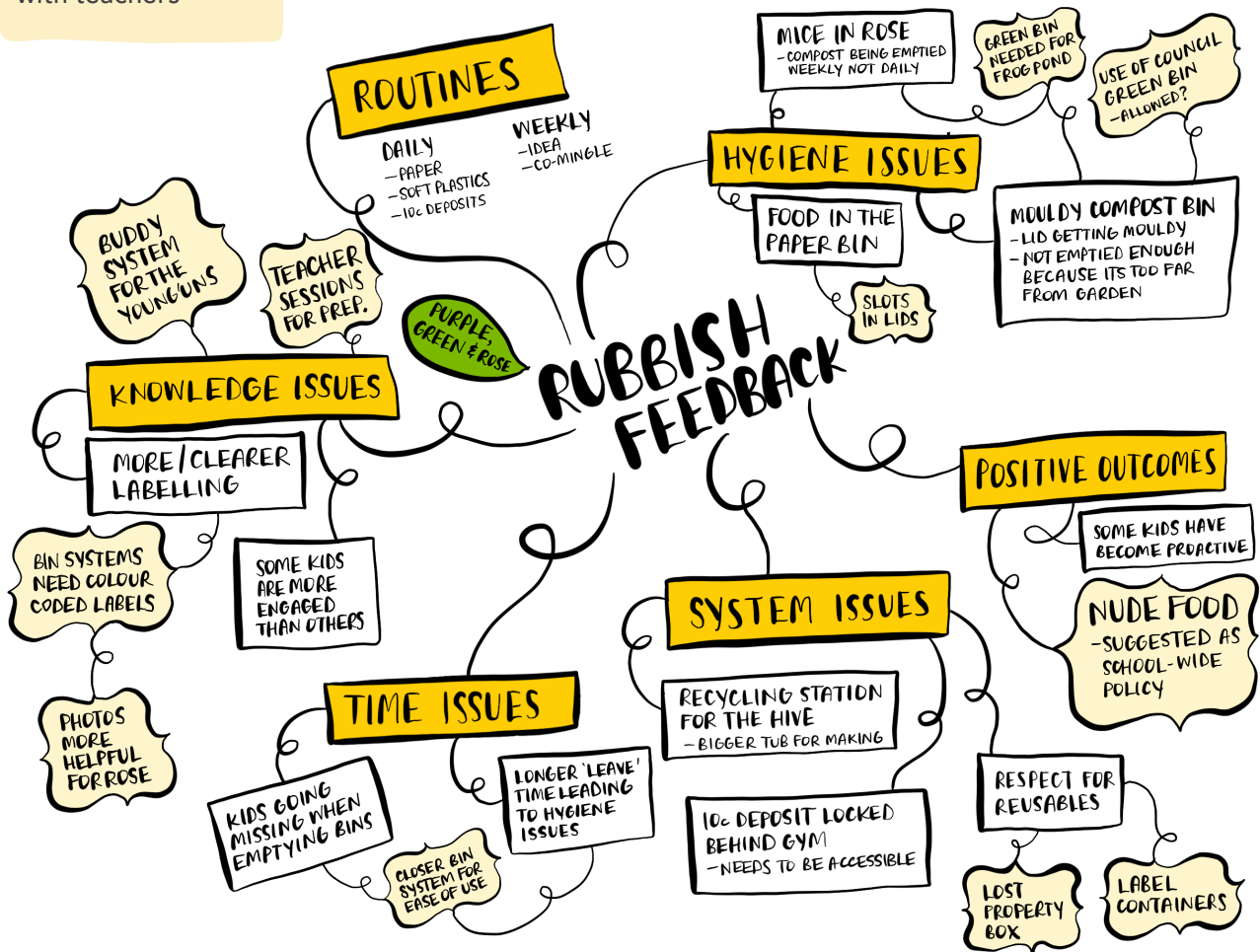


Figure 7.4:  
Stakeholder  
connections

Figure 7.5: Field notes from rubbish feedback session with teachers



project, a number of stakeholders exist, but their relations are varied. Mapping their direct and indirect connections makes these relations more visible. For example, the Department of Education is a default stakeholder in any project involving a school. The Department sets and maintains the curriculum and influences pedagogical outcomes, however their connection to students and teachers varies. An indirect connection with students reflects the Department's power over a student's educational experience whilst also recognising they may never have any real human interactions with students. Conversely, teachers and staff have a direct connection with the Department through their employment contracts which are governed by and dependent upon the strength of this relationship.

Analysis of how the relations interconnect revealed insights into the different ways that stakeholders might experience problems in the school community. The strongest connections existed between students, parents and teachers however these relations were influenced by indirect connections with the local council and the Department of Education. Students' actions could be inhibited by stakeholders they did not have a direct connection with, for example their local council inhibited their ability to recycle by limiting school waste collection services. Considering this in line with the recent global student activism against climate change reveals the importance of empowerment and counterpower

for students and teachers attempting to change the system they are embedded in. An empowered student is less likely to perceive these limitations as barriers to action, rather they might see limitations as hurdles to be jumped or navigated instead.

Mapping has contributed significantly to the way this project has been approached, and provided insights to the interconnectedness of the problem at an individual level, a stakeholder group level, and a systems level. Visual mapping processes documented workshops to visualise participants' experiences with interventions, and as a form of documenting and analysing these interventions in classrooms spanning the whole school.

As a sensemaking process, mapping can take many forms, and mapping through 'reflective doodling' provided a different way of thinking through the problems being faced. These designerly processes helped build a clearer understanding of the full scope of a problem, and also informed the process of problem articulation.

#### 7.1.4 Defining consumption as a design problem

Most interrogations of consumption adopt an economic paradigm, where consumer theory prompts a focus on the act of buying and consuming goods and services<sup>846</sup>. However sociologically speaking, acts of consumption provide much more to engage with, and interrogations of social practices connect the consumption of goods and services with the daily lives of people<sup>847</sup>. Engaging with this more human narrative also permits insights into socially unsustainable aspects of consumption; it expands the circle of concern beyond the environmental impacts of post-consumer waste, to include the negative effect that consumerism has on people. On face value consumption may be an economic concern, on a deeper level it may be a sociological concern, but it must be acknowledged that design plays a bridging role between economics and sociology. Designers typically work for clients who are driven by an economic imperative; the designer's aim is to use design to increase the desirability of their client's brand/product/service and help market it to a target demographic. I would argue that design's bridging role as a cultural mediator has evolved into a kind of glue that binds the economics and sociology of consumption together. This interconnected triad strengthens as more time passes, and as consumption continues to accelerate so too does the waste it creates.

This research approaches excess consumption and waste as a design problem and argues that designers continue to perpetuate it through their work as 'designer-consumers'. To overcome this dynamic, the *Rethink Rubbish* project aimed to redirect the approach of the designer-consumer to instead see what could be done by approaching design with greater autonomy as a 'designer-transformer'.

846 Conca, "Consumption and Environment in a Global Economy."; Dauvergne, "The Problem of Consumption."; Jackson, "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption."

847 "Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption."; Kossoff, "Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society."; Shove and Walker, "Governing Transitions in the Sustainability of Everyday Life."

In typical design projects a symmetrical relationship exists between the client and the designer; business relies on design to help increase profits and design relies on business to provide creative projects for financial rewards. This symmetry is usually coupled with a power dynamic that results in a client-led approach that subjugates designers to a weak positioning, often classing them as a resource. This has further implications for designers, stripping them of adequate time to perform creatively<sup>848</sup>, and according to Glaser's interview with Soar, firmly situating them at the end of a long line of processes<sup>849</sup>. This weakened position can limit designers' capacity to contribute more substantially to a project, and also reduces their capacity to address sustainability through their work.

To overcome this, the *Rethink Rubbish* project was crafted as an autonomous design project using the principles of transition design in the approach. The project began with an articulation of the consumption and waste problem and the contextualisation of this as a design problem. Project activity was constructed around this problem, and different people collaborated on different aspects of the project at different times. No search for a single solution to the problem was attempted. Rather a continued effort was undertaken through 'design as facilitation', which explored the problem from multiple perspectives using mapping exercises, stakeholder engagement and through a continued engagement with theoretical knowledge, academic literature and the media. Collaborative design interventions aimed at these complex interconnected problems were approached incrementally, and attempts to create change occurred at different scales, at an individual level, in classrooms of up to 45 students, at an institutional level through engagement with the school's teachers and Principal, and more broadly through interactions with members of the school community. Perhaps one of the distinctive outcomes of this project was the realisation that *Rethink Rubbish* is more than a one-off design project; recognising its existential nature has led to descriptions of it as part of my 'life's work'. This in itself has been a significant shift in how I think about my design practice.

As part of the endeavour of shifting my practice beyond greener things I have acknowledged how technical approaches in design can reinforce structural unsustainability. I have recognised that much of the activity emerging from designers' determination to do 'good' remains unsustainable, and that efforts to make the 'bad' 'better' often accelerate the connected problems of consumption and waste<sup>850</sup>. Reflecting on my own relationship with greener things (as a maker and as a consumer), combined with my relationship with consumption and waste, revealed how challenging it was to think differently while so much of my thinking was being shaped by a world driven by consumption. Self-transformation through a shift to conscious consumption and a zero waste

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848 Dorland, "Routinized Labour in the Graphic Design Studio."

849 Soar, "The First Things First Manifesto and the Politics of Culture Jamming: Towards a Cultural Economy of Graphic Design and Advertising."

850 Boetzkes, "Resource Systems, the Paradigm of Zero-Waste, and the Desire for Sustenance."; Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

lifestyle provided the cognitive space to reconsider the influence consumer culture had on my life. I had to face its influence on me, as a consumer with a penchant for buying clothes and gadgets, and as a designer, whose creation of greener things was embedded within and contributing to a consumer society. In my experience, this transformation away from consumption has facilitated a much deeper disconnection from it, reflected in both my actions and my thinking. This disconnection resulted in the redirection of the goals of my design practice and has facilitated my definition of consumption as a design problem.

### 7.1.5 A deliberate and designerly approach

The *Rethink Rubbish* project is a continuing investigation of consumption and waste using facets of design that operate outside of the norms of practice, including design as facilitation and ontological design (that is focused on behaviours and designing new ways of being in the world). Action research cycles and reflective practice have permitted assessment and iteration of the approaches and outcomes, and reflection has contributed to sensemaking and considerations of the contributions that collected data makes to the findings<sup>851</sup>. This has included reflection on my actions and contributions as a designer and researcher and considers how I have approached the role of designer-facilitator. This reflective process has also positioned me as an additional subject of reflection in this project<sup>852</sup>. The thinking underpinning this project used the MLP and social practice theory to inform the ongoing collaboration between the researcher, students, and teachers. It also considered data collected organically as insights, through conversations with students during collaborative processes and through conversations with teachers, some of whose children are students at the school. This provided an added perspective about knowledge transfer and the relations between learning at school and doing at home. The informality of these conversations provided unique insights into people's experiences as often what is said 'off the cuff' typically comes from a very genuine place. Reflection on these insights often happened 'in-action', which was supported by a notation process that permitted further reflection 'on-action'.

The concept for this project emerged from the intersection of my research, my personal transition to a zero waste lifestyle and the changes taking place in my professional practice. As my design practice became increasingly tied to theoretical knowledge, it evolved into a praxis; where theory and action were intertwined in ways that now feel inseparable. This approach connects with ideas from Sartre and d'Anjou of an 'existential project'<sup>853</sup>; a deliberately chosen project that stimulates a career-long focus rather than the typical

851 Rosanna Hertz, *Reflexivity & Voice* (Sage Publications, 1997).

852 Luigina Mortari, "Reflectivity in Research Practice: An Overview of Different Perspectives," *International Journal of Qualitative Methods* 14, no. 5 (2015).

853 d'Anjou, "The Existential Self as Locus of Sustainability in Design.," Sartre, *Being and Nothingness*.

shorter-term design projects historically undertaken in my professional practice. This has provided insights into how my practice of design could be better aligned with my way of ‘being-in-the-world’. It has helped me to reconcile the often-destructive nature of design, and my contribution as a practitioner in ‘one of the most dangerous modern professions’<sup>854</sup> by ensuring that my contributions are responsible, considered, meaningful and positive. My approach throughout this project remained designerly, inquisitive and flexible, and the collaborations between myself and members of the school community deepened my understanding of what is possible through co-creation, revealing the importance of co-motion<sup>855</sup>.

*Rethink Rubbish* was designed to approach the connected problems of consumption and waste using autonomous design<sup>856</sup> and transition design<sup>857</sup>. As previously described, autonomous design (AD) is problem focused, self-directed and independent of a client. The first step in the AD process is to identify a problem in order to build a project. Through engagement with the literature and reflection on a series of semi-structured interviews with designers, consumption and its subsequent waste was identified as an under-addressed design problem that could be approached in a designerly way. The *Rethink Rubbish* project was born out of a desire to address the consumption and waste problem in a more radical way, rather than to do so in service to a client.

The highly collaborative approach drew on a range of co-creation and participatory techniques. Collaborations with teachers informed the design of a series of workshops, and collaborations with students and teachers led to a number of different design interventions. Continued stakeholder engagement maintains an open relationship with the participants, which is creating strong feedback loops and a cooperative space for the ongoing aspects of the project to inhabit. Incorporating aspects of transition design<sup>858</sup> infused the thinking with theories of power<sup>859</sup>, counterpower<sup>860</sup>, the MLP<sup>861</sup>, social practice theory

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854 Tonkinwise, “Design Away.” p 3

855 Esteva, “Regenerating People’s Space.”

856 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

857 Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*; Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”; Manzini, “Design, Ethics and Sustainability: Guidelines for a Transition Phase.”; Tonkinwise, “Design for Transitions—from and to What?.”; Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.”

858 Irwin, Kossoff, and Tonkinwise, *Transition Design: Re-Conceptualizing Whole Lifestyles*; Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”

859 Dowding, *Power*; Foucault, “The Subject and Power.”; Lukes, “Power: A Radical View. The Original Text with Two Major New Chapters.”; Richard Lynch, “Is Power All There Is? Michel Foucault and the “Omnipresence” of Power Relations,” *Philosophy Today* 42, no. 1 (1998).

860 Gee, *Counterpower: Making Change Happen*.

861 Geels, “The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.”; “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”

(SPT)<sup>862</sup>, and reflective practice<sup>863</sup> and radical design thinking<sup>864</sup> were also used. This knowledge has informed the approaches taken and has theoretically grounded the project.

Figure 7.6:  
Jar custodians  
receive their  
class jar



Designing for transitions requires an approach of continual versions rather than completed outcomes; as such the *Rethink Rubbish* project has undergone numerous iterations with many more to come. Each iteration performed in different ways, but each was designed to deliver a memorable experience, with the intent of making a transition towards sustainable modes of living more desirable. Another iteration of the *Rethink Rubbish* project is running

concurrently to the school program discussed in this thesis, however it is not included in this research. Its principal relevance lies in the initial reflection performed on it, which revealed a tendency for adults to blame their children for excess consumption and waste. It was this revelation that led to the youth-focused version discussed here.

The youth-focused iteration of the *Rethink Rubbish* project was pitched to the Principal at Alberton Primary School<sup>865</sup>, as a series of educational workshops designed to kickstart the school's zero waste journey. Several teachers were early collaborators in the project and the pilot began in March 2018. Conversations with teaching staff leading up to the first workshop permitted a cross-pollination of ideas and ensured the introduction of complementary themes across the classrooms and workshops. This approach resulted in workshops that reinforced and built upon the knowledge students were developing through their class work while also creating co-learning opportunities where

students shared and built upon their existing knowledge through engagement in workshops, conversations and activities exploring sustainability, and particularly, consumption and waste.

The workshops were held in primary school classes of varying sizes (up to 45 students per class) with students from reception through to year seven, and follow up sessions were conducted with teachers and staff. The workshops began with a class of year six and seven students, and drew on their leadership roles within the school. Their leadership became a pivotal part of the school's transition process, and students continued to co-learn and co-create approaches to sustainability throughout 2018. Whilst each workshop iteration varied in order to accommodate for its audience, all workshops included provocations,

862 Hargreaves, "Practice-Ing Behaviour Change: Applying Social Practice Theory to Pro-Environmental Behaviour Change."; SC Kuijer, *Implications of Social Practice Theory for Sustainable Design* (TU Delft, Delft University of Technology, 2014); Shove, "Putting Practice into Policy: Reconfiguring Questions of Consumption and Climate Change."; Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*; Shove and Walker, "Governing Transitions in the Sustainability of Everyday Life."

863 Hébert, "Knowing and/or Experiencing: A Critical Examination of the Reflective Models of John Dewey and Donald Schön."; Schön, *Reflective Practitioner: How Professionals Think in Action*; Yanow, "Ways of Knowing."

864 Buchanan, "Wicked Problems in Design Thinking."; Acaroglu, *Disruptive Design Method Handbook*; Grant Young, "Design Thinking and Sustainability," *Zumio Meaningful Innovation* 61, no. 0 (2010).

865 Alberton Primary School is located in a north-western suburb of South Australia. The school is in a lower socio-economic area and the school's demographic is highly inclusive and multicultural.



Figure 7.7:  
Student  
documentation  
of their waste

class discussions, brainstorming sessions and ‘making’ activities which centred around consumption and waste. Each workshop was designed in collaboration with teachers, to provide the right level of knowledge for each age group. The workshops aimed to inspire and motivate students to think about their behaviours and reduce their waste, and prompts were given to each group to kickstart their explorations of reuse/recycling initiatives suitable for their class and for the school.

Each session concluded with the group being given a glass jar to collect their landfill waste in; a challenge that helped keep their waste and their progress visible throughout their transition to zero waste. Progress was monitored by



Figure 7.8:  
Storytelling  
with 14  
months of my  
landfill waste



‘jar custodians’<sup>866</sup>—a small group of volunteer students from each class who ensured the jar was used properly, and documented how frequently it filled up. This process was also supported by my own weekly documentation.

Overlaps were identified between *Rethink Rubbish* and KESAB’s *Wipe Out Waste* program<sup>867</sup>, which also works with schools to reduce waste through education and the implementation of recycling systems that help to divert waste from

landfill. Whilst connections exist, there were also clear differences noted between the two programs, primarily in the focus of the thinking and in the methods of execution. Both programs implement recycling initiatives however *Rethink Rubbish* also positioned waste as a symptom of the larger problem of consumption, thereby facilitating deeper connections between consumption and waste. *Rethink Rubbish* provocations were carefully designed and communicated and aimed to encourage students to make these connections without burdening them with any associated guilt. Where *Wipe Out Waste* focussed on the negative impact of waste, *Rethink Rubbish* encouraged affirmative action through a deliberate awakening of values. Altruistic values such as universalism,

benevolence and self-direction were encouraged for their potential to foster holistic life-long approaches to sustainability problems.

The collaborative nature of the *Rethink Rubbish* program was designed to encourage the school community to co-create solutions that worked for them, and to help troubleshoot these solutions along the way. While recycling was an important part of this process, the sustainable life-skills being taught at Alberton Primary School added another dimension to *Rethink Rubbish*. As the school community is confronted with emergent problems, they were supported to co-create solutions that worked for them; these ranged from changes made to their leadership style and communication methods, to seeking further knowledge and implementing additional systems that supported their sustainability goals. Students from each class shared their knowledge with the next, which fostered a co-learning environment<sup>868</sup> where the children led the journey towards sustainable futures. The zero waste goals of the two programs most certainly overlap, however the pathways travelled are distinct by design.

866 The idea of custodianship used here draws on Australian Indigenous Wisdom around Care for Country, and on Robert Crocker’s consideration of caring for possessions as a custodial approach to the ownership of things. Crocker, *Somebody Else’s Problem: Consumerism, Sustainability and Design*.

867 KESAB is a South Australian based NGO who started in 1966 as an anti-litter campaign. They are now a leader of sustainability solutions in South Australia. See for more information about the Wipe out Waste program: <http://www.kesab.asn.au/programs/wow/>

868 Peter M Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (Broadway Business, 2006).

## 7.2 Project Outcomes

Reflecting on the outcomes of this project to date revealed that a group-wide commitment came not only from a convincing argument for change, but also from viewing the transformation as desirable and owning the decision to change. Students needed to balance the complexities of systemic problems like consumption and waste whilst maintaining hope that change was possible—this meant they needed more than knowledge, they also needed inspiration. Initially this was drawn from a demonstration of what zero waste ‘looked like’, provided during the workshop provocations and through continued interaction with students and teachers. But ongoing inspiration was also drawn from the student’s documentation of their own progress (see figure 7.7), and from their recognition and celebration of their own success with the experimental zero waste system.

### 7.2.1 The need for a catalyst

Reflection on the literature<sup>869</sup> and my own zero waste transition suggested there must be a catalyst for change to start a transition. For the students’ transition towards zero waste this comprised of three reinforcing experiences: viewing the *War on Waste* TV docu-series; visiting recycling and landfill facilities; and participating in the *Rethink Rubbish* workshops. These three experiences combined to provide students with background knowledge on the scale of the problem, how it situated locally and the importance of change. This also gave students the opportunity to see how local waste is managed on a large scale, whilst they learned how to manage it themselves on a smaller scale.

Upon commencement of the pilot it was immediately evident that teachers’ interest in sustainability varied, and those who championed the change in the school frequently expressed their disappointment in those who were less engaged. Whilst the champions appreciated the time constraints and knowledge gaps that at times governed the behaviours of their less passionate peers, they also suggested that stricter regulation and enforced rules might be needed in order to change the behaviours of those who were less willing. This theme of time and knowledge constraints was commonly expressed throughout the duration of this project and will continue to be discussed throughout this section.

Embracing such widespread change posed continual challenges and revealed the importance of an initial catalyst to make change desirable. Students and teachers alike needed a catalyst to inspire change. Upon reflection, the constraints facing teachers/staff were different to students, and likely warranted a different catalyst in order to make their time sacrifice feel more worthwhile.

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869 See for example: Geels, F. W., & Schot, J. (2010). The dynamics of transitions: a socio-technical perspective.; Sanders, E. B.-N., & Stappers, P. J. (2014). From designing to co-designing to collective dreaming: three slices in time. *interactions*, 21(6), 24-33. doi:10.1145/2670616; Manzini, E. (2014). Making Things Happen: Social Innovation and Design. *Design Issues*, 30(1), 57-66. doi:10.1162/DESI\_a\_00248; Riedy, C. (2013). Waking up in the twenty-first century. *On the Horizon*, 21(3), 174-186.



## 7.2.2 Knowledge building through provocations

Students had good access to information resources, but as has also been seen with designers, any lack of conversion to working knowledge constrained their action<sup>870</sup>. This knowledge gap was addressed through a series of provocations, designed to deliver content in ways that were impactful and experiential. The provocations were designed with guidance from teaching staff to ensure that all content was valid, age-appropriate and geared towards active learning. This active mode of learning encouraged students to build knowledge on subject matter through a process of inquiry.

It was evident that participants had not made an explicit link between consumption and waste until the provocations encouraged them to connect these two problems. Their post-provocation responses revealed that they had not only made the connection between consumption and waste, but that they also recognised the inequities of consumption and its global impacts. Sorting through their rubbish by hand also provided an opportunity for students to connect their own behaviours with the waste they created. Whilst a presentation slide could have been used to communicate these concepts, it is clear upon reflection that the physicality of these experiences had a greater impact on their thinking and subsequent behaviours.



Teachers' participation in the provocations varied from group to group, and it was noted over the course of the year that the teachers who engaged with this process were more actively involved in the transition taking place in the school. On reflection I would suggest

Figure 7.9: (Top)  
Rubbish provocation

Figure 7.10: (Bottom)  
Reimagining a zero  
waste birthday party

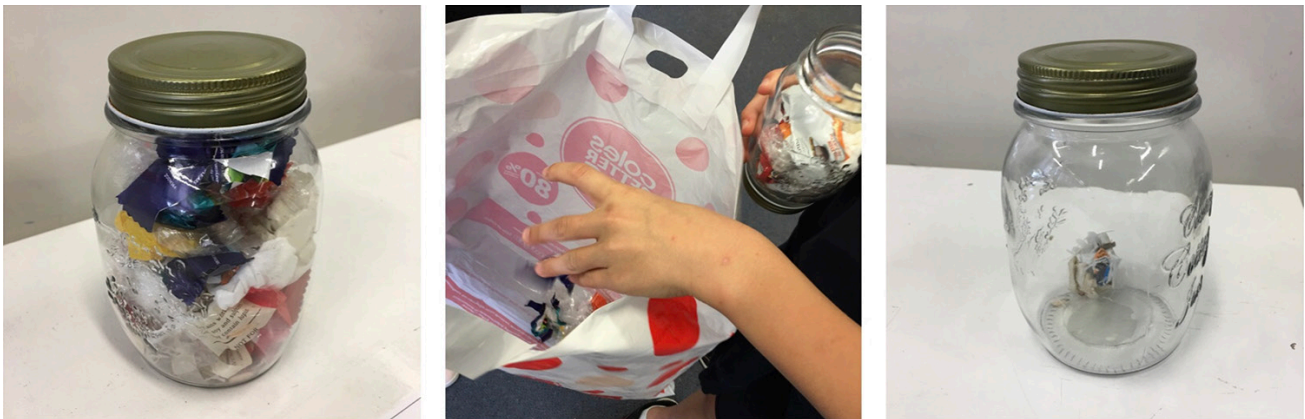
that by co-learning alongside their students they were able to support students' continuing engagement with the transition. Disengagement (or absence) during the provocations also correlated with less successful classroom transitions and further reflection on feedback sessions and insights also revealed greater resistance to change from these teachers. This correlates with the designer experience, where less knowledge can lead to action-paralysis.

870 Tonkinwise, "Ethics by Design, or the Ethos of Things."

### 7.2.3 The need for ongoing maintenance and curriculum connections

The *Rethink Rubbish* workshops provided both knowledge-links and team work/cooperative activities for students, however the question of maintenance quickly came to the fore. How would teaching staff and students maintain new-found sustainability knowledge? This was a particularly challenging notion considering that many teaching staff expressed concerns about how they would continue the transition without heavy involvement from me. Several month-long breaks from the project due to travel unintentionally tested this, and my absence correlated with dips in project outcomes. Upon returning from the first break I was approached by one particularly passionate student who declared that I should never leave them again because the project was ‘not the same’ without me there. She raised concerns about the champions in the school being outnumbered and felt that any decline in leadership numbers would impact the project.

Figure 7.11:  
Sorting waste  
from the jar



Teachers were experiencing an equally steep learning curve and were often constrained by time. Upon reflection it was evident that running a separate workshop for teachers/staff prior to entering the classrooms would have been beneficial. Unfortunately, time constraints relating to the approval of an ethics protocol prevented this from taking place before the start of the school term. I believe if timed correctly that a pre-term teacher-focussed workshop would have provided the opportunity for teachers and staff to build knowledge outside of their classrooms which might have enabled stronger leadership in the classroom. I noted in several workshops that teachers whose interest was piqued by the subject matter made a concerted effort to build their knowledge by asking questions and taking notes both during and after workshops. A clear pattern of knowledge-building was evident with these teachers, who also took advantage of my ongoing presence in the school and engaged in impromptu conversations in an effort to build their knowledge further.

Conversely, those who appeared to be less knowledgeable (and also less passionate) about sustainability demanded technical solutions such as simpler systems or more/bigger bins, rather than seeking more knowledge or requesting

more specific support. This push for a solution to be provided, pointed to a perception of the problems as external—for someone else to manage or maintain. However those who embraced the problem and actively engaged in provocations described how the activities altered their perceptions and opened their mind to new possibilities.

Maintenance of the program relied not only on knowledge and commitment, but on leadership from both students and teaching staff. Each class had a small team of ‘jar custodians’ who were responsible for the maintenance of their waste jar; they cared for its contents, reminded their peers of the jar rules (what could/could not go into the jar) and encouraged their peers (and teachers) to actively participate in the school’s transition to zero waste. The designer-researcher’s weekly documentation of the jars provided students with support during the first year, but at the end of the experiment it was noted that ongoing support would need to be developed. It was recommended that this be conducted through the implementation of regular meet ups between the ‘jar custodians’. This peer-to-peer process would allow early adopters to lead late adopters and would encourage continued cooperation and co-learning between class groups. A peer-led process such as this could also help to develop students’ communication and leadership skills, giving them much needed life-skills that would benefit their future participation in education, employment and activism. This peer-led process is in development with students from the school’s Environments Ministry.

Reflection on the issues of knowledge transfer and ongoing maintenance resulted in deeper considerations for the integration of sustainable life skills into the curriculum. Connections made between sustainable activities and the curriculum have since become a key concern, not only for the purpose of sustaining the progress made to date, but also to legitimise the activities as a part of curriculum-based teaching and learning. The aim here is to recognise that values, sustainable life skills and ways of being in the world are an important part of human development that are interconnected with the typical learning done during schooling. Making explicit links between sustainable activities and STEAM subjects (science, technology, engineering, arts and mathematics) through teaching frameworks and lesson plans ensures that as new teaching staff and students join the school community its sustainable spirit can continue to be nurtured. Curriculum connections and maintenance plans have been discussed, but their documentation and implementation is outside of the scope of this research. This will be pursued as part of the next phase of this research project.

#### 7.2.4 The right systems for the right outcomes

Successfully transitioning to zero waste relied not just on the reduction of waste but also on the right systems being implemented to support specific recycling for any rubbish being created. Work with teachers and students co-designed pathways to a nude food policy that were supported by the creation of packaging alternatives. Products such as beeswax wraps were made by students

and sold through the school's weekly marketplace. The wraps were successful in reducing waste but packaging (particularly soft plastics) still made its way onto school grounds where it needed to be dealt with. Students were determined to recycle soft plastics wherever possible however the Redcycle<sup>871</sup> soft plastics recycling program does not extend to schools. Despite this, a Redcycle bin was placed in each classroom, and students/parents volunteered to take this stream of recycling to local supermarkets for processing. This temporary measure was fraught with issues, not least of which was its reliance on the participation of passionate parents. Students on the school's Environments Ministry continued to explore alternative approaches but a total ban on soft plastics has been inhibited by the school's lower socio-economic demographic—as the cheapest food also tends to be the most heavily packaged. Group discussions with the student Environments Ministry are currently investigating a proposal to a local waste processor to partner with them in managing this waste stream. This will be explored as a future project with the school.

While soft plastics challenged the school, recycling other tricky items such as batteries and toothbrushes challenged community members who had limited access to additional recycling services. International recycling organisation, Terracycle, offer recycling services for items that cannot be recycled through Australia's kerbside recycling collection services. A limited number of Terracycle drop points exist in South Australia and most are

centrally located in the city centre. The implementation of a series of co-created Terracycle bins has allowed the school to offer Terracycle's services to a community that would be otherwise unable to access it. Services included recycling for batteries, old makeup and dental products such as toothbrushes and toothpaste tubes that require specialised processing. Whilst these streams of waste are not typically created in the school, the extension of this service to the community demonstrates the school's leadership in sustainability and community service. Further to this a recycling bin for 3D printing waste was implemented. This small but unmanaged waste stream was identified during an audit of the

Figure 7.12:  
Student prototype  
encouraging  
recycling through  
games



871 Redcycle is an Australian recycling service for soft plastics. It is currently provided to the general public via bins in Coles and Woolworths supermarkets. For more on this program see: <https://www.redcycle.net.au>

school's waste and 3D printing waste is now being managed by DCycle, a local filament recycling start-up.

Converting the rubbish bins no longer needed in zero waste classrooms into new recycling bins helped reclaim materials otherwise destined for landfill, however this also posed a challenge. Whilst each class's self-organising approach resulted in high levels of ownership of the system, it also resulted in inconsistencies in the look and feel of the bin system being used from one class to the next. These inconsistencies challenged students trying to 'do the right thing' as they moved through the school, so addressing them became crucial. Consistent and clear school-wide bin identification and support communication was co-created with students from the school's Environment Ministry to address this issue. Aspects of this system were co-created using waste that was captured for 'making activities' and stored in the school's 'IDEA shed'<sup>872</sup>. The new recycling bin systems remade waste into a system designed to further decrease waste, and other initiatives explored ways that might increase student participation in the system. The external bin system includes a basketball hoop that was part of a working prototype co-created by students to encourage people to recycle. The aim is to encourage recycling bottles and cans that are part of a container deposit scheme, by inviting students to shoot goals with their empty drink containers.

The external bin systems were co-created with students and community members by repurposing materials from wooden palettes that were discarded by local businesses. This system was co-created and connects with the system implemented in classrooms. The system utilised the same transparent approach as the jars; clear containers were inserted into the bin system to keep landfill waste visible and front of mind whether inside or outside of the classroom. The rest of the system was colour coded to create consistent links between indoor and outdoor bin systems. Collaborating with students and teachers to co-create this system encouraged active participation from the school, and students were further empowered to seek sponsorship from a local hardware store to cover the cost of coloured paints needed for the external bin system. The passion and determination expressed in their letter to the store's manager was moving, and demonstrated not only their passion, but a real sense of ownership of the project.

### 7.2.5 A commitment to change

Some staff and students are committed to continuing this transition, but others are less passionate and less enthusiastic. Work is continuing in a range of areas to foster the passion and commitment and continue to facilitate the transition. Developing links between the school's fruit/vegetable garden and the canteen remains a work in progress but has strong support from staff and students alike. The aim of this project is to transition towards a 'co-operative café' as

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<sup>872</sup> IDEA is a space for students to source materials that have been salvaged for use in future projects. This space has been activated by the school's sustainability champions.

Figure 7.13: A new bin system to foster zero waste behaviours

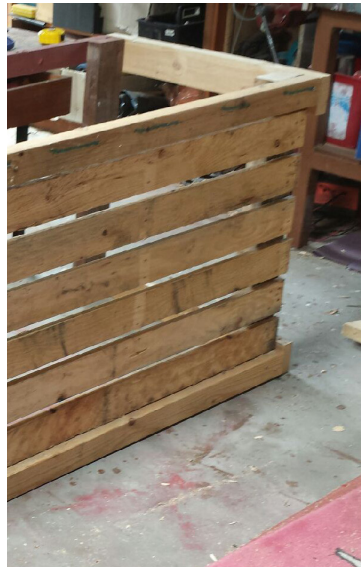


every school we have at students parliament, so this  
 day in the classroom meeting, one of the things  
 today - the environmental meeting, one of the things  
 decided to name to you so we hope you  
 decided to read this letter as you could perhaps  
 the time to read this letter as you could perhaps

was ministry last year wanted to work on a waste  
 system to reduce the amount of rubbish we waste  
 landfill is successfully set up the sorting systems  
 classrooms and have started to set up recycling  
 to help have waste sorting entry for younger  
 we've decided to colour code the bins according  
 types to each bin we've also used this colour  
 systems inside the classrooms too, so it flows  
 about the school

decided to paint the bins (we've made out  
 recycled wood) and at most above it to show the  
 what goes in each bin. However, along one journey  
 e needed to use up the paint as already have  
 have tried to use up the paint as already have  
 to help us we need your help.

to save the kids of today's future, we  
 and less waste to landfill so. Also  
 kind up these bin systems - how  
 dramatically - how  
 addition





a small, scalable approach to transition the canteen from pre-packaged food towards student-grown and student-prepared food. The café would create a circular economy between the garden and the canteen<sup>873</sup>, whilst also creating curriculum-based learning opportunities in life sciences, home economics and enterprise. This would reposition students not just as consumers of the produce from the garden, but as contributors to its planning, growth and maintenance. The first iteration of this project is underway and is being trialled with two class groups who will prepare and serve meals to one another. The willingness to explore projects of this nature demonstrates the commitment to change being made within the school community. Whilst this is but one of many schools in the state, this school provides glimpses of what might be possible at a state-wide level.

### 7.2.6 Facing challenges and building resilience

Work with smaller groups of students who are investigating ways to remake their waste into useful objects has faced logistical challenges. Two of these projects have been impacted by students moving to new schools in 2019; due to the constraints of my ethics protocol their participation can no longer be documented in this research. Prior to their moves these projects aimed to remake waste collected in the school in two ways: the first from hard-plastic waste into functional bicycle pedals, the second to pulp down paper waste to remake it into greeting cards for sale at the school's market. While both projects can continue to be explored, I am now limited in my documentation of them as part of this research.

Another challenge was faced at the end of 2018 when one of the project's teacher-champions moved from a teaching role into a new role as the town Mayor. Whilst this is a loss for both the school and the project, it also presented an opportunity for closer collaboration with local government. It was immediately identified that a passionate sustainability advocate embedded in local government could provide valuable attention and support for projects of this nature. The flow on effect in the school from this loss is evident, however several other teacher-champions have been building their resilience. Nurturing multiple champions ensured that if sustainability champions moved on their contributions to the school and their spirit would be honoured through continued engagement with the values embodied by them.

The continuing commitment from the school is considerable, but it must also be recognised that a transition of this nature is fraught with frustrations, and even those who are highly dedicated to the cause have felt limited by a lack of time, resources and the knowledge of how to 'get there'. Workshopping these issues with teachers revealed how their experience of challenges differed entirely

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<sup>873</sup> The garden is presently engaged in a circular economy project with 'Sarah's Sisters', a local café. This new project does not intend to reduce or infringe upon the success of this relationship, rather the intent is to dedicate new areas of the school's garden to projects that can increase the school's sustainability by increasing students' participation in food production, reducing their consumption of commercially produced food and thereby reducing their waste.

based on their own knowledge and unique circumstances. Their classroom's proximity to larger waste management systems such as the school ground's compost bins or council-managed recycling bins significantly impacted their willingness to engage. It was evident that any effort made by them needed to be minimal in order to make participating easy. Wherever possible participants were given guidance and support, but their openness to trying new things was frequently challenged by knowledge and time. Projects that might address these limitations continue to be explored, and careful consideration was given to the design and implementation of the new external bin systems in the hopes that they might minimise these pain points. The outcomes here will continue to be examined.

Creating and holding space as a designer-facilitator required a different skillset to typical design projects. Effective facilitation balanced open communication with conflict resolution and mediation skills. This exercised deep listening and facilitation skills as part of the work. Addressing feedback from participants in group settings also posed challenges, and the need for proactive mediation during these sessions presented from the outset. Flexibility and agility in addressing feedback is an important aspect of any project. In collaborative settings, flexibility was a shared endeavour that on reflection, if left unmanaged could have impacted future participation in the project. Throughout this project an open and collaborative approach was maintained, and a process of perpetual versioning was adopted. This permitted experimentation in how ideas were implemented and the flexibility to adjust them where needed, based on people's perceptions and experiences of them.

As time has passed the composition of the collaborative working group has changed, some members have moved on and new ones have joined but despite changes in people, the limitations remained the same—time and knowledge. Time and knowledge appeared to be a shared barrier, but these limitations also present an opportunity to reconsider how time might be prioritised with sustainability goals in mind.

The project's endeavour to address student behaviours around consumption and waste was more successful in some classes than others. Some students believed their individual behaviours were the key, some teachers felt that their classroom's proximity to the garden made a difference, and the data collected on the use of the zero waste jars suggests that those classrooms with an activated teacher/student who championed change were the most successful at minimising their waste. By the end of 2018 all classes were using a zero waste jar to keep their landfill waste visible, but there is still more work to be done to culturally embed this change. The desire to help this passionate community succeed in their transition remains strong and will continue beyond the scope of this research.

### 7.3 Closing remarks

Approaching the problems of consumption and waste using deliberate and considered design thinking and making skills has provided opportunities for experimentation in the creation of a desirable transformation towards more conscious consumption and reduced waste. This project built school students' knowledge through experiential provocations and collaborative activities and emergent outcomes presented opportunities for deeper engagement with the school community. Participation and collaboration were key aspects of this project, and it was clear from the outset that people appeared to take ownership of solutions and work harder to maintain them when they actively participated in the co-creation of outcomes. This project continues to reveal insights into how sustainability knowledge could be better integrated into young people's lives, and collaborations with the school continue to develop and strengthen. It is evident from the responses from project participants that repurposing the tools of design to promote sustainable ways of being in the world has merit. It is also evident that the complexity and temporality of transitions of this nature requires increased patience and resilience from the designer, coupled with a willingness to collaborate wholeheartedly with experts and non-experts alike. The *Rethink Rubbish* project has made use of the theories addressed above and applied them to the problem of consumption and waste. It has demonstrated the importance of participation and collaboration in approaching complex problems and highlighted the role of empowerment in taking affirmative action. Insights from this project and its contribution to the transition in my practice continue to be explored in Chapters 8 and 9.

## Chapter 8

### Practice, Process, Projects: exploring transitions through design research

Throughout this research design's role in sustainability transitions has been investigated. The previous chapter discussed how theoretical knowledge was explored in practice-based projects using designerly sensemaking approaches, action research and research through design and reflective practice. This chapter further analyses the insights gained from these approaches spanning three main sections: practice, process and projects. Whilst there has been a lot of overlap and interconnection between the explorations that have occurred in this research, what follows in this chapter is an attempt to dissect these into independent explorations. In Figure 8.1 this activity is presented in a timeline format that maps when specific activities have occurred, for example designer interviews, project start points and iterations of analysis. This timeline also maps the initial recognition of aspects of transformation in my process and my practice. Figure 8.1 works in conjunction with Figure 8.2 which presents a timeline of other key moments such as recognising limitations in metrics for analysis. Figure 8.2 also documents the timing of external influences such as personal carbon footprint assessments.

This chapter opens with the discussion of collected data that reveals design practice could be an unrealised locus for sustainability in design. Three aspects are explored; practice norms, tensions arising from resisting these norms and the transition away from these norms. First, the norms of practice are analysed and discussed using data collected from practitioner interviews and reflection on my own practice of design. Reflection on data reveals that sustainable approaches are not part of the norms of practice despite most designers acknowledging they should be. Then the tensions arising from resisting these norms is explored, revealing how impactful the designer's double bind can be in attempts to take action. Finally, stories of transitions are explored, and discussion reveals the different ways that practitioners are trying to intentionally shift their practice away from the industry norms.

Section two explores how the design process contributes to sustainability transitions through approaches that embrace hybridity, collaboration, and new ways of designing. First, the potential for hybrid approaches to foster increased capabilities for designers is explored, and hybridity is analysed and discussed as a way of unlocking the sustainability potential of a practice or project. Secondly, the process of collaboration and different participatory approaches are discussed, and the role that collaboration plays in 'design for transitions' is explored. Finally, 'new ways of designing' that have emerged as part of my transformation are analysed, and their expansion of my capacity to 'design for transitions' is discussed.

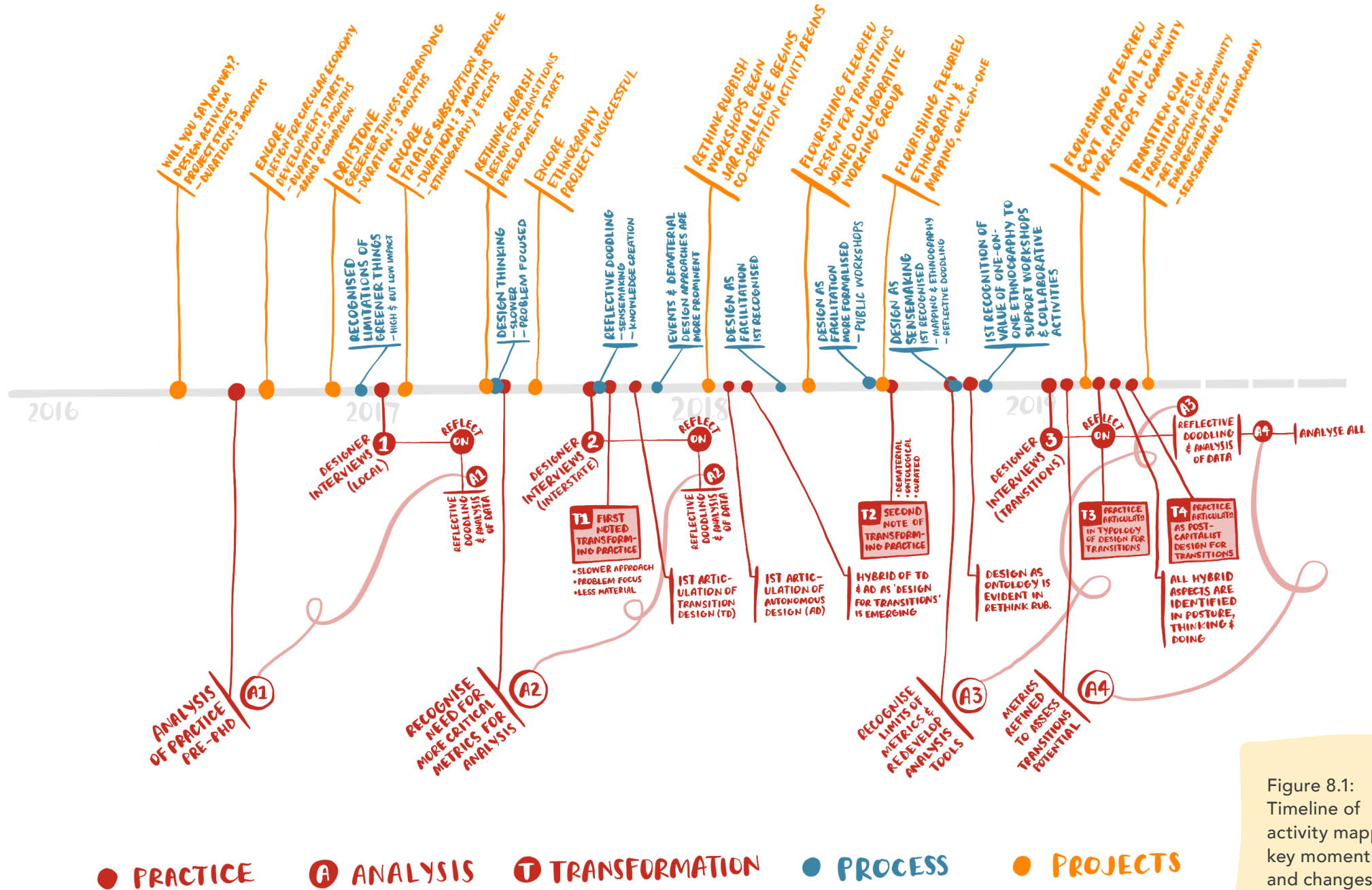


Figure 8.1: Timeline of activity mapping key moments and changes in practice, process, and projects

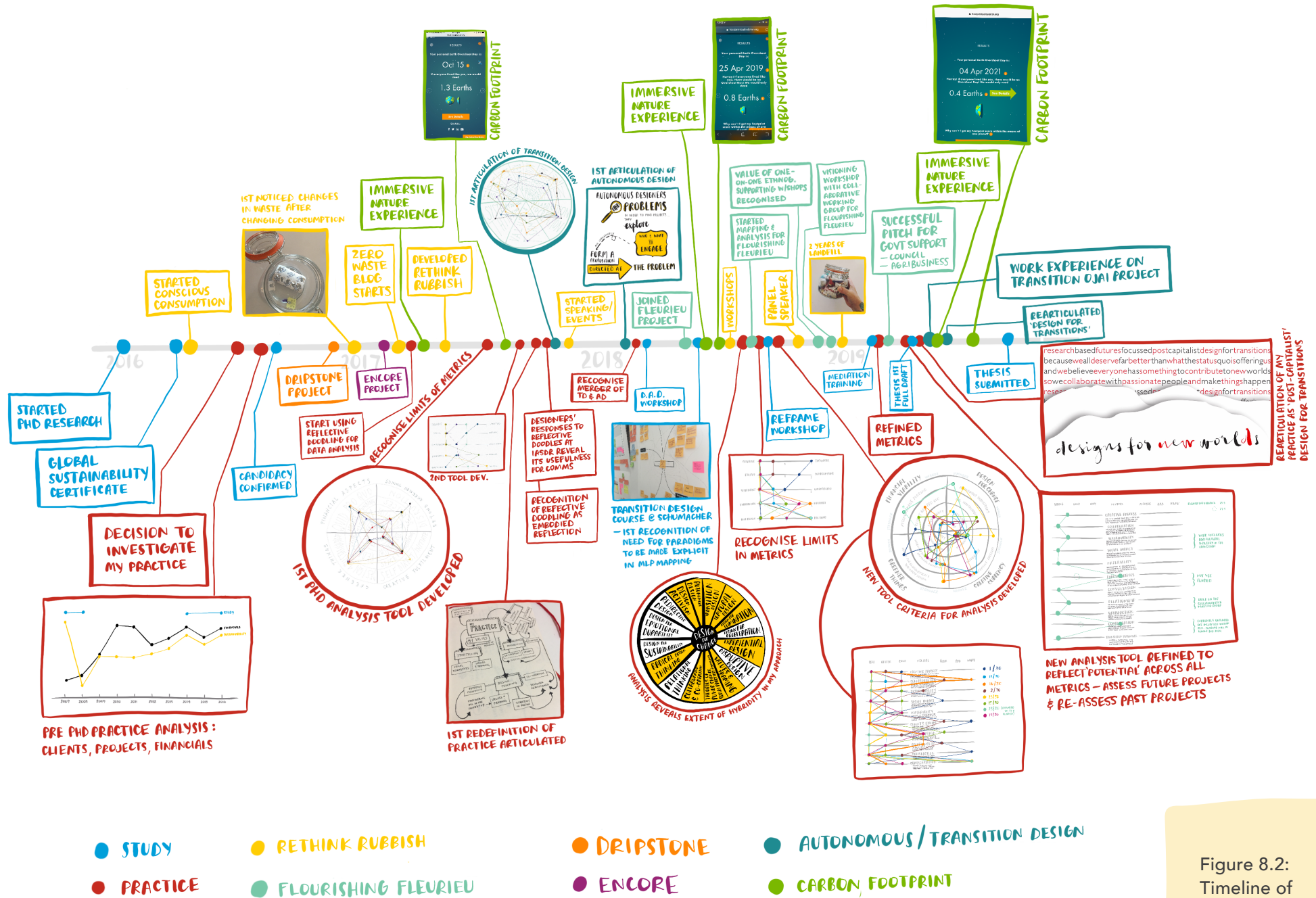


Figure 8.2: Timeline of key moments in reflection

The third and final section of this chapter outlines the types of projects that have been undertaken during this research, and a timeline of this activity is presented. Firstly, two tools for project analysis are presented and two projects from the timeline in Figure 8.1 are used to demonstrate the tools' adaptability for historical and futural analysis. The two projects have been selected for their representation of 'making greener things' and 'design for transitions', and through the analysis I aim to demonstrate the differences between these approaches. A rubric presents the metrics used and whilst a level of subjectivity remains in the analysis, reflection was guided by this rubric and framed with a critical pragmatism that was informed by the theoretical knowledge that has been discussed throughout this thesis.

This chapter establishes norms in design practice that echo the literature and further identifies these norms as contributing to structural unsustainability. Through the analysis, my design practice is situated in relation to these norms, to practices in the design industry, and to other transitioning practices. It discusses how my design processes are transforming and analyses two projects that demonstrate how these transformed processes are impacting the approaches taken to projects. This discussion continues in Chapter 9 where the transitions occurring in my own practice are explored in more detail through discussion of the case study.

## 8.1 Practice

Throughout this thesis, design as an industry and as a practice has been investigated from multiple perspectives to interrogate how it is unsustainable and to explore where its potential for sustainability might be expanded. In a study of the norms in Canadian practice, Dorland describes<sup>874</sup> the structures and routines that are common to the Canadian designer experience, where creativity is structured and designers are pressured by limitations on time and money. In another study of practice, Springer examines how reporting metrics and measurement have become normalised<sup>875</sup>, an experience that is particularly true for interaction design and is driven by clients' desire for data to justify project budgets. This section draws from and builds upon these studies using collected data to show how experiences of norms such as time constraints and structured creativity are not only typical, but also unsustainable.

In an effort to learn more about how typical designers approach sustainability in their work, semi-structured interviews were conducted with design practitioners and consultants to explore designers' attitudes towards sustainability. Of particular interest was the discussion of sustainability in design as a form of action: how this action manifested, perceived barriers to it, and whether it was 'viable' to pursue this action in practice. Collected data also informed the interrogation of sustainability within my own design practice, and throughout this research I have continually returned to the questions: 'what can

874 Dorland, "Routinized Labour in the Graphic Design Studio."

875 Springer, "Auditing Communication Design."

I do, as a designer, to increase the sustainability of my practice?’ and ‘how am I contributing to transitions toward just and sustainable futures?’

Analysis draws on the literature discussed throughout this thesis, my own experiences as a practitioner<sup>876</sup> and on data collected through semi-structured interviews with design practitioners and consultants. Analysis revealed that regardless of a practice’s design specialisation, location, or size, very minimal consideration is given to environmental or social sustainability. For many interviewees, the industry norms influencing their practice were fostering unsustainable modes of making. A set of relatively consistent behaviours in practice suggest that addressing sustainability is not the norm, and reveals how a niche of practitioners are actively engaging with sustainability in attempts to resist this norm.

A breakdown of these interviewees and the coding used to describe their responses is in the following table (repeated from Chapter 2):

Practitioner Type	Coding	Employed (E) or self-employed (SE)	Engaged in transitions	Total Number Interviewed
Communication designer	CD	3E/4SE	0	7
Interaction designer	ID	1E/1SE	2	2
Service designer	SD	1E/1SE	2	2
Communication designer specialising in Illustration	CDIL	1SE	0	1
Hybrid practitioners in CD and ID	CDID	2SE	0	2
Design Consultant (with sub-discipline specialisation)	CDDC IDDC	2SE	0	2
Design Consultant (no sub-discipline specialisation)	DC	1SE	1	1

Notes: Sequential numbers were assigned to each practitioner type, for example, CD03 is the third interviewee to be coded as a communication designer but not the third participant to be interviewed. While employment status is not referenced in the allocated code it was included in the collected data that this table is drawn from.

<sup>876</sup> My work experience includes work as an in-house designer, employee, freelancer and principal of my own studio. References to ‘my own experiences as a practitioner’ include this historical work experience but also references reflections on the transformed process and projects that are discussed in sections 8.2 and 8.3.



### 8.1.1 Exploring the norms in contemporary Australian design practice

Seventeen designers and consultants from communication, interaction, and service design participated in semi-structured interviews about their practice and process, the design industry, sustainability and business. The first round of interviews (conducted in early 2017) provided insights into designers' perspectives on sustainability. A second round of interviews (conducted in late 2017) added insights from designers in remote or regional areas. After attending a transition design course in mid 2018 another round of interviews was conducted to explore how transitions were being activated in some course attendee's practices. The data collected during these interviews provided insights into the place of sustainability within the norms of design practice and revealed the processes and behaviours that designers considered 'typical' of design practice. As outlined in Figure 8.1, interviews occurred at three different time intervals; as such, aspects of the transformation in my own practice are also embedded in this collected data. Diversity in participants' sub-disciplines echoes the hybridity within my own practice, which has allowed for a more fluid exploration of how these norms are experienced by practitioners. This fluidity also reflects a continual blurring of disciplinary lines that has been ever-present in the design industry as design continues to evolve in response to social and technological change. Approaching data analysis with fluidity in mind also prefixes the discussions of hybridity that follow this section.

Each practitioner's perspective provided insights into design industry norms, revealing an entanglement in systems that accelerate consumption and behaviours that contribute to business-as-usual approaches. A lack of critical engagement with sustainability combined with the pressures of performing creatively under increasingly conflicted circumstances appears to have led to broad inaction on matters of sustainability. This could stem from experiencing the double bind outlined in Chapter 3, where practitioners want to act but either do not know how, or feel unable to do what they believe is required. But for many interviewees, sustainability was not front of mind, which ultimately influenced their inaction. For an active minority, 'sustainable design' was predominantly a technical consideration such as printing on recycled paper, using vegetable-based inks or storing files on carbon neutral servers, however this action was not described or perceived as a norm. An even smaller subset described sustainability more critically, as embedded in their thinking and as a guiding force for their actions. Analysis of this collected data indicates considering sustainability is absent from the norms of typical commercial design practice. The interviews reveal that financial concerns tend to overwhelm concerns of sustainability and that time is almost always pressured. Analysis also suggested designers in 'typical' commercial practices are either disengaged or under-empowered, and are likely experiencing a range of conflicts that lead to the previously discussed designer's double bind. Data used to explore industry norms have also been used for comparative analysis of

the transformations taking place in my own practice, and insights and reflections upon my own practice are included in the discussion that follows.

#### Identity through creativity

‘I’m a designer.’ The words are almost worn like a badge of honour—they mean something to those wearing this badge, and in many ways being a designer is an identity that brings with it a sense of purpose. Like many of my peers I identify in this same way. I am a designer.

I am driven to create, but this is more than what I do for a living, this is part of who I am. Creativity has always been important to me, and identifying in this way binds me to this group. Understanding this aspect of my own identity

led to the autoethnographic approach taken

for this aspect of the research, and this analysis has been conducted using this designerly perspective.

For the majority of practitioners interviewed, what they do (design) connects deeply with who they are (designers). Though many practitioners commented that designerly descriptions of themselves were typically lost on those outside of the design industry, they persisted with describing themselves in designerly ways. This suggested that those who identify as creative also place importance on being perceived by others as creative.

The designer identity appears to be constructed by a shared worldview surrounding culture and taste that informs processes and leads to particular shared experiences. Over the course of this research I have become disconnected from this shared view. Over time, explorations of the shared processes and experiences of my peers served to highlight where my own differed, and through critical engagement with the literature, and the analysis of data collected during interviews with designers I have begun to reconstruct what the identity of ‘designer’ means to me.

As my thinking has shifted, so too have my capabilities. My sense of responsibility as a designer now feels greater than ever. Throughout my design career I have embedded sustainability in my thinking and my process; in doing so I felt that I was performing in the role of designer slightly differently

Figure 8.3:  
The creative  
identity



to my peers. As further shifts have occurred in my practice, the previously shared identity of ‘designer’ has become unstuck, and in my transitioning practice, a new space is being carved out in its place. This new view recognises design’s contribution to ‘defuturing’ activities. It seeks to mitigate this by prefacing goals of creativity and aesthetics with intrinsic values and an ecological worldview. Throughout this research I have experienced continual shifts in my identity, as a designer and as a person. This process of analysis has helped me acknowledge the inherent limitations in my former (technical) approach to sustainability as a practice of ‘making greener things’. It has prompted further critical thinking about what else might be possible, for myself and my peers, to consider what else is needed as part of the extension of my practice beyond ‘making greener things’, and what this means for my identity as a designer.

#### Critical engagement, or lack thereof

For some interviewees, critically questioning design’s responsibility to ecological and social well-being interfered with their sense of identity. ‘I’m a designer’ became ‘I’m *just* a designer.’ There appeared to be a reduction in identity and in power that designers experienced when considering the scale of sustainability problems. With the addition of the word ‘just’ all designer responsibility could be negated—the word ‘just’ implied that a designer could not be ‘more than’; that a designer could not do ‘more than’. It implied that designers are bound by the aesthetic focus of their discipline and that they must perform in very particular ways. Pre-loaded in the word ‘just’ is a solid boundary, invisible yet overbearing. It suggests that the act of designing is void of power (it is not) and that designers are powerless (we are not). Yet in descriptions of their process, many designers received briefs that were questioned to give clarity to or inform slight adjustments to the client’s pre-defined problem. They did not aim to

Figure 8.4:  
The resource  
challenge

#100CO1  
AHH DESIGN... it's such a  
CHALLENGE  
BECAUSE A  
PRINT  
DESIGNER  
IS SEEN AS A  
RESOURCE

radically shift or redirect a brief towards sustainability goals. This behaviour suggested a lack of critical conversations or ‘redirected’ response briefs. Without such critical engagement, designers are rendered powerless to address structural unsustainability. Analysing this aspect of the interviews through a lens of power revealed practitioners’ reflections of normative power dynamics<sup>877</sup> demonstrated through their conformity to the belief that designers perform in very particular and limited roles. Most communication designers spoke predominantly about graphics, branding and packaging, and most interaction designers spoke of websites, apps and the Internet of Things. Any limitations interviewees encountered were immediately contextualised by a specificity to the tasks they performed. Their descriptions of critical thinking in design focused on the impact of a solution or the aesthetic quality of the work. Accounts of ‘critical’ engagement with clients were contextualised in the same way. I would argue that based on the descriptions given, what interviewees described was akin to aesthetic critique, standard client liaison, project and relationship management.

From this analysis it would seem that designers are frequently under-empowered because they operate on behalf of others, as a ‘resource’, as ‘creativity for hire’, and in many situations as ‘*just* a designer’. For many who share the identity of ‘designer’, this is ‘normal’. Taking a brief, designing an outcome, and getting paid to do so is part of the designer’s day-to-day job. Most designers described performing these tasks with a relative sense of comfort; they are all routine aspects of a designer’s role and responsibilities. For most interviewees, this process of briefing, designing and delivering outcomes in return for financial reward was described in very similar ways. There was a consistency and a normality to it. Most described their processes using similar terms to the routines of practice described in the research of Dorland<sup>878</sup> and Springer<sup>879</sup>, revealing that financial pressures, time constraints and reporting metrics all form part of a common experience for contemporary designers.

There was some variation in experiences based on designers’ specific roles; for example, designer-employees felt time pressures without feeling financial pressures, while self-employed designers felt both time and financial pressures. Interaction designers were generally more concerned with performance and reporting metrics than communication designers. This is most likely because the Internet of Things can be reported on more readily through user research, data analysis and other performance metrics. It would appear that communication designers are yet to fully embrace the ‘testing’ of their work with its audience. This difference was also noted in attitudes to collaboration. Interaction designers frequently collaborated with clients and end-users as part of user-research in UX design and end-products, while communication designers stated that this was not part of their process. Most communication designers relied on their own intuition supported by desk research, and some

877 Foucault, “The Subject and Power.”; Jurgen Link and Mirko M Hall, “From the” Power of the Norm” to” Flexible Normalism”: Considerations after Foucault,” *Cultural critique* 57, no. 1 (2004).

878 Dorland, “Routinized Labour in the Graphic Design Studio.”

879 Springer, “Auditing Communication Design.”

responded negatively to the notion of collaborating with a client, believing this process would feel like micro-management. This led me to question how communication design processes might benefit from critical engagement with project stakeholders.

Some designers described pushing themselves further to seek accolades for their work; descriptions of their critical engagement with the work's aesthetic contributions were coupled with a yearning for the validation that would come from industry acknowledgement of the work as 'good'. This was not routine to all practices and not all strived for awards, but for those who did it was expressed as a crucial component of their practice, typically described as part of their critical practice of design. For CD01, awards provided an assurance to their clients that they were 'at that top level'. CD04 expressed 'I wouldn't be where I am today without awards' revealing how this constructed their identity as an 'award winning designer'. A physical gesturing to the awards

on display in their boardroom also showed that their mantelpiece signified success in a very particular and tangible way. For those engaged in this type of critical practice, awards were proof of their ability to do 'good design' and of their contribution to design culture. For a small number of designers practicing in sustainable niches, this 'good' was not good enough. Instead they described this award-winning version of 'good design' as an aesthetic that lacked an ethic, and blame was directed towards flawed criteria and frameworks for judgement. In their minds this kind of 'good design' did not critically engage on matters of social or ecological sustainability and as a result it did not have critical impact. It might look 'good', but they (and I) questioned, whether critical engagement on aesthetics was 'good enough' for contemporary contexts. Throughout this research I have argued for critical thinking and engagement with sustainability, and throughout this process of analysis it was noted as lacking in most designers' discussion of what constitutes 'good design'. This trend carried through to responses to questions on sustainability.

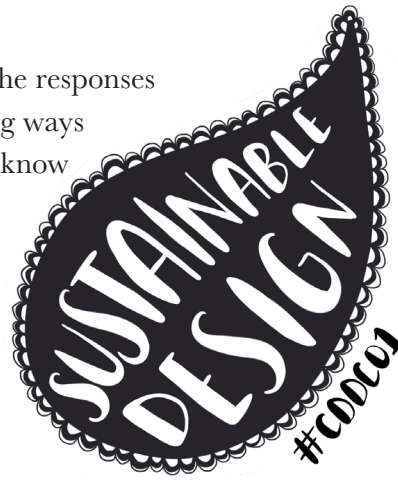
Without critical engagement, what is sustainable design?

Interviewees were all asked what sustainable design meant to them. This question was followed with what they believed it meant to other designers and to the

Figure 8.5:  
The superficial  
understanding  
of sustainable  
approaches



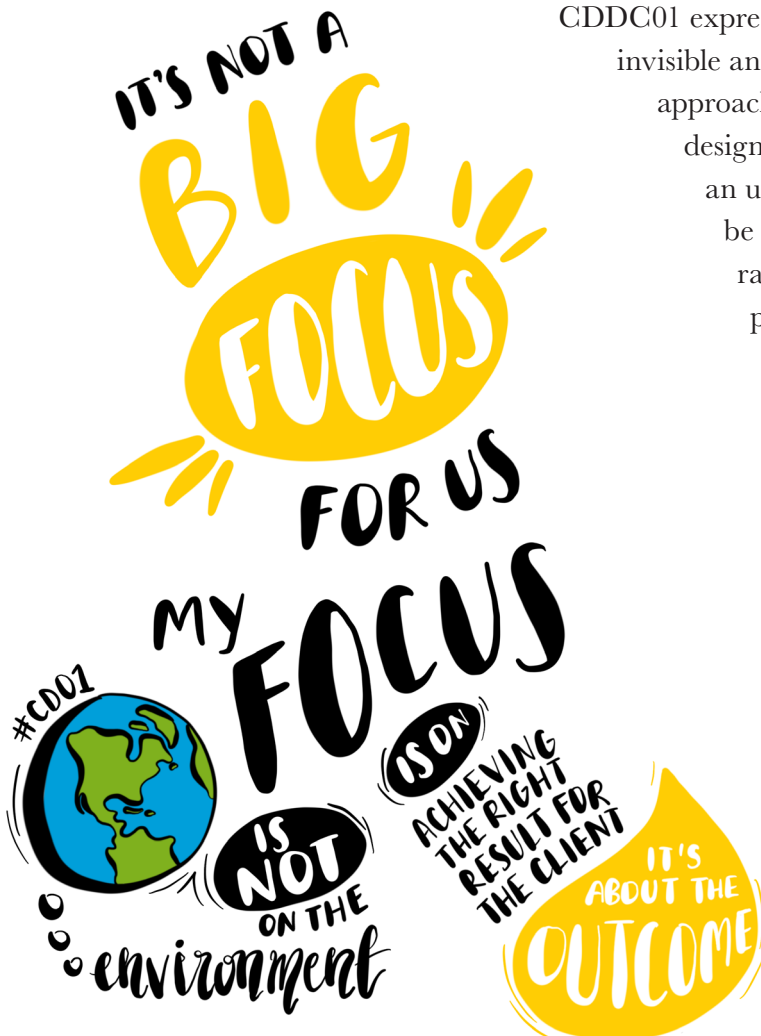
design industry. The responses varied in surprising ways including, ‘I don’t know what sustainable design means’ (IDDC01), ‘I’ve only thought about it once as part of a tender’ (CD07), ‘it’s not front of mind for us’ (CD01), and ‘it’s a broad word, I wouldn’t use the term sustainability with design’ (CDID02). Some were tentative with their responses, best demonstrated by one designer who diplomatically stated, ‘I don’t think it’s something we’re that articulate about as a profession’ (CD06). Others spoke in purely technical terms claiming that ‘it’s all about the paper’ (CD04) ‘I think it’s just recycled paper and vegetable ink and that’s as far as it goes’ (CD03). But for a small number of designers practicing in a sustainable niche, sustainability was much more embedded in their thinking.



SHOULD BE  
INVISIBLE &  
UNIVERSAL

Figure 8.6:  
The deeper  
understanding  
of sustainability  
in design

Figure 8.7:  
The lack of  
focus on  
sustainability  
in design



CDDC01 expressed how ‘sustainable design should be invisible and universal’ and SD01 referred to it as ‘an approach where sustainability is an equal goal with design’. These last two interviewees indicated an understanding that sustainability cannot be thought of as an optional add-on but rather must be an integral aspect of design’s processes and outcomes. This suggested a more holistic approach to sustainability informed their work. Interestingly both designers went on to acknowledge that very few organisations (clients) position themselves in this way (as holistically sustainable), which they believed also limited the potential ‘market’. This correlates with interviewees who questioned the financial viability of sustainable approaches, but contrasts with notions that an altruistic focus can lead to financial security organically. This forms part of an upcoming discussion in this section.

The pattern that emerged with absolute clarity is that for the majority of the designers interviewed,



Figure 8.8: The commodification of design

considering sustainability even in a technical manner is not a norm in their practice. Furthermore, many practitioners felt they lacked the necessary knowledge to act, and several indicated that their action was reliant on directives from a governing body. As identified in the literature, without adequate knowledge a failure to act is inevitable<sup>880</sup>, but relying on governing bodies for such information could also fail to build the kind of knowledge that is needed. Throughout the interviews, many designers expressed a need for tangible guidelines, with several stating that without this knowledge they would remain unable to act. These same designers looked to industry bodies for this knowledge, with

many communication designers pointing to the Australian Graphic Design Association (AGDA) as an information source. The focus on aesthetics in AGDA's critical engagement through awards suggests they are an unlikely conduit for such knowledge. The environmental policy in their current code of conduct states 'a Member shall work in a manner so that as little harm (direct or indirect) as possible is caused to the natural environment'<sup>881</sup>. Even those with knowledge of how to act accordingly might find this too ambiguous to act upon.

Figure 8.9: The matter of money

### Creativity and financial security

Money might be the currency of business, but creativity accompanies money as the currency of design practice. Despite the romantic notions of creativity<sup>882</sup> shared by many designers, most acknowledged that their design practice is also a business. In this sense, its creativity could also be decentred by its needs as a financial entity. Some interviewees spoke of the pressure they felt stemming from a responsibility to employees—in some instances they felt more responsible to bring in a project that would keep the studio running than to question its nature and risk losing it. The immediacy and proximity of their financial responsibilities loomed large, this appeared to trump any social or ecological responsibility they might have felt. This aptly demonstrates an important aspect of the experience of



880 See for example: Boehnert, *Design, Ecology, Politics: Towards the Eocene*; Tonkinwise, "Ethics by Design, or the Ethos of Things."

881 AGDA, "Agda Website".

882 Romanticising creativity was frequently described as designers sitting in bean bags 'naval gazing' for ideas.

the designer's double bind: a designer who is forced to choose between the survival of their practice or addressing sustainability, is left with little choice. This particular example is further complicated by the interviewees' sense of responsibility to the financial security of their employees as well as themselves. CDDC01 suggested it was commonplace for economic viability to impact transparency, and declared that in their opinion, many practitioners in the design industry lacked an ethical framework. Complications in the designer's role are also described by Grayling (in Roberts) who acknowledges that 'money can be a distorting factor in all aspects of life and work'<sup>883</sup> and this was evident in interviewees' discussions of money's influence on decision making.

Many practitioners spoke of their experience of financial pressures; while some discussed this in connection to the responsibility they felt to their employees and even to themselves, more frequently, financial pressures were discussed as a project constraint. 'The race to the bottom' was mentioned multiple times, and practitioners cited different reasons for design's commoditisation. IDDC01 felt it was just the nature of society<sup>884</sup>, CD01 felt it was driven by an influx of sole practitioners whose lower overheads drove design fees down, but most felt financial pressures were driven by client demands for lower cost work. The unfortunate outcomes of feeling a lack of financial security were expressed in a number of ways, but designers consistently spoke of finances as a limitation on sustainability, describing how budget constraints also decreased opportunities to incorporate sustainability into the work. CD07 and CDID02 worked in remote regions of Australia, and both felt that financial pressures were more significant in regional and remote locations than in more central areas. In response to this financial pressure CD07 expanded their practice to include an on-demand printing business which they described as an unusual but successful strategy. Other responses to financial constraints included accepting less creative 'bread and butter' projects more frequently, tendering for projects 'just for the money', reducing the number of concepts delivered, and lastly but also most frequently, reducing the time invested in the work.

#### Time constraints

As consistently as financial concerns were expressed, so too was the issue of time constraints, and these two tensions were typically discussed together rather than separately. Most designers felt they were consistently placed under time pressures but the results of this tension varied between interviewees. Several discussed how time constraints led to them working overtime (unpaid) and most agreed that time constraints impacted the creativity of their work. Designers drew on different strategies to manage their time, such as relying more heavily on reference material, pushing themselves to work faster, using their leisure time to think about their work (particularly common for idea generation), or sacrificing a project's award-winning potential in order to deliver it in a faster timeframe. Designer-employees expressed feelings of resentment towards their

<sup>883</sup> Grayling in Roberts, *Good: An Introduction to Ethics in Graphic Design*, p 36

<sup>884</sup> This designer's location and background suggests their reference to society is a Global North perspective.



Figure 8.10:  
The tension  
between time  
and money



managers; they felt the unrealistic expectations of them were driven by poor management further up the chain. Those in directorial roles appeared torn about how best to manage these constraints and often tried several of these strategies. Self-employed designers felt conflicted as they were simultaneously the person who accepted the unrealistic timeframe and the person required to meet it. CDID01, expressed disappointment in their repeated inability to decline work of this nature. Reflection on this and my own past experiences of saying yes to less desirable work, suggests this conflict is more likely to be experienced when a designer's financial security feels at risk.

Time was an ever-present part of these conversations, and none of the interviewees felt able to change their uneasy relationship with time and money.

Time and money were most frequently spoken of as two parts of the same problem. For most, long timeframes for delivery were considered an unimaginable luxury and long-term clients regularly briefed them on fast turnaround projects. This pace can lead to short term solutions applied to ill-defined problems. Of significant concern here is how designers' thinking is impacted by constant time constraints and creative pressures, how limited their approaches become and how this continual short-termism prevents long-term thinking about the possible future impact of their work.

Constant concerns about financial security appear to lead to saying 'yes' to more of this same kind of work, which appears to perpetuate more time constraints.

The design industry appears to be caught in this loop as a result of its connection to business and subsequently the economic status quo, which drives down prices and increases volumes. As designers adapt to these mounting pressures, their processes must also become more efficient (though not necessarily improved) and so the cycle continues. Due to a lack of industry regulation, designers must manage this situation themselves. But a lack of empowerment will likely make critical engagement elusive, and could result in client briefs that demand the impossible and unsustainable in perpetuity.

What is the designer's responsibility?

The number of design-driven issues humanity faces in mitigating sustainability problems is significant, yet for many designers consumption and waste were not initially considered design problems. This was best demonstrated in one interview where designer CD07 described their frustration at over-packaging in supermarkets but went on to say that it had never occurred to them to address the matter when selling packaging to a design client. IDDC01 described how

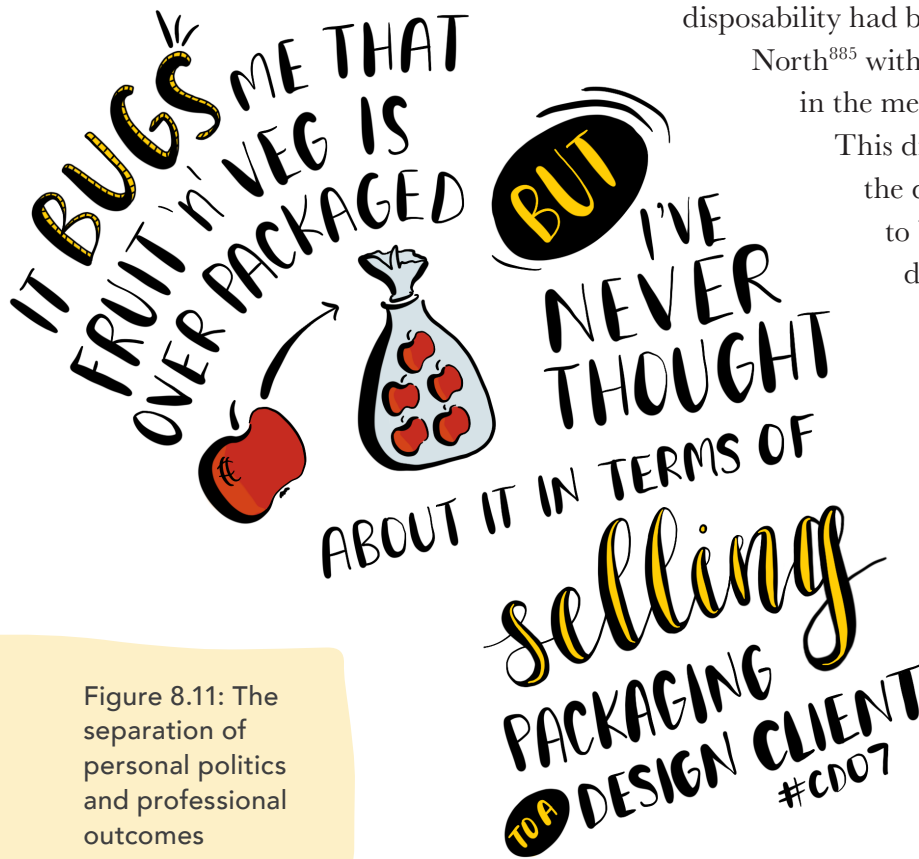


Figure 8.11: The separation of personal politics and professional outcomes

disposability had become part of culture in the Global North<sup>885</sup> without fully recognising their own role in the mediation of this cultural transience.

This disconnection or disassociation of the designer from their work appeared to be an experience shared by many designers. It points again to a lack of critical thinking in terms of the work performed, and to a broader sense of under-empowerment in the role of designers. When designers expressed themselves in disconnected ways it was frequently paired with an attachment of responsibility to the client—it was the client’s responsibility to include sustainability in their brief, not the designer’s. CD03 stated that ‘if it’s not in the brief then it’s not in the thinking,’ which suggested that sustainability needed to be

a directive rather than their initiative. Whether this is a true lack of initiative is unclear, it is likely more indicative of their perception of the designer’s role and the client’s expectations of how that role should be performed. CD01 also spoke of roles, separating out their own responsibilities from those of the client, suggesting that it was not their role to question the sustainability of what goes inside the package, just to design the best package possible. As discussed in the critique of the Gillette razor packaging case study, we have reached a time where questioning the contents of the package being designed is a critical conversation to have. To follow arguments from Glaser<sup>886</sup> and Roberts<sup>887</sup> about responsibility in transmittance, to design the package is to accept responsibility for transmitting its contents. Without critical questioning, how can designers know what they might be transmitting?

Many designers expressed that they felt their expertise was respected by their clients. This indicates that if these designers were to engage critically with their clients, important conversations about sustainable futures could begin. Of interest here is that several designers appeared confident that their clients would listen to them, yet maintained an apparent unwillingness to engage critically with them, stating that it was not their position to do so. The expressions indicated a level of disengagement, and reflection on the interviews

885 ‘Global North’ was not explicitly referred to as such, but it is reasonable to assume that the discussion related to the designer’s experience of disposable culture in the Global North as this is where they are from.

886 Glaser, “Ambiguity and Truth.”

887 Roberts, *Good: An Introduction to Ethics in Graphic Design*. p 90-93

left me wondering what was preventing affirmative action? ID02 suggested a fear of losing their job inhibited action, but for CD01, a lack of sustainability knowledge, even at a surface level made action impossible. Their expression that ‘sustainability is not a priority for us’ indicated that as an agency they were not thinking about sustainability, let alone talking about it with their clients. Suggestions from CD01 and CD04 that sustainability needed to be ‘pushed by someone’ indicated an awareness of the importance of addressing sustainability in design, but this accompanied a lack of acknowledgement that addressing sustainability was part of their responsibility as a designer. Designers’ expressions of a need for direction from a governing body (industry or otherwise) is perhaps symptomatic not just of a knowledge gap, but of a larger ethical problem within the design industry. Any notions of social or ecological responsibility have been pushed so far back that it would appear that many designers feel their responsibilities are to the client, the outcome, and to their own financial security.

While reflecting on this I returned to the comment from Glaser, that ‘looking for ethics in design is like looking for cabbages in a butcher’s shop’<sup>888</sup>. The need for ethics in design is greater now than ever before. Throughout this analysis I have felt confronted by and uncomfortable with designers’ ability to simultaneously identify with design as a creative practice yet disassociate from design as an ethical undertaking. Under-empowerment, and expressions that implied it, were a common theme throughout these interviews. Many designers discussed their ‘seat at the table’, an apt boardroom-based metaphor for the inner business circle, where decisions have the greatest potential to be influenced. Some

referred to this seat as a ‘token gesture’; they felt that the ‘real business decisions’ would have already been made, but their seat reflected the faith a client placed in their ability and expertise. CDID01 stated indignantly, ‘I might be at the table but it’s [sustainability] not on the table’, a comment that reflects one of the many challenges facing designers in repositioning themselves. A seat at the table might signify a clients’ respect, but unless that seat can be used to critically engage with clients about social and ecological sustainability it might as well remain empty. It is through such critical engagement that designers could reveal their potential value to a client beyond that of an aesthetic expert. Here they could engage in the kinds of conversations that more accurately reflect the designer’s true responsibilities—to ecology and

Figure 8.12:  
The weak  
positioning of  
designers



888 Glaser, “Ten Things I Have Learned.” p 3

Figure 8.13:  
The glib  
impression of  
design as a  
sales tool



society—and in doing so possibly even affect some real change. Unless designers use their seat to engage more deeply, they will likely remain a mouthpiece for organisations making unsustainable decisions about the future.

#### Design's role in accelerating consumption

A lack of critical engagement with design's role as a cultural mediator in a consumer society was demonstrated in

CD04's remark, 'I would not know what to do as a designer or a person if I wasn't selling something'.

CD03 spoke of the necessity of buying and selling things, describing this as a natural part of the world we live in, while CD07 commented that they had never thought of design in that way before—it had not occurred to them that design was used as a sales tool.

Many discussions seemed prefixed with a total acceptance of design culture as something quite separate and distinct from consumer culture.

For several designers their work seemed to be so neatly compartmentalised that even when discussing it in terms of brand awareness, market segments and profit they still spoke as if design was somehow disconnected from the end-result of these things. Some spoke with a sense of awareness, but for these few there was also a somewhat comfortable acceptance that

this was 'the nature of the beast', that people need to buy things and that a designer's job was to make those things more desirable. Sometimes this was expressed in terms of a desirable goal that also incorporated creativity, at others it was discussed more dryly, as an obvious consequence of working for businesses. At no time during any of these interviews was there an expression of resistance to design being used in this way. For most designers it was either an accepted part of design, or an aspect that had gone previously unexamined. The focus of many of these discussions returned to money—how else would a designer earn an income if not by performing these types of tasks for these types of clients?



Figure 8.14:  
The goal of  
selling in  
design

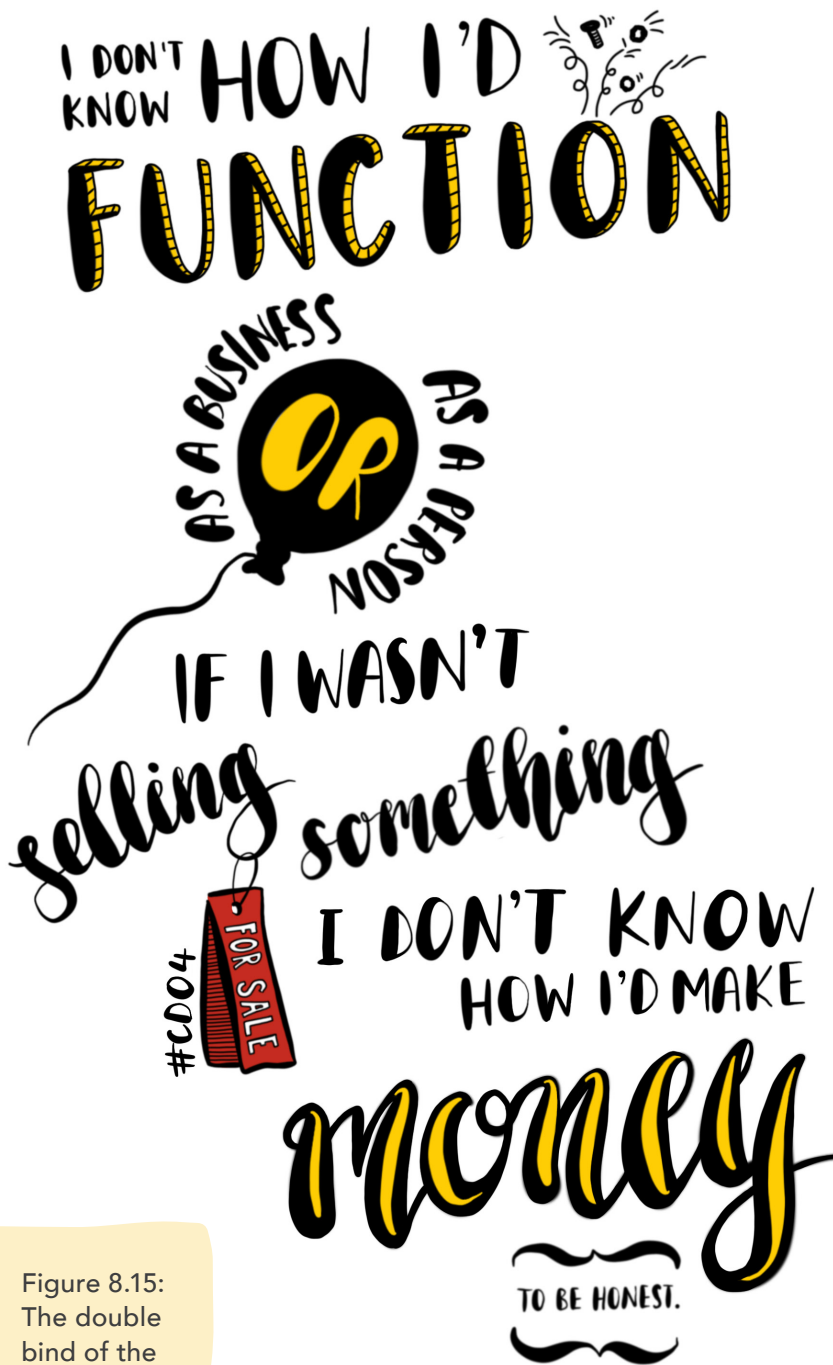


Figure 8.15:  
The double bind of the  
designer-  
consumer

It was this very question that I had been investigating in my own practice. Much like my peers, I had also felt unsure about how I could earn an income without contributing to accelerated consumption and without relying on working exclusively for causes or not-for-profit organisations. This last point is particularly relevant—cause-related work was outlined by CDDC01 and ID01 as being part of a very limited market. The possibilities remained elusive until after my self-transformation to conscious consumption. It was through this constant questioning that I began to explore what design might be if its goals were ‘redirected’, and subsequently, how a designer’s identity might also change as part of this redirection. Embracing alternative approaches to design, led to questioning whether my identity as a designer changed because of the explorations undertaken in my practice or whether my practice changed as a result of my identity shifting? Whilst no clear answer

arose from this very circular reflection, the outcome remains the same, both my identity and my practice have transformed. As my practice continues to transform beyond making greener things, I continue to face tensions arising from this process of resisting industry norms.

### 8.1.2 Rising tensions: following and resisting practice norms

Interviewees provided descriptions of their typical design and business processes, client relationship management and approaches to projects that bore a remarkable similarity from one designer to the next. Consistent experiences of tensions relating to time constraints and financial pressures were described and most agreed that these tensions impacted the creative process and its outcomes. Whilst the descriptions were overwhelmingly consistent, there was a

Figure 8.16: The inconceivability of sustainable design



small group of designers resisting the industry norms. Though it appeared that designers experienced tensions both when following industry norms and when resisting them. The reasons given for resisting these norms varied, but most were driven by a desire to work more ethically and align their work more closely with their values. For some this meant pursuing work in the health and education sectors, for others this was done by working exclusively for causes, for a small few this meant how they worked needed to change entirely.

Shifting away from design as making towards design as consulting and facilitating was a rare but interesting response to these tensions, that was described in conjunction with a recognition of the limitations in practicing design as a form of making. For CDDC01 this limitation was experienced as a result of feeling unable to fully address sustainability through design as making. In their experience, the impact of their work was greater as a design consultant and facilitator than it could be as a designer-maker. They described how consulting had increased their influence by bringing them into the client relationship at an earlier stage and by operating in a more collaborative way. Of interest here is how they felt this was unachievable

through design-making, only through design-consulting. For IDDC01 a shift towards consulting was a way of repositioning themselves in order to adopt a more strategic approach to design. The driver here was not sustainability, rather a desire to increase their impact at a business level, yet they acknowledged that in this altered position they would be more able to influence an organisation's sustainability via their overarching business strategy. Whilst this opportunity had not been seized, they believed through a consultancy role it would be possible.

The desire to shift away from design as making in order to practice in deeper ways correlated with expressions from

Figure 8.17: The tension between sustainability and disposability

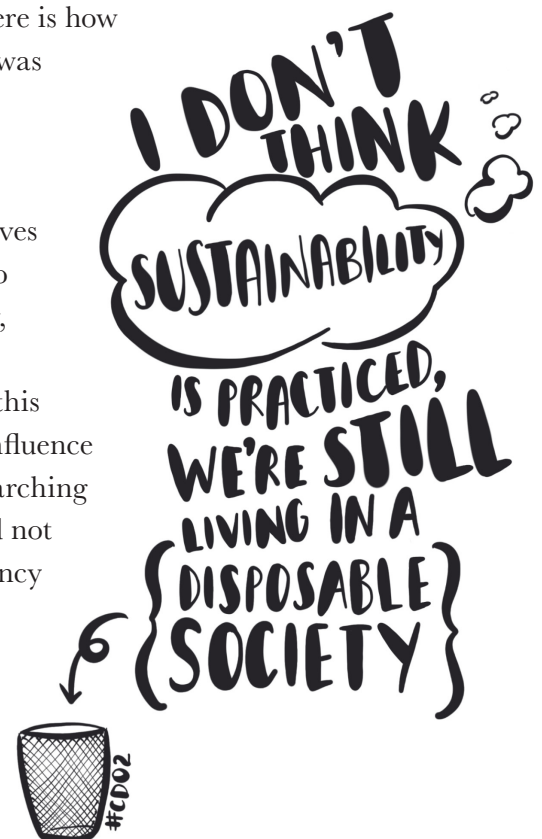


Figure 8.18:  
The inability  
to say no

other participants, who felt that sustainable design was not practiced. IDDC01 expressed this as an aspect of ‘living in a disposable society’, but CDDC01 felt that ‘most practitioners don’t have an ethical framework... if you don’t have one then the grey area is where you live’. This ethical perspective aligns with the literature<sup>889</sup> and suggests some designers might condone unsustainable design as an aspect of identity construction. In this sense, structural limitations could be used to excuse practitioners’ shallow engagement with sustainability, rather than prompting a more critical engagement with the direction or goals of design and design practice. Others felt sustainable materials were too limiting. CD04 claimed that no amount of design could overcome imperfections in recycled stock. In their mind the aesthetic considerations of their design as ‘good work’ (that is, award winning work) justified a resistance to using sustainable materials in the end outcome.

### Repositioning and redirecting

Those resisting unsustainable norms in commercial practice are creating new niches of practice. This presents opportunities to engage with business strategies that could influence sustainability. Their resistance of the norms appears to be facilitating their repositioning from resource to expert. Yet using this repositioning as an opportunity to redirect projects towards increased sustainability still relies on critical thinking that extends beyond things, beyond aesthetics and perhaps even beyond profit. Relational thinking and design thinking could provide structure and space for increased engagement with sustainability, yet most designers appeared to think in terms of outcomes, their aesthetics and their direct connection to business/brand/communication strategies. In this context, strategy is typically employed as an approach to better align projects and their outcomes for the purposes of increasing profit for the client rather than aligning to a sustainability strategy or goal. Several designers indicated that a lack of care and a lack of funding typically inhibited strategies with sustainability goals. Many referred to ‘box ticking’ approaches that were easily abandoned or overturned for economic reasons, with time, money, and a lack of knowledge being cited

WHO  
ARE WE  
TO SAY  
**NO**  
TO A  
client  
WHO  
WANTS  
TO SPEND THEIR  
MONEY ON  
SOMETHING?  
#CDD03

889 See for example: Milton Glaser, Anthony Grayling, Lucienne Roberts and Cameron Tonkinwise

as the most significant barriers to sustainability. Others felt differently about the idea of redirecting a project. CD03 asked, ‘who are we to say no to a client who wants to spend their money on something?’ suggesting that regardless of the brief or its outcome they would contribute their labour to it. CDID01 spoke of how a client’s suggestion of what they need is rarely questioned by designers ‘because they want to be able to redesign a logo... to generate more work’. Others discussed their uncertainty in how to take action to ‘redirect’ a project, with many expressing that they did not feel knowledgeable enough to perform their role any differently to the industry norms. This question, ‘but how?’ has been continually expressed throughout this research. Designers appear to be generally lacking the necessary knowledge to critically engage with sustainability, and extending beyond the design industry’s myopic approaches without such knowledge is unlikely. This points to a need to embed critical thinking for sustainability in designers’ education, and as argued by Fry and Willis, this is currently lacking in education<sup>890</sup>.

Figure 8.19:  
The lack of  
acknowledgement  
of the value of  
altruistic values

THE  
MAJORITY  
OF PEOPLE KNOW  
WHAT  
values are  
**BUT**  
IT'S  
50-50  
WHETHER THEY  
think  
THEY'RE REALLY  
IMPORTANT

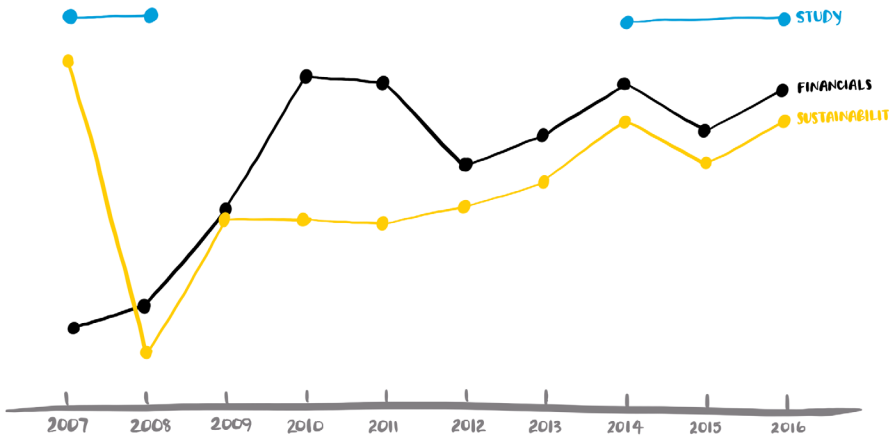
#### Values-based approaches

Another form of resistance to industry norms was identified in a small group of designers’ descriptions of values in their work. Most of these practitioners spoke about values as part of a more altruistic worldview, an attitude frequently accompanied by passion for social and/or ecological sustainability. What became apparent through comparative analysis was how designers following industry norms appeared to be driven by extrinsic values. This was most commonly noted through their expressions of the importance of success, influence, wealth, social power and tradition, however none of these practitioners mentioned values explicitly during their interviews. Those whose work was underpinned by intrinsic values expressed an uncertainty as to whether this values-base was evident to others, often mentioning the lack of care or lack of importance placed on values by other people. Feeling separate from the industry was a commonly expressed side-effect of working in this way, and CD02 and CDDC01 both believed their views were quite different to the norm. CD02 and ID01 both spoke of how they focussed on people instead of profits. Most designers in this small but outspoken group believed their focus on relationships and altruism brought with it an organically developed financial security, without the efforts typically involved with achieving financial success.


890 Fry, “Design after Design.”; Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.”



Figure 8.21:  
Tracking  
the financial  
performance and  
sustainability of my  
pre PhD practice



FOR THOSE I'VE HAD A  
CLOSE CONNECTION  
WITH IN THE INDUSTRY  
IT'S ALL ABOUT THE  
DOLLAR



[ I DON'T GO  
looking  
FOR THE DOLLAR  
BUT THE WORK COMES ]

Figure 8.20:  
The organic  
economy from  
'good' design

The experiences of this smaller group frequently mirrored my own. A map that overlaid project types and financial outcomes in my practice from 2007–2016 revealed a similar upward trend (see Figure 8.21). Altruism and a focus on relationships in my practice also resulted in a steady workflow, eliminating

any need to focus on or chase after financial success. This experience contrasts with attitudes from interviewees who suggested that working this way is financially unviable. At the risk of sounding unacademic, the notion of this being a form of 'good karma' was something I sensed throughout this period. Much like the designer intuition that guides practitioners throughout design thinking and making, I felt I had embraced another kind of intuition in my decision making—an intuition that when followed, led me to explore more altruistic projects. In Australian Indigenous culture, an important aspect of decision making is listening to the gut<sup>891</sup>. This is considered to be a form of *being in and with* the world, and Scharmer contributes a non-indigenous approach to this same ontology<sup>892</sup>. Experiencing financial security while following this gut-instinct was anecdotally recognised prior to conducting this research. Further reflection on collected data and my own experiences suggests that following gut instincts led by altruistic values achieves financial security (but amasses less wealth) than extrinsically-led financially focussed approaches. If both approaches will pay the bills, perceptions that sustainability is unviable in design practice could

be argued as misguided. Whilst this work is less likely to build wealth, citing finances as a barrier to its pursuit warrants reassessment.

891 Nia Emmanouil to Being with Country, 21 February, 2017, <https://beingwithcountry.net/tag/feeling/>.

892 Claus Otto Scharmer, "Organizing around Not-yet-Embodied Knowledge," in *Knowledge Creation* (Springer, 2000).

### 8.1.3 Stories of transitions: shifting away from the norms

Practitioners transitioning their practice experience tensions and challenges in different ways; some have been unique to the constraints of the designer-employee experience, but others are more commonly experienced. Constraints relating to the intersection of time and money seem to exist whether designers are self-employed or not, and this is irrespective of following or resisting norms. This is perhaps more symptomatic of the pressures stemming from the economic status quo rather than from any particular type of client or designer. Designers transitioning away from the norms might face new tensions arising from the need to autonomously fund their work, but embedded in the act of transitioning is a sense of empowerment. The level of empowerment felt by designers appeared to hinge upon their employment status and appeared to differ for designer-employees. For designer-employees, feeling under-empowered tended to silence them. They reported feeling unable to voice their concerns about projects or clients for fear of losing their job. For ID02, an attempt to rally peers to resist ‘defuturing’ projects as a group rather than as individuals, framed their descriptions of transitioning their practice within their place of employment as a kind of ‘class struggle’<sup>893</sup>. ID02 described how attempts to increase critical engagement in the workplace were often met with resistance as a fear of judgement was silencing voices. Descriptions of this workplace ‘class struggle’ included evidence of significant pay gaps relating to gender and hierarchy (male-female, employer-employee) that were difficult to fight due to confidentiality. Minority voices were also noted as being vocal in private but silent in group scenarios mostly frequently due to concerns over job security. Although employees were given a platform for open discussion, their fear of interacting on it made them appear tamed and apolitical to their employer, whose inability to identify any issues within the workplace appeared to add to the experience of ‘class struggle’ amongst employees.

Gee’s concept of Counterpower<sup>894</sup> is evident in the actions of designers who are trying to shift their practices. Idea counterpower is evident in the pursuit and presentation of research<sup>895</sup> ID02 conducted that critically interrogates how the company’s product might be reinforcing marginalisation of minority groups. A kind of economic counterpower is evidenced in SD02’s negotiation of mandatory time for the pursuit of transition design as part of their design agency employment contract. SD02 successfully negotiated this time upfront, but described how six months into this contract, typical business concerns (time and money) had prevented exploration of transition design. Both interviewees were attempting to transition their workplaces as a first step in ‘redirecting’ the outputs of their labour. However both attempts to redirect labour were

893 This reference to ‘class struggle’ is born out of Marxist thinking that under capitalism, divides classes of people into ‘workers’ and a ‘ruling class’. ‘Class struggle’ is commonly experienced in the tech industry where workers (including those not classified as such, for example, Uber drivers) are often marginalised and exploited and whose labour force amasses significant wealth for tech platform owners. Particular to ID02’s notion of ‘class struggle’ is their experience as a ‘worker’ within the tech industry designing a tech platform product.

894 Gee, *Counterpower: Making Change Happen*.

895 This research remains unpublished. Permission to publish was refused after its presentation to the company CEO. This ethnographic research was presented in house and its processes and outcomes were discussed during ID02’s interview process.

met with resistance due to the financial and time constraints that are common in the design industry. This demonstrates some of the additional challenges faced by designer-employees, where a lack of influence can limit their ability to pursue transition design.

Those with exposure to transition design through the short course offered by Irwin et al had varying degrees of success implementing the principles into practice. Four course attendees were interviewed, one from the 2016 course and three from the 2018 course. SD01 declared that from their perspective transition design projects were theoretical only and did not exist in the real world. This perspective is likely influenced by the timing of their course attendance in 2016, during which time transition design was in an earlier incarnation. In 2018, the course presented two practical applications of transition design, *Transition Ojai* and *Futures of Fish* (a retrospective application). Three attendees from the 2018 course reflected on their perceived skill gaps in relation to transition design during interviews. All expressed uncertainty about ‘how to do transition design’, they felt more knowledge was needed before they could act. DC01 described attempts at navigating the ‘how’ and felt further training would help to activate their practice of transition design. The most commonly expressed concerns related to the articulation of transition design as a practice, and at the time of interviewing, all four course attendees struggled to articulate how this practice could be incorporated into their work.

Reflection on my experience of the same course reveals a number of key insights into my engagement with transition design. First and foremost, my practice of this emergent method has been privileged by its incubation within this research. This incubation has provided the time needed to build new knowledge, the space to explore projects and the opportunity to test theories as part of a larger academic process. Secondly, I have been afforded opportunities to explore this work under the guidance and supervision of experts in the field. My PhD supervisors have supported my work, allowing me to build confidence whilst benefiting from their wisdom, and my principal supervisor has presented relevant project opportunities to me, and in doing so has expanded my network of contacts. Thirdly, as the principal of my design practice I am empowered to make decisions about the nature of the work undertaken and have the power to hold space for transition design projects. Not unlike the interviewees, I also initially struggled to articulate this practice. Through this research I have benefited from much needed time to closely explore the method, and in writing this thesis I have been able to consider a number of different expressions of this practice. My practice of transition design has been blended with other approaches, particularly autonomous design, but the theories and aims from transition design are still evident in my attempts to design for transitions. Whilst I disagree with SD01’s suggestion that transition design projects are non-existent, I suspect that many of the practitioners working on systemic change have limited visibility and may not be badging this work as ‘transition design’. I base this on anecdotal evidence drawn from discussions with academics and practitioners at conferences, and from a recent collaboration with practitioners abroad.

Reflection on these interviews revealed how complicated it can be to design against ‘defuturing’. Despite the tensions and conflicts it presents to practitioners, the practice of transition design is slowly surfacing outside of academia, and these interviews signify practitioners’ commitments to making space for transitions within their own practices. Making space for transitions is discussed as a curatorial process in the next chapter; I believe this process has played a key role in nurturing the transitions taking place in my practice.

## 8.2 Process

This section analyses the processes explored through my practice and reveals how my approach to design has transformed through this research. It begins with an exploration of the role of hybridity and fusion that has both facilitated and accelerated the transformation of my design process. It discusses collaboration as a key aspect of this transformed process, revealing how it can be both a challenging yet rewarding characteristic of designing for transitions. It also explores how new ways of designing have been embraced as part of the transition in my practice and contextualises these approaches through a discussion of the *Rethink Rubbish* project.

### 8.2.1 Hybridity

Themes of fusion and hybridity have been ever-present in my design practice, which over the years has been performed as a tangle of creative sub-disciplines. More than a decade of intersecting communication and interaction design, writing and illustration has driven the direction of my practice and shaped its outcomes. The visual and strategic nature of projects has varied, but has most often involved branding, web design, publication design, information graphics, illustration, and the creation of custom typography and iconography for use across print and digital mediums. Early-career experience in web design and development has evolved into interaction design (UX/UI) and an exploration of service design was also undertaken as part of this research. These sub-disciplines are all distinct in their processes and are different orders of design<sup>896</sup> however transition design brings together the skills of the lower orders and applies them to complex problems in the higher order<sup>897</sup>. Tonkinwise argues that transition design’s focus on systemic change posits it as fourth order design, and that when designing for systemic change, the skills of the first three orders of design provide a kind of scaffolding for operation in the fourth<sup>898</sup>.

As my practice has evolved to focus on design for transitions, it has explored a number of perspectives and approaches—particularly autonomous design and transition design. Through blending methods and methodological approaches I have been able to push past the limitations of one method by incorporating it with another. For example, the *Rethink Rubbish* project used cradle-to-cradle (or zero waste design) in conjunction with transition design and autonomous

896 Buchanan, “Design Research and the New Learning.”

897 Tonkinwise, “Design’s (Dis)Orders & Transition Design.”

898 Ibid.

design in order to enrich design outcomes addressing consumption and waste in a school community. I continue to question the need for a prefix to define this practice, and wonder if perhaps the suffix is more relevant. The aims and outcomes of my practice do not neatly slot into communication design, interaction design, service design or transition design, and considering Tonkinwise's thinking on how these design orders roll into one another<sup>899</sup>, perhaps I should not expect them to. Rather, I have drawn on a blend of methods that straddle each of these sub-disciplines in order to design for transitions. Whilst this has at times been practiced as transition design, it has more frequently merged transition design with autonomous design while also drawing on the skills from communication and interaction design. This hybrid practice is given more context by the suffix transitions. Design for transitions is broad enough to consider outcomes that span multiple sub-disciplines. It is explicit in its aims whilst permitting the flexibility that is required for design at this scale. Design for transitions facilitates project opportunities for transitions within organisations but also operates outside of the status quo through projects with communities and social movements.

As my practice has continued to transition I have explored how and why the changes within it are taking place. This exploration has revealed how a foundation for this practice was laid in the decades preceding this transformation, not only through my experiences as a designer, but also through my experience in change management as part of a former corporate career. This reveals that hybridity in my practice has involved more than mixing design methods and creative sub-disciplines, it has also incorporated business insights that could have sub-consciously informed my practice.

Transition design and autonomous design are proving to be compatible approaches, and a hybrid of these approaches has been used to explore the *Rethink Rubbish* and *Flourishing Fleurieu* projects discussed in this research. Through these projects, autonomous and transition design processes have become particularly integral to my approach. This has added to the hybridity in my practice and has used it in advantageous ways, creating a sense of 'kairos' in the approach—used in this sense to describe an invoking of the right skills at the right time for the right project with the right team of collaborators.

### 8.2.2 Collaboration

Collaborative approaches can challenge people who are less accustomed to working with others, but collaboration provides valuable insights that benefit projects and can offer groups of disparate thinkers ways of moving forwards together. Proactive mediation techniques have been presented in previous chapters as a way for designers to manage the group dynamics that can arise through collaboration with stakeholders, and these techniques are also discussed below. The role of collaboration is explored here as a crucial yet often under-utilised way of working that plays an important role in sustainability transitions.

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899 Ibid.

Figure 8.22:  
The lack of  
collaboration

CLIENTS  
AREN'T  
INVOLVED  
IN THE  
creative  
PROCESS  
AT ALL.  
THERE IS  
A BRIEFING,  
THEN THERE'S THE  
PRESENTATION  
THERE'S NO  
COLLABORATION

For many designers, particularly those from a communication design background, collaboration is not an inherent part of the design process. Interviews with designers revealed that collaboration or co-creation is often experienced as a feedback loop between designers and clients or other stakeholders rather than a deeply engaging creative process. Most communication designers expressed a preference for working independently, and several expressed a dislike for collaborative processes. CD03 described client collaboration as akin to micro-management and felt that collaboration with end-users was unnecessary, relying instead on designer intuition and desk research to target and position their work. CD01 felt that their designer-employees did not collaborate well, claiming it hindered their creative processes and generated less successful ideas, so they encouraged independent work over collaborative work in the studio. It was noted that none of the communication designers interviewed had ever engaged in a collaborative design process with end-users, and most felt it was unnecessary.

For interaction designers however, end-user collaboration was more common. IDDC01 described how their entire business model relied on effective collaborative relationships, and most interaction designers reflected positively on their engagement with collaborative processes. It was noted during reflection on designer interviews that collaboration was often described like a business tool that provided designers with an additional feedback loop and user insights. In the Australian design industry, it still appears to be less common for designers to engage in truly participatory co-creation processes. The approaches taken in Australia seem to draw more from the American co-creation model of user research than the European model of participatory design<sup>900</sup>. Of interest here are the insights this provides into the role of ego in design collaborations.

When collaboration creates a feedback loop it considers end-users but maintains

designers' expert positioning and cognitive biases in creating the end-outcome. Conversely, when collaboration is participatory, end-users co-create the end-outcome with designers, which fosters a different relationship dynamic between collaborators. For a truly collaborative process to occur, the expert-designer's ego must be cast aside in order to actively create space for non-expert designers to contribute.

900 Sanders and Stappers, "Co-Creation and the New Landscapes of Design."

Reflection on the collaborative processes used throughout the *Rethink Rubbish* project revealed that in the role of designer-facilitator, an explicit casting off of ego helped to create a safe space for a participatory collaboration where everyone's contributions would be valid. During rubbish provocations with younger students, children were encouraged to document their ideas through

writing, drawing and storytelling processes. It was their decision which mode of expression felt the most

appropriate which gave them power and ownership over how they approached

the process. In other collaborative

activities adult participants who were

less active expressed they felt they

were less creative than others

in the group. Most children

responded well to simple

verbal encouragement, but

it appeared that some adults

needed more encouragement

to feel safe from judgement

before they could express

themselves. This could relate

to the personality types in

these sessions, but is perhaps

more indicative of the dilution of

creativity and freedom of expression

that seems to occur after the transition

from childhood to adulthood. Regardless

of a group's demographics, creating a safe

space involved reassuring all participants that their

voices were important, that their ideas were valid, and that

everyone had something to offer. In the *Rethink Rubbish* workshops this was

performed through a range of verbal and non-verbal cues that were adjusted

in the moment to appropriately respond to and adapt within each group.

Creating a safe space for all ideas also appeared to diffuse competition between

ideas, allowing a celebration of all participants' contributions. Workshop

sessions closed with a celebration of the achievements of the group at large,

by regrouping smaller groups back into one larger group for 'show and tell'.

This gave participants the opportunity to share their ideas and the focus for

celebration remained on the volume of great ideas rather than on an individual

'winning' or 'best' idea. This reinforced the initial communication to the group

that there was no one solution to the problems of consumption and waste and

that we need a lot of different approaches to address wicked problems.

Collaboration within the *Rethink Rubbish* project also extended the approaches

taken within the workshops to include co-learning opportunities. This

created a number of moments where students from different age groups could

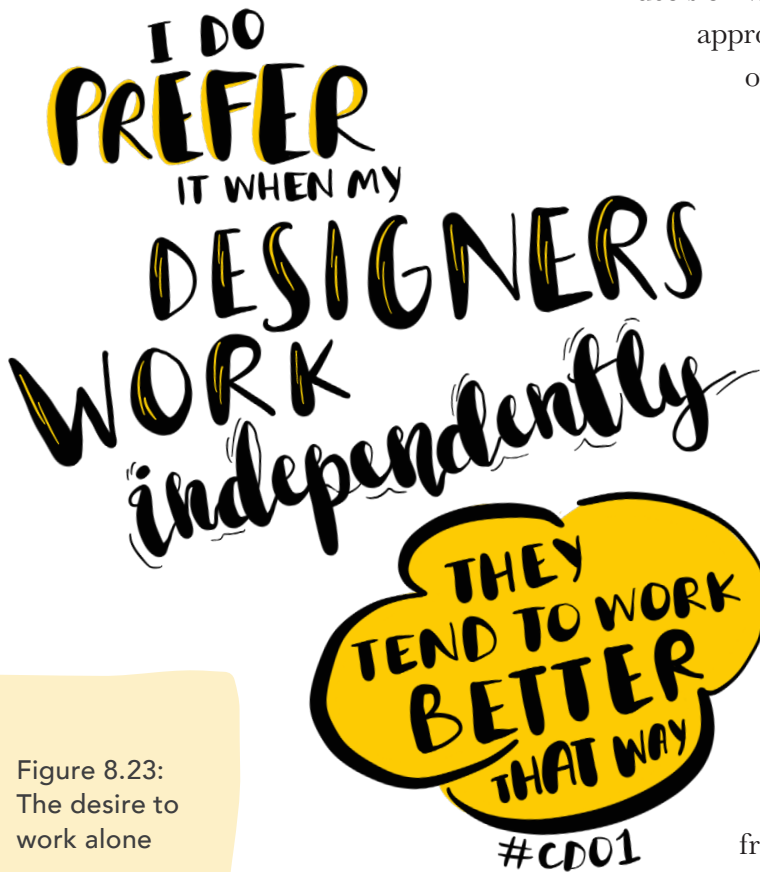


Figure 8.23:  
The desire to  
work alone

work together and share knowledge and insights into the school's zero waste transition. The introduction of co-learning created a more layered collaborative process with the intention of creating a foundation for continued student collaboration beyond the life of the project.

The role of collaboration in design for transitions is significant. Truly collaborative processes create opportunities for co-motion<sup>901</sup>. Co-motion aims to balance difference and sameness through collaboration. Rather than negotiating with disparate groups in the pursuit of compromise, co-motion brings disparate groups together, acknowledges their differences and creates a space in which they can co-create pathways forward, together. In some respects, co-motion is an act of proactive mediation. It acknowledges the potential for conflict between stakeholders and seeks to prevent it from interfering with their ability to fully participate. In this respect it could be argued that co-motion embeds justice into the collaborative process.

Sustainability transitions hold equal potential to be just or unjust<sup>902</sup>. In approaching the problems contributing to structural unsustainability designers must also remember how these problems intersect with issues of social justice and inequality. As a process of involvement, collaboration will be key in ensuring no one is 'left behind' as a result of sustainability transitions. Furthermore, collaborative processes work with all voices to create pathways forward on which all can travel, building a sense of equity into the process itself. As part of a consultative process in design for transitions, collaborative stakeholder engagement embraces participatory democracy, it acknowledges difference, it seeks to understand a range of perspectives, and actively involves people at every stage. Without this level of engagement, sustainability transitions risk justice for the sake of moving forwards. However, engaging in deep collaborative processes brings justice to the fore, ensuring we move forwards together and leave no one behind in the process.

### 8.2.3 New ways of designing

'New ways of designing' are presented by Irwin et al as an integral part of the transition design framework<sup>903</sup>, and the framework outlines different approaches to design that are particular to its goals as a multi-level multi-stage approach. Through this research I have practiced a range of new ways of designing, some have been a deliberate attempt at practicing approaches proposed by Irwin et al, and others have emerged from project explorations. Reflection on my engagement with five of these new processes reveals that new ways of designing do not negate old ways of designing. Rather the new builds upon the old, providing new thinking as a foundation for new processes that enhance existing design practices. In this sense, when designing for transitions I am still practicing communication and interaction design, but the new dimensions added

901 Esteva, "Regenerating People's Space.;" Samantha Muller, "Co-Motion: Making Space to Care for Country," *Geoforum* 54 (2014).

902 Damian White, "Metaphors, Hybridity, Failure and Work: A Sympathetic Appraisal of Transitional Design," *Design Philosophy Papers* 13, no. 1 (2015); "Creative Labour/Critical Designs/Just Transitions Imaginaries."

903 Irwin, "The Emerging Transition Design Approach."



by transition design are expanding my approach. Each of these new ways of designing connect closely with the thinking underpinning autonomous design and transition design and are discussed in relation to the *Rethink Rubbish* project.

### Design as facilitation

Engaging stakeholders in collaborative processes of co-defining and co-creation reveals the need to understand power dynamics and the importance of mediation and conflict resolution skills in facilitation. A short course in conflict resolution provided much needed training that allowed me to engage in collaborative processes with more confidence and provided much needed skills to better perform design as facilitation. This training ultimately changed my approach to facilitation to one of proactive mediation, where a collaborative space is designed by the facilitator to foster active participation in the co-creation of pathways forward. In dematerialised processes the designer creates space, moments or experiences rather than artefacts, objects or things, and reflection on this reveals the influence of the designer's mindset in this process.

Throughout the *Rethink Rubbish* project design has been performed as a process of facilitation. This work has been supported by a number of different artefacts and interventions, but the project has centred around a set of facilitated experiences that were co-created with each group of participants. Design in this context is highly reflective, requiring a balance of presence and mindfulness to reflect in-action, the agility to reflect and respond in-the-moment and the humility to observe and adjust behaviours and courses of action accordingly. Design as facilitation also benefits from a sense of openness from the designer—being open to difference, change, and plurality also requires concession of the role of expert so that others may step in and out of it. Planning such a process also requires trust in the self and the process, a comfort with chaos, recognition of what is emergent, and the emotional intelligence to acknowledge when a plan might be defunct. During reflection I recognised how highly responsive this process is, and how a designer's resilience will be a significant factor in their effective performance of design as facilitation.

### Sensemaking

A key aspect of design as facilitation is sensemaking; a process through which problems can be mapped and visualised in order to make sense of their complexity. Mapping processes are commonly used in design for problem articulation and solution exploration, typically producing artefacts such as mind maps, customer journey maps, and system maps. Design as sensemaking embraces a number of alternative mapping techniques that are underpinned by theoretical knowledge to permit deeper exploration and documentation of the varying dimensions of complex problems. In my performance of design as sensemaking in the *Rethink Rubbish* project, two distinct stages were noted. The first was a process of designing to understand, which primarily involved collecting, interpreting and analysing complex information. The secondary process was designing to communicate, which involved a re-engagement with

the information in order to visualise its complexity and clearly communicate this complexity to others. In *Flourishing Fleurieu*, a multi-stage process was also noted for sensemaking. Each stage contributed new insights into the different dimensions of interconnected stakeholder relations and reflection also utilised ‘reflective doodling’ (see Figure 8.24).

Reflection on this process revealed how ‘understanding’ was strengthened by ‘communicating’ and how both stages contribute to the overall sensemaking process. Design performed as sensemaking utilises both acts—understanding and communicating—in order to make sense of complexity. Mapping and analysis play a vital role in designing interventions to complex problems, and design as sensemaking might attract communication designers looking to make key contributions to sustainability transitions.

### Design as interventions

Investigating systemic problems involves a necessary ‘letting go’ of the designerly desire to solve. Systemic problems are large, complex, and temporal, and a designer’s understanding of the futility of one-off solutions is an important aspect of framing these problems at their appropriate scale. This deliberate shift in the designer’s thinking moves them from solutions-focussed approaches and grants them increased cognitive space to instead consider ‘systems interventions’, performed as a series of interconnected or coordinated activities. Approaching design in this way calls for systems thinking. But relational thinking is even more beneficial to the process of design as a form of intervention, due to its focus on plural approaches and the interconnections between things.

Thinking relationally in the *Rethink Rubbish* project created greater opportunities to manage the interconnections and intersections between systems and the problems seemingly ‘locked’ within them. Interventions were created with the understanding that attempting to intervene in large scale complex problems is different to approaching problems that are small scale, disconnected and solvable. Interventions were therefore designed and implemented across a variety of scales and timeframes, and a flexible approach was adopted to maintain the ability to scale up or down as needed. Observation and reflection on each intervention permitted their continual assessment and fast retraction if a scale-back was deemed necessary.

Observing and responding in this way prevented interventions from reinforcing structural problems, this might be likened to a process of ‘tinkering’ that ensures things work before they are scaled up. Performing design as interventions combines a range of old and new ways of designing, and interventions might be material or dematerial or a mixture of both. Worth noting is that while a solution can take the form of an intervention, an intervention is not a solution in and of itself. It is not an intervention’s outcomes (artefacts, moments or otherwise) that distinguishes them from solutions, but rather their sense of scale, temporality and interconnectedness within a larger constellation of activity.

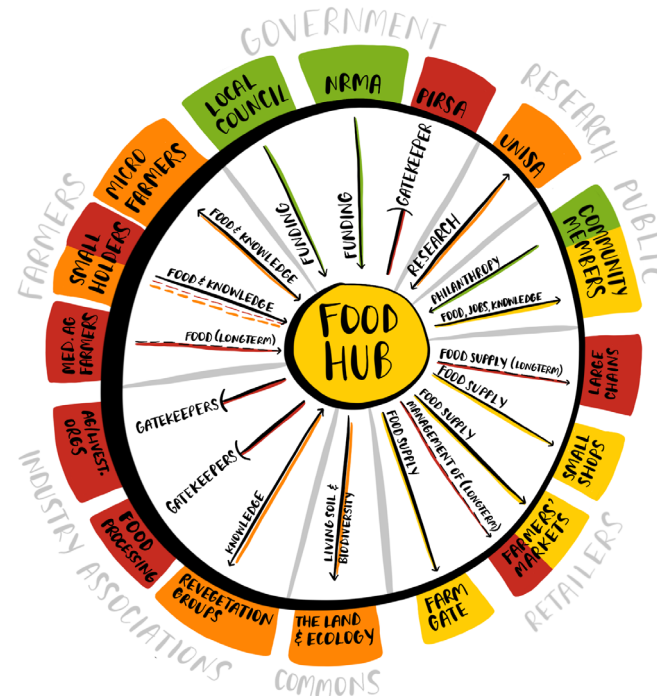
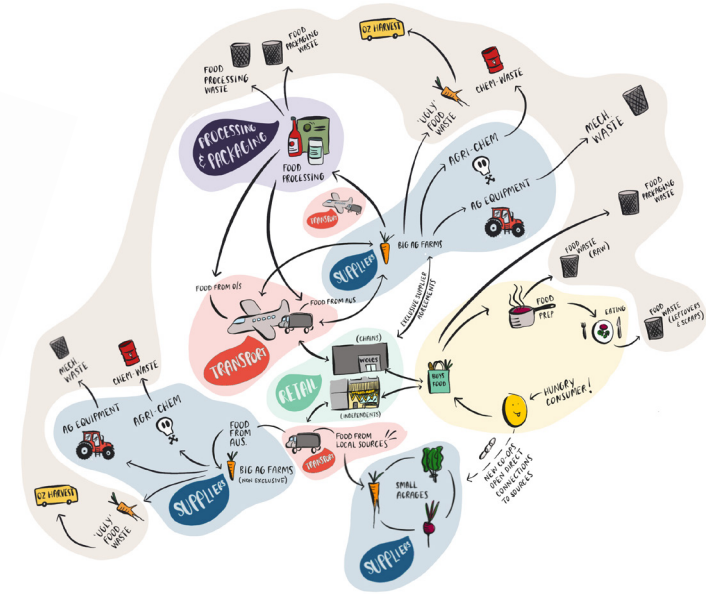
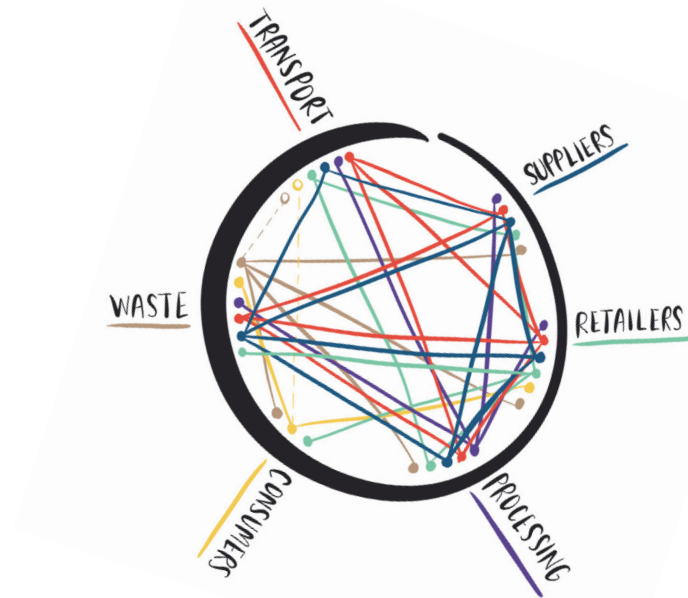
Figure 8.24: Different levels of food system stakeholder analysis for Flourishing Fleurieu project.

Top left: interactions between systems.

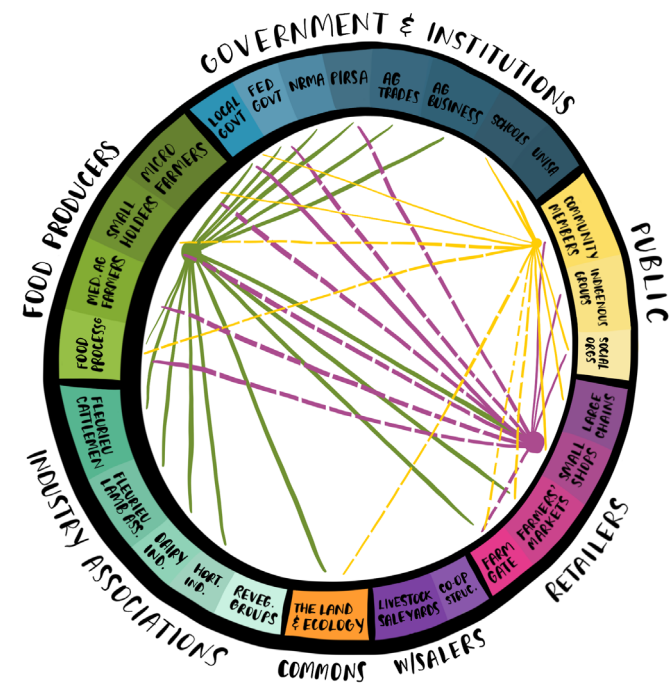
Top right: production of cross system waste

Bottom left: types of potential interactions with a food hub

Bottom right: mapping direct and indirect relations between stakeholders, recognising the land as a stakeholder



■ GIVING      ■ RECIPROcity  
■ RECEIVING      ■ CHALLENGES



## Ontological design

Ontological design is a process of designing new ways of being in the world. It directly connects the concept of design as interventions with the everydayness of sustainability. As previously discussed, much of the activity of everyday life has become unsustainable, from how we eat to how we bathe, our everyday behaviours are impacting the planet. Designing ontologically considers the combined impact of human behaviours and socio-technical interactions on the natural world. It approaches the design of things by considering how a thing's existence influences our future behaviours. Escobar and Fry<sup>904</sup> might describe this ontological process as an act of 'futuring'. They acknowledge how the things we design go on to design us, and propose ontological interventions to prevent 'defuturing'. Manzini<sup>905</sup> might describe it as a process of creating enabling solutions, designing in order to encourage the maintenance of sustainable life skills. Central to these interpretations is the acknowledgement of how design shapes human behaviour. Perhaps what is most illuminating in this process is the reframing of designing behaviour change as designing ways of being in the world.

Figure 8.25: Students co-creating a zero waste birthday party that uses scrap paper to make decorations such as kites and paper garlands instead of balloons, and reimagines party favours as potted flowers instead of plastic bags of sweets and trinkets.

904 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Fry, *Becoming Human by Design*.

905 Manzini and Walker, *Enabling Solutions for Sustainable Living: A Workshop*.



Ontological design distinguishes itself from designing behaviour change by using design to nurture new behaviours. This approach takes some inspiration from Fuller in its aim to make the old obsolete by focussing on the new<sup>906</sup>. In the *Rethink Rubbish* project, ontological considerations informed this focus on the new, and the project aimed to amplify grassroots efforts in zero waste by normalising a suite of sustainable life skills. Skills being practiced in sustainable niches such as conscious consumption and zero waste living were illuminated and injected into the everyday lives of students in a primary school. New behaviours were reinforced by a number of interventions, designed to interconnect and encourage new behaviours. Similarly, interventions discouraged unsustainable behaviours allowing them to recede over time. This slower approach facilitated a number of interventions over longer periods of time, and aimed to limit the resistance typically encountered during rapid change. Ontological design presents a necessary shift in design's focus, from the fabrication of wants to the satisfaction of needs, and could provide designers with a way of redirecting their daily labour.

### Temporal design

The larger scale of transition design projects combined with their potential impact requires more temporal approaches, using time as a medium in which interventions can play out. While time is not a particularly new medium for designers, historically its use has been more trivial, for example in the design of interactions and immersive experiences in commercial design. Considerations of time's role in sustainability transitions leads to a necessarily critical stance. This includes reflective activities that critically examine the potential impact of interventions pre-implementation, observing and responding to interventions' impact post-implementation, or creating granular visions for sustainable futures. Each of these activities asks the designer to consider possible future scenarios, to extend their imagination and analysis skills through time.

The aforementioned process of design as interventions is by nature plural and temporal. As part of a multi-level multi-stage process, the temporality of such interventions becomes a key consideration. In the *Rethink Rubbish* project, rubbish bin interventions in classrooms were implemented over three to five week periods as a series of small steps towards the goal of zero waste. Time was a key consideration in these interventions, and through processes of observation and adjustment, time was embraced as a crucial medium. Ignoring temporality would have hindered the project considerably by failing to recognise when/where interventions were needed.

Implementing this series of staged interventions was not without its challenges; as a designer restraint and patience were key, and for participants, tenacity was also important. Whilst a plan was prepared, it was created with flexibility in mind to adapt to emerging conditions from class to class, and it was noted that some class groups needed more time than others. For some participants this temporality brought frustration, but this was experienced for a variety of

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906 Fuller, *Operating Manual for Spaceship Earth*.

reasons. Some project champions felt impatient with their less passionate peers, they wanted them to change and they wanted that to happen quickly. Others felt frustrated by the lack of understanding of the importance of the transition's temporality—that those resisting the change were also risking the opportunity for the school to step up as sustainability leaders in the state. Meanwhile, less passionate participants viewed the transition at times as a disruption, and at other times as a personal inconvenience. This group appeared to be largely resistant to change, not just in their classrooms but also on a personal level. On reflection, these experiences were less of a commentary about temporality and more symptomatic of a paradigmatic divide amongst the teachers. To understand the root causes of resistance and to cross-pollinate some passion, two feedback workshops were facilitated using proactive mediation techniques, and participant-teachers' experiences were mapped. As part of these workshops, teachers collaborated on ways forward and suggestions for new ideas and potential interventions were encouraged as part of this process. This opened discussions about the transition to the broader school community and invited all to participate in co-defining and co-designing processes. Prior to these workshops, interventions had been managed primarily by the researcher and a collaborative working group of teachers, staff and students. Reflection on the feedback workshops revealed a benefit in involving larger groups of people, as those who were resistant to change felt that they had been included and heard. However, with large groups numbers and high passions, the need for conflict resolution skills was immediately evident, and this process could have taken a disastrous turn with a less informed approach.

The new ways of designing discussed here are a mere snapshot of those outlined in transition design framework. The limitations of this research bound this discussion to these five new ways of designing, which in my experience were complementary to one another and to my existing practices of communication and interaction design. Exploring them through the *Rethink Rubbish* project provided opportunities to extend my design practice and to document how these new approaches applied in a real-world design project.

### 8.3 Projects

Research through design has played an integral role in building active pathways between the thinking and doing aspects of this research and of design. Using this methodological approach, theoretical knowledge has been applied to practical outcomes, and alternative design methods have been explored through project work. Projects practicing the emergent approach of 'design for transitions' also demonstrate the role of a transformed process in shifting in my practice from 'making greener things' toward 'design for transitions'. This section analyses real-world design projects from my practice; it explores their shortfalls and highlights their potential to contribute to structural change. Discussion of this analysis points to a synergy between these two modes of practice and explores what role each might play in my post-doctoral design practice. A timeline of this activity is presented in Figure 8.26.

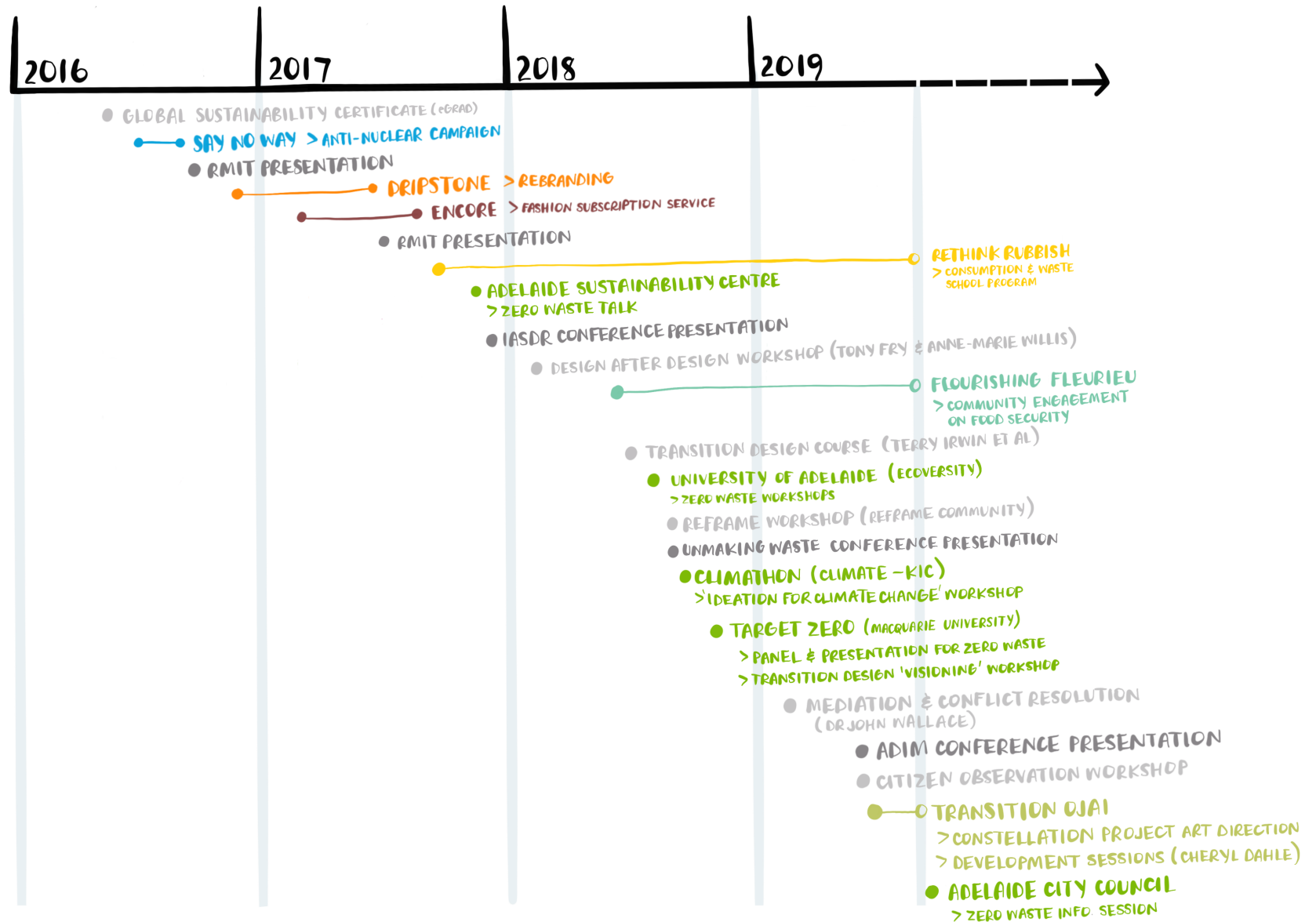


Figure 8.26:  
A timeline of  
projects and  
facilitation activity  
(repeated from  
Figure 2.3)

Throughout this research new knowledge (both theoretical and practical) has been implemented into every project undertaken in my design practice. This has been done irrespective of a project's discussion within the thesis. This has accelerated a process of professional development and has also permitted an immediate application of knowledge being built through this research. Exploring this knowledge through a variety of projects creates a real-world practice context that has also enabled reflection on possible futures within my practice. The purpose of this section is to discuss each of these projects as sites of analysis within the comparative case study of my practice. It explores the insights gained through the process of research through design, and discusses how this has impacted the transition taking place in my design practice. Whilst many projects were analysed, this presentation and discussion is restricted to two representative projects, *Dripstone* and *Flourishing Fleurieu*. *Dripstone* was a rebranding project undertaken during the first year of this research, it demonstrates the limitations of 'making greener things'. *Flourishing Fleurieu* is a transitions project that was undertaken in the third year of this research. Despite its infancy it demonstrates key differences in the 'design for transitions' approach in relation to pacing, process and outcomes. Limiting discussion to *Dripstone* and *Flourishing Fleurieu* also ensures a clear comparison between the approaches of 'making greener things' and 'design for transitions'.

### 8.3.1 Tools for analysis

Tools that adequately analyse/assess the sustainability of design outcomes are rare. Zink and Geyer argue for 'net green' assessments however most assessment tools lack this kind of relational approach and tend to focus on materials which are most the easily measurable metric in such assessments. As part of this research, a number of different tools were developed to analyse projects in my practice with a more relational approach. As my knowledge has increased these tools have become more nuanced, and reflection on their evolution provided another means of documenting shifts in my thinking and my practice. Both tools use a nascent set of metrics and their inclusion in this thesis is not intended as a discrete presentation, but rather, to fill what appears to be a void in how this kind of work is considered and assessed. The tools expand on the material criteria that can be assessed using tools such as the Re-Nourish website<sup>907</sup> but lack a mathematical criterion. Tool B assesses dematerial dimensions of projects through critical thinking points including social impact, funder's ethics, and collaborative/consultative/transition potential, each of which can be subjective and dependent upon the accessibility of information. A rubric has been used for Tool B to guide assessment in an attempt to minimise this subjectivity.

Both tools map desirable considerations and outcomes for project work, but each serves a different purpose. Tool A permits comparative analysis between projects that produce greener things and those that design for transitions,

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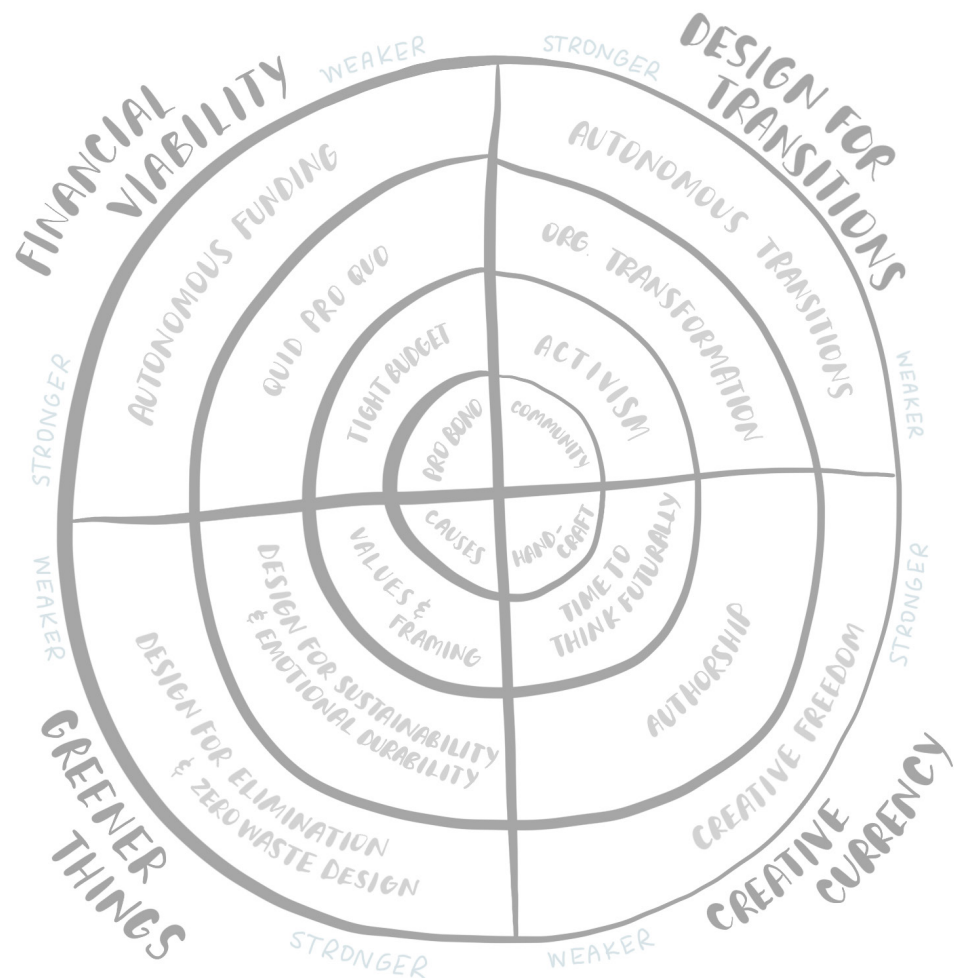
907 Benson and Perullo, "Re-Nourish Website".



and Tool B provides a means of assessing different dimensions of projects that impact their contribution to sustainability transitions. Tool A's intent is not to inform a project rating system, however it was noted during analysis that projects with a greater number of mapped nodes on Tool A also tended to contribute more towards sustainability goals when assessed using Tool B. The tools' comparative qualities provide a visual guide to map the differences between greener things and design for transitions, and reveal insights into the financial viability and creative currency of each project. The metrics captured in Tool A are outlined in the following table:

Quadrant One	Quadrant Two	Quadrant Three	Quadrant Four
Design for Transitions	Creative Currency	Greener Things	Financial Viability
Autonomous transitions	Creative freedom	Design for elimination and zero waste design	Autonomous funding
Organisational transformation	Authorship	Design for sustainability and emotional durability	Quid pro quo
Activism	Time to think futurally	Values and framing	Tight budget
Community engagement	Hand crafted processes	Partnering with Causes	Pro bono

Figure 8.27: Tool A, Blank



Tool A is divided into quadrants that map different dimensions of greener things, design for transitions, financial viability, and creative currency, and each of these quadrants are further split into bands. The bands themselves are not hierarchical, however nodes can be placed within each band to indicate the level of influence a band has had in a project, from weaker to stronger. For example, in the greener things quadrant, the second band maps the use of the values and framing approach. Engagement with the approach is mapped via the node's placement (from weaker to stronger) to represent the depth of engagement values and framing has played in the project.

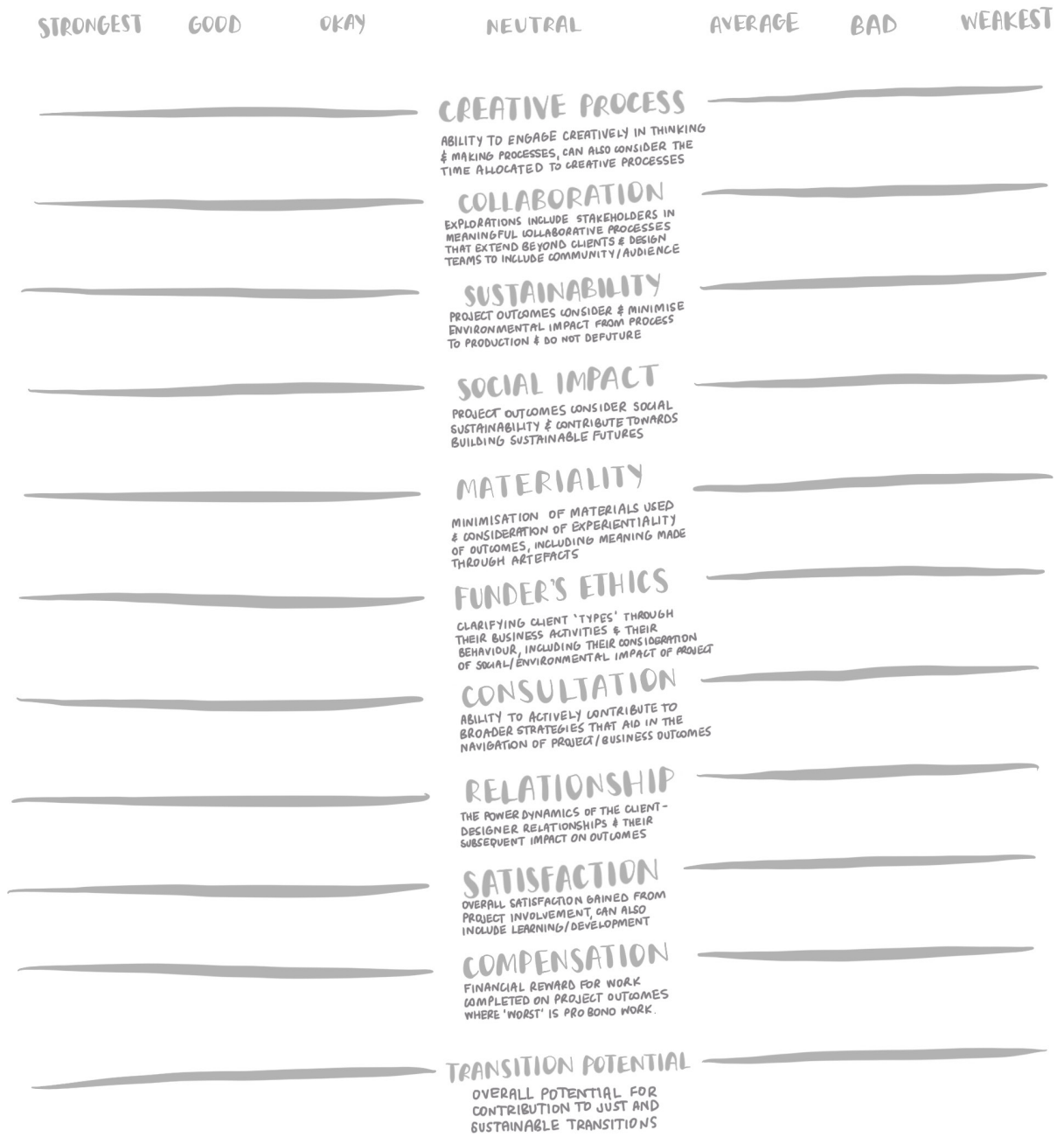
Tool B is an assessment tool that analyses eleven key dimensions of projects. Whilst some overlaps between the two tools exist in terms of the dimensions they map, unlike Tool A, the intent of tool B is to assess and rate projects within my practice. Reflection on the analysis of past and current projects, has informed the tool's development, and the version presented here has been used to assess eight projects within my practice, two of which are discussed below. This tool was largely developed by reflecting on past projects, but its intended use is to inform decision making on future projects. The *Flourishing Fleurieu* project discussed below reflects how the tool might be used as part of future project assessment.

Tool B uses seven columns to create a sliding scale from strongest to weakest and assigns a value to each node as follows:

Strongest	Good	Okay	Neutral or N/A	Average	Bad	Weakest
3	2	1	0	-1	-2	-3

This simple ranking system assigns a score to each of the key dimensions, thereby permitting a ranking of projects and allowing for a deeper assessment of the suitability of these types of projects (and/or clients) within my practice. Eleven key dimensions are used in Tool B to assess a project's social and ecological impact, its creativity and provision of satisfaction and compensation, as well as its potential to contribute to sustainability transitions. Mapping also includes consideration of the collaborative potential for a project, the power dynamics in the funding body/client relationship, the consultative nature of this relationship and the funding body/client's ethics, all of which are considered for their potential to influence relevant relationships surrounding a project. Assessing these dimensions provides a clear way of visualising a project's potential. Tool B aims to guide decision making by facilitating a project's critical assessment prior to its acceptance, thereby permitting decisions about whether to move forward with a project or whether labour should be divested.

Figure 8.28:  
Tool B, Blank



The tool presented in Figure 8.28 represents this ranking visually and the metrics and rubric being used for analysis are listed in the following table:

Metric	Strongest	Good	Okay	Average	Bad	Weakest
Creative process: Ability to engage creatively in thinking and making processes, also considers the time allocated to creative processes.	Full ability to engage creatively in thinking and making processes, with a large allocation of time to explore and reflect	Reasonably creative with some time to explore and reflect	Allows for some creativity but time is more limited	Allows for some creativity with a bare minimum time budget	Wants creativity but will not allocate time for it	No creative expected (e.g. re-using existing design for annual report) and bare minimum time budget
Collaboration: Ability to include stakeholders in meaningful collaborative processes that extend beyond clients and design teams to include community/audience.	Explorations include stakeholders in meaningful collaborative processes that extend beyond clients and design teams to include community and/or audience.	Stakeholders are included with a medium level of engagement e.g. included in most but not all processes	Stakeholders are included but engagement is limited e.g. included minimally in processes	Stakeholders are included but lack any audience or community input	Stakeholders are not included but there is a feedback loop	Stakeholders are not included and clients are disengaged from processes
Sustainability: Project consider and minimise environmental impact from process to production and outcomes do not 'defuture'.	Project outcomes consider and minimise environmental impact and do not 'defuture'. Behavioural considerations lead more ontological approaches	Project outcomes have minor impact and lack a full consideration of behaviours but do not 'defuture'	Project outcomes seem sustainable but have an impact e.g. outcomes partially 'solve' a problem but may reinforce its root cause	Project outcomes can be made materially sustainable but lack consideration of behaviours and may contribute to 'defuturing'	Project outcomes cannot be influenced by designer and are driven by costs and client's pre-determined solution. No consideration of behaviours	Project outcomes fail to consider behaviours and impact, they reinforce structural problems and 'defuture'

Metric	Strongest	Good	Okay	Average	Bad	Weakest
Social impact: Project processes and outcomes consider social justice and contribute towards building just and sustainable futures.	Project outcomes amplify social justice and contribute towards building just and sustainable futures	Marginalised voices are included and outcomes do not reinforce structural injustice	Social justice issues inform the approach but are not a central focus in the outcomes	Social justice is not considered but injustice is not perceptible in outcomes	Social justice is under-considered and outcomes may create injustices	Social justice is not considered, outcomes are hostile and create and/or reinforce injustices
Materiality: Minimisation of materials used and consideration of experientiality of outcomes, including meaning made through artefacts.	Minimisation of materials used and consideration of experientiality of outcomes, including meaning made through artefacts.	Materials are minimised but experientiality and meaning are somewhat limited	Materials are not minimised but outcomes are meaningful and experiential	Material use is typical (though not wasteful) and outcomes are less experiential	Materials are excessive or unsustainable and outcomes are less experiential	Materials are excessive or unsustainable, lack meaning and fail to consider experience
Funder's ethics: Clarifies client/funder 'types' through their business activities and their behaviour, includes how they consider the social and environmental impact of projects.	All business activities and personal behaviours align, and outcomes are embedded with social justice and environmental considerations	Social and environmental impact is considered and funders care about outcomes	Social and environmental policies exist and funder's appear to care about outcomes	Social and environmental policies are discussed but might be rhetoric	Social and environmental impact is not considered and no policies are in place	Funders actively contribute to 'defuturing'
Consultation: Ability to actively contribute to broader strategies that aid in the navigation of project/business outcomes towards goals of sustainability.	Able to actively contribute to broader strategies that aid in the navigation of project/business outcomes towards goals of sustainability.	Can have some influence on strategies that aid in the navigation of project/business outcomes towards goals of sustainability.	Minimal influence on strategies but outcomes can be steered or 'redirected'	Influence on strategies is not possible but outcomes can be steered or 'redirected'	Influence on strategies is not possible and outcomes can only be steered or 'redirected' in marginal or superficial ways	No influence on strategies or outcomes and no consultative opportunities exist

Metric	Strongest	Good	Okay	Average	Bad	Weakest
Relationships: The power dynamics of project relationships and their subsequent impact on people and outcomes.	The power dynamics and relationships create positive opportunities in processes and positively impact outcomes.	Minor power imbalances exist but all parties work well together	Power dynamics cause occasional roadblocks but impacts are minimal and relationships are mostly positive	Power dynamics create frequent roadblocks and impacts are felt in processes and outcomes. Relationships are strained but bearable	Power dynamics hinder processes and negatively impact outcomes. Relationships are dysfunctional	The power dynamics make the work untenable and the relationships have potential to cause harm
Satisfaction: Overall satisfaction gained from project involvement. Opportunity for learning and development as part of participation.	Highest overall satisfaction gained from project involvement, and from learning and development resulting from involvement.	Satisfaction is high and projects provided some learning and development	Feelings of satisfaction are achieved but project has offered minimal learning and development	Some minor satisfaction is achieved but minimal development is gained	Satisfaction is low and no development is gained through participating	Project provides no satisfaction, no learning or development
Compensation: Financial reward for work includes self and payment for project collaborators.	Project is funded autonomously and pays all collaborators fairly and equitably	Project has quid pro quo client funding and pays all collaborators fairly and equitably	Project is funded reasonably well but in some areas budgets are tighter than preferable	Project is funded but budgets are tight which may result in unpaid overtime	Project is pro bono, but there is non-monetary value gained from involvement	Pro bono, and nothing of non-monetary value is gained from involvement
Transition potential: Overall potential for contribution to transitions towards just and sustainable futures.	Project is multi-stage and multi-level. Overall potential for contribution to transitions towards just and sustainable futures is high.	Project is smaller in scale but has potential to make some contribution to sustainability transitions	Project is limited but opportunities exist for conversations and workshops that can explore potential	Project is limited in its own potential to contribute but may be connected to a larger transitions project	Project is limited in its own potential to contribute and is unlikely to connect to a larger transitions project	Project has no potential for transitions and is unlikely to change in the future

Reflection on the literature and analysis of past projects revealed how ‘greener things’ projects can fail to contribute to sustainability transitions. These failures tended to lie in the nature of the work itself being focussed on commercial outcomes. The nature of the client-designer relationship was another factor, and it was also noted that an inability to collaborate or work consultatively could also dramatically impact the direction of a project. Failings aside, analysis using Tool B also demonstrated a key role for ‘greener things’ projects to play in a transitioning practice: providing financial security during the pursuit of autonomous work. This is discussed in more detail in the next chapter.

### 8.3.2 Making greener things

Historically, my practice has aimed to make greener things, defined mostly by a technically green approach to design thinking, making and production. While the intention of this research has been to push beyond this mode of practice, in the process of ‘breaking through’, my greener things process was first pushed to its limits. Several past examples of approaches to making greener things have been analysed, and one example is presented below to demonstrate the strengths and weaknesses of this approach.

The *Dripstone* project is a rebranding collaboration between my practice and another South Australian design practice, Ecocreative. The project was undertaken in the summer of 2016-17, artwork was designed by me and art direction was provided by Ecocreative. The client’s pre-determined brief was discussed in depth before a response brief presented our intended approach back to the client. Projects of this nature were common in my pre-PhD practice and this project typifies my approach to making greener things.

Dripstone Children’s Centre is a childcare centre located in the Northern Territory in Australia. The centre has an altruistic values-based sustainable ethos with a focus on nature-play, which needed to be reflected in their new branding and associated collateral. The project was approached using a combination of alternative design methods including Chapman’s Design for Emotional Durability<sup>908</sup>, Walker’s Design for Sustainability<sup>909</sup> and Braungart and McDonough’s Cradle-to-Cradle<sup>910</sup> method. Thinking was also underpinned by values and framing<sup>911</sup> and whilst the work was performed remotely, the project maintained a collaborative approach throughout. All conceptual artwork and mark-making processes used pigments I made from home-grown vegetables, and the concepts were composted at end of life. Meaning was embedded in the designs using strong conceptual links to tell the story of the centre, its purpose, its location and its community values. Collateral and signage was designed and fabricated using the most sustainable materials available, and files were set up to eliminate waste from the production process. The website was designed to load quickly, to engage users by telling the story of the centre and is hosted on carbon neutral servers.

908 Chapman, “Design for (Emotional) Durability.”

909 Walker, *Designing Sustainability: Making Radical Changes in a Material World*.

910 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

911 Holmes et al., “The Common Cause Handbook.”

# DRIPSTONE

## CHILDREN'S CENTRE

*Loving nature*

Figure 8.29:  
Dripstone  
Children's  
Centre  
Branding



FRILL SHAPE DRAWN  
FROM THE CENTRE'S  
FRILL-NECK LIZARD



LIZARD TRACK  
& JOURNEY LINE  
REPRESENTING  
NATURE PLAY

A MEANDERING  
JOURNEY LINE  
OF DISCOVERY  
& LEARNING



65 DRIPSTONES—  
ONE PER CHILD  
ENROLLED AT  
THE CENTRE







Figure 8.30:  
Tool A, Dripstone  
Project Analysis

The project initially achieved its zero waste objectives, yet even a project as considered as this can fail to realise its full potential. In this instance, several staff changes and a significant weather event resulted in multiple reprints of some collateral. The website was also reverted back to its former state while consent was sought for its imagery as some children were no longer at the Centre. Photographic imagery was later updated and the website was launched.

Analysis of the *Dripstone* project reveals a deeply considered process, but the slightly messier reality means the project looks better ‘on paper’. The green ambitions of the design process were mostly successful, but as is the case with any project, once work is handed over to the client, so too is the control over its outcomes. This limitation is one that has been repeatedly experienced when making greener things. It is not dissimilar to the experience described by Benson and Perullo in the introduction to their book, *Design to Renourish*<sup>912</sup> where a loss of control over the production of the book prevented its realisation as a greener thing. As discussed throughout this thesis, the technical approach adopted when making greener things is easily overturned by external stakeholders, and a designer’s good intentions can be lost in execution.

912 Benson and Perullo, *Design to Renourish: Sustainable Graphic Design in Practice*.

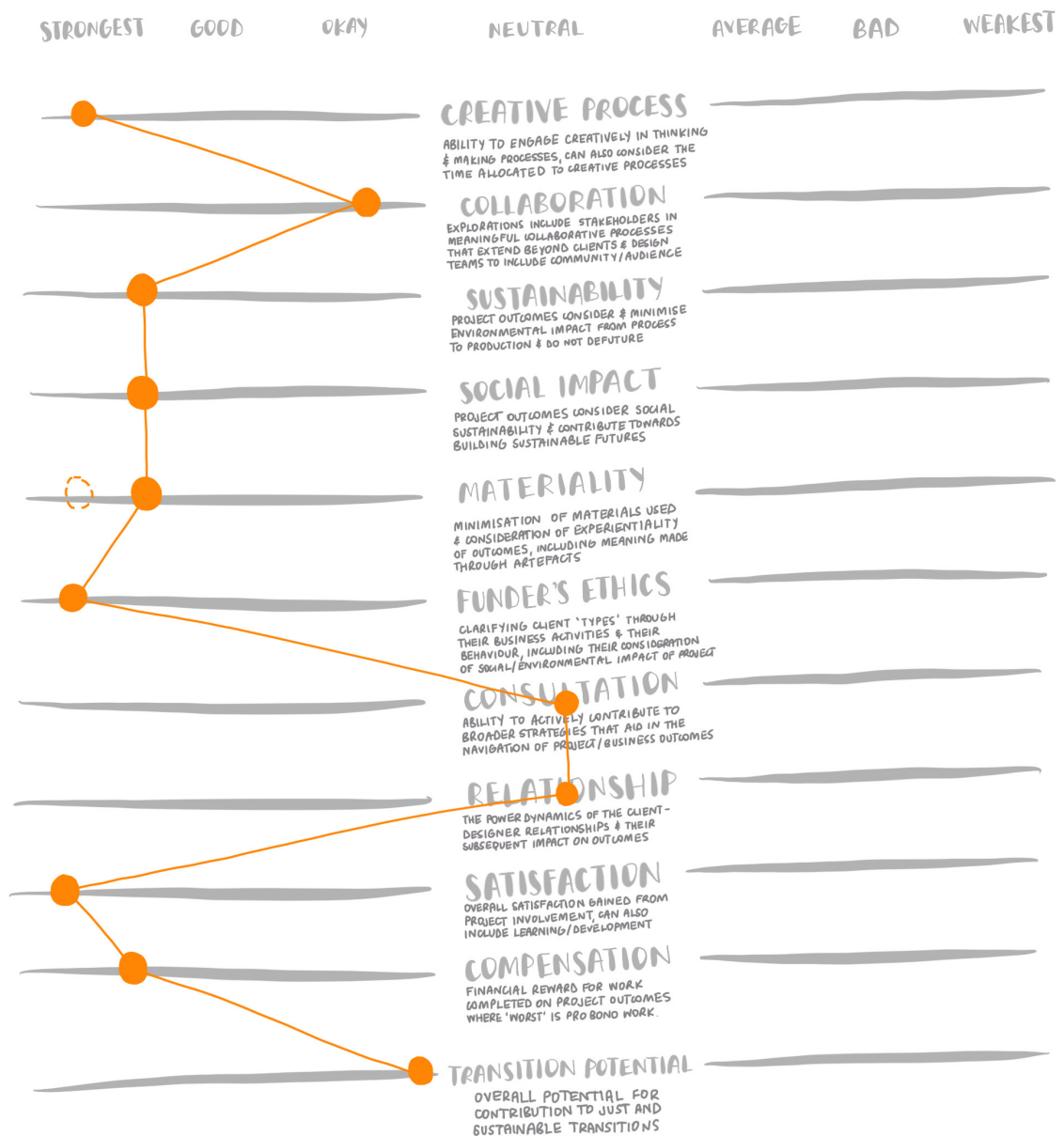


Figure 8.31:  
Tool B, Dripstone  
Project Analysis

Despite these challenges, *Dripstone* also demonstrated the potential for design to tread lightly, to connect with nature and to engage in sustainability narratives through storytelling (see Figure 8.29). The intrinsic values and nature-based worldviews that the centre instils in its students also make them a champion for sustainable futures. The project's exploration and communication of different approaches and processes to clients and end-users contributes to increased visibility for sustainable approaches. The client's delight in the artwork's 'origin story', meant aspects of this process remain embedded within the final brand-story. The client's vision to present the centre as local leaders in sustainability has been realised and has potential to be extended further. The project budget was reasonable, and while certain aspects of the project required more care and more time (particularly in relation to supplier liaison and production specification), the additional time invested felt worthwhile and was mostly able to be done within the allocated budget. Conversely, with student numbers

capped at a maximum of 65 per year, the centre's impact is relatively small scale, thereby limiting a broader contribution to sustainability transitions. This highlights the most significant limitation of making greener things—as standalone projects they appear less likely to contribute to much needed structural change.

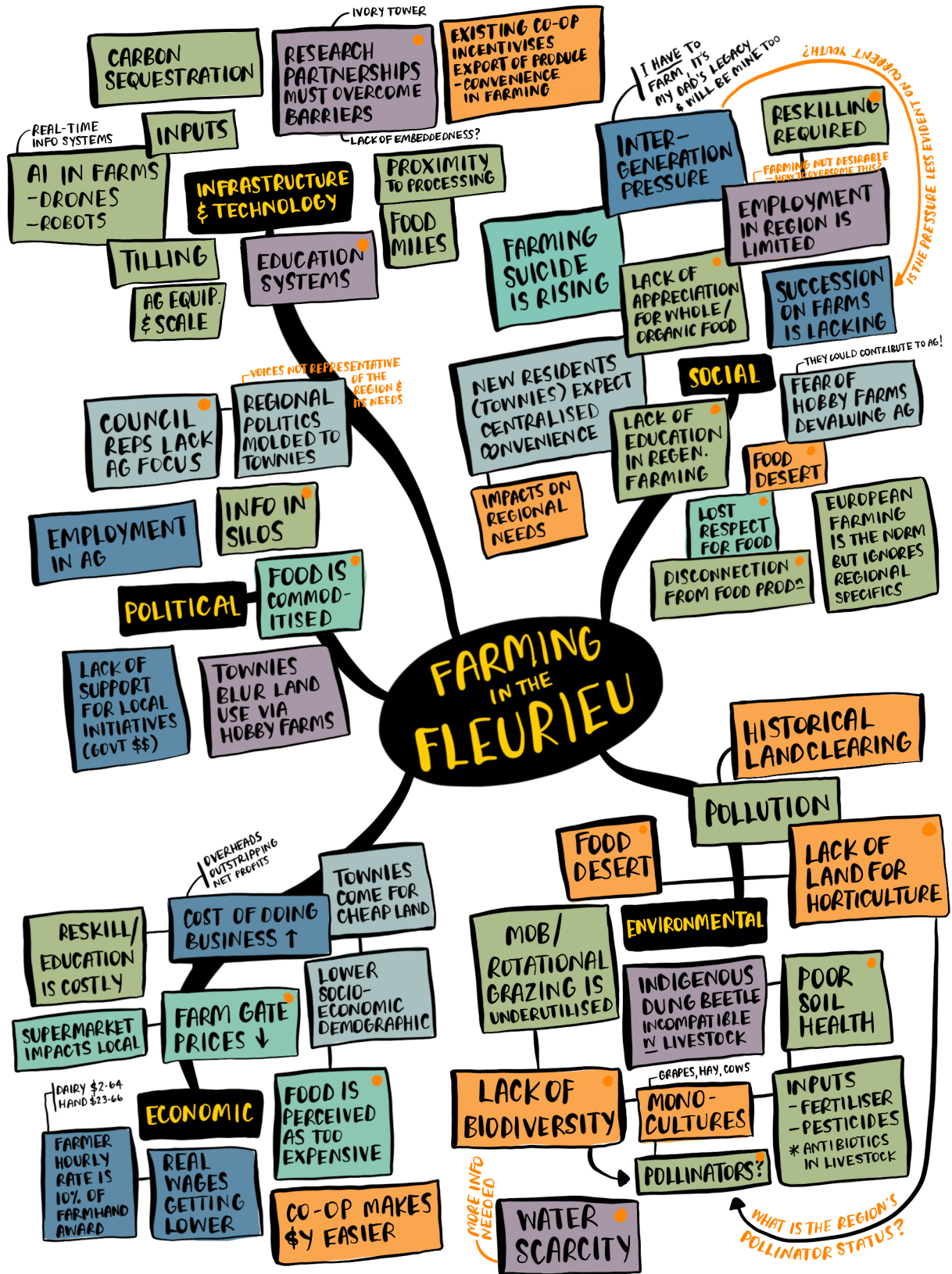
The work produced for *Dripstone* demonstrates benefits and limitations in making greener things. The financial viability of projects of this nature suggest that making greener things could help to fund the pursuit of design for transitions. Considering how financial stability is achieved during and post-transition is indicative of the reality of pursuing design work outside of the status quo whilst remaining somewhat embedded within the system. The potential for greener things projects to connect into larger sustainability transitions projects points to what might be possible as part of a more coordinated effort within a practice, and this curatorial process is discussed in more detail in the next chapter.

### 8.3.3 Design for transitions

As a counterpoint to the *Dripstone* project, *Flourishing Fleurieu* aims to push beyond greener things towards design for transitions. *Flourishing Fleurieu* is a community-based transition design project exploring problems relating to food and water security in a regional agricultural community. I first encountered this project in mid-2018 after joining a collaborative group who were exploring the potential for a smart farming cooperative start-up in the Fleurieu Peninsula region of South Australia. After learning more about the project's aims and the group's intentions, I began to map the project using the tools and methods from transition design. Mapping and analysis revealed the region's agricultural land is under pressure as soil health and farm gate prices are both on the decline. Added pressures from low rainfall forecasts resulting from climate change pose risks to water security for agricultural use, and the region is at risk of becoming a food desert. Farmers are experiencing a number of problems living on the land and the broader community has become dependent on centralised food systems rather than supporting regional growers and producers.

*Flourishing Fleurieu's* overarching aim is to transition the community towards a participatory food system, where farmers, food processors and community members are more connected and food production and consumption is more localised. A number of objectives spanning ten or more years will help realise this goal; one of the more immediate objectives for the collaborative working group is the creation of a food hub in the region. The food hub could operate as a living lab, facilitating research on farms to measure soil health, water retention and regenerative farming techniques. It could also promote new future-focussed farming techniques through increased access to farm-specific education and employment in the region. In addition, the hub could incubate social enterprises that explore value-add food processing to foster a food-based circular economy in the region. A food hub such as this could bring new

Figure 8.32: A STEEP analysis conducted as part of problem exploration and articulation for Flourishing Fleurieu



- AG EMPLOYMENT
- TOWNIES
- PLACE/RESEARCH
- FOOD NARRATIVE
- FARMING
- FOOD DESERT

thinking and sustainable future-focused activity into the region but would require start-up funding and community endorsement. Funding opportunities will be explored in late 2019 through a combination of community, government and university grants and private investment.

*Flourishing Fleurieu* is still in an early planning stage, and continues to move more slowly than typical commercial design projects. The collaborative and research aspects of the project have at times delayed processes, but the project’s rhythm aptly demonstrates the slower pace and longer view that design for transitions adopts. This temporality while expected, also limits documentation for this research, as such the discussion here focuses on the beginning of what will likely be a decade-long project within my practice. The project is discussed briefly below before analysing its dimensions using Tools A and B, revealing the potential use of Tool B as a pre-project assessment tool.

Mapping work began in late 2018 with my client (and fellow collaborative working group member) a local entrepreneur who lives and works in the region. Multiple perspectives and dimensions of the food security problem were mapped using a STEEP analysis<sup>913</sup> (see Figure 8.32) followed by mapping

913 STEEP is an acronym for Social, Technological, Economical, Environmental, Political, these categories are used to analyse the different dimensions of complex problems.

Figure 8.33:  
Tool A,  
Flourishing  
Fleurieu Project  
Analysis

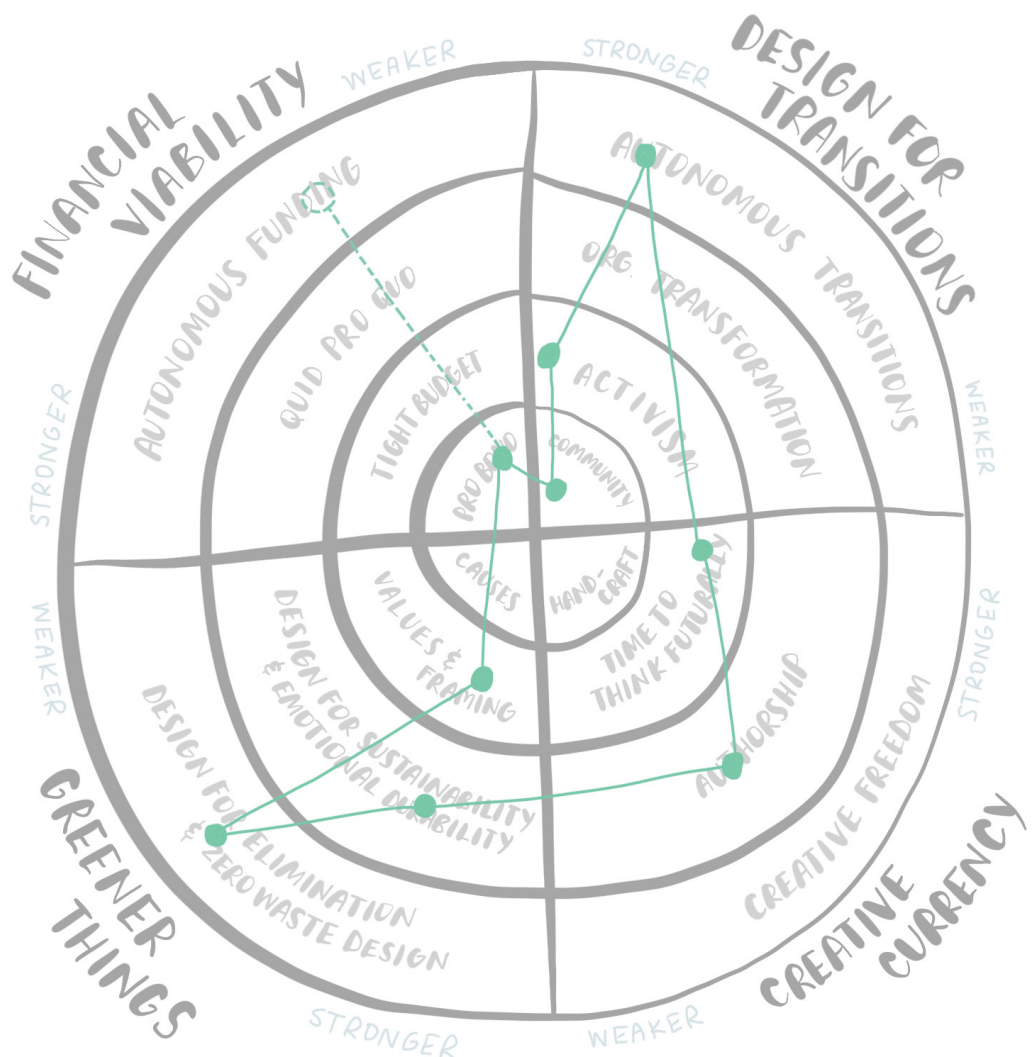
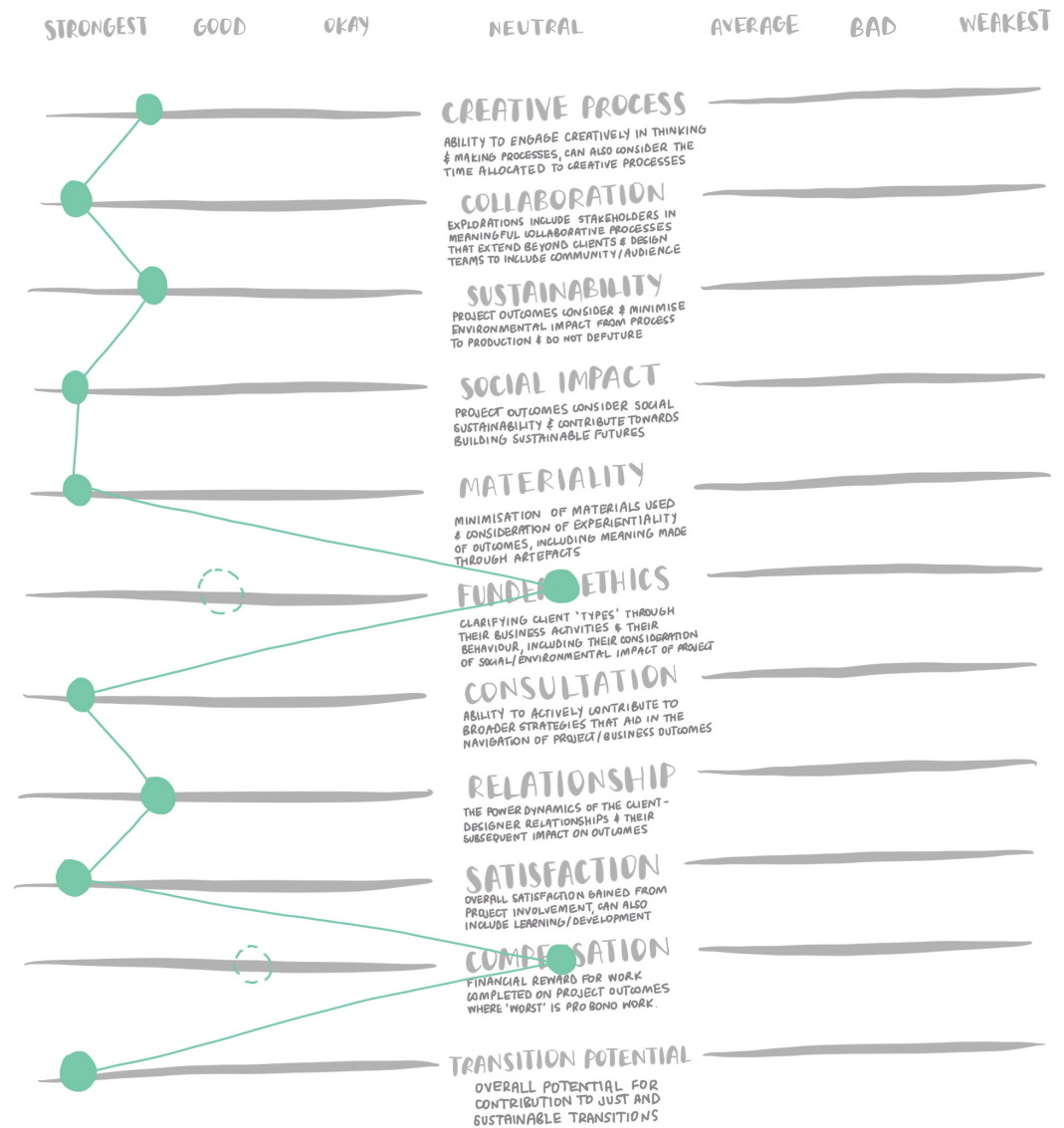


Figure 8.34:  
Tool B, Flourishing  
Fleurieu Project  
Analysis



using the MLP canvas<sup>914</sup>. Stakeholder interactions were then mapped, and the interactions between these stakeholders and the proposed food hub were explored. This initial round of mapping work finished in December 2018 with a 'visions and backcasting' workshop exercise conducted with the collaborative working group. This collaborative process facilitated the co-identification of a constellation of potential projects, many of which were tailored to the research and farming interests of the group. The project gained the support of the local farming community and Local Government in mid-2019 and is now in a community engagement phase. A round of workshops with local government and community groups are due to commence in the latter part of 2019.

*Flourishing Fleurieu* has been pitched to the community as an umbrella project that aims to connect multiple activities in the region through a constellation of interconnected projects that span research, education, farming, and social enterprise. The transition design workshops that will be run in the community in late 2019 aim to create space for community members to co-define the

914 Initial client mapping was performed collaboratively using an early draft of the modified MLP canvas. The problem will be remapped in the 2019 workshops using the fully modified MLP canvas displayed in Figure 5.4.

region's problems from multiple perspectives. Facilitation will adopt a proactive mediation approach to manage group dynamics and limit the potential for frustrations and conflicts between stakeholders to derail the collaborative aims of the workshops. Co-creating visions for possible futures will encourage a participatory approach to the co-design of multiple pathways towards just and sustainable futures for the region.

This project encapsulates the wide range of knowledge built through this research. It practices new ways of designing, is highly collaborative, requires relational thinking and proactive mediation, and is underpinned by theories of change, theories of needs, and theories of consumption. Its initial incubation within this research has provided a strong foundation, and its future potential reveals glimpses of what my post-doctoral design practice might look like.

Analysis of the project using Tool A reveals it has only one additional node compared to the Dripstone project, however the placement of the nodes is considerably different between the two projects. *Flourishing Fleurieu's* contribution to sustainability transitions is inherent in its aim to transition this agricultural region towards a more participatory food system. Yet this does not exclude it from making greener things. Rather than being eliminated or superseded, greener things are incorporated into the larger scale nature of design for transitions. In some instances, greener things are transitioning towards events and experiences<sup>915</sup> that are dematerial and participatory parts of a broader contribution to structural change. As seen in Figures 8.33 and 8.34, the full funding potential of the project has not yet been realised, but the goal of autonomous funding has been mapped using a dashed line. This demonstrates two things: firstly, it shows how impactful this funding could be, and secondly it indicates that securing autonomous funding is expected as part of the future activity in this project. The placement of funding nodes in Tools A and B immediately visualises the added breadth that funding would provide. Tool A demonstrates how the pursuit of design for transitions encapsulates the goals of creative currency, financial viability and greener things, which likely all play a contributing role in contributing to transitions towards just and sustainable futures. Tool B demonstrates its functionality as an assessment tool by revealing the potential benefits of a project as well as identifying the dimensions that will require more management. In the *Flourishing Fleurieu* example, funding is highlighted as a significant area for concern, and with such a large-scale project, any lack of resolution to funding challenges could eclipse its many other positive dimensions. Securing autonomous funding is an expected challenge that will likely create further tensions in my practice, and this particular dimension in an area for future exploration within the *Flourishing Fleurieu* project. An initial focus on grant applications in late 2019 will later be extended by future discussions with private investors.

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915 The reference here to events and experiences connects with the ancient philosophical definition of happenings or events as 'Things' (with a capital T) rather than material artefacts. For more on this see: Bjögvinsson, Ehn, and Hillgren, "Design Things and Design Thinking: Contemporary Participatory Design Challenges."; Ehn, "Participation in Design Things."

## 8.4 Closing remarks

This chapter reflected on the analysis of data collected through interviews with designers, combined with insights gained through reflection on design processes and projects undertaken during this research. Several design practice norms were identified through a set of emergent themes from the interviews and these findings correlate with the literature. Discussion centred around designers' experiences of time and budget constraints, briefing processes and power dynamics, design thinking and sustainability.

The findings point to unsustainable norms stemming from the design industry and reveal how sustainability is backgrounded in typical commercial practices. I would argue that these discussions support the findings presented in Chapter 3: that the combination of consumer-focused education and design industry work experience has materialized the 'designer-consumer'—a designer so entrenched in the mediation of consumer culture they are incapable of designing against consumption. The unsustainable norms in practice suggest a significant gap in the thinking and doing aspects of design that must be filled if design is to contribute to sustainability transitions. Whilst the norms appear to be unsustainable, a niche of practitioners are actively resisting these norms, choosing instead to redirect their labour towards health, education or cause-related design. However it was noted that the tensions and conflicts experienced in practice still exist whether designers are following or resisting industry norms.

Problems relating to time and money frequently intersect in practice. This experience was common to all, and a discussion of the viability of continued resistance in practice revealed how a designer's position (self-employed versus employee) can impact their resistance. The focus on transitions within practice sharpened to explore how transitions towards sustainability are experienced differently from one practice/practitioner to the next, again revealing the role of power and position in activating transitions in practice.

Discussions of process revealed three core aspects of the design process that have contributed to the activation of transition in my practice: hybridity, collaboration and new ways of designing. Each of these was explored in relation to design projects to give them context and ground the discussions. A particular focus on the *Rethink Rubbish* project in discussions of new ways of designing demonstrated how these approaches frequently overlap and interconnect with one another as part of designing for transitions.

The changes occurring in my design process have also influenced the projects undertaken in my practice and two analysis tools were presented and discussed in relation to the *Dripstone* and *Flourishing Fleurieu* projects. Discussion of these projects demonstrated the shift that has occurred in my practice, and sets up a continuing discussion of the case study of transition in my practice that follows in the final chapter.



## Chapter 9

### Personal, political, professional: The case of a practice in transition.

Some of the writing and figures from this chapter were presented at the 2019 Academy of Design Innovation Conference: Design in the era of Transformations. The full paper will be published in the conference proceedings. The spirit of the original paper remains in this chapter, but further insights and findings are presented here to more thoroughly discuss this case study of a design practice in transition.

Humanity has exceeded multiple planetary boundaries<sup>916</sup> and it is increasingly evident that significant changes to our everyday lives are on the horizon. Whether these changes are by choice or by force depends upon immediate and collective actions being taken to mitigate climate change. It has been argued throughout this thesis and within the literature that design is uniquely positioned to not only make change desirable but to contribute more broadly to sustainability transitions<sup>917</sup>. It has also been argued that in order to do so, design itself must change—from a practice entangled with the economic pursuits of business, to one that is focussed on transitions toward more just and sustainable ways of being in the world<sup>918</sup>. As part of this endeavour, designers will need to help craft rich narratives for sustainable futures<sup>919</sup>, visions that reimagine everyday life in tangible ways. Through these visions designers can consider how their daily labour could be redirected as transition design; but tied to this reimagining of everyday life is also the consideration of what non-design labour looks like in transitions towards sustainable futures<sup>920</sup>. Visions of a sustainable everyday will require a granularity that allows rich interpretations of how these possible futures might function, particularly if they are to offer viable alternatives to the dominant neo-liberal narrative in the Global North. This chapter discusses the case of my transitioning design practice and the role self-transformation has played in this transition. It explores projects that ‘design for transitions’ and reflects on the first three years of this research-led, practice-based transition.

A design practice in transition is many things at once, often making it ill-defined and impeding the clarity of its narrative. The fluidity of these in-between times can be challenging, due to the ever-present tensions rising from blending the old practice with the new. The sometimes-paradoxical mix can result in a practice that feels at odds with itself; doing commercial work can feel ‘wrong’ but conversely it can help fund the transition work that feels ‘right’. This chapter discusses the navigation of these tensions, and the personal, political and professional commitments I have made as a practitioner while transitioning

916 Nations, “Global Warming of 1.5 °C.”

917 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. Fry, “Design after Design Workshop.”

918 Irwin, “The Emerging Transition Design Approach.”; “Transition Design: A Proposal for a New Area of Design Practice, Study, and Research.”

919 Lockton and Candy, “A Vocabulary for Visions in Designing for Transitions.”

920 White, “Metaphors, Hybridity, Failure and Work: A Sympathetic Appraisal of Transitional Design.”

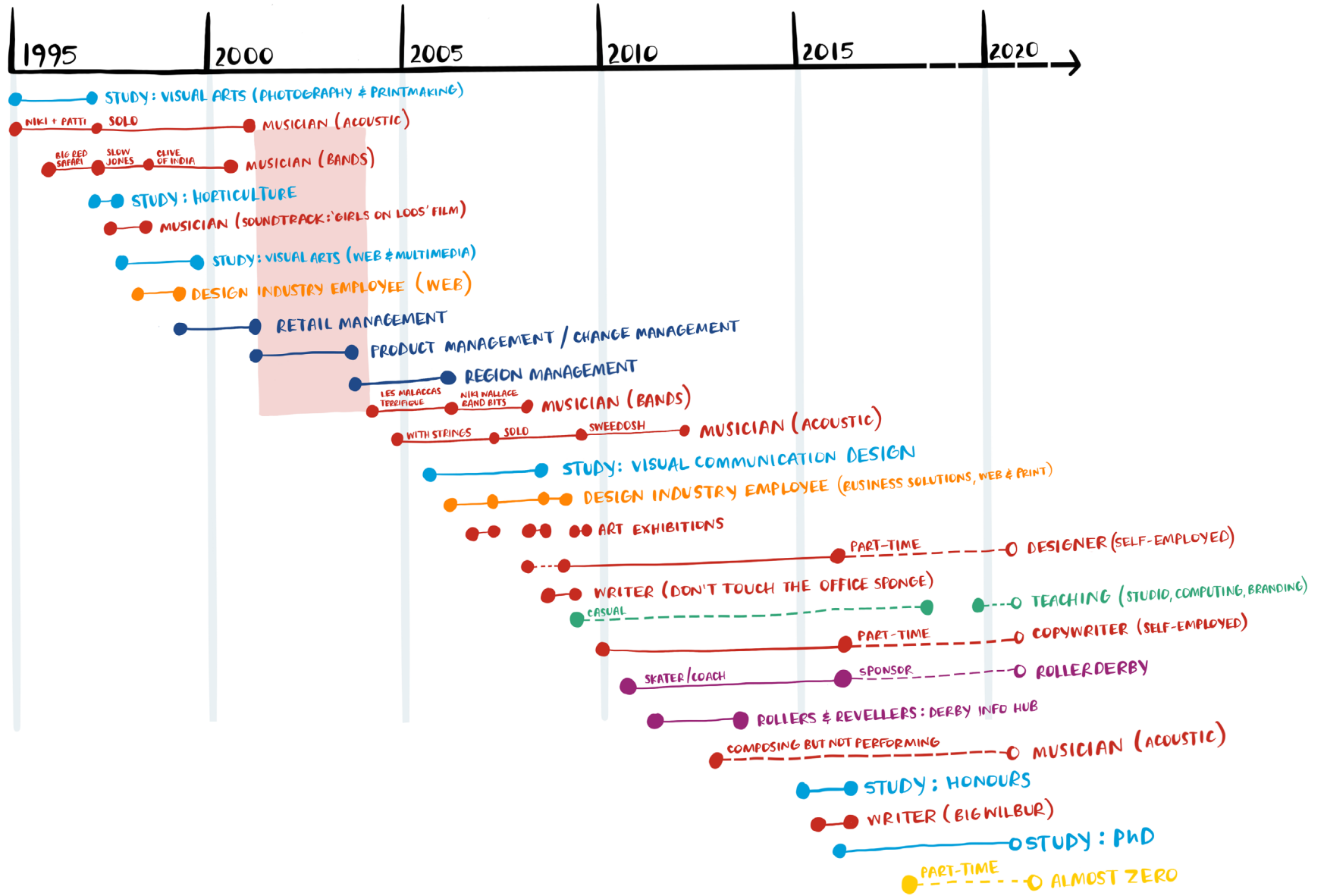


Figure 9.1: Timeline of historical activity

- STUDY
- DESIGN WORK
- ROLLERDERBY COMMUNITY
- TEACHING
- CORPORATE WORK
- MY CREATIVE PRACTICE
- ZERO WASTE COMMUNITY
- EXCESS CONSUMPTION

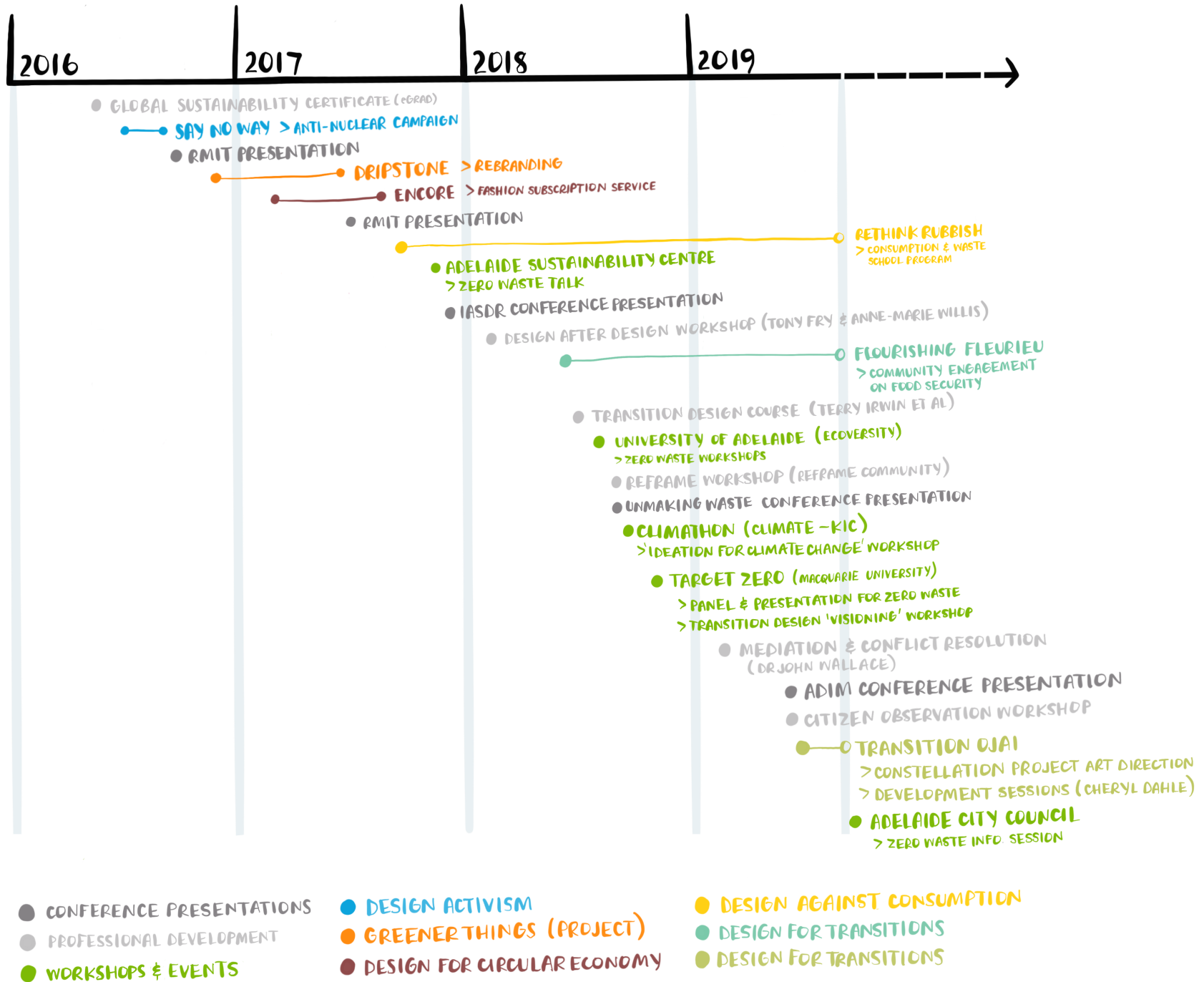


Figure 9.2:  
Timeline of  
research activity  
(repeated from  
Figure 2.3)

my design practice from a commercially-focussed sustainable design practice of ‘making greener things’, towards the practice of ‘design for transitions’.

In section one I contextualise the case through an exploration of the origins of my practice as one of making greener things and the key experiences that contributed to the transition of my practice. Analysis of creativity as a social practice reveals its contribution to the satisfaction of multiple needs and the inherent sustainability of creativity as a practice is argued. I reflect on my history of working with change in corporate settings and the subsequent impacts this had on my creativity and my consumption. In section two the role of personal transformation and its influence on the ongoing transition in my practice is examined. I investigate how this has led to an increased ability to design against the norms of excessive consumption and how ‘design for transitions’ has been used as an approach to the ‘everydayness’ of sustainability. Section three discusses the politics that have been embedded in this process of transformation and transition, and section four explores the professional dimensions of this transition as a process of curation, that is filled with tensions and pain points that must be navigated. A timeline of the historical activity discussed in section one is presented in Figure 9.1. This is supported by the timeline of research activity presented in Figure 9.2 (repeated from Chapter 2).

Reflection on this activity has been framed by critical pragmatism and underpinned by socio-technical transition theory and the multi-level perspective, social practice theory, power dynamics, and theories of well-being and needs. Reflection is also informed by data collected through project work and interviews with designers as discussed in the previous two chapters. Due to the temporal nature of ‘design for transitions’ two of the projects discussed (*Rethink Rubbish* and *Flourishing Fleurieu*) are ongoing, and likely to continue for years to come. This sense of ‘unfinishedness’ is common to case studies in the emergent practice of transition design. It poses a relative challenge in their presentation, particularly in relation to the tenses used in written descriptions and discussion of processes, outcomes and activities that are in progress. In light of these challenges, the discussion in this case study might be better considered in a continuing sense, as case studying.

## 9.1 A personal journey with a sustainable start point

I was raised in a second generation Macedonian-Australian home in the 1970s-1980s; life was simple and waste was unacceptable. Composting, recycling, reusing/repurposing were all common practices, as was growing fruit and vegetables and preparing meals from whole foods. Making was valued, remaking even more so, and broken objects were salvaged for their materials’ potential to be repurposed. I can still recall the tactile sensation of running my fingers over rusted bits and pieces in my Dodo’s (Grandfather) shed and the fascination at watching him use those bits and pieces to fix things. Consumption was a conscious act and frivolous spending was minimal. A ‘waste not, want not’ attitude was culturally embedded through values of care and respect and reflected through meaningful relationships with quality

objects. Although the drivers were more frugal than environmental, this upbringing taught me sustainable life skills. This sustainable foundation gave my professional practice a values base. Since its inception in 2007, my design practice has maintained a firm position on sustainability that has informed work with both causes and commercial clients. I have always brought values-based sustainability principles to projects in both settings.

The techniques and processes developed in my practice were documented as part of an honours project that explored the potential for sustainable making (greener things) to become a new norm for communication designers. By making small adjustments to design processes and closely evaluating the use of materials, I argued for greener things that could be created without any of the usual eco-rhetoric (for example green logos and brown paper). In my practice, making greener things that did not look like typical eco-things evolved into a specialisation of sorts. It was a position with which I had become comfortable, and prior to conducting this research, it did not seem feasible to push beyond it. In my mind, I was being creative, earning a living and honouring my values—I had worked hard to carve this niche for myself, and was comfortably filling it. The moment I started this research was the moment discomfort set in.

As argued throughout this thesis, greener things do not fully contribute to sustainability, and this section interrogates personal aspects of my journey. It explores how creativity contributes to sustainability, while also acknowledging how shallow a greener things approach can be. Firstly, creativity is explored as a sustainable practice that contributes to the satisfaction of needs. Then the theme of change is explored in my practice. Finally, making is examined as a practice that can be either sustainable or unsustainable, which sets up the discussions of transformation that follow in the next section.

### 9.1.1 Creativity as a sustainable practice

There is an aspect to the creative process that is self-serving; I derive pleasure and a sense of satisfaction from creative activity. In this sense, working as a creative practitioner is one of the ways I satisfy my needs. Analysing my creative activity using Max-Neef et al's needs/satisfiers<sup>921</sup>, reveals that several of my needs can be satisfied through the process of creation. Subsistence is facilitated through the performance of creative work that pays for food and shelter, and the need for protection is satisfied through the sense of financial security gained by creative work that is financially rewarded. Participatory satisfaction is gained through the development of meaningful relationships with clients and colleagues, as well as through collaborative processes, self-expression and through additional connections with peers in design associations and groups both online and offline. Freedom is satisfied through a sense of autonomy and an ability to take risks, and even my need for leisure is satisfied through creativity. Creative processes are more than how I work, my free time is frequently spent drawing, painting, writing, singing and playing music.

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921 Max-Neef, Elizalde, and Hopenhayn, "Development and Human Needs."

Feelings of relaxation are often evoked during creative flow states<sup>922</sup> (whether for work or pleasure) and my need for leisure is satisfied through the use of my imagination, and from the enjoyment gained through the process of creation.

During early reflection on my body of work I noted hybridity had always been evident in my creative practice. The lyrics I wrote were fused to the music I composed, and the physicality of playing guitar often influenced the intonation in lyrical melodies. My arts practice intersected my writing practice; poetry and prose frequently made their way into my painting, drawing and printmaking. My design practice became a magnetizing force for this hybridity, merging different aspects of it together in different projects. Whilst this fluidity between sub-disciplines was instantly recognisable, it took a little more time to identify that this creative hybridity also included authorship.

The political nature of my work was not always immediately evident, often it was deliberately obscured amongst layers of meaning (mostly out of a fear of judgement). This obscuring was typically project-dependent, for example, a social media campaign fighting a nuclear waste repository was obviously (and proudly) political and required absolute clarity in my political stance<sup>923</sup>. In contrast, a seemingly lighthearted book about germophobic relationships with office sponges is an obscured political statement about the social impact of toxic workplaces. Its political narrative was hidden within its picture book format to ‘protect the guilty’ while offering ‘full disclosure’ between the lines of the narrative<sup>924</sup>.

The projects explored throughout this research have extended my political voice beyond design authorship into the pursuit of autonomous design. As an autonomous designer I feel freer to use my voice and my design skills to create post-capitalist outcomes. By partnering with communities instead of commercial enterprises to create work outside of the status quo, I have been empowered to meaningfully contribute to future possibilities. Once again, satisfying the need for participation by actively contributing to the creation of post-capitalist worlds.

It has been argued by Jackson, Thorpe and others<sup>925</sup> that satisfying multiple needs through creative practices also reduces the desire to satisfy needs through acts of consumption. During early reflection on my practice, I noted that the few times I held down employment outside of creative fields also coincided with significant increases in personal consumption and decreases in my mental well-

922 Csikszentmihalyi, *Creativity*; “The Costs and Benefits of Consuming.”

923 This project (*Will you say no way*) was created collaboratively with a conservation organisation in support a movement of local indigenous people who were fighting for their right to decline the use of their land for a nuclear waste repository. This design activism project aligned neatly with my values and politics and I was very clear on my own stance when I first undertook the project.

924 The *Spongebook* project (though not documented as part of this thesis) is an early example of hybridity in my practice. It combined creative writing, illustration and design, and was launched at an exhibition of my artwork. Those who were aware of the backstory knew that the book was a commentary on my experiences of toxic power dynamics in different Australian workplaces, but others believed it to be a fun story about germophobia. *Spongebook* was one of the inaugural projects undertaken by my practice in its first year of operation, it was launched as a farewell of sorts to working in these environments.

925 Csikszentmihalyi, “The Costs and Benefits of Consuming.”; Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.”; Thorpe, *Architecture and Design Versus Consumerism*; “Design’s Role in Sustainable Consumption.” See also: Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”; Tatzel, *Consumption and Well-Being in the Material World*.

being. Later it was also noted that my politics receded during these times, and on reflection I recognised how my politics were fused to my creative practice through authorship and activism. This connects to the earlier discussions of hybridity and fluidity in my creative process, but extends this discussion beyond a crossover in creative sub-disciplines. This interweaving of my politics with my creative outputs led to feelings of powerlessness when I was unable to exercise my creative-political voice. This suggests not only that my need for freedom is tied to my need for creation, but that my well-being is more dramatically reduced by decreased creativity due to the accompanied stifling of my political voice.

Creation as a satisfier is embodied in all of the aforementioned needs and in those that follow, and my identity as a creative practitioner has been constructed not just through the creative tasks performed, but also through a sense of belonging to a creative community. As discussed in Chapter 8, this identity has been shifting throughout this research, and tied to it now is a sense of pride in the creation of more meaningful work and in the commitment to continue to develop myself politically and creatively. A deeper engagement with values has accompanied a letting go of the aesthetic focus and business drivers that were honed through work in the design industry. With this I have accepted a weakening of my connection to that design community. Continual shifts in my identity have gradually changed the communities I position myself in; my design community's global expansion through a transition design network has brought new perspectives and cross-cultural connections. Community immersion through my work in anti-consumption and zero waste has also facilitated another point of connection with people who share my values and passion.

My needs' are also satisfied by embedding altruistic messaging in my work. A desire to raise awareness about issues, to tell stories that connect people to these issues and to create change, are ever-present themes in my work. From the first poem I wrote as a teenager in the 1980s who was terrified of nuclear war, to the illustrations I drew last month encouraging self-care for changemakers, the driver of my internal creative motor is the desire to see positive change in the world. This is embedded in the processes undertaken throughout this research and is reflected in the end outcomes of my work. Intertwining creative practices with politics facilitates a deeper satisfaction of my needs and reveals the important role that creative pursuits play in my achievement of well-being.

I must acknowledge that I am privileged by a freedom to explore all of this. As a middle class, euro-white woman, who is highly educated and self-employed, I live in a society where I can take risks. The colour of my skin grants me the privilege to speak my mind and dissent when and how I choose. These privileges have afforded me the freedom to pursue projects of my choosing and to work outside of the confines of the status quo, to explore my creativity and my politics as a hybrid form of sustainable practice. Without these privileges, activating a politically motivated creative practice would likely be more challenging. With these privileges, I feel able to do more than 'just' design.

### 9.1.2 A history of change

Themes of change have not been exclusive to my creative practice. This was a core focus during my brief segue into the corporate world, where I gained experience training and integrating new staff resulting from my employer's mergers and acquisitions<sup>926</sup>. During this period I worked closely with people to help them assimilate into their new brand family, and worked as part of a team to develop tools that could aid in this transition. The work was draining, my creativity was stifled by a lack of time and headspace, and the pressures of the role led to feelings of anxiety from the experience of imposter syndrome. I began seeking 'retail therapy' at every opportunity. Whilst I recall joking about 'retail therapy' to a colleague at the time, it was not until recent reflection on this time that I recognised what a textbook consumer I had become. (This is discussed in more detail later in this chapter.) When I returned to creative practice full-time I felt instant relief as my excess consumption subsided. I was cognisant of my consumption at the time, but did not understand that it was unsustainable behaviour; I still considered myself to be passionate about sustainability.

In retrospect, I can recognise how this corporate experience shaped me in other more positive ways. During this period I developed a business acumen and a unique skillset in people management and change management that has become exponentially more useful as my practice has evolved. These skills have informed my design process in large scale rebranding projects and have informed my thinking in the development of business and brand strategies. The conflict resolution skills I developed during brand mergers became honed through further (recent) training and practiced during workshop facilitation with community groups. Upon reflection I recognised how this corporate experience laid a foundation for design for transitions, particularly in relation to transitions within organisations. This work experience also provided me with a sense of validation and the much-needed confidence to engage in conversations about transitions with organisations.

### 9.1.3 Making money, making greener things

My practice of design has included roles as an employee, in-house, and agency freelancer, but it was not until I started my own practice that I realised how challenging practice could be. The activity and key moments discussed below are presented in a timeline format in Figure 9.3. In a design practice, making money is more than a means of paying personal expenses, it is also integral to the smooth running of the practice as a business. In this sense, sustainability is also a form of longevity that results from a practice's financial performance. This ensures personal bills are paid, but it also covers wages, equipment, premises, insurance and other expenses that are necessary aspects of taking on large projects. Financial performance aside, making money was never my

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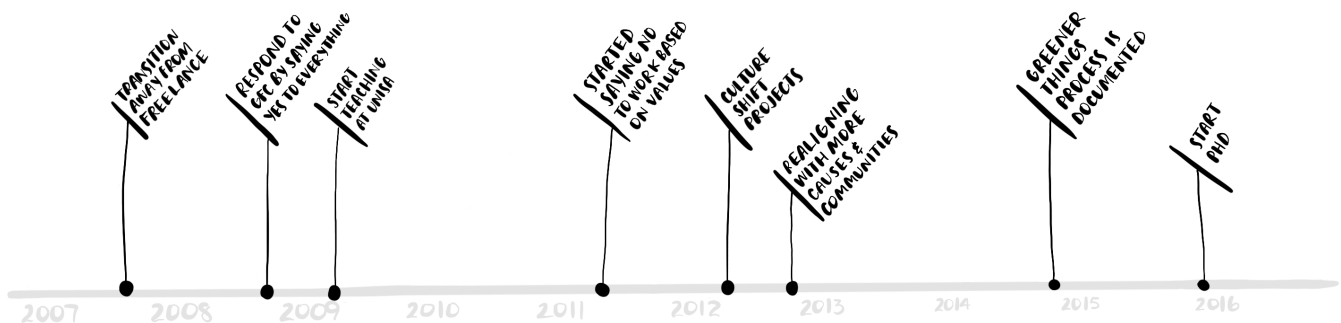
<sup>926</sup> This role was multi-faceted and began as part of a Product Management role, where my facilitation skills were nurtured during product-specific training sessions with retail staff. Over time the role evolved, and I became more involved with 'brand roadshows' designed to unite newly acquired businesses into the parent brand. This evolved again into a more specialised role managing a region with particularly 'resistant' employees and working closely with them to transition them into the business.



focus, and sometimes to my own detriment I did not consider my practice as a business. Employment in the design industry taught me the importance of business development and I learned how frequently work was sought through tendering or pitching, but the experience in my practice differed. Over the years my practice evolved from word of mouth recommendations, and my first practice-based transition (2007-2009) shifted me from ‘freelancer’ to ‘sole practitioner’. Analysis of my client list revealed a web of interconnections. Many of my larger clients trace back to one of my first clients, and it is evident that doing good work and nurturing good relationships had been good for business.

By 2009 the impacts of the global financial crisis (GFC) were being felt throughout the Australian design industry; projects were scarce, budgets were tight and yet I survived. Not because of money, but because I maintained my focus on relationships and the work. On reflection I would argue that my hybridity played a role here; I was able to take on projects spanning communication design, interaction design, writing and illustration. Other more specialised studios/agencies in my hometown did not survive. Work continued to flow in and out with minimal effort and I continued making money by making greener things. As the gravity of the GFC hit I said yes to more work than normal, but I felt less passionate about it. Although I persevered with ‘making greener things’, I was not creating change.

Figure 9.3:  
Timeline of  
practice activity  
(2007-2016)



On reflection, I had been experiencing a double bind—my actions had become limited by knowledge gaps and by the economic climate of the time. Despite these limitations I did attempt to take action: by 2012 I had stopped saying yes to everything and realigned my practice with more cause-related work. I took on two large-scale organisational culture shift projects and expanded my community-based work. The seeds for a future of design for transitions were being sown, but I was still entrenched in the process of ‘making greener things’ and approached all projects with this technical mindset. In 2013 my ‘greener things’ process was documented through an honours project called *Big Wilbur*. It aimed to create a simple tool for designers to inform their making process and improve the sustainability of their design outcomes. *Big Wilbur* sought to embed greener things into design industry norms, but the objective of this research

has been to push beyond it. Yet it was not until late 2016 (almost a full year into this research) that I was able to fully acknowledge how limited ‘making greener things’ was. With this came the recognition that I had dedicated my practice to a process of making the bad slightly better<sup>927</sup>. Engaging with theories of change, power and consumption, highlighted this fact with absolute clarity, and I now recognise that I had been designing in a shallow, light-green bubble.

Developing my economic and ecological literacy further, revealed how my design practice was failing to significantly contribute to change. Boehnert describes how ecological literacy aims to ‘create the frame of mind that recognises the ecological and organises cultural, political, legal and economic priorities accordingly’<sup>928</sup>. Whilst making greener things for cause-driven organisations felt like it honoured the ecological and cultural, it did little to address problems of structural unsustainability inherent in the surrounding political, social and economic systems. Without a more critical approach I would remain trapped by this technical process. As I engaged with literature that built my understanding of political, economic and social systems, my ability to approach structural unsustainability began to increase. Socio-technical transitions theory<sup>929</sup> gave me a sense of how these systems have been constructed and stabilised, and how they might be changed through or by design interventions. Theories of power, change and social practices<sup>930</sup> expanded my capacity to approach wicked problems that are nested and interconnected, and new knowledge was synthesised through designerly sensemaking processes. It felt as if a door in my practice had been unlocked, but I was still unsure how to open it, let alone walk through it.

#### 9.1.4 Making connections, making changes

Recognition of transformations in myself and my practice have been made continuously throughout this research, and reflection has revealed the transformation of my practice was activated by self-transformation.

Explorations of how and why this transformation occurred drew heavily on Cross’s ‘designerly ways of knowing’<sup>931</sup> and Schön’s reflective practice<sup>932</sup>.

What lies at its core is my synthesis of the literature and a subsequent influence on my daily practices which formed a kind of praxis. While I expected to

927 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

928 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 74

929 Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”; Geels and Schot, “The Dynamics of Transitions: A Socio-Technical Perspective.”

930 Dowding, *Power*; Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”; Geels and Schot, “The Dynamics of Transitions: A Socio-Technical Perspective.”; Gee, *Counterpower: Making Change Happen*; Irwin, “The Emerging Transition Design Approach.”; “Transition Design: A Proposal for a New Area of Design Practice, Study, and Research.”; Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.”; Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”; Lukes, “Power: A Radical View. The Original Text with Two Major New Chapters.”; Shove, “Beyond the Abc: Climate Change Policy and Theories of Social Change.”; “Putting Practice into Policy: Reconfiguring Questions of Consumption and Climate Change.”; Shove, Pantzar, and Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes*.

931 Cross, *Designerly Ways of Knowing*.

932 Schön, *Reflective Practitioner: How Professionals Think in Action*; Yanow, “Ways of Knowing.”; Yanow and Tsoukas, “What Is Reflection-in-Action? A Phenomenological Account.”

change as a result of conducting this research, I did not anticipate that change to apply with such breadth and depth that it would affect my way of being in the world so dramatically.

Early research into the problem of consumption and waste informed interrogations of my own patterns of consumption and creation of waste. As a full subscriber to ‘retail therapy’ in the early 2000s, I was profoundly impacted by the literature discussing consumption. Theories of consumption as a social construct were contextualised by perspectives informed by my personal behaviour. This reflective process also provided opportunities to apply a social critique of consumption. I consumed for a variety of reasons, but in the 2000s this behaviour was most predominantly an emotionally driven attempt to placate and satisfy through acts of ‘retail therapy’. This behaviour is common and supported by a wide body of literature that also discusses alternative behaviours that can satisfy and placate without consumption. Of particular interest is research from Tatzel<sup>933</sup> about how spending money on an experience brings longer term satisfaction, and from Csikszentmihalyi<sup>934</sup> on the satisfaction gained through flow states that are reached during creativity, for example, drawing or playing a musical instrument. Recognising the patterns in my behaviours was easy, and when I was actively engaged in and feeling satisfied by creative processes, I shopped less.

Further connections were drawn between my actions and the concept of avoiding shame through acts of consumption<sup>935</sup>. This was most evident during my brief corporate career where feelings of displacement were coupled with feelings of shame. I had been promoted internally from a retail role that was supplementing my income as a musician. The promotion seemed like an opportunity I should harness, but I was a creative thrust into a corporate world, and I felt out of my element intellectually and culturally. On a surface level, I did not own ‘the uniform’, so I shopped to avoid the associated shame of not looking the part. I spent money I did not have on suits I did not need. Over time I looked like I fitted in, but beneath the pin-striped uniform I was still an imposter. I internalised much of the associated anxiety and coped through acts of consumption.

Leaving this corporate role facilitated a break in what had become an addictive shopping cycle; I remember at the time feeling completely aware that the two were connected. After engaging with theories of consumption in economic and sociology literature I felt better equipped to analyse this behaviour and truly understand it. The post-analysis impact on my consumption was almost immediate, and the spill-over effect across my entire lifestyle was significant. Exponential change extended across all my social practices, and I began to monitor my carbon footprint using an online tool<sup>936</sup>. Adopting a plant-based

933 Tatzel, ““Money Worlds” and Well-Being.”

934 Csikszentmihalyi, *Creativity*.

935 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.”; Sen, “Capability and Wellbeing.”

936 Footprint results showing a year on year decrease are presented within the reflection timeline in Figure 8.2. See also: <https://www.footprintcalculator.org> Accessed as part of this research on 3 August 2017, 3 August 2018, 3 August 2019

Figure 9.4:  
Two years  
of the waste  
to landfill  
created by  
myself, my  
husband and  
our two dogs



diet, growing a larger volume of fruit and vegetables and supplementing this with other local produce dramatically reduced my food footprint. Changed transport practices made the next largest impact; typically my air travel is minimal, but a higher than usual amount of travel to attend courses and conferences during this research impacted this aspect of my footprint. Reducing my car usage and cycling or using public transport helped here, but in a larger effort to counter my transport footprint I documented the emissions of flights and offset them through tree-planting and bush regeneration/land-care activities. Water consumption was decreased by halving my shower time from

six minutes down to three minutes and energy consumption was minimised by using appliances less frequently and by turning off appliances when not in use. Package-free alternatives for goods were sourced (and often made by hand) and my waste was reduced to almost nothing. I collected my landfill waste in a glass jar—in part as a challenge to see how long it would take to fill up, and in part to be transparent about the waste I was making (see Figure 9.4).

I recognised early on that these changes were happening as a result of my research, I was making connections that led to behaviour change. It was not until I reflected on these changes that I realised how integral this transformation was to my research.

The process of self-transformation was informed by synthesis of the literature, reflection on the self as a subject, and on my practice (as design processes and as a business entity), all of which served to realign my behaviour with my values. Much of what I was changing involved sacrifice, and despite the obvious discomfort, the raw and honest personal transformation narrative I presented through social media and blogging was influencing other people to change too<sup>937</sup>. Using writing and design to craft a narrative for communicating this change combined design authorship with design activism. Critical ecological literacy was reducing the gap between my knowledge and my actions<sup>938</sup> and through the process of documenting and sharing that experience, I was influencing the actions of others. I received messages from people telling me how their behaviours had been influenced by my story, and some described

937 While this activity was documented it does not form part of this research, however reactions to the narratives on my social media account have at times influenced my decision making. As discussed in Chapter 7, these responses led to the pursuit of the *Rethink Rubbish* project in schools.

938 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

their limitations and barriers to me. As discussed in Chapter 7, reflection on this led to the emergence of the *Rethink Rubbish* project. The changes I had made in my personal life provided a unique experience that could inform my design approach—I was making connections that were helping me make sense of the design possibilities. Fry’s *Design After Design* workshop highlighted the need for design to make transformations toward sustainable ways of living seem desirable<sup>939</sup>, and he argued for the importance of the role of communication design in this endeavour. Fry described this as a ‘redirection’ of communication design’s focus from making consumption desirable to making sustainable living desirable. The *Rethink Rubbish* project explored how such an approach might work. *Rethink Rubbish* extended beyond making greener things and approached the problem of consumption and waste in ways that were unexpected and impactful; it formalised my thinking into action. It demonstrated the shift from designer-consumer to designer-transformer.

During reflection I recognised that personal transformation was the precursor to transforming action within my practice, prior to it I had felt unsure about how to approach the problem of consumption and waste. By disconnecting as a designer-consumer my thinking became critically aligned to approach the problem of consumption and waste. Immersing myself in a personal exploration of zero waste and low footprint living unlocked this explorative process and allowed me to investigate the consumption and waste problem as an intersection. Not as two separate problems, but as interconnected problems that could reinforce one another when approached separately. This key insight was informed through lived experience and helped me to unpack possible approaches to behaviour change.

The full complexity of this complete lifestyle transformation revealed itself to me slowly, but in each moment there was time to consider the many dimensions of change. The web-like nature of social practices often meant one changed practice influenced other associated practices which created an interconnected constellation of change. The relevance of this is revealed in Kossoff’s framework for the ‘Domains of the Everyday’<sup>940</sup>, where he outlines the way social practices frequently overlap one another to satisfy multiple needs. To draw on an example from my own experience: changing to a plant-based diet created changes that overlapped with cooking meals using whole foods. This activity overlapped with growing my own food, which reduced my reliance on centralised food production and its associated footprint. Growing, preparing and consuming whole foods also had health benefits. With increased gardening activity I got more exercise and sunshine. The decreased intake of meat, dairy, additives and preservatives eliminated my previously medicated allergies, cleared up my skin and contributed to weight loss. Gardening and cooking activities induced flow states and home-grown, home-prepared foods minimised

939 Fry, “Design after Design Workshop.”

940 Kossoff, “Holism and the Reconstitution of Everyday Life: A Framework for Transition to a Sustainable Society.”; “Transition Design Lectures,” (Schumacher College, UK, 2018); Kossoff, Tonkinwise, and Irwin, “Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions.”

‘food miles’ through reduced transport, increased the freshness of the food being consumed, and eliminated post-consumer waste. Each practice (and therefore change) was interconnected with other practices/changes, all of which satisfied multiple needs. The sum of which greatly reduced my ecological footprint in multiple domains (in this example, food, transport, and waste) and also reduced the desire for excess consumption in the pursuit of satisfaction. While this process was slow and changes were a series of baby steps, the impact of those changes became exponential.

Reflection on the documentation of almost three years of accumulated change in my social practices, revealed how this personal transformation influenced the transformation in my design practice. Most evident in projects like *Rethink Rubbish* and *Flourishing Fleurieu*, the transition is observable in my changed process and approach, but also in the scale of the projects being undertaken. Their ambition is to create change, at scale, in ways that approach structural unsustainability. At the core of both projects are passionate people who are working collaboratively to co-create pathways to just and sustainable post-capitalist futures. I would argue that without self-transformation I would be incapable of making meaningful contributions to such projects. Self-transformation activated the praxis that made these projects possible and was a discernible trigger for transition in my practice.

## 9.2 Personal transformation as a precursor to committing to a practice-based transition

Transition design literature argues for an altered ‘mindset and posture’ in designers, shifting the designer from a competitive space into a cooperative one<sup>941</sup>. This appears to be a crucial step for practicing transition design, which is highly collaborative in its approach. It draws heavily on participatory processes such as co-creation, ethnography and facilitated stakeholder engagement, and transition designers also benefit from personal virtues such as deep listening, patience, generosity, flexibility, empathy and resilience<sup>942</sup>. In Escobar’s<sup>943</sup> descriptions of autonomous design, these collaborative processes are described as existential or ‘life’s work’<sup>944</sup>. They are performed by designers embedded within communities who facilitate space for the co-definition of problems and the co-design of solutions that meet communal visions for the future<sup>945</sup>.

Both autonomous design and transition design are reliant on collaborative processes for their success, and require an understanding of power dynamics<sup>946</sup> and of the power relations present in group dynamics<sup>947</sup> in order to practice

941 Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.”; Irwin et al., “Transition Design.”

942 Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.” p 23

943 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

944 Ibid. p 184-185

945 Ibid. p 184-185 d’Anjou, “The Existential Self as Locus of Sustainability in Design.”

946 Avelino et al., “The Politics of Sustainability Transitions.”; Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*; Lukes, “Power: A Radical View. The Original Text with Two Major New Chapters.”

947 Dahle, “Designing for Transitions: Addressing the Problem of Global Overfishing.”; Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Dahle, “Transition Design Lectures.”; Gee, *Counterpower: Making Change Happen*.



Figure 9.5:  
 (Top) Daily litter collection as part of the political action against waste  
 (Bottom) The landfill waste produced during the first two years of my zero waste transition

with sufficiency<sup>948</sup>. Reflection on literature discussing power and behaviour dynamics brought with it a greater sense of my own power and privilege, and the role this is playing in re-forming my identity as an empowered designer is significant. As discussed previously, the explorations of consumption and waste as part of this research catalysed further change and empowerment. Adopting a zero waste lifestyle formed part of a personal ethico-political stand against consumerism (see Figure 9.5)—this change became more impactful after its extension into my practice. But in making the commitment to transition my practice and refocus its outcomes in line with this, the immediate question of, ‘how?’ came to the fore. Decelerating consumption is not a principal concern for the design industry nor its symbiotic partner, business. Perhaps the most jarring question to ask is, ‘how?’ How does one perform post-capitalist design when design’s financial viability relies on active participation in a consumer society? What sacrifices must precede the rewards that could follow?

There is a complicated tension that arises from a disconnect between personal empowerment and professional actions. Sub-conscious responses to this tension could present as cognitive dissonance, leading to denial and a subsequent action paralysis<sup>949</sup>. As outlined in Chapter 3, deeper cognisance of this tension can put designers in a double-bind, due to complex and contradictory messages inhibiting their action<sup>950</sup>. Designers can experience a double-bind when they view sustainability as simultaneously necessary and impossible in the context of their design brief. The resulting action paralysis can lead to design’s equivalent of business-as-usual—an aesthetically pleasing range of unsustainable design outcomes. In contrast, a designer who transforms their relationships to ecology and the problems that threaten it is empowered to politicise their approach.

Engaging with problems and contexts through transformative and onto-epistemic learning can create a kind of stickiness to theoretical knowledge, which appears to create clearer pathways to action<sup>951</sup>. Shifting from ‘knowing’ into

948 Avelino et al., “The Politics of Sustainability Transitions.”; Dahle, “Designing for Transitions: Addressing the Problem of Global Overfishing.”; Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.”

949 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*. p 135-142

950 Bateson et al., “Toward a Theory of Schizophrenia.”

951 This was noted during several immersive nature experiences during this research. These experiences are mapped on the timeline in Figure 8.2. See also: Stephen Sterling, “Transformative Learning and Sustainability: Sketching the Conceptual Ground,” *Learning and Teaching in Higher Education* 5, no. 11 (2011). This is also evident in Riedy’s paper exploring the idea of ‘awakening’: Riedy, “Waking up in the Twenty-First Century.”

‘doing’ activates the ethico-political designer. This awakening can illuminate the sustainable potential in a brief, thus loosening the double-bind and resolving action paralysis. It would appear that the rich experiences that formulated my self-transformation sparked a mindset shift that facilitated transformation within my design practice. The ethico-political commitment made through this research fostered a praxis that in turn, catalysed a powerful practice-based transition—from ‘making greener things’ towards ‘design for transitions’.

### 9.2.1 Designing against consumption: intersecting personal and practice transitions

It has been argued throughout this thesis that the problems of consumption and waste are connected, yet the design industry fails to recognise that these problems are accelerated and reinforced by design<sup>952</sup>. Like so many of the sustainability problems we face, the problems of consumption and waste are intersectional and structural, and the design industry’s technical approaches—including designing ‘greener things’—tend to reinforce rather than resolve these problems. Approaches such as cradle-to-cradle design<sup>953</sup> present valuable changes to the use and circulation of materials as part of a circular economy, but simultaneously fail to address design’s acceleration of consumption<sup>954</sup>. Cradle-to-cradle aims to make ‘good’ things but its myopic failure to consider design as an accelerant of consumption results in a default position of ‘making consumerism “better”’<sup>955</sup>.

A case in point is compostable single use plastics. This intervention ‘improves’ the materials of single use items but reinforces the culture of convenience and disposability underlying this waste stream. Furthermore, compostable plastics reinforce other interconnected problems such as monoculture farming, decreased soil health, biodiversity loss and declining pollinator numbers. This well-intended solution demonstrates how complex sustainability problems are, how critical designers must be in our approach to technofixes, and how deeper relational thinking is required from designers working in this space.

Mapping processes in transition design have been discussed as part of the framework’s ‘new ways of designing’<sup>956</sup>, and these processes practice critical thinking and systems thinking (see examples in Figures 9.6 and 9.7). Analysing complex data benefits from relational thinking to highlight interconnections and points of intersection during pattern sensing and sensemaking. I would argue relational thinking is the more pertinent approach to thinking for complex intersectional problems<sup>957</sup>. These sensemaking processes and thinking

952 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.”; Thorpe, *Architecture and Design Versus Consumerism*.

953 Braungart and McDonough, *Cradle to Cradle: Remaking the Way We Make Things*.

954 Boetzkes, “Resource Systems, the Paradigm of Zero-Waste, and the Desire for Sustenance.”

955 Thorpe, “Design’s Role in Sustainable Consumption.” p 15

956 Dahle, “Transition Design Lectures.”; Irwin et al., “Transition Design.”

957 Capra, “Speaking Nature’s Language: Principles for Sustainability.” p 252-253 Dahle, “Designing for Transitions: Addressing the Problem of Global Overfishing.”; “Transition Design Lectures.”



Figure 9.6: Sketch of MLP mapping (repeated from Figure 5.3).

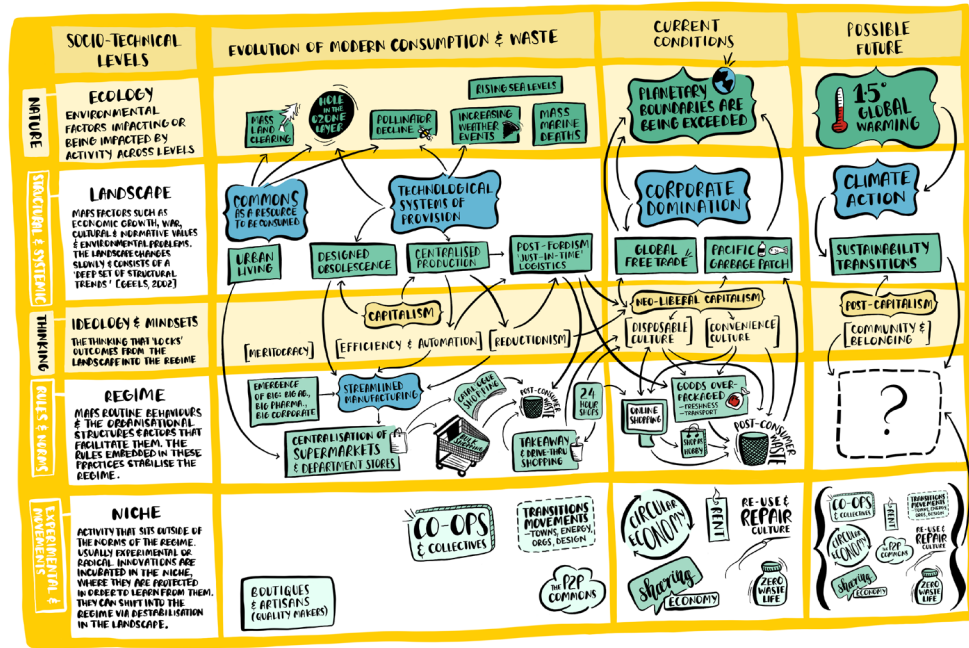
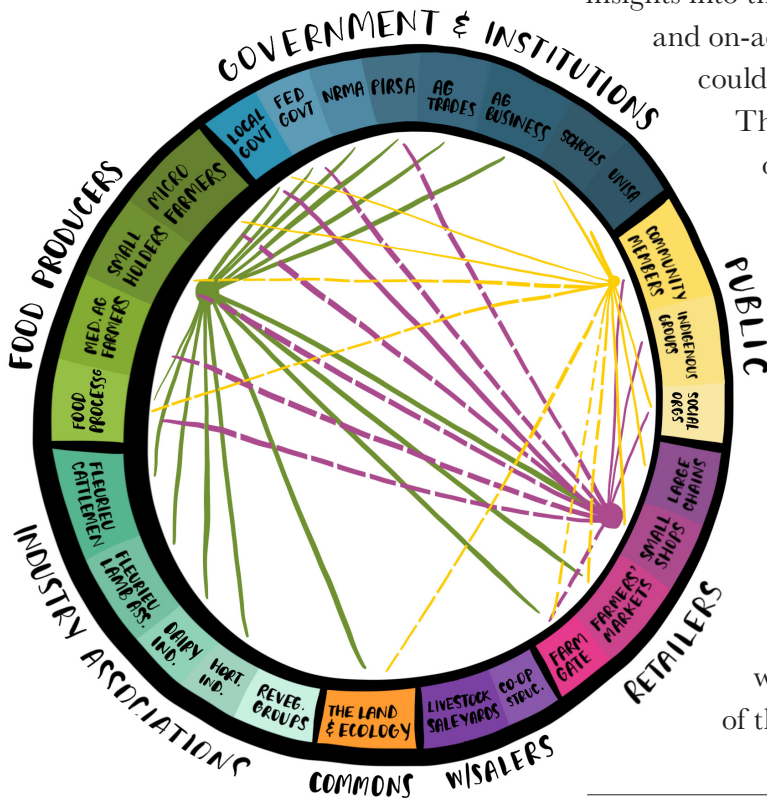


Figure 9.7: Stakeholder group connections. Flourishing Fleurieu project analysis.



techniques provide valuable insights into approaches that might design against consumption. When this thinking was combined with theories of change such as the multi-level perspective (MLP)<sup>958</sup>, I gained deeper insights into what might be possible as part of future transitions. Using Geels’ MLP<sup>959</sup> and the MLP canvas from the transition design toolkit (see Figure 9.6) I analysed consumption as a social practice. I used sensemaking processes to gain

insights into the problem, but during reflection both in-action and on-action, also gained insights into how the tool could be used, and modified the canvas accordingly.

The canvas presents a narrative for the impact of the economic paradigm embedded in neo-liberal capitalism. Analysis revealed how a combination of changes made to production, manufacture and sale at the landscape (slow-moving) and niche (fast-moving) levels of a society influenced the everyday social practices that formed the norms of consumption, use and disposal at the regime level (stable-centre). Combining insights from MLP mapping with Meadows’ leverage points for system intervention<sup>960</sup>, provided a deeper understanding how and where structural change might be possible and of the combination of levers that might be needed

958 Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”; Geels and Schot, “The Dynamics of Transitions: A Socio-Technical Perspective.”

959 Geels, “Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study.”; “The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms.”

960 Meadows, “Leverage Points.”

to activate this change. From these observations it was evident that approaches that aim to design behaviour change would need to be supported by policy change. This informed the creation of futures visions and backcasting processes, where ideation of design interventions starts in a future position and works back to the present<sup>961</sup>.

Mapping had been used previously in my practice for ideation (mind maps), research and prototyping (system/journey/experience mapping), however the mapping and analysis<sup>962</sup> introduced through transition design was a ‘new way of designing’ within my practice<sup>963</sup>. It required an openness from me as a designer to willingly invest my time in processes where the outcomes were unknown. It also required experimentation informed by theoretical knowledge in order to modify the tools being used. These new mapping processes have enriched the collaborative approaches being undertaken by highlighting multiple perspectives to create a richer and more dynamic understanding of problems. Using collaborative mapping and ethnographic data collection techniques in consideration of the consumption and waste problem has revealed cultural differences in people’s relations between consumption and waste. Analysis during *Rethink Rubbish* revealed how culturally visible virtues of respect and responsibility appeared to cultivate low waste behaviours, which pointed to underlying values of care and compassion. As a result of this analysis, using experiential design interventions to awaken these values and encourage these virtues was a key consideration in this project. This was done by making connections to the larger ecological context of the problems being faced, and by actively engaging people in collaborative thinking and making processes that co-created project outcomes.

Designing against consumption is challenging in the Global North because of the dominance of neo-liberal economic thinking and general absence of post-capitalist community-based narratives. Yet it is evident that a compelling narrative for sustainable futures is required to enact transitions<sup>964</sup>. Looking to indigenous cultures and the Global South provided valuable insights into the power of community-based narratives<sup>965</sup>; these cooperative narratives are vastly different to the competitive narratives that accelerate consumption by encouraging a growth mentality. Notably, a very different relationship to consumption and waste is also prevalent where communal narratives are more dominant<sup>966</sup>. This most likely arises from deeper ecological connections that provide satisfaction separately from consumption, as these connections

961 Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.”; Lockton and Candy, “A Vocabulary for Visions in Designing for Transitions.”

962 Mapping and analysis included wicked problems, problem interconnections and intersections, stakeholder relations, hopes/fears/visions, project constellations

963 Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.”

964 Eisenstein, *The More Beautiful World Our Hearts Know Is Possible*, 2; Irwin, Tonkinwise, and Kossoff, “Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions.”; Monbiot, “Neoliberalism—the Ideology at the Root of All Our Problems.”

965 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

966 Ibid.

# flourishing FLEURIEU

THE YEAR IS 2040, THE FLEURIEU PENINSULA IS HOME TO AN AUTONOMOUS COMMUNITY THAT IS THRIVING. AT THE HEART OF THE COMMUNITY IS A PARTICIPATORY FOOD SYSTEM SUPPORTING A REGIONAL CIRCULAR ECONOMY. FOOD IS GROWN & PRODUCED LOCALLY & THE COMMONS ARE FLOURISHING WITH LOCALLY INDIGENOUS SPECIES THAT SUPPORT POLLINATORS AS WELL AS BEING AVAILABLE FOR FORAGING. A FOOD HUB CONDUCTS ONGOING RESEARCH INTO REGION-SPECIFIC CHALLENGES AND SHARES KNOWLEDGE WITH FARMERS AND THE COMMUNITY AT LARGE. CLOSE TIES WITH NEIGHBOURING COMMUNITIES PROVIDES UNIQUE OPPORTUNITIES FOR EXCHANGES & TRADE THAT FACILITATE A LARGER CIRCULAR ECONOMY WITHIN THE STATE. THE AGEING POPULATION ARE ENGAGED IN FIELD TO FORK PROJECTS AND EMPLOYMENT IN HEALTH AND/OR FOOD IS MOST COMMON, WITH A STRONG FOCUS ON FARMING AND VALUE-ADD FOOD PROCESSING ENTERPRISES. THE FLEURIEU IS FLOURISHING AND HAS BECOME A FODDIE PARADISE.

Figure 9.8:  
An early draft of a  
future narrative

tend to be more prevalent in indigenous and communal cultures. Engagement with perspectives from the Global South<sup>967</sup> and indigenous wisdom<sup>968</sup> helped inform the crafting of new narratives during visioning exercises. These communal perspectives highlight the importance of granular details in narratives of possible sustainable futures, and offer insights into how participation and cooperation could be interwoven and culturally embedded through these projects. Figure 9.8 presents an early draft of a possible future narrative for *Flourishing Fleurieu*, a transition design project emerging in South Australia's Fleurieu Peninsula that is exploring this farming region's struggle with food security. This narrative was crafted as a 'small bite', to get a sense for what might be possible in the region. It was developed out of a visioning workshop with the project's collaborative working group (see Figure 9.9) and this process will be revisited through workshops with regional stakeholder groups in late 2019. This process will incorporate more perspectives into the narrative, making its aim, its focus and its generative process collaborative and participatory.

There is an interesting shift in the sense of ownership that one feels over the work produced through these processes, that is best described as a point of intersection between personal and practice-based transitions. Reflection on this shift revealed how at times these projects felt simultaneously like 'theirs', 'mine' and 'ours', and how at others they drifted between these positions. Reconciling this was an additional process of personal discovery and learning that has informed the transition of my mindset as a designer. There is an aspect of ego involved here; stepping out of traditional expert roles into more collaborative modes enacted an initial shift away from 'mine'. At the same time, I could speculate that project participants might have also been grappling with this same ego-ownership dynamic. Finding the space in these collaborations for what was 'ours' and then nurturing that space has been an emergent insight into building successful collaborations with communities. Nurturing this space has also revealed the importance of the designer's mindset, and has demonstrated how the shared attitude of 'ours' arises from immersion into the community itself. This is

967 Ibid.; Escobar, "Response: Design for/by [and from] the 'Global South.'"; Fry, "Design for/by 'the Global South.'"; Rodríguez-Labajosa et al., "Not So Natural an Alliance? Degrowth and Environmental Justice Movements in the Global South."; Vazquez, "Precedence, Earth and the Anthropocene: Decolonizing Design."

968 Michelle Chino and Lemyra DeBruyn, "Building True Capacity: Indigenous Models for Indigenous Communities," *American journal of public health* 96, no. 4 (2006); Patricia AL Cochran et al., "Indigenous Ways of Knowing: Implications for Participatory Research and Community," *American Journal of Public Health* 98, no. 1 (2008); Elizabeth Kendall et al., "Beyond the Rhetoric of Participatory Research in Indigenous Communities: Advances in Australia over the Last Decade," *Qualitative Health Research* 21, no. 12 (2011); Anne Ross and Kathleen Pickering, "The Politics of Reintegrating Australian Aboriginal and American Indian Indigenous Knowledge into Resource Management: The Dynamics of Resource Appropriation and Cultural Revival," *Human Ecology* 30, no. 2 (2002); Jeni Warburton and Briana Chambers, "Older Indigenous Australians: Their Integral Role in Culture and Community," *Australasian Journal on Ageing* 26, no. 1 (2007).

2020 2025 2030 2035 2040

- PARADIGM
- PROJECTS
- MILESTONE GOALS
- FUNDING
- FARMING OUTCOMES

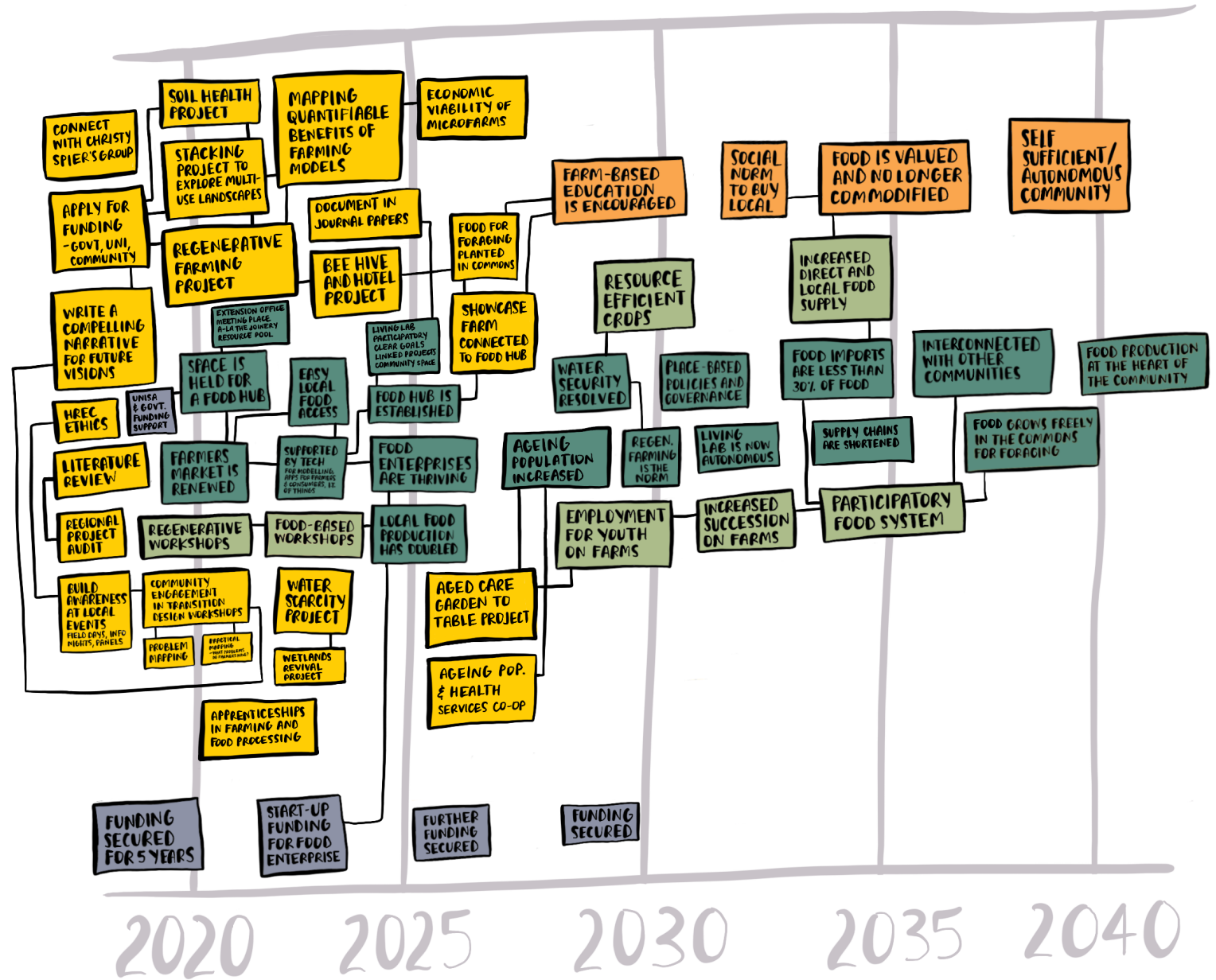


Figure 9.9: Flourishing Fleurieu Visioning Workshop mapping outcomes

also discussed by Escobar<sup>969</sup> as an aspect of autonomous design—that it is best performed from within the community itself, not by an external actor. Without the designer’s immersion or membership, the role of expert cannot be fully vacated, and collaborations might remain ‘theirs’, potentially splintering the co-creation process into what the designer versus the community thinks is best. Throughout this research, these projects have aimed for a shared feeling of ‘ours’, achieved through community immersion and collaborative processes.

Embodied reflection on my personal transition to zero waste and conscious consumption revealed this lived experience has been informing my approach to interventions into the problems of consumption and waste. Moreover, its political endeavour has become an ethical guide for decision making in my practice. The larger transition taking place in my design practice is ongoing, and as previously argued, Escobar might describe this as an onto-ethico-epistemic political endeavour<sup>970</sup>. This description suggests that my way of being in the world (ontology) and of knowing (epistemology) cannot be separated, and nor could/should this onto-epistemology be separated from ethics or politics. This recognises the existential nature of this transformation, and of the transition it has activated. The subsequent pursuit of ‘design for transitions’ is what Willis would likely call my ‘life’s work’<sup>971</sup>; a slow, life-long approach at a chosen problem.

### 9.3 Political shifts: from designer-consumer to designer-transformer

Political activation is a necessary part of transitioning, and politics are interwoven throughout ‘design for transitions’. In this chapter I position the political quite intentionally between the personal and the professional, as a metaphorical bridge that connects one to the other. Literature from Boehnert<sup>972</sup>, Escobar<sup>973</sup>, and Fry<sup>974</sup> discusses the politics of design as being a crucial component of design for sustainable futures, and reflection on projects explored throughout this research revealed the role of politics in empowering my praxis. I would argue that designers lacking political drive could be more inclined to live one way (sustainably) and work another (unsustainably). This was noted during designer interviews where for example, CD07 declared a frustration at the overpackaging of food but had ‘never thought about it in terms of selling packaging to a design client.’ Other designers also expressed personal care for sustainability but described a lack of engagement with it in their work. Historically I had also failed to fully address sustainability in my work, believing that ‘making greener things’ was enough. In contrast, a politically active and empowered designer holds greater potential to drive change through design as a means of reflecting their personal values and

969 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

970 Ibid.

971 Willis, “Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism.”

972 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

973 Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*.

974 Fry, “Redirective Practice.”; *Design as Politics*.

beliefs through their work. This has been evident in both *Rethink Rubbish* and *Flourishing Fleurieu* where each project's focus on transitions aligns with my practice's ethico-political commitment to create change.

A designer's inability to recognise their political power can limit their agency, and perceptions of power dynamics in client relationships can impede action. Recognising that action takes many forms, initially political acts in practice may take a verbal form (conversational/critical questioning) before being realised through a designer's work. This was discussed in Parts 2 and 3 and demonstrated by interviewees SD02 and ID02 who were both engaged in this

critical process. The introduction of challenging concepts such as

post-capitalist design can be limited in commercial practice<sup>975</sup>; managing detachment from the economic priorities of the design industry could be key in the political activation required for transitions in design practice.

In his critical essay, *Edugraphology*, Papanek argues that designers are trained as consumers<sup>976</sup>.

I would further argue that while the designer-consumer can make anything desirable, they lack the required knowledge to design against consumption (see Figure 9.10). An education steeped in consumerism precedes

emergence into an industry that mediates consumer culture and is reliant on its continued acceleration. This industry

experience reinforces the designer-consumer mentality, and the feedback

loop between industry and institutions

reinforces the designer-consumer approach in education. Following this argument, if the designer-



Figure 9.10:  
Excerpt from  
designer  
interview  
(CD07)

975 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*.

976 Papanek, "Edugraphology—the Myths of Design and the Design of Myths."

consumer designs for consumption, what kind of designer designs against it? Designing against consumption can create a double bind for designers with a consumer mindset, rather it is the designer-transformer who performs in this space. Education in post-capitalist design is lacking (and barely exists outside of post-graduate study) however engagement with theories such as those discussed throughout this thesis can expand the understanding of design's culpability and capability. I propose that commitments made by designers to shift their daily practices, ways of thinking and approaches to design are all political acts that play a necessary role in a practice's transition. When combined, these acts can prompt more intentional moves towards projects that 'design for transitions'.

## 9.4 Professional: the ongoing process of learning from and through transitions

Transitioning my practice has been an ongoing process of learning. Insights from the literature were often synthesised during and with experiential moments. Epiphanies often occurred during or after immersive nature experiences and each of these has informed my transition. Self-transformation both catalysed and amplified this process of learning. Further learning came through the practice of 'design for transitions', where immersion in the work and its designerly processes unlocked pathways forward and built the momentum of my practice-based transition. This section discusses the professional dimensions of this temporal process. First the practice of 'design for transitions' is located and its emergence is discussed. This is followed by an investigation of its purposeful curation within practice. I explore some of the 'side-effects' of transitions that might be experienced in a transitioning design practice and how they impact upon and contribute to practice-based transitions. This section closes with a discussion of six tensions that required navigation during my practice-based transition.

### 9.4.1 Locating transitions in practice

Transition design is still largely academic and practice is in its infancy, particularly in Australia. In the US one well documented approach, *Transition Ojai*, is underway, which aims to build a community's resilience to climate change<sup>977</sup>. Much like *Rethink Rubbish* and *Flourishing Fleurieu*, the *Transition Ojai* project has benefited from incubation in academia and practice. Interviews with designers attempting to practice transition design revealed the different ways it is emerging through their work, and how different environments present distinct challenges. Designer-employees hoping to redirect their daily labour to transition design have begun by verbalising the need for transitions and

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<sup>977</sup> Transition Ojai is a former joint venture between Carnegie Mellon University (CMU) and FlipLabs. The project is now managed by Cheryl Dahle at FlipLabs. In July 2019 I secured funding and travelled to the US to gain experience working on this project with Cheryl Dahle. This experience provided new insights into how 'design for transitions' is performed. Documentation of CMU's involvement in the project can be found here: Steve Hamilton, "Words into Action: Making and Doing Transition Design in Ojai, California. A Case Study," *Cuaderno 73* (2018); *ibid.*; Irwin, "The Emerging Transition Design Approach.," Irwin and Kossoff, "Mapping Ojai's Water Shortage: A Workshop.," *ibid.*

asking critical questions of their employers and peers. ID02 and SD02 both described how power dynamics with their employer inhibited the transition of their practices. ID02 discussed the significant role that power played in stifling authorship in tech workplaces and described their practice of transition design as a ‘class struggle’. In other design practices transition design remains in its infancy, as a promise, a hope for the future, or as intent expressed through manifestos. It remains to be seen whether these intentions will activate its practice. My own engagement with transitions spans academia and practice, and my attempts to practice ‘design for transitions’ have been discussed throughout *Part 3: Doing*. Examination of how projects are being undertaken in my practice provides further insights into how this practice is being activated.

Many insights were drawn from reflection on an early (failed) attempt at a disruptive/transition project, *Encore*, that aimed to create a circular economy through a subscription service for fashion accessories<sup>978</sup>. Reflection revealed *Encore* had great potential as a circular economy project, but it was undertaken too early in this research. I was still thinking like a designer-consumer which limited my ability to contribute—simply put, the transition in my practice had not been activated sufficiently to properly support this project. *Encore* was further impeded by street closures impacting foot traffic to the retail store, and timing-related setbacks that affected participant recruitment. Greater literacy and agility was needed to read the project and the participants and adjust the approach accordingly. Ultimately I believe the collaborative team mapped an overly-ambitious course of action that aimed to do too much too soon. In many respects, the project was over-planned and subsequently felt inflexible. Structured mindsets and controlling attitudes inhibited our agility, and as a group we did not fully comprehend the roles that time and space play in projects of this nature. I cannot help but wonder what would have happened had we explored this project with greater flexibility and time? This was a significant learning opportunity in designing behaviour change as a slow process rather than a fast one. As my transition continued, I continually recognised the critical nature of temporality in designing interventions for transitions—these projects are vastly different to standalone projects that respond to typical design briefs. Transitions involve shifting gears and slowing down, and what works in the fast-paced world of commercial design does not always translate into the slower pace of transitions. Transitions need time.

*Rethink Rubbish* learned from this. It benefited from hindsight, and better timing (the work commenced after my self-transformation). It began with the aim to transition a school to zero waste through a series of workshops that explored the problems of consumption and waste through a number of experiential provocations (see figure 9.11). The insights from each workshop informed the next, and a flexible approach to the workshop facilitation permitted greater

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<sup>978</sup> The *Encore* project was a collaboration between myself, a circular economies consultant and a retailer. The collaborative team developed a trial of a fashion subscription service and data was collected through semi-structured interviews with participants. Whilst feedback from participants was positive they were limited in numbers and the project was challenged by a number of externalities. The failure of this project has informed my understanding of the slower pacing of transitions work and the need for flexibility in the approach.



responsiveness to the needs of the group at hand. Creating co-learning opportunities between class groups provided a dynamic way of communicating the zero waste transition to younger students, who responded well to learning from their peers. This also appeared to validate the project in their minds; one student remarked how the change seemed more achievable once they saw proof of another class's success. With *Encore's* lessons front of mind, bolstering the workshops with a significant allocation of open time also held much needed space for student consultation and emergent projects.

*Rethink Rubbish* used 'design for transitions' to explore big change achieved through small actions. The project timeline has extended into 2019 and new possibilities have emerged from this additional time. Ongoing work with students from the school's Environments Ministry is embedding the Ministry's leadership within the school, and this group continues to initiate actions to help sustain their waste transition. A larger vision for the project positions the school as a 'state leader in sustainability', and projects continue to emerge that could support this larger transition. Continual reflection on this project reiterates the importance of time. Learning this significant lesson from *Encore*, has benefited *Rethink Rubbish*. A continual shift between reflection and response combined with the holding of time and space has permitted greater agility and flexibility in the approach. Holding space for what 'might be' requires trust in the process, but this process appears to prove its worth. Transitions require trust.

One of the newly emergent *Rethink Rubbish* projects aims to shift students from consumers to contributors by building connections between the classroom, the garden and the canteen (see figure 9.12). This project is in its infancy but is being explored by two class groups who will plan, plant, prepare and serve a meal for their peers, and will later be in receipt of a meal that is planned, planted, prepared and served to them. Once completed and documented, the project can draw connections back to the curriculum through traditional lessons such as maths, economics, biology and life sciences all of which endeavour to be contextualised in the garden and kitchen. Students will combine traditional learning with sustainable life skills around food production and preparation while practicing reciprocity, cooperation, planning and project management. Engaging with sustainability through experiential and participatory learning nurtures values of respect and care that could lead to lifelong pro-environmental behaviours<sup>979</sup>. Even at such an early stage this project demonstrates the school's appreciation for the weaving together of sustainable life skills and values with traditional areas of study. Furthermore, it demonstrates what is possible in these projects when space is held for the emergent. I would argue that the holding of space for such projects suggests evidence of a practice-based transition. Transitions need space.

Throughout the *Rethink Rubbish* project I have used my voice and design authorship for political ends, and in turn my practice has continued to transition. I would argue that *Rethink Rubbish* is an emergent outcome of my self-

979 Holmes et al., "The Common Cause Handbook."; Stern et al., "A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism."

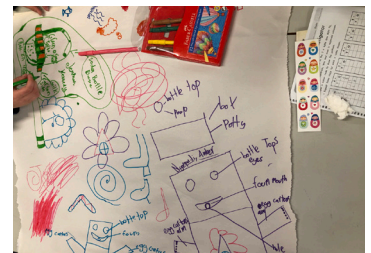
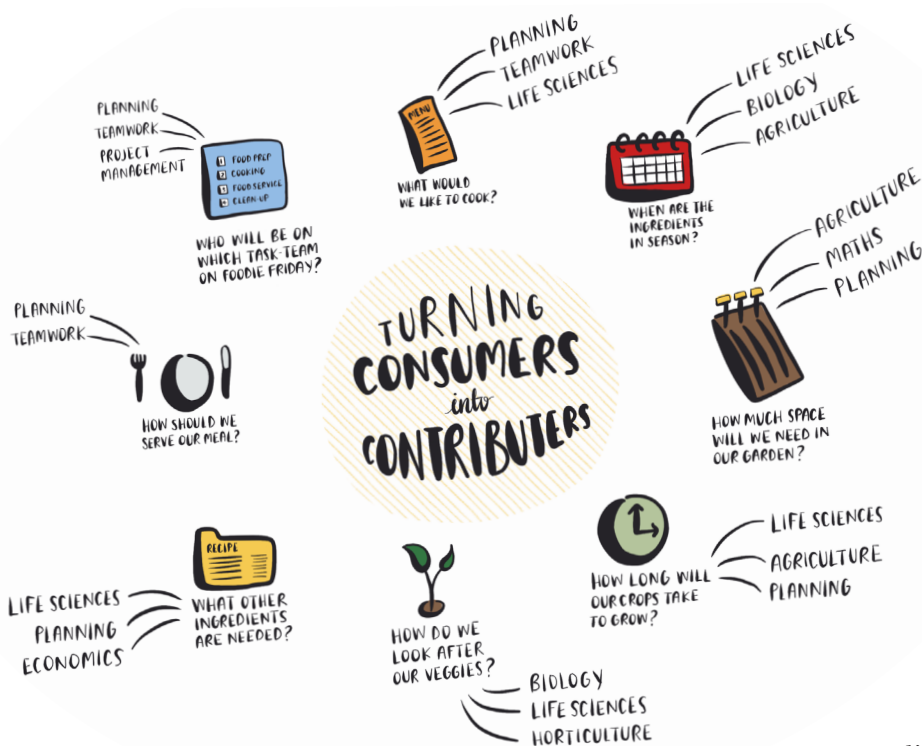


Figure 9.11:  
Experiential provocations  
and emergent projects.  
Rethink Rubbish project.

Figure 9.12:  
Connecting  
sustainability  
life skills into the  
curriculum.



transformation, and that its constellation of projects are an outcome of holding space for the unknown and emergent. In turn, this project is also transitioning my practice. Immersion in the school community and regular engagement with students created deeper connections and permitted greater transparency in my own behaviours, which unbeknown to me were being carefully observed by the students. One student commented that she knew I really meant what I said because I always wore the same pair of earrings, the same sneakers and carried the same bag. To her, this was testament that I had been honest in communicating my own consumption habits.

Transparency resulted from this

immersion, it demonstrated how students could participate, and active engagement arose from this.

Claiming the project's success hinged on my own transformation is far too subjective. However reflection on feedback from participants does support the argument that my immersion into the school and subsequent demonstration of a zero waste lifestyle provided additional

leadership for the changes occurring

in the school. This immersion also facilitated

collaborations that shifted the project's ownership from

'mine' to 'ours'. Transitions require immersion.

These findings show how a political shift from designer-consumer to designer-transformer can influence both the design outcomes of a practice and the transition occurring within it. Furthermore the *Rethink Rubbish* project's close ties to theory, its adaptive nature, and its highly collaborative approaches have been key not only to the project's success, but also to the identification of emergent projects that work towards a larger vision for a sustainable future. *Rethink Rubbish* and the 'failure' it draws upon, *Encore*, both helped to locate my practice of 'design for transitions'. The *Flourishing Fleurieu* project also contributes to this, and points to a possible future where this practice might thrive outside of academia. These projects demonstrate a variety of work that can be performed through 'design for transitions', and the pursuit of each of these projects has contributed to the transitions occurring within and to my

practice. This discussion suggests transitions can be located in practice by evidencing trust in the process, identifying the time and space they are granted in a practice, and by recognising a practitioner's immersion in their pursuit.

#### 9.4.2 Curating space

What takes place in a transitioning practice could be described as a process of curation. In an art gallery, curation involves careful planning and consideration of the interactions between works that share space, and the



Figure 9.13: Curating space for transition design by enveloping the old with the new.

process bears similarities here. Creating habitable space for 'design for transitions' leads to the old practice becoming enveloped by the new. In this sense, 'design for transitions' is less an adjoining camp to an existing practice and more like a circle that is drawn around a practice, with deep consideration given to what exists inside (see Figure 9.13). Within its boundary live a number of things, each requiring space and attention to flourish. As the curation in my practice focusses on 'design for transitions' this aspect of the practice will thrive, and in the process the old practice will recede. As with systemic change, 'design for transitions' does not 'negate the old, but [rather it] contains and supersedes it'<sup>980</sup>, and this notion of enveloping the old better communicates the changes taking place in my practice.

Curating this space has involved a process of letting go: of some clients, some projects, some thinking, however in doing so there has been no disciplinary divorce as such. Practicing 'design for transitions' does not negate my practice of communication or interaction design, rather it utilises my knowledge of both. It envelops them, and changes how I think about them. Their power is harnessed as part of transition design which continues to redirect their focus. Communication design as a 'redirected' practice can make sustainable futures desirable<sup>981</sup> and post-capitalist applications of interaction design could support sustainability transitions<sup>982</sup>. Eventually these redirected practices of communication and interaction design will simply form part of my practice of 'design for transitions', superseding their original modes of practice. As this transition continues, it is anticipated that a reliance on stabilisation funding from commercial projects will decrease as funding for community-based transitions increases.

980 Eisenstein, *The More Beautiful World Our Hearts Know Is Possible*, 2. p 38

981 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Fry, *Design Futuring*.

982 Cameron Tonkinwise, "Transition Design as Postindustrial Interaction Design?," (2014), <https://medium.com/@camerontw/transition-design-as-postindustrial-interaction-design-6c8668055e8d>.

Curation changes the focus of a practice by intentionally seeking out projects with transition-potential. A set of determining factors can help guide the decision-making process, and the more closely aligned to sustainable futures the better. The eleven determining factors I have used were presented as an analysis tool in the previous chapter (see Figure 8.28). While I remain open to standalone design projects that will provide financial stabilisation, I am more cognisant of what these projects are, and how they might contribute more broadly to transitions. For example, designing a series of handbooks about self-care for changemakers is a standalone communication design project for a cause-client that feels conceptually linked to the work I am doing with young changemakers involved in the *Rethink Rubbish* project. An interaction design project that aids in construction material specifications feels less linked to transitions, yet on reflection, the project was successfully ‘redirected’ from an unsustainable print run of technical manuals to a digital web-app. Whilst this approach is a technical redirection (towards a greener thing) this quid pro quo project offsets the time I invest in low paid or pro-bono community-based work. Early conversations exploring the organisation’s transition-potential have also begun, so despite the latter project’s commercial face, it forms part of the transition. Time has been invested into its ‘redirection’ and into the instigation of bold conversations about its future direction. Whether this project can be fully converted into ‘design for transitions’ remains to be seen, but the foundations are being laid. Open communication with current and potential clients and collaborators can facilitate larger conversations about transitions, and these form an important part of this curation process. Without such discussions, the true transition-potential in a project or an organisation remains speculative.

This process of curation and its associated funding balancing-act will continue to be tested through the *Flourishing Fleurieu* project, which has been incubated within this research during its initial stages. Community workshops begin in late 2019 (after this thesis is complete) and this process will be documented as part of future research along with associated emergent projects. It is anticipated that a ‘living lab’<sup>983</sup> will create a food hub that aims to connect social enterprises, research, education, and community members and engage with the food and water security issues currently threatening the region. Locally-specific hub-connected social enterprises will be explored with the aim to decrease the food hub’s reliance on funding through grants. Whether this project will continue to be incubated within academia is unknown, but curation in my practice has held space for this work to continue through practice-based research, with the intent for community immersion over a ten-year period. Through continued documentation of this project I aim to contribute further insights into community-based transitions, farming transitions and ‘design for transitions’.

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983 In this project a living lab will permit the study of soil health, regenerative farming practices, food production and consumption practices. Living labs are a form of participatory research born out of Northern European co-creation models. For more on this see: Pieter Ballon, “Living Labs,” (2015 (near final draft)).

Design for transitions is slow and patient work<sup>984</sup> and there is an art to saying no in favour of the slow. The curation process is likely altered by a number of different factors from one practice to the next and a number of tensions arise from it, many of which appear to be financial and/or ethical. Striking a balance can be a challenge in itself and curating the transition in an established practice takes time. Through open conversations designers can qualify what might be possible, and from this comes a more informed process of curation.

### 9.4.3 Transitioning design practice towards increased sustainability

In order to take direct action against ‘defuturing’, design practice will need to transition towards increased sustainability<sup>985</sup>. Shifting design’s focus from accelerating consumption to social justice and environmental sustainability will play a key role in transitioning practice. It is also quite possible that a transitioning practice will be uniquely positioned to transition its clientele in addition to transitioning itself<sup>986</sup>. Transitions can activate and occur in multiple ways. What follows is a discussion of the different ways that transitions might be experienced in practice, where flux, mindset shifts, and ‘new ways of designing’ inform different approaches and strategies. This section draws from my experience of practice-based transition and selected interviews with designers who are transitioning their own practices. It is important to note that transitions are not unilateral. What is discussed below serves as a demonstration of one kind of practice-based transition; its presentation does not intend to nor should it detract from the existence of a range of possibilities.

#### Flux while in transition

The experience of a practice-based transition is also an experience of flux. A transitioning practice might benefit (structurally speaking) from embracing an increased sense of fluidity, but irrespective of its acceptance, flux can create discomfort and adds to the rising tensions in practice. The desire for practitioners to divorce from ‘defuturing’ work must be balanced with the need to address it directly. Whilst amplifying sustainability through work for causes and communities is helpful, so too is challenging the thinking and subsequent priorities of commercial clients. These two approaches to practice (commercially viable and environmentally and/or socially just) can co-exist and can be managed simultaneously but there will also be a palpable tension between them. This balancing act could be likened to mixing the volume of musical tracks. It is not enough to turn up the volume of track A in order to make it audible over track B, the tracks must be blended in an attempt to strike a balance, while also managing any bleed between them. This kind of ‘volume management’ demonstrates flux management. It attempts to strike a palatable balance between different approaches, different client-types, different outcomes,

984 Irwin, “Transition Design Lectures.”

985 Boehnert, *Design, Ecology, Politics: Towards the Ecocene*; Fry, *Design Futuring*.

986 Irwin, “Transition Design Lectures.”

and the different tensions that arise from balancing this ever-changing blend of work. This is not to say that this flux presents a series of dichotomies to practitioners, good/bad, unsustainable/sustainable, and commercial/community. On the contrary, the ‘blend’ is the core concept here. For example, a commercial client who is engaged in conversations about transitions with a designer sits at neither end of any real or imagined scale of sustainability. More likely they are a messy blend of many parts of the spectrum. This reflects a far less utopian reality than the mental image of a sustainable practice that ‘designs for transitions’. Rather, it acknowledges that transitions of this nature can (and perhaps should) be a little messier. Practice-based transitions could contribute to sustainable futures not just by practitioners investing their time and energy into building those futures, but also by challenging the thinking and doing of commercial clients who are doing the ‘defuturing’. This process might start with a bold conversation, and indeed it might take many of these conversations before any cut-through is observable, but in drawing attention to structural unsustainability, Counterpower is evoked as part of ‘design for transitions’.

Knowledge in flux will also be an ongoing concern for designers aiming to contribute in this space. As knowledge gaps are discovered they will need to be acknowledged and filled, particularly in theories of change, culture shifts and alternative business models and economies. A designer’s expertise in these areas will no doubt be called into question by corporate clients who have historically viewed designers as resources that provide an aesthetic end-point. Corporate or organisational transitions will likely be slow to start, and this has certainly been my experience in this space. As previously suggested transitions might be initiated through challenging conversations and proposals for approaches that counter business-as-usual. It should also be recognised that at the outset these would likely be met with resistance and opposition, although any response to the contrary should be immediately nurtured through continued engagement. Managing this feedback loop can be an emotionally gruelling process. It requires patience, determination and empowerment from the designer, and accordingly an understanding of power dynamics and theories of change to adequately strategise the approach. I would argue that embracing this period of flux holds significant potential to flexibly support a practice throughout its transition. Flux also presents opportunities to instigate culture shifts in organisations as a partner rather than an expert, and recognises how this can create collaborative movement forwards. Cultural change that encompasses transitions in mindsets could also reduce ‘defuturing’ activities by altering what is deemed desirable in terms of business goals and outcomes. From this process comes the potential to reimagine the client-designer relationship from resource to collaborator.

Large-scale ‘design for transitions’ projects often add to this flux. Their combination of chaos and complexity requires trust in (sometimes new) processes and (sometimes different) people in order to navigate this uncomfortable space. The number of unknowns in these projects can be

challenging; they span problem articulation, timeframes, funding and more. Designing for this collection of unknowns can be daunting, and articulating it can feel overwhelming. Accepting flux as a native aspect of transitions and embracing more fluid approaches can help build the trust that transitions projects require.

### Mindset shifts and knowledge building

Conceivably, a transitioning designer's mindset will need to shift from competitive to collaborative ways of thinking and being. Practicing collaboratively enacts a mindset shift from 'working for', to 'working with'; without this, the designer could become trapped by baggage from old (current) ways of working. Irwin et al describe this new mindset as more open, mindful and self-reflective in its 'holistic worldview and ecological paradigm'<sup>987</sup>. As previously discussed, stepping into a participatory and collaborative space requires a letting go of the role of expert in order to share this role with others. The openness that is achieved through this process alone is significant, it allows the designer to shed their disciplinary baggage and more fully embrace other people's perspectives. Letting go of the 'expert' role is also a process of relinquishing control; it puts trust in a larger collaborative group and accepts more holistic approaches and outcomes. This can challenge designers considerably; holistic outlooks differ from expert/control mindsets that tend to silo information and action, and can reinforce the status quo. Embracing more holistic views is a necessary shift in designers' thinking. In conjunction with this mindset shift, a considerable body of knowledge is also required by a designer in order to transition their practice. A wide body of literature argues for ecological literacy as a critical aspect of this new knowledge<sup>988</sup>. The primarily technical approaches to sustainable design outcomes reveal that without eco-literacy a designer's contributions to sustainable futures will be limited by a lack of knowledge.

Further to increased eco-literacy and theoretical knowledge is the need for an understanding of relational dynamics and theories of power. Dahle illuminates the role of power dynamics in systemic change<sup>989</sup>, and Willis critiques the transition design framework as lacking in this respect<sup>990</sup>; Willis further identifies the need for an understanding of the philosophies of technology and ways of being in the world as part of the framework for transition design. Familiarity with power dynamics and relational dynamics will also aid designers stepping into facilitating roles. This theoretical domain will be of particular interest to designers embarking on transitions conversations with organisations, where the client-designer power dynamic can impact communication. Movement from 'aesthetics expert' into facilitation roles will demand an increase in

987 Kossoff, Tonkinwise, and Irwin, "Transition Design: The Importance of Everyday Life and Lifestyles as a Leverage Point for Sustainability Transitions." p 2

988 See Joanna Boehert, Arturo Escobar, Tony Fry, Terry Irwin, Gideon Kossoff, David Orr, Victor Papanek, Cameron Tonkinwise and AnneMarie Willis for more on this.

989 Cheryl L. Dahle, "Discussion of Power Dynamics in Systems Change," (2019).

990 Willis, "Transition Design: The Need to Refuse Discipline and Transcend Instrumentalism."



the capabilities of designers. Cross-disciplinary hybridity could benefit communication designers who might have a larger leap to make in their client's minds to evolve from resource to collaborator. Regardless of discipline, a deep decoding of the 'language' of business would benefit all designers moving into this space. Processes of decoding could help designers to demystify organisational structures and cultures in ways that reveal potential leverage points for change. This arcs back to the Transition Design Framework's call for 'new ways of designing' and points to the importance of sensemaking activities that are informed by theoretical knowledge and the transitions discourse.

### Transitioning towards new ways of designing

The Transition Design Framework outlines the need for 'new ways of designing' as part of transitions. Five specific 'new ways of designing' were discussed in the previous chapter. They discussed the practice of design as facilitation, sensemaking, interventions, ontology and temporality. What follows intends to build on this discussion by presenting the insights gained from practicing these 'new ways'.

The introduction of mapping and analysis demonstrates how systems thinking and relational thinking provide a deeper understanding of the interconnectedness of structural unsustainability. Ethnography can provide further insights into the reality of human experiences with problems and with potential approaches to those problems. Collaborative co-definition of problems builds a greater understanding of the different ways a problem can be experienced, and this appears to lead to a more nuanced problem articulation. Analysis of this process also provides designers with a deeper understanding of a problem's intersections, embeddedness and/or interconnectedness across systems. This work extends the typical designer's skillset; it relies on connections made with people through more meaningful collaborative processes (including Forester's 'participatory rituals'<sup>991</sup>) and on pattern recognition during sensemaking processes.

'New ways of designing' help designers avoid the disconnection that comes from conducting desk research or collecting and disseminating information on end-users as disparate processes of problem and user research. Instead they are forging connections by creating and holding space for more participatory collaborative processes. This requires deliberative time and space. This also permits approaches akin to Esteva's co-motion<sup>992</sup> that shift knowledge gathering beyond the user-feedback loops that are typical of contemporary co-creation process. Co-motion<sup>993</sup> recognises the tension between sameness and difference that is also highlighted by Plumwood<sup>994</sup> and is inherent in collaborative groups that include cross-cultural perspectives. Esteva's theories have been applied in Muller's research<sup>995</sup> where co-motion can be identified in

991 Forester, "On the Theory and Practice of Critical Pragmatism: Deliberative Practice and Creative Negotiations."

992 Esteva, "Regenerating People's Space."

993 Ibid.

994 Plumwood, *Environmental Culture*.

995 Muller, "Co-Motion: Making Space to Care for Country."

the approaches to Caring for Country that attempt to link government landcare management organisations and Indigenous peoples (Yolngu) in Arnhem Land in Australia's Northern Territory. Both Esteva's and Muller's research discuss how connections between people can foster true collaborative relationships that are built on foundations of trust and respect. Muller reveals the importance of this when working with Indigenous groups, whose wisdoms can inform relations with the land, and she highlights the challenges faced in the ontological differences between Indigenous groups and governments in undertaking 'Care for Country'<sup>996</sup>. Muller suggests that where 'governments do not understand the ontological underpinnings of Caring for Country, they [should] resource it and respect the rights for Yolngu to operate from their own perspectives and have the right to be accountable to their own systems'<sup>997</sup>. Esteva's principles of co-motion demonstrate how we (humanity) could move together by embracing a mutual respect for our differences, and this plays a crucial role in ensuring justice as part of global transitions. Fostering this as part of a mindset shift takes time, and designers may benefit from further training that helps fill any perceived skills gaps in this area.

As a design practice continues to transition, so too will the design processes embedded within it. Not unlike the experience of changing a personal social practice, it also takes time for 'new ways of designing' to feel native and habitual. 'New ways of designing' continually emerge and what has been presented in this thesis is by no means an exhaustive list. 'New ways of designing' along with the other areas of the Transition Design Framework are co-evolving<sup>998</sup>; they complement existing practices in design by enhancing the designer's ability to articulate problems and by engaging designers in more collaborative experiences. These deeply collaborative, relational and analytic processes are all identifiable in the transition taking place in my practice. Whilst they are not explicitly used in every project, they have influenced my thinking to such an extent that they feel ever-present in some form or other.

#### Determination, divestment or defeat?

At the beginning of this section, the metaphor of volume management was used to describe a balance of project work in a transitioning practice. Part of this balancing act might involve discussing, facilitating and collaborating on transitions within corporations, while also contributing to social change through 'futuring' projects with communities and causes. A designer's 'volume co-ordination' of 'futuring'/'defuturing' as part of transitions will likely be an ongoing process, making it a skill worth honing. Where this process of volume management becomes challenging is in decisions relating to divestment—at what point should a designer divest their expertise and labour from 'defuturing' organisations? Is divestment admitting defeat, and is that a bad thing? Is the overarching goal here to stick with the problem and keep trying to activate change, even knowing this change might be negligible?

996 Ibid. p 139

997 Ibid. p 139

998 Irwin, "The Emerging Transition Design Approach."

In an interview between Roberts and Roach<sup>999</sup>, Roach insists that designers should not walk away from unethical projects, but rather, should remain and try to have influence. But what if attempts at change feel futile? Does the perception of futility suggest ‘defuturing’ will continue? Does this flag the need for divestment or simply suggest an altered approach is needed? And how does the ethically compromised designer manage their own well-being as part of this? Throughout this research these kinds of questions have filled me with uncertainty. As part of my own transition I have explored who I work with, how we work together, what we work on, and what contribution the relationship is making towards transitions to sustainable futures. In some instances I have divested my labour, in others I have ‘stuck with the problem’ and continue to question the contributions being made. I remain unsure if small and/or negligible change feels worthy of the ethical compromise made in its pursuit. In my transitioning practice I continually juggle these notions of determination, divestment and defeat. The answers to these questions remain elusive, but I persevere in asking them.

#### 9.4.4 Tensions in the existential practice of design for transitions

Navigating the pain points during a practice-based transition can be challenging, and there are obvious tensions between the need for financial security and the desire for utopia that must be managed as part of the practice of ‘design for transitions’. Practitioners who are driven by deadlines and budgets in commercial practice may struggle with the ambiguity of ‘design for transitions’, where projects tend to be undefined and have imperceptible end-points. Patience, resilience and determination are required to comfortably experience the temporality of ‘design for transitions’. What follows is a discussion of six tensions that have been noted during my practice-based transition: the privilege embedded within the transition itself; its presentation as ‘class struggle’ in some practices; its reliance on sacrifice; the structural and financial changes that support the ongoing transition; the transitioning professional identity; and the critical boldness required in briefing. These tensions can be experienced differently from one practice to the next, but I would argue that their acknowledgement along with the continued identification of yet unknown tensions is a prerequisite of navigating practice-based transitions.

##### A practice of privilege

It has been argued that transition design (like other forms of sustainable design practice) is a practice of privilege<sup>1000</sup>, that in order to divest or redirect their labour a designer must also be in a privileged enough position to do so. The economic argument is perhaps the loudest—that one must have independent wealth (or a benefactor) to fund this work—and I must acknowledge several

999 Roach in Roberts, *Good: An Introduction to Ethics in Graphic Design*, p 47

1000 This was noted in a published conversation from the Service Design Melbourne event hosted at RMIT in October 2018. The conversation included Professor Cameron Tonkinwise, Dr Stefanie Di Russo, Dr Melissa Duque Hurtado, and Dr Chris Marmo. See here for the recording: <https://soundcloud.com/user-300099016>

privileges that have enabled my pursuit of this practice and reduced my exposure to risk. Firstly, throughout the duration of this research (and consequentially my practice's transition) I have been in receipt of a scholarship stipend that has provided a safety net of sorts. Slower-paced 'design for transitions' projects have been pursued securely, in-part from the knowledge that this stipend would cover some of my living expenses. This also means I have not fully experienced the challenges of funding this work, because in some respects it has been funded via its incubation within this research. Secondly, undertaking this research facilitated the pursuit of theoretical and practical knowledge needed to perform transitions by privileging me with the necessary time to increase my eco-literacy and understanding of economic possibilities within ecological contexts. Finally, I have run a sustainable design practice for more than a decade, and my clients are (for the most part) aware of my passions and my politics. I believe this has made some of my conversations about transitions easier, and from some clients' perspectives, expected. The misaligned few were managed out of my practice in order to create space for 'design for transitions'. This case study of a practice-based transition has been privileged in multiple ways, not least of these privileges is the freedom I have as the principal of my practice to explore transitions as I see fit.

#### 'Class struggle' in transitions

Practice takes many forms, and mine is but one of many possible approaches to transitioning a practice. Design is practiced by employees in design studios, agencies, tech-orgs, and in-house roles and the constraints and limitations experienced by designer-employees are vastly different from those experienced by a director or sole practitioner. It is important to recognise that transitions can activate in all of these spaces, though it is likely that it will take on different forms and approaches dependent upon the context of the practice. In their interview, ID02 described how an employee might feel less empowered to enact change in their workplace because their ability to take action can be hindered by the risk of job loss and subsequent financial (in)security. For an employee, transition design might appear more like a 'class struggle', and this is how ID02 describes their practice of it. Their focus is on the workplace itself, where co-workers are being encouraged to unionise or organise to redirect their labour away from 'defuturing' projects. This type of action could serve two purposes, one: to affect real change in the nature of the work produced; or two: to destroy a 'defuturing' organisation from within. As transition design matures there will likely be a greater appreciation for the impact of this kind of action. It is particularly relevant in staunchly 'defuturing' industries with wide reach, such as the tech industry, where labour is frequently performed by marginalised groups who are overworked and underpaid, and where the products frequently risk possible sustainable futures<sup>1001</sup>. To overlook the 'class struggles' that are inherent within transitions would be an unjust and unrealistic outcome, not

1001 Scholz, How Platform Cooperativism Can Unleash the Network; Schor and Attwood-Charles, "The "Sharing" Economy: Labor, Inequality, and Social Connection on for-Profit Platforms." See also for an example of organisation in the tech industry: <https://techworkerscoalition.org> Accessed 31 January 2019

only in the design and tech industries, but in all industries and in all societies. White's approach to 'just transitions'<sup>1002</sup> reveals how important addressing these 'class struggles' is. He argues for their consideration as part of moving forward without leaving anyone behind, and discusses the reimagining of labour as a significant contributor to the scale and breadth of transitions to just and sustainable futures.

#### Sacrifice by design—a commitment to change

To intentionally transition a practice is to design a necessary process of sacrifice, the first part of which is making a commitment to change. If a designer's suggestions of alternative approaches, redirections or strategies for change are deemed undesirable and a transition is deemed impossible, then earnest consideration of the divestment of labour must begin. This process will differ from practice to practice, what remains constant is the eventual need to say no to 'defuturing' projects. Acceptance of this sacrifice might come from the understanding that what is given up feels significant yet pales in comparison to what can be gained as a result. As Bill Bernbach famously said, 'a principle isn't a principle until it costs you something'. Sacrifice by design is presented here in a similar spirit.

Every practice embarking on this journey will likely experience the need to say no—sometimes to the kinds of projects that have defined them in the past—in order to create space for the kinds of projects that will define them in the future. I believe this is the biggest sacrifice—declining paid work to instead hold space. But holding space also creates another metaphoric space in which designers become empowered and enabled. Projects might not exist in this space, rather it remains open and held, filled only with possibility. If this process of sacrifice is not designed it can feel uncomfortable and unmanageable, as it may involve letting go of clients, projects, or both, and with this can come a sense of loss or grief. If the process of sacrifice is designed by the practitioner making the sacrifices then it can be managed, chosen and performed in ways that create the necessary space for 'design for transitions'. Feeling some sense of control over the process can help alleviate any sense of pain, loss or grief.

#### The pressure of 'slow' on regular cash flow

Whilst several previously acknowledged privileges have reduced my risk and exposure, there are still financial implications to 'design for transitions' that I have had to consider, particularly as this research draws to an end. The longer delivery window in slower projects requires a different approach to invoicing and payment cycles, as monthly invoicing is not always applicable, and milestone invoicing can leave long lean periods between invoices. Furthermore, applying for grants and other funding is time consuming and unpaid. A financially viable transition likely includes the ongoing development of standalone projects, as outlined in earlier discussions on curating space.

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1002 White, "Metaphors, Hybridity, Failure and Work: A Sympathetic Appraisal of Transitional Design.;" "Creative Labour/Critical Designs/Just Transitions Imaginaries."

Continued work in the ‘greener things’ space will provide my practice with financial stabilisation, but this work is being undertaken with a curatorial approach. This ensures two things: firstly, that ‘design for transitions’ thrives in the practice ongoing, and secondly, that any future ‘greener things’ projects contribute to or connect with the larger aims of transitions projects in my practice. A stabilising step such as this could be viewed as a step backwards, afterall, this case study is about transitioning away from greener things. It is important to recognise that the process of transitioning is slow, so it relies on an acceptance of flux during the in-between times, and on trust that active curation will create greener things that are sensitive to transitions. Intentionally developing standalone projects (greener commercial things) that are connected to future visions or transition design projects might also make the blend of activity in this in-between time less discouraging. For the past year, creation and participation in experiences and events is emerging in my practice, which appears to be a result of this in-between time. These experiences and events, typically in the zero waste community, help to amplify the local grassroots efforts of this movement. This work is paid and could be described as bridging work. It sits at neither end of the spectrum but rather hovers in the in-between space bridging the gap between ‘making greener things’ and ‘design for transitions’. Workshops and events also present another alternative for funding community-based work that contributes to the practice-based transition and to the larger goal of contributing to sustainability transitions.

Working in transitions requires an openness to change within your own practice structures, particularly during transitional periods, and developing flexible working arrangements has increased the agility of my practice as a business. This has included the combined use of co-working spaces and a home-based studio to reduce premise-related financial commitments, and engaging in more flexible working relationships with sole-practitioners/consultants rather than having employees with fixed expenses. Nurturing long term collaborative relationships with other practitioners has opened up opportunities to expose them to ‘design for transitions’ and has provided the agility needed for team-kairos (Greek for the right thing at the right time). This is helping to expand my local network with transition-savvy designers, which facilitates a more strategic transitions-oriented workflow management. Furthermore, it is creating a business structure that holds space for and allocates time to the development of projects that design for transitions.

#### The professional identity in flux

Transitioning a practice also leads to a transitioning professional identity, and the pressure to present the right kind of professional narrative can be all encompassing. After our interview, CD03 wanted to know more about my work in transitions, and after hearing part of my description asked: ‘do you still consider yourself to be a designer?’ I believe the answer to this question lies in one’s understanding of what design can do. For CD03 being a professional designer was in some large part defined by the act of ideation and subsequent

pushing of pixels on a screen. As my practice has transformed, I have spent less time pushing pixels and more time creating the moments and space in which everyone else can design. Where CD03 perceived a limitation in the disciplinary boundary, I saw an opportunity to push beyond. I still consider myself a designer, but this identity is being shaped by different ideas of what design can do. The aforementioned shift from things to experiences and events is relevant here, as creating experiences is rarely connected to ‘doing design’ in the ways that are typically understood by most communication designers.

Throughout this research and this process of transition my identity has shifted, and while I do still identify as a designer, like my transitioning colleagues, I have been continuously challenged by how best to articulate this identity to others. As discussed in the previous chapter, I have found comfort in the prospect of providing context through a suffix rather than a prefix—I ‘design for transitions’ rather than ‘I am a transition designer’. The flexibility that comes from identifying as a prefix-free designer feels somewhat appropriate for the fuzziness that accompanies the hybridity and the transition in my practice. Using a suffix feels more apt for the varied creative processes and outcomes resulting from approaches that ‘design for transitions’, which has emerged in my practice as a hybrid of multiple approaches.

The growing landscape of ‘professional social media’ such as LinkedIn, Medium, Behance and others, demands a biography that presents a clear narrative of a designer’s work. In these settings, professional standing is often tied to completion—a body of work rather than work in progress, having transitioned rather than being in transition. Resilience and humility are required in order to be transparently in flux in this professional narrative.

### Bravery in briefing

Design’s co-dependency on business can impact decision making, and without addressing the financial commitments of a practice (such as limiting employee ‘mouths to feed’ and reducing overheads) this co-dependency could lead to saying yes to projects that infringe on the space allocated to ‘design for transitions’. Saying yes is a design industry habit, and the underlying aims of a pre-determined industry brief are rarely ‘redirected’. To break the habit of saying yes, critical questioning must sit bravely between a brief and the response to it. This critical approach to the briefing process and the possibility of saying no to a brief must become a conscious practice. Like any change in habits this can pose challenges, and in this instance, those challenges often have financial implications (hence the concept of sacrifice raised earlier). Despite this, the importance of critical engagement cannot be understated; critical questioning, challenging the desired outcomes of briefs and engaging in conscious deliberation over a brief’s suitability can change the power dynamics of the client-designer relationship.

To return again briefly to the financial concerns which loom large for many practitioners, if ever there was an argument for a smaller practice base with

increased agility this is it. Smaller teams decrease the financial commitments of a practice which can alleviate financial concerns when challenging or redirecting a brief. During their interview, SD01 expressed a belief that a large agency structure is required to pursue design at the scale of transitions. Whilst I agree that many large-scale projects require large-scale teams, I would argue that a team of collaborators can work just as effectively, with greater agility and less risk per person than a large agency structure. Of relevance here to the process of briefing is that smaller teams cost less to maintain and support, thereby decreasing the supposed financial risks associated with critical engagement during briefing. Curation is a bold political act that requires empowerment, but brave designers will reap the rewards of a curated space in which they can ‘design for transitions’, and a relocation of power in relation to client-fed projects.

## 9.5 Closing remarks

This chapter has discussed several aspects of a practice-based transition, positioning it as a personal, political and professional process. This case study has documented how an Australian-based design practice is transitioning from ‘making greener things’ to ‘design for transitions’ and explored how self-transformation and engagement with real-world projects both helped activate this shift. Through the case, insights are presented that reveal a value in particular approaches, including curating space for transitions, designing a process of sacrifice, allocating adequate time to transitions and being open to the experience of flux. An overview of six tensions that have accompanied this process reveal some of the challenges that designers will likely face in transitioning a practice. This chapter demonstrated the important role that personal and political transformations can play in the process of transitioning a design practice. Furthermore, the case study reiterated the existential nature of ‘design for transitions’, which was evident not only through the exploration of interconnected aspects of self-transformation and practice-based transition, but also through the amplification that has occurred as a result of continued engagement with projects that contribute to transitions. Whilst the transition taking place in my practice is far from complete, this case has revealed how far it has come, and has illuminated a clear path into the future for this process to continue outside of this research.



## Conclusion

This research has investigated design's contribution to unsustainable consumption and waste, and in doing so has also explored design's potential to contribute to sustainability transitions. It revealed a history of inaction in practice but also presents a positive movement towards a focus on critical thinking rather than technical making in response to structural unsustainability. Throughout this research I have continually returned to a number of questions, the first being why. Why is sustainability absent from the norms of practice? Why are designers' actions limited? And why does the design industry seem so apathetic about sustainability? Investigating these questions from multiple perspectives has provided a richness to this research. The literature discusses design practice as an increasingly structured working environment where outputs are monitored by the measurement of metrics and performance of end outcomes. Frequent pressures on designers' time and project budgets are coupled with interactions with increasingly complex problems that demand more time and space for more thorough articulation. But typical commercial practices are situated within an economic status quo which limits their ability to allocate adequate time and space.

This creates significant tensions for designers. These tensions impact the design process by replacing creativity with routines under which designers feel forced to act in a particular way. In interviews, some designers expressed their reliance on references they could 'make their own' as a shortcut, while others used their personal time for the thinking that used to be done as part of their professional creative process. Some reduced the number of concepts being delivered to clients, and several designers worked overtime without pay to meet tight budgets while maintaining high standards in their work. These perspectives were contrasted with my own experiences as a designer and as a researcher, and reflection on this contrast occurred multiple times throughout this research. My previous industry experience mirrored the tensions presented by limited time and restricted budgets. Reflection on the impact of this research on my practice revealed how increased flexibility in time and space have positively impacted my approach to complex problems.

The time-money quandary is one of several conflicts that can lead to the experience of a double bind for designers—where a particular course of action feels simultaneously necessary and impossible. Conflicts such as values compromise, action-paralysis and solutionism have been presented to explain the experience of the designer's double bind. Designers' ability to honour their values and ethics through their work is often limited by their financial reliance on work that contrasts with these values. This can lead to the feeling of having 'sold out', which adds to the stress experienced by designers whose time and mental capacity is already strained. A desire to contribute coupled with the inability to do so can also lead to over-simplified technical approaches to sustainability as the 'only perceptible option'.

Action-paralysis is also a common outcome, particularly for those attempting to take action that extends beyond greener things. An increased understanding of the problems associated with things and technical approaches to sustainability, can combine with an inability to address the acceleration of consumption through design. This can lead to action-paralysis expressed as a sense of helplessness—‘it’s too big and too hard’. Whilst this could be argued as unethical behaviour, there is also a gap in the discourse between theory and action. Designers struggle to convert the vast information and theory associated with sustainability into practical courses of action within the context of design practice. This can easily lead to inaction, as can the industry ‘side-effect’ of time and budget limitations. I further argue that this inaction is also part of a broad lack of empowerment that when left unaddressed leads to the designer’s double bind.

‘Solutionism’ is embedded within designerly approaches, and design is often badged as a problem solving industry. This framing arises from an education that focuses on problem solving that is subsequently reinforced through industry experience. The nature of the design process plays a role here too; briefing presents designers with predetermined problems to be solved and designers typically respond to briefs in ways that provide clients with their desired solution. This is typically done at the expense of a clearer articulation of the problem, and designers are frequently bound by their own financial needs to adhere to these predetermined approaches.

Designers’ experience of the double bind explains why action is limited, why sustainable approaches are not the norm, and why changing these circumstances is so challenging. Design’s co-dependent relationship with business underlies this double bind. This research documented an attempt at freeing myself from this double-bind; of significance is how increased flexibility in briefs, time and budgets loosened this bind and created clearer pathways to action. It would appear that by working more autonomously and creating self-directed briefs that approach complex problems, a sense of empowerment can be achieved. An increased flexibility in relation to time permits greater engagement with complex problems and improves their articulation. This permits a shift in the framing of design’s relationship with problem-solving as a process, changing it from ‘solutions’ towards ‘approaches to’. The plurality of ‘approaches to’ maintains the flexibility needed for multiple interventions, and prevents a blinkered approach that seeks a ‘silver bullet’ solution. Reframing the designer’s action as ‘approaches to’ also recognises that structural unsustainability is not a simple problem that designers can solve. The network of complex, intersectional and interconnected problems it presents requires far more from designers than superficial ‘silver bullet’ solutions. Approaching problems relating to structural unsustainability (rather than solving them) is a far more honest framing of what design can do.

Inaction resulting from the designers’ double bind can be further connected to the complex problem of consumption and waste. Explorations of consumption in this research discussed its ubiquitous role in designers’ lives, revealing

designers experience consumer culture both as consumers and as cultural mediators. Designers are trained to be expert consumers. Their work is framed by its neo-liberal capitalist context, and work experience in the design industry reinforces designers' sales-focussed education. I argue that this focus on design as a form of selling has led to the emergence of a 'designer-consumer', whose work perpetuates consumer culture and is an ongoing reflection of their own identity as a consumer. The designer-consumer experiences limitations in approaching design work that is post-capitalist or anti-consumption as this operates outside of their understanding of what design is and what it can do.

I have argued that in order to approach the problem of excess consumption, a designer must first disconnect as a commercial actor. In doing so a number of transformations can occur: first, disrupting the designer's relationship with consumer culture permits a more critical engagement with its mediation. Secondly, through critical engagement with design's mediation of consumer culture a designer can build a new understanding of the relation between business and design. Thirdly, closer examination of the design-business dynamic can open up possibilities to explore work outside of this context. It is the combination of these acts that leads to a potential shift from designer-consumer to designer-transformer. This shift is in many ways a politicisation of the designer that brings with it a greater sense of autonomy. It can also trigger a larger transition within a design practice. Contrasting the inability for the designer-consumer to take action with the increased ability of the designer-transformer to act, suggests that a transformation of self must precede the transformation of practice.

Self-transformation is an emergent outcome of an intentional disconnect from the status quo. This transformation is strengthened when the disconnection extends across personal and professional dimensions. Self-transformation can activate transitions within a design practice and I would argue that for many designers it is also a precursor to working in 'design for transitions'. This transformation is accompanied by mindset shifts: 'working with' rather than 'working for' and the aforementioned 'approaches to' rather than 'solutions'.

It has been argued that designers' lack of eco-literacy creates knowledge gaps that result in superficial/technical approaches or that entirely inhibit action. Both outcomes can lead to experiencing the designer's double bind and reflect the limitations of the designer-consumer's actions. The complex problems designers are facing now (and those they will likely face into the future) demand more knowledge than can be provided through most tertiary education programs. It is becoming increasingly evident that the feedback loop between industry and education has tailored education to train highly skilled designer-consumers. Conversely, there is no such demand for designer-transformers, whose training requires far deeper engagement with theoretical domains, and more critical participation in the application of these theories within design practice. I have argued that design in this context is a highly privileged practice, and almost non-existent outside of post-graduate study, where its explorations

are largely self-directed. In many respects knowledge building in the problems relating to structural unsustainability also demands self-transformation, which in itself is an act of privilege. Recognising how and where the designer-transformer is privileged is important as it also recognises how and where actions in this direction might be limited.

Designers who can actively build their knowledge will benefit from an increased understanding of theories of power and change. This will increase their capability to recognise their own agency and take action accordingly. I have argued that underpinning critical thinking with an ecological prudence that is decolonial is an ontological endeavour. I propose that this in itself is an act of counterpower against the design industry that can further increase a designer's autonomy. This knowledge is a necessary aspect of undertaking design for transitions. It takes time to build it and space to unpack it in practice, but it is evident that it forms a crucial part in practice-based transitions. I echo Willis in suggesting that transition design would benefit from incorporating power dynamics into its framework. I would argue that this should be done as an intersectional aspect of change, rather than as an independent body of knowledge. This approach would recognise how power and change intersect and can reinforce or restrict transitions.

Much of the context of structural unsustainability is economically framed, so the designer-transformer's ability to act effectively will be vastly improved by increased knowledge in alternative economics. Raworth's doughnut economics framework<sup>1003</sup> has been proposed for use in outlawing activity that threatens social and ecological well-being. However the economic discussions in this thesis also draw on the understanding that plurality is a crucial aspect of sustainable futures. Any changes made to economics will also require the support of multiple changes in behaviours and surrounding systems of consumption and waste. The idea of 'net green'<sup>1004</sup> is key here; that no one approach will create a just and sustainable economy. Rather it is a combination of interconnected approaches and activities that are more likely to permit the emergence of multiple economies that can support the flourishing of all life. We have the opportunity to step away from the exploitative and reductive economic growth model and create real and significant changes. The doughnut economics framework provides a valuable tool that could underpin economic thinking and help to shape economies that help us to thrive.

Increased economic literacy will also be beneficial for designers engaged in organisational transitions, as much of the language and goals of business are economically-focussed. Engaging in critical conversations with clients in large organisations will be a necessary first step for any designer looking to transition their practice. This process not only determines a client's potential transition-status (as possible or otherwise) but also begins the process of unpacking the challenging issues that businesses will face in sustainability transitions. The ideologies and mindsets in organisations can differ, and I propose that the

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1003 Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*.

1004 Zink and Geyer, "There Is No Such Thing as a Green Product."

interactions between an organisation and a designer-transformer would benefit from proactive mediation. This would permit a recognition and mediation of the conflict rising from the differences between an organisation's economic goals and the goals of sustainability. This mediation would also reposition the designer from 'working for' to 'working with', as a strategy that encourages more collaborative approaches.

Collaborative approaches have played an important role in the projects explored throughout this research and they play a crucial role in sustainability transitions, which require multi-disciplinary teamwork and cross-sector actions. Collaborative approaches maintain an openness to multi-disciplinarity and an acceptance of contributions from experts and non-experts alike. It must also be actively inclusive, and its processes should hold space for marginalised voices to ensure justice as part of moving forwards. Collaborative processes that are underpinned by values of sharing (of language, theoretical knowledge and real-life experiences) allow collaborators to co-learn how to move forward together. This permits a deeper collaborative process that facilitates the co-definition of problems and the co-creation of approaches to them. Deeper collaborations create opportunities for more relational thinking and doing as part of sustainability transitions which could build bridges between disciplinary silos. While systems thinking can help identify these silos, it is relational thinking that permits intersectional interactions between them. Relational thinking in collaborative settings could aid in processes of 'de-silofication', where relational thinking and sensemaking could better align multiple systems and policies with the goals of just and sustainable transitions towards post-capitalist futures. This is an area for further research that would build upon the theories and practices that have been explored throughout this thesis.

I propose deeper collaboration as an area for future research that could explore how designerly sensemaking processes might be used to identify and articulate the relations between things. Deepening the understanding of these relations and providing clarity to how and where problems intersect could also inform design strategies that are intersectional<sup>1005</sup> and ontological. This is proposed with the understanding that in an ontological enquiry a designer questions the nature of things<sup>1006</sup> and their role in shaping our ways-of-being before rethinking the design of practices surrounding those things. This is performed in complex ways where things, interactions and practices are often intertwined. To draw on an example from Willis: the single serve juice box combines 'fruit juices and packaging materials... a distribution and marketing infrastructure and a product image... it quenches thirst and nourishes, [is given to or shared by a parent through a child's lunchbox] but in itself, in its essential nature, ontologically—it is not part of giving or sharing... it is designed for, and it designs individual consumption... rather than communal activity'<sup>1007</sup>.

1005 Collins and Bilge, *Intersectionality*; Crenshaw, "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color."

1006 Used here in a Heideggerian sense

1007 Willis, "Ontological Designing." p 79-80

Furthermore, this juice box may be consumed conjointly with other foods that have similar ontological considerations. Not to mention the practices surrounding parent/teacher/child interactions with school lunch boxes, waste systems and additional concerns regarding the impact of processed and high sugar foods on childhood obesity and brain function. The linkages are complex and many, and designers who combine relational thinking with intersectional approaches might be better positioned to use design to address the way these information silos can lock down systemic problems.

Appreciating plurality is an important framing for these activities that recognises one solution will not fit all. By maintaining a plural focus (transitions, approaches, economies, futures, worlds) we make an important distinction about how humanity moves forward. Dominant economic thinking and ‘one-world’ approaches have created systemic problems that marginalise the vulnerable and threaten the health of the planet. If humanity is to move forward without leaving anyone or anything behind, then plural approaches akin to those that foster Escobar’s ‘pluriverse’ will be needed.

To be in transition is to experience constant flux. Finding a way to be comfortably in flux has been key to experiencing the transition in my practice. As a musician I recognise the importance of the in-between times: the space between two notes, the bridges that create the moments in music that belong to neither verse nor chorus. As a designer this same concept of space is important. The space between things can help us make sense of the things themselves. As I sit in this space, comfortably in flux, I can see both where I have come from and where I am headed. With reasonable clarity I can comment on this in-between space, where everything feels unfinished and where my confidence to navigate the muck that ensues is growing. The iterative articulations of what my practice is becoming have allowed me to embrace where I am—in-between. Neither ‘making greener things’ nor engaged full time in ‘design for transitions’. Perhaps I should feel less comfortable with this flux than I do, but I find myself fascinated by its chaos, complexity and its constant unknowns. It is filled with possibilities and I have found a sense of confidence comes from knowing I have curated a space in my practice where as yet unknown possibilities can emerge.

At times this research has felt like a process of feeling around in the dark for the light switch, where the pressing search for the light is coupled with the kind of caution that avoids stubbed toes— to borrow the phrasing from Fry, it is ‘urgent without rushing’. Reflection has flicked that light on, at times only briefly, but as I sit now, comfortably in flux, my practice feels softly lit. I can see how it has shifted away from ‘greener things’ in unexpected ways—not by eliminating them, but by incorporating them into ‘design for transitions’. I can also see how my engagement with transitions has expanded my practice of making greener things into an experiential space. Emergent projects co-creating events and experiences in the zero waste community use dematerial approaches that are fostering the design of behaviours rather than things. The identification of ongoing projects that ‘design for transitions’ provides clarity

about where my practice is heading, but continued engagement with the curatorial process and fully embracing the flux it brings, maintains a sense of openness to the possibilities.

It is clear that transformation has played a significant role in shaping the transition of my practice. Changing my relationship with consumption and waste (as a designer and as a human) has transformed my approach to design. Through 'design for transitions' I am better positioned to approach the complex problems contributing to structural unsustainability. As a result of this research and the projects explored within it, I am more capable of effectively contributing to the goal of transitioning towards just and sustainable post-capitalist futures. Whilst this thesis has presented insights into why and how designers' pursuit of this goal can be inhibited, to counter this, it also presents a possible course of action that is worthy of exploration by designers aiming to transition their practice and create change through their work.

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# APPENDICES

The following appendices present a number of sketches, images and artefacts many of which have been produced through the process of 'reflective doodling', an integral part of the sensemaking process used in this research.

## Appendix A:

This appendix presents a collection of 'reflective doodles' and images that reflect the designerly process work conducted as part of this research.

Figure AA1: A reflective doodle used to engage with literature.

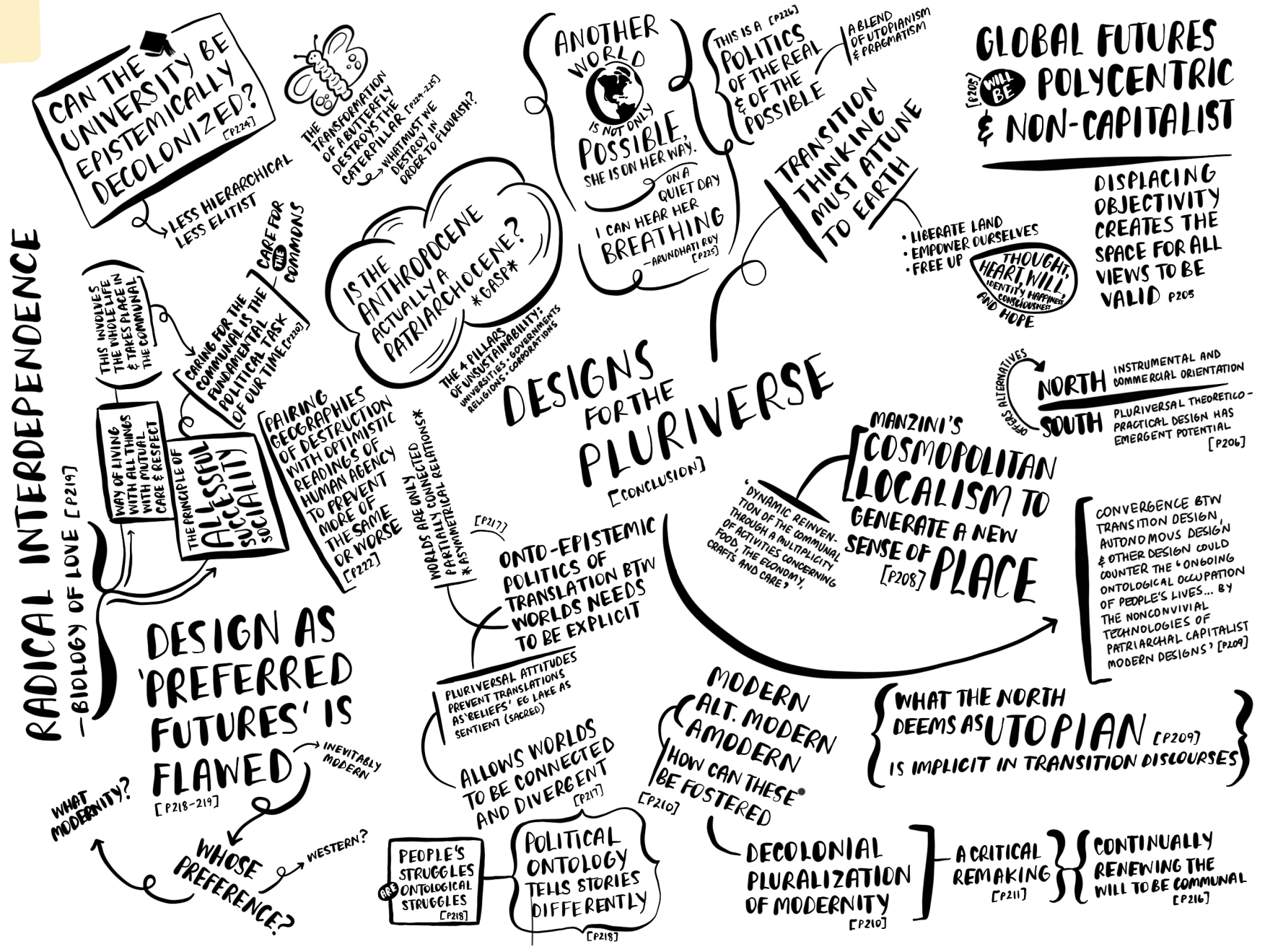






Figure AA4:  
A sample of field notes that capture participant feedback. Recorded during a workshop with teachers in the Rethink Rubbish project. Another set of notes from a similar workshop is included in the thesis.

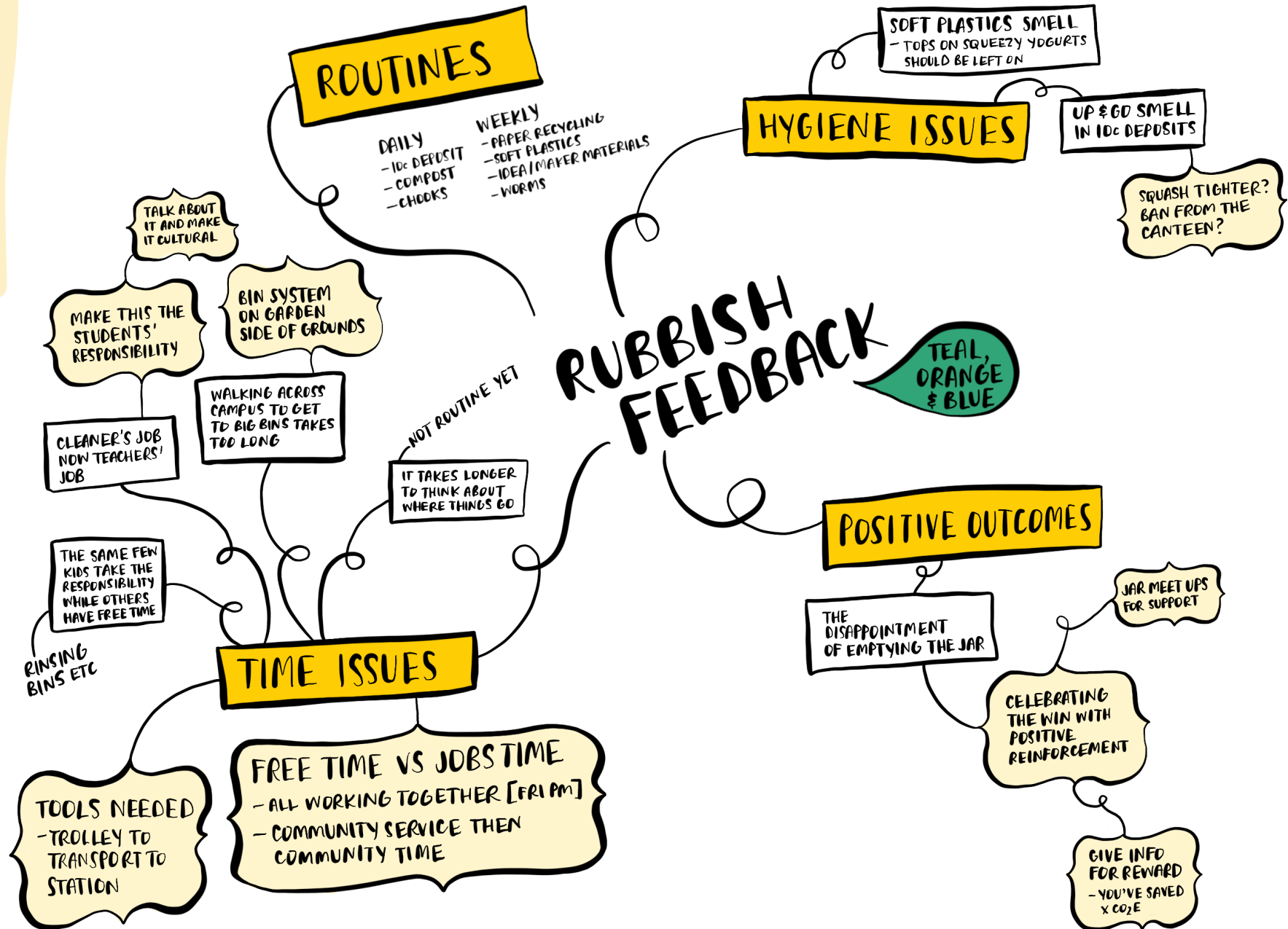




Figure AA5:  
A reflective  
doodle capturing  
the constellation  
of projects as part  
of the Rethink  
Rubbish project.

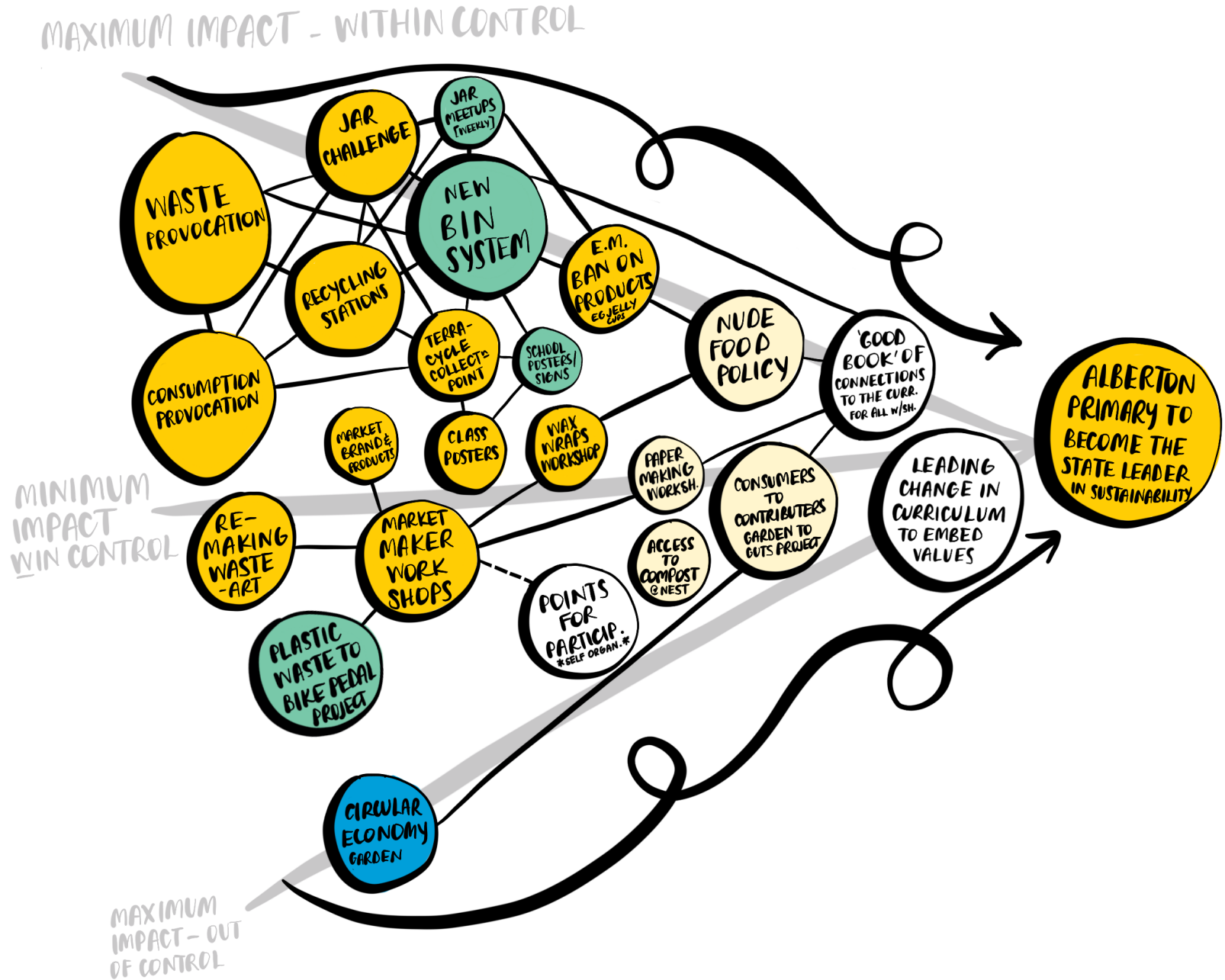


Figure AA6: A sample of field notes and reflections from the Rethink Rubbish project.



Figure AA7: A sample of field notes and reflections from the Rethink Rubbish project.





# encore timeline

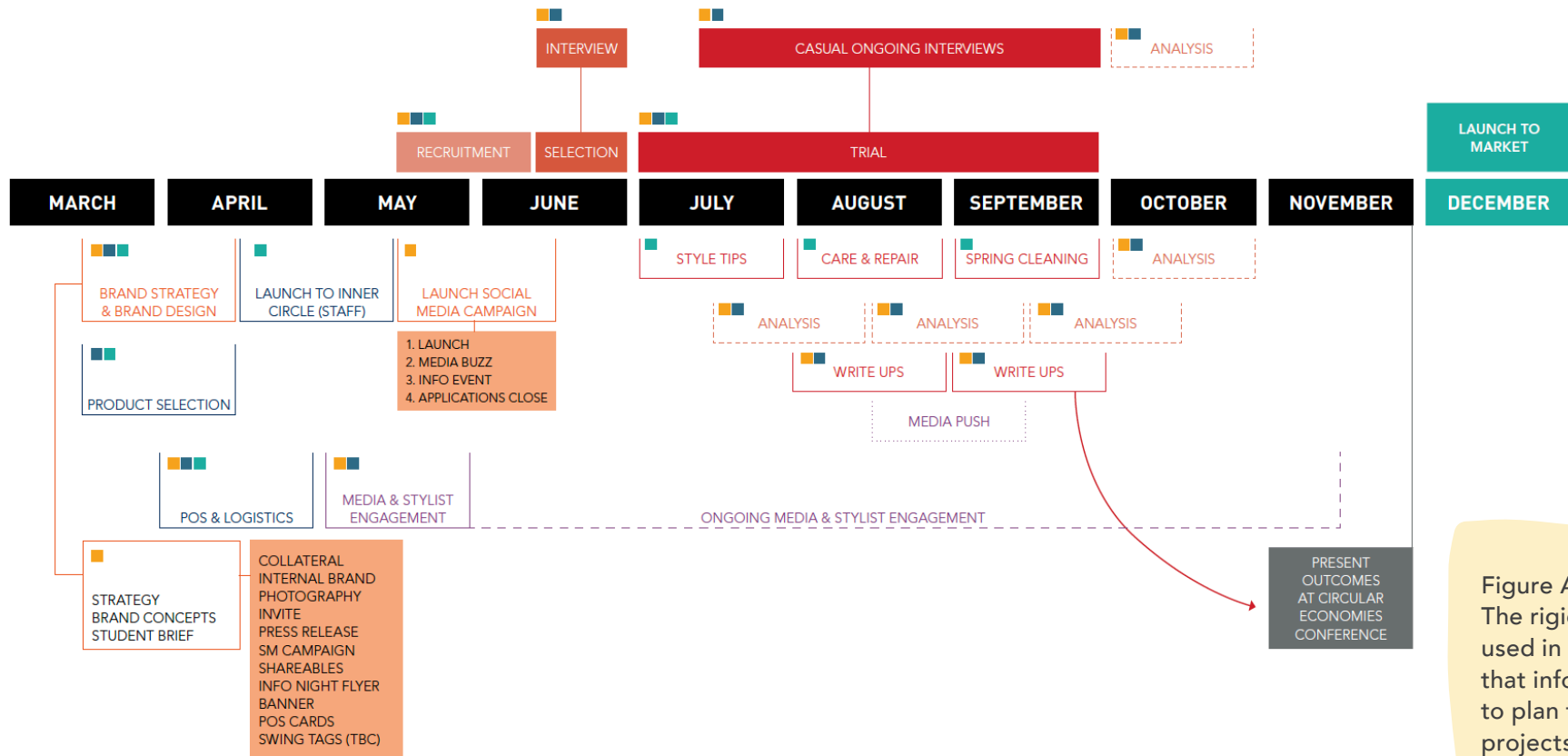
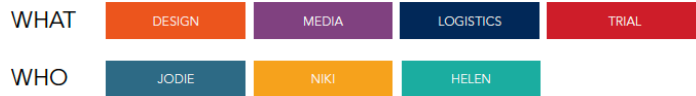


Figure AA8: The rigid timeline used in Encore that informed how to plan transitions projects with greater flexibility.

Figure AA9:  
One of six personas developed as  
part of the brand strategy for Encore

## THE MINIMALIST



### Je'mapelle Suzanne

I've been listening to The Minimalists podcast and decided it was time to declutter my life! I paused when I tried to declutter my wardrobe because I love having lots of different clothes and accessories. Subscribing to encore has helped me to reduce the number of accessories I own without compromising my mix n match wardrobe or personal style.

#### How it worked for me

Encore has made the decluttering process easier because I don't feel like I'm making as many huge sacrifices — it almost feels like a sneaky little loophole in the minimalist movement!! In the first month I took home 3 handbags and a couple of scarves. After 3 weeks I returned 2 of the handbags and swapped them for one that would work better for a last minute special event I was invited to attend.



#### WHY I LOVE ENCORE

I've become a bit obsessed with the minimalist movement so I am trying to declutter my life, but I get bored easily and like to have lots of accessories to spice up my wardrobe. Subscribing to encore let's me do both, yay! I feel like I have this huge range of accessories but get to remain minimalist at heart, because I don't own any of the products, I'm just looking after them for a while! My wardrobe used to be the clutter zone, now encore is part of my wardrobe so I don't have to think about where I'll store anything!



## Appendix B:

This appendix presents a collection of 'reflective doodles' and sketches that demonstrate process work in the operationalisation of the MLP.

Figure AB1:  
An early sketch  
using the MLP  
canvas to explore  
farming transitions  
in the Flourishing  
Fleurieu project.

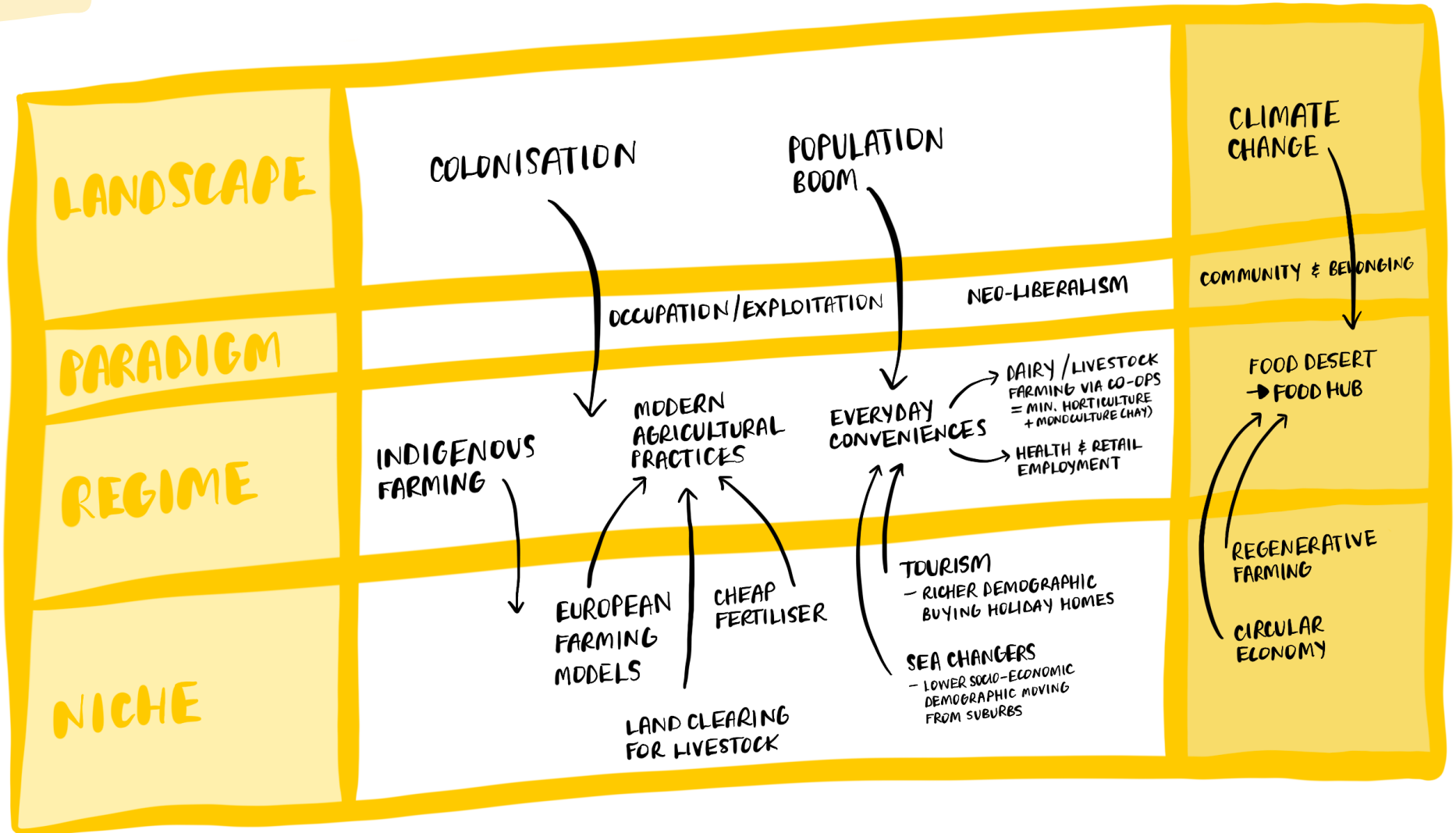
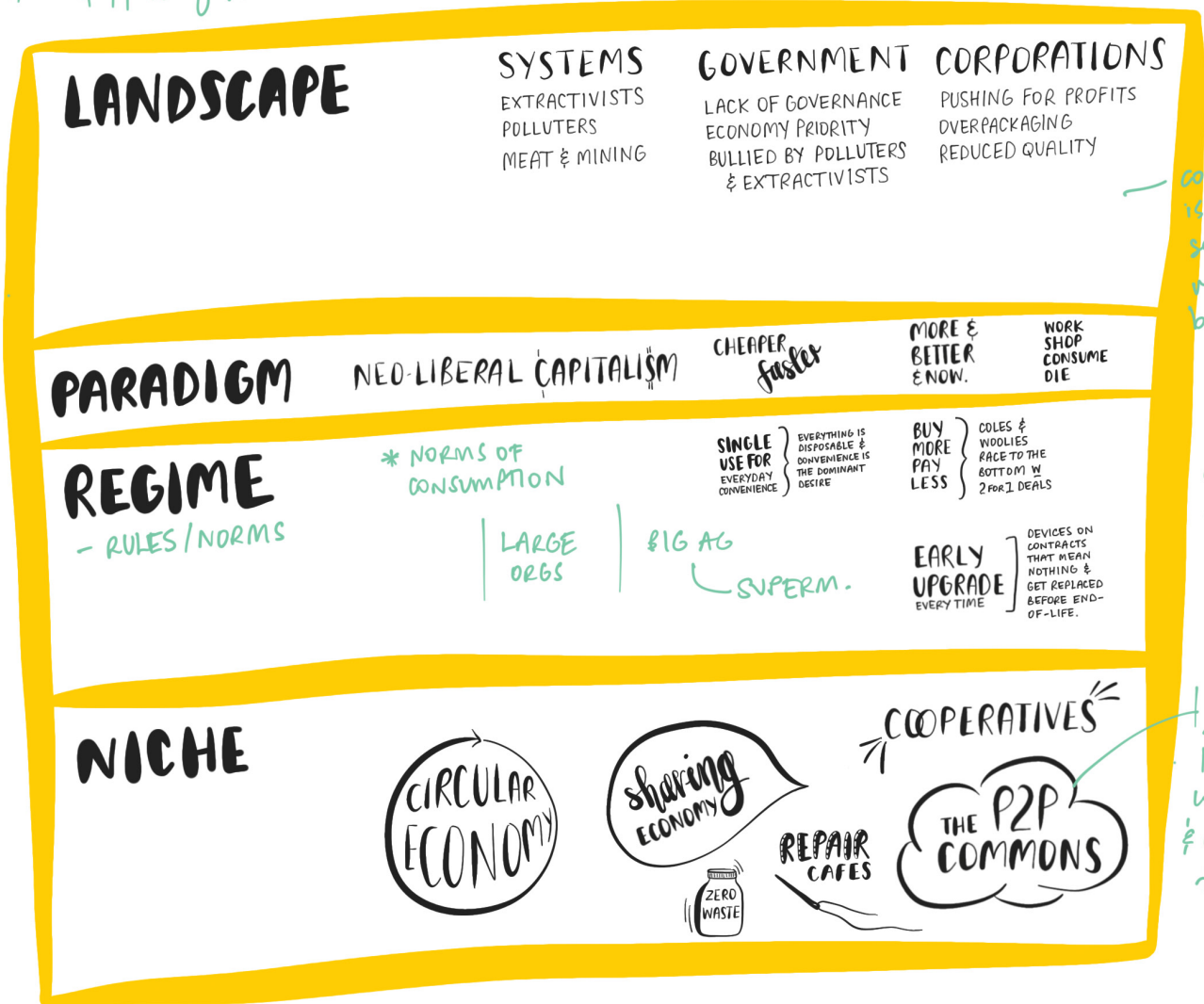


Figure AB2:  
Evolution of  
thinking through  
sketches using  
reflective  
doodling and MLP  
theory to map the  
consumption and  
waste problem

shadow work e.g. supermarkets into registers. scanners.  
instead of ppl doing work.

in neoliberal cap.  
- disguised as  
automation  
but its making  
profit out of  
our contribution  
e.g. self checkout

\*LOOK AT  
GEELS AGAIN



commons  
is there but  
seen as a  
resource to  
be consumed

↓  
costs  
are shifted  
to the  
commons.

in theory  
at niche  
level its  
consumed  
& cared  
for.



Figure AB3:  
Evolution  
of thinking:  
paradigms refined  
to ideology and  
mindsets

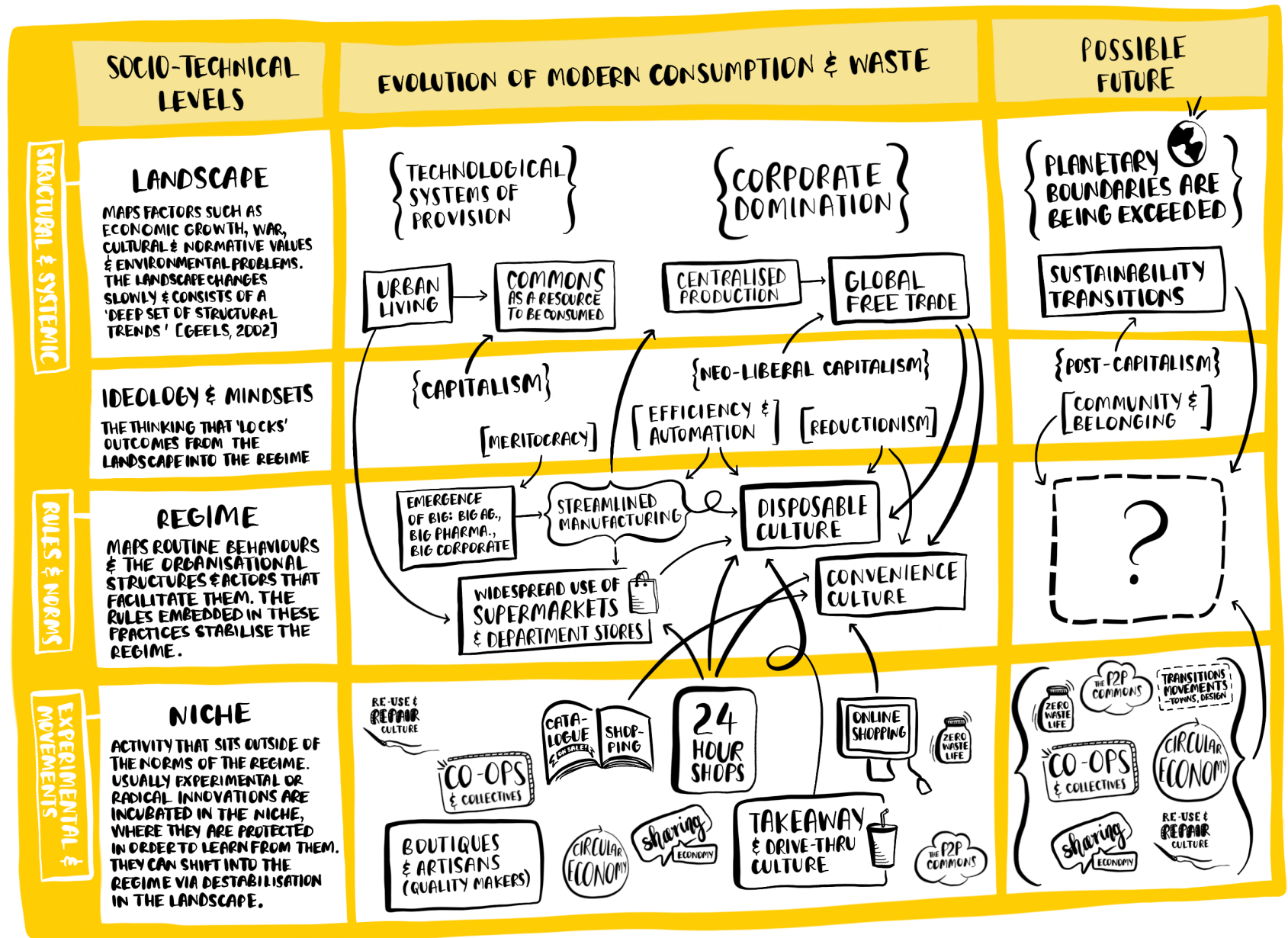


Figure AB4:  
Evolution of  
thinking: addition  
of sub-level for  
ecology

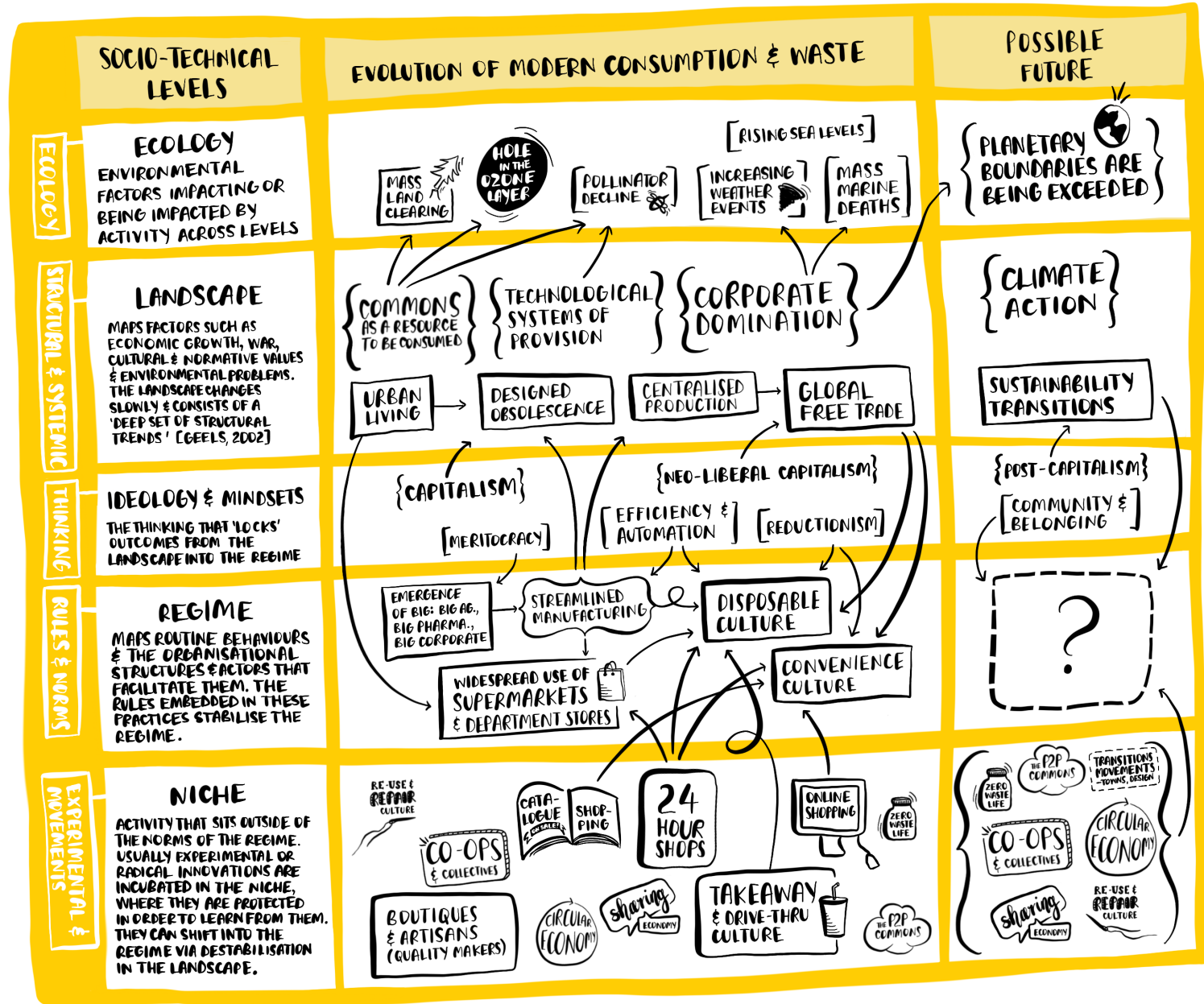


Figure AB5:  
Evolution of  
thinking: trying  
to apply ideology  
and mindsets into  
a column rather  
than a row

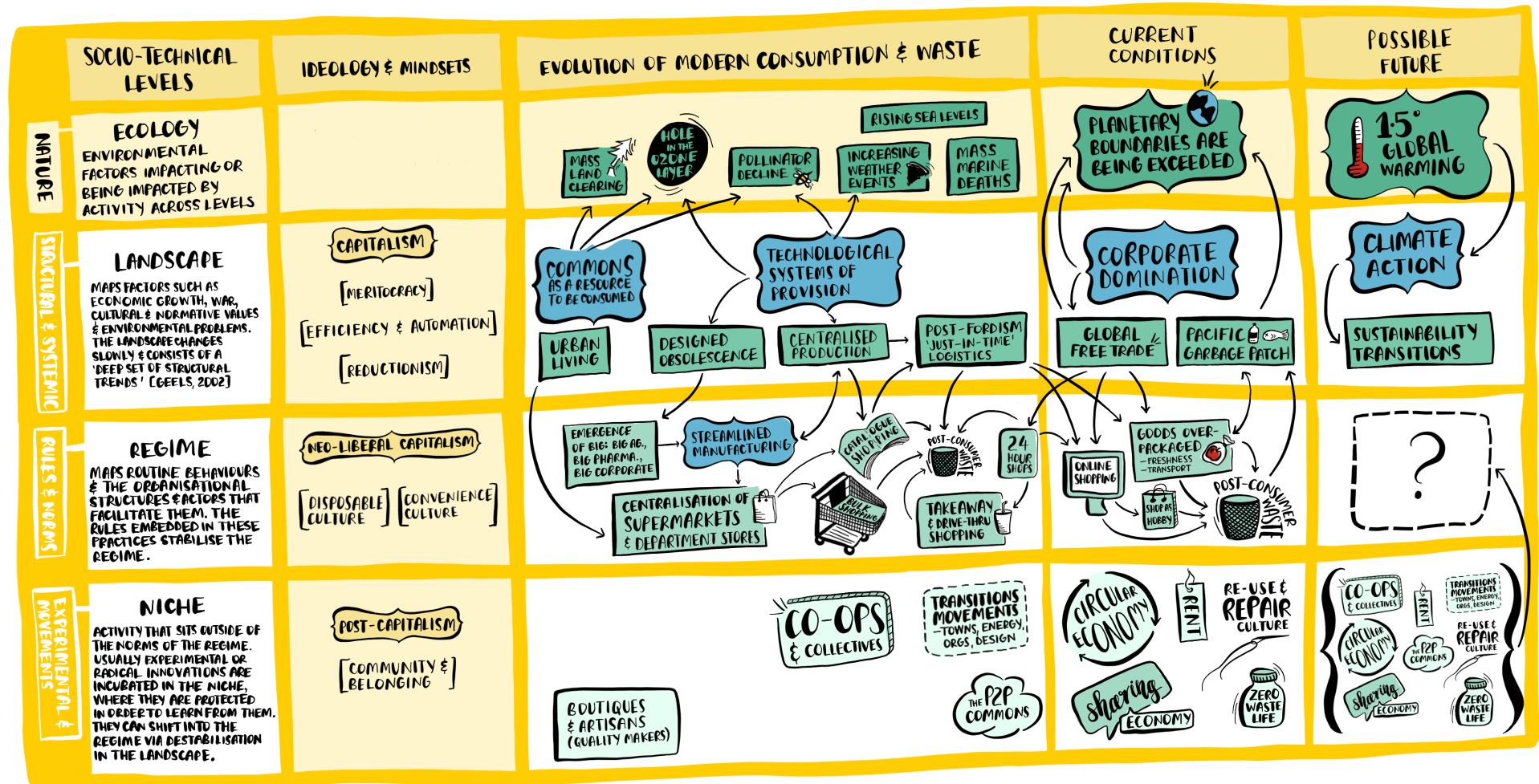
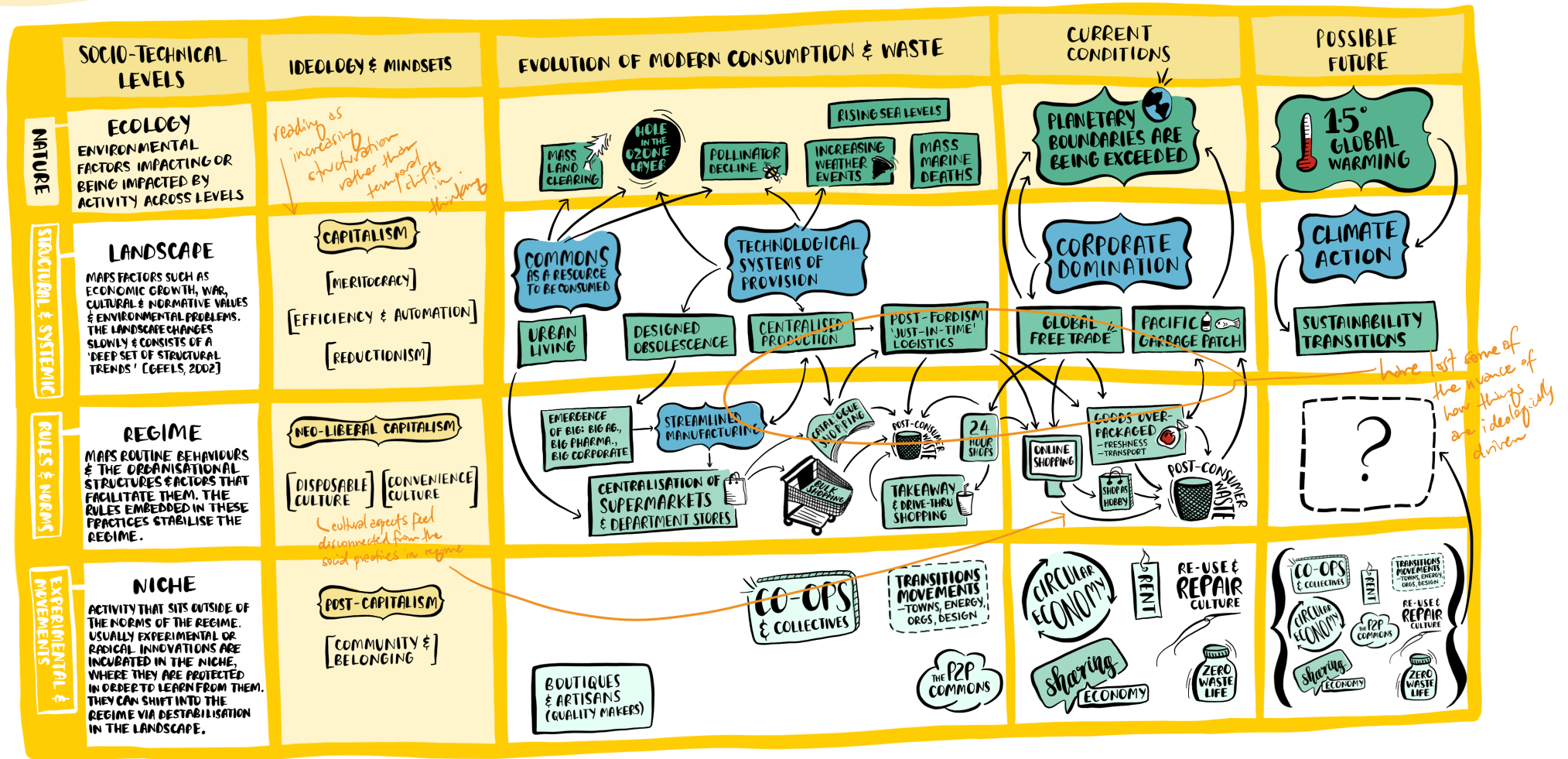


Figure AB6:  
Evolution of  
thinking: trying  
to apply ideology  
and mindsets into  
a column rather  
than a row (with  
reflective notes)



*have lost some of the how things are ideologically driven*

*↳ column is feeling too much like it struts thinking at each level differently*

Figure AB7:  
The blank canvas  
used for sketching

	SOCIO-TECHNICAL LEVELS	EVOLUTION OF A PROBLEM	CURRENT CONDITIONS	POSSIBLE FUTURE
NATURE	<p><b>ECOLOGY</b> ENVIRONMENTAL FACTORS IMPACTING OR BEING IMPACTED BY ACTIVITY ACROSS LEVELS</p>			
STRUCTURAL & SYSTEMIC	<p><b>LANDSCAPE</b> MAPS FACTORS SUCH AS ECONOMIC GROWTH, WAR, CULTURAL &amp; NORMATIVE VALUES &amp; ENVIRONMENTAL PROBLEMS. THE LANDSCAPE CHANGES SLOWLY &amp; CONSISTS OF A 'DEEP SET OF STRUCTURAL TRENDS' [GEELS, 2002]</p>			
THINKING	<p><b>IDEOLOGY &amp; MINDSETS</b> THE THINKING THAT 'LOCKS' OUTCOMES FROM THE LANDSCAPE INTO THE REGIME</p>			
RULES & NORMS	<p><b>REGIME</b> MAPS ROUTINE BEHAVIOURS &amp; THE ORGANISATIONAL STRUCTURES &amp; FACTORS THAT FACILITATE THEM. THE RULES EMBEDDED IN THESE PRACTICES STABILISE THE REGIME.</p>			
EXPERIMENTAL & MOVEMENTS	<p><b>NICHE</b> ACTIVITY THAT SITS OUTSIDE OF THE NORMS OF THE REGIME. USUALLY EXPERIMENTAL OR RADICAL INNOVATIONS ARE INCUBATED IN THE NICHE, WHERE THEY ARE PROTECTED IN ORDER TO LEARN FROM THEM. THEY CAN SHIFT INTO THE REGIME VIA DESTABILISATION IN THE LANDSCAPE.</p>			

Figure AB8:  
The full A1 size  
MLP sketch  
mapping the  
consumption and  
waste problem

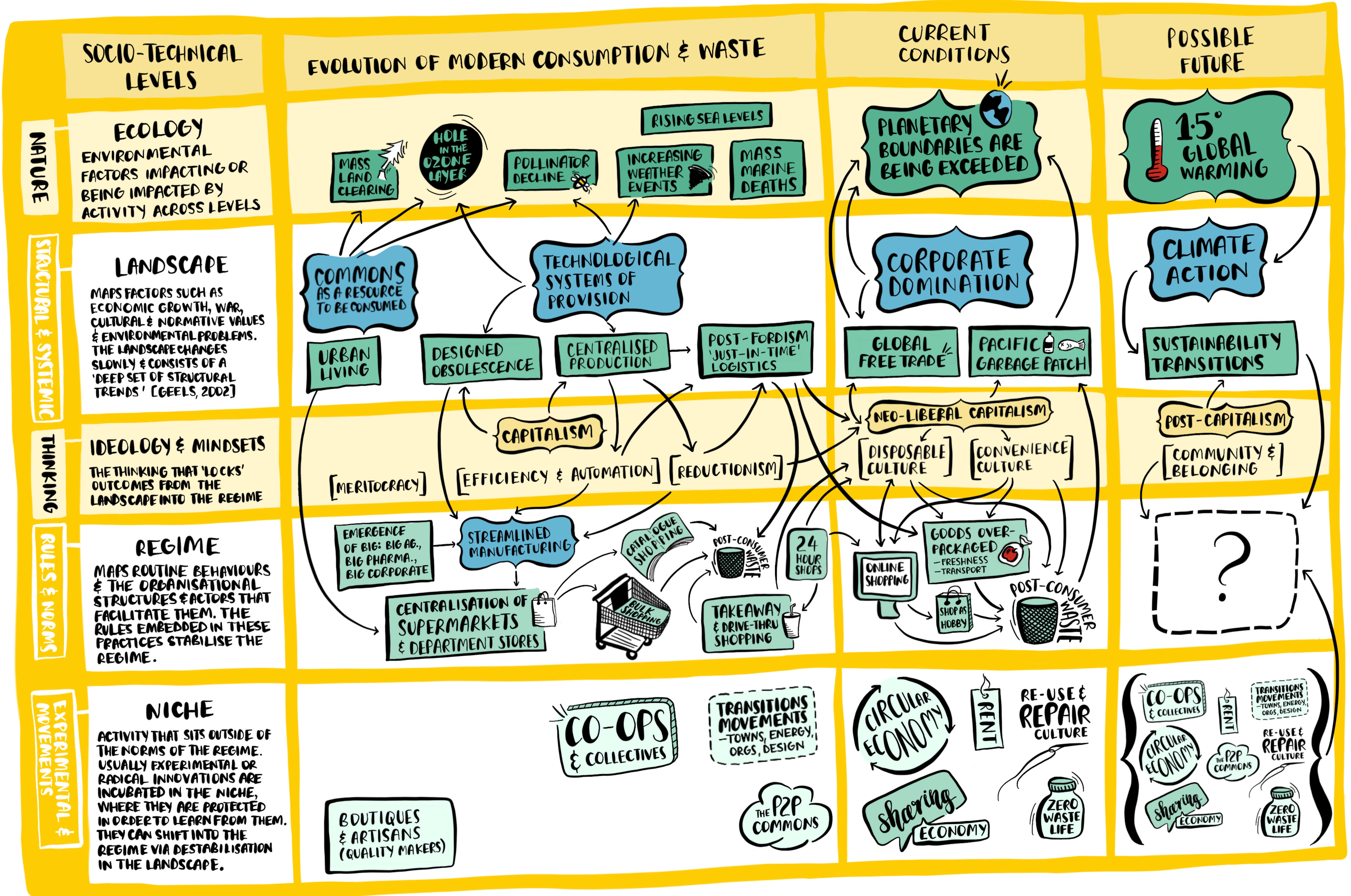


Figure AB9:  
Sample of early sketch exploring the mapping of social practices using the MLP canvas.

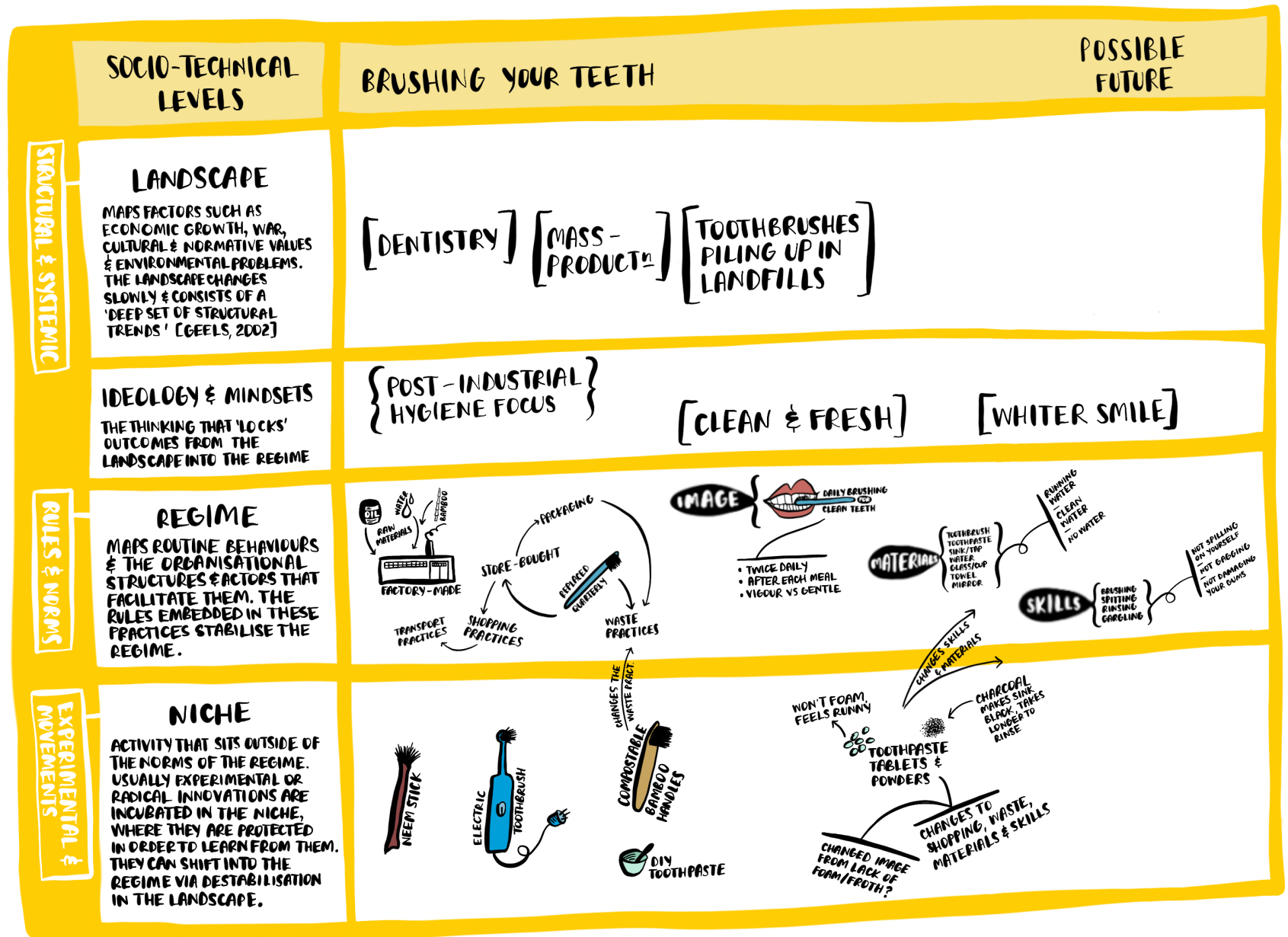


Figure AB10:  
Full A1 size sketch  
mapping the  
social practice  
of toothbrushing  
using the MLP  
canvas

**SOCIO-TECHNICAL LEVELS**

**NATURE**

**ECOLOGY**  
ENVIRONMENTAL FACTORS IMPACTING OR BEING IMPACTED BY ACTIVITY ACROSS LEVELS

**STRUCTURAL & SYSTEMIC**

**LANDSCAPE**  
MAPS FACTORS SUCH AS ECONOMIC GROWTH, WAR, CULTURAL & NORMATIVE VALUES & ENVIRONMENTAL PROBLEMS. THE LANDSCAPE CHANGES SLOWLY & CONSISTS OF A 'DEEP SET OF STRUCTURAL TRENDS' [GEELS, 2002]

**THINKING**

**IDEOLOGY & MINDSETS**  
THE THINKING THAT 'LOCKS' OUTCOMES FROM THE LANDSCAPE INTO THE REGIME

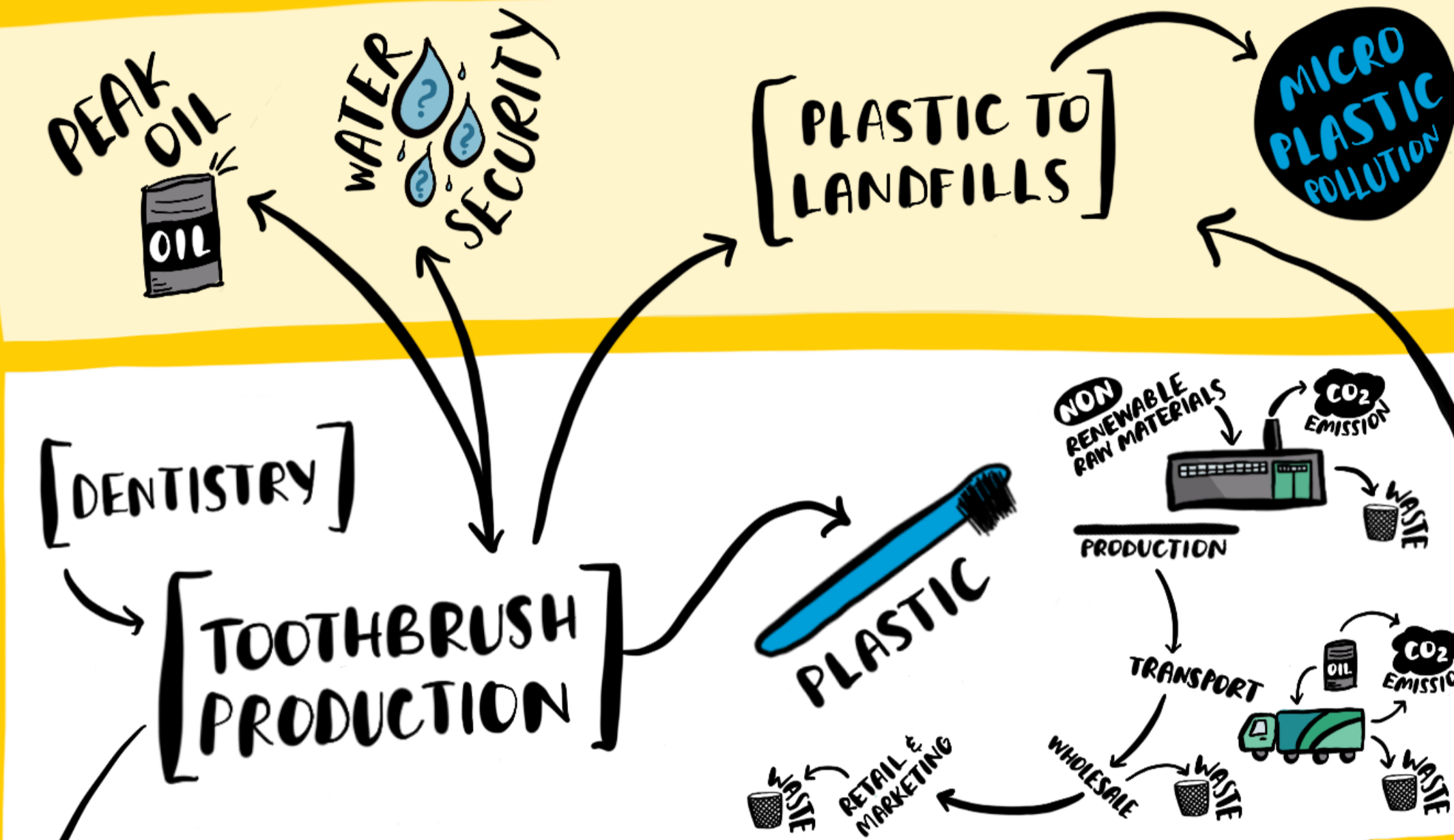
**RULES & NORMS**

**REGIME**  
MAPS ROUTINE BEHAVIOURS & THE ORGANISATIONAL STRUCTURES & FACTORS THAT FACILITATE THEM. THE RULES EMBEDDED IN THESE PRACTICES STABILISE THE REGIME.

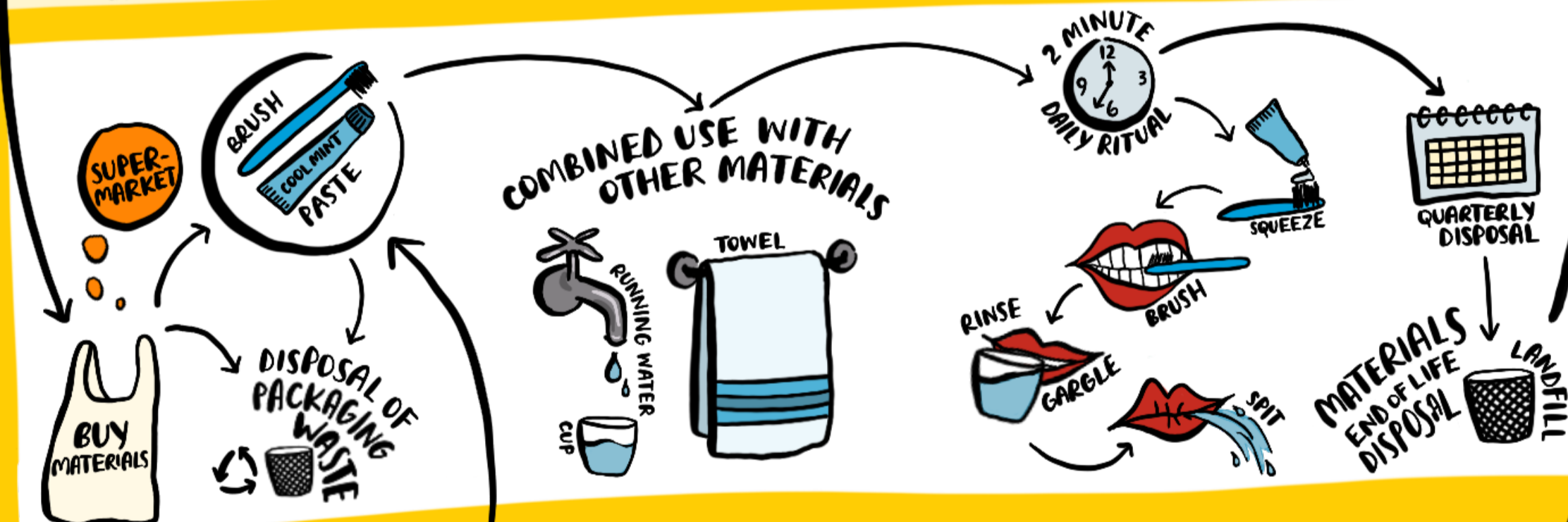
**EXPERIMENTAL & MOVEMENTS**

**NICHE**  
ACTIVITY THAT SITS OUTSIDE OF THE NORMS OF THE REGIME. USUALLY EXPERIMENTAL OR RADICAL INNOVATIONS ARE INCUBATED IN THE NICHE, WHERE THEY ARE PROTECTED IN ORDER TO LEARN FROM THEM. THEY CAN SHIFT INTO THE REGIME VIA DESTABILISATION IN THE LANDSCAPE.

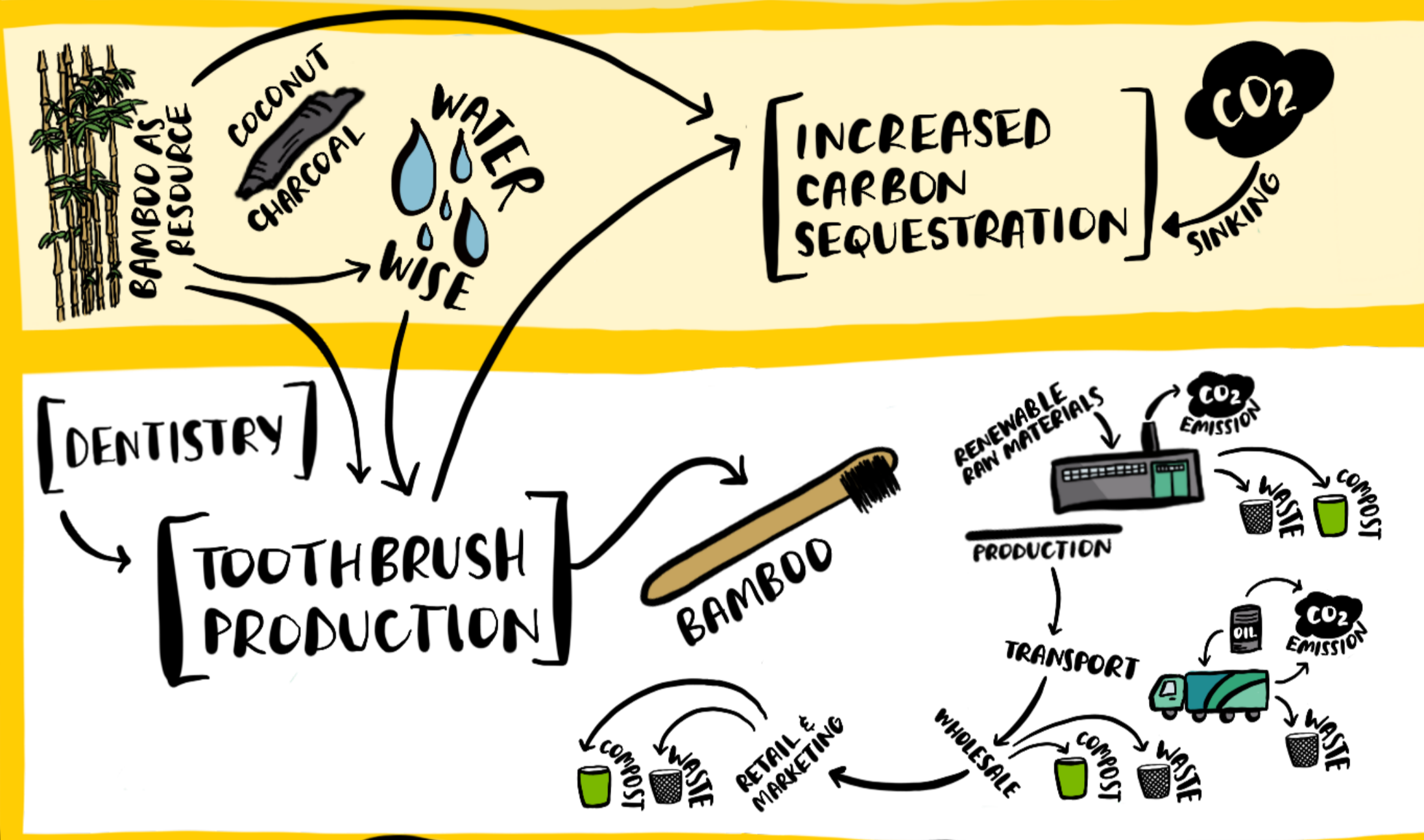
**BRUSHING YOUR TEETH: WAY ONE**



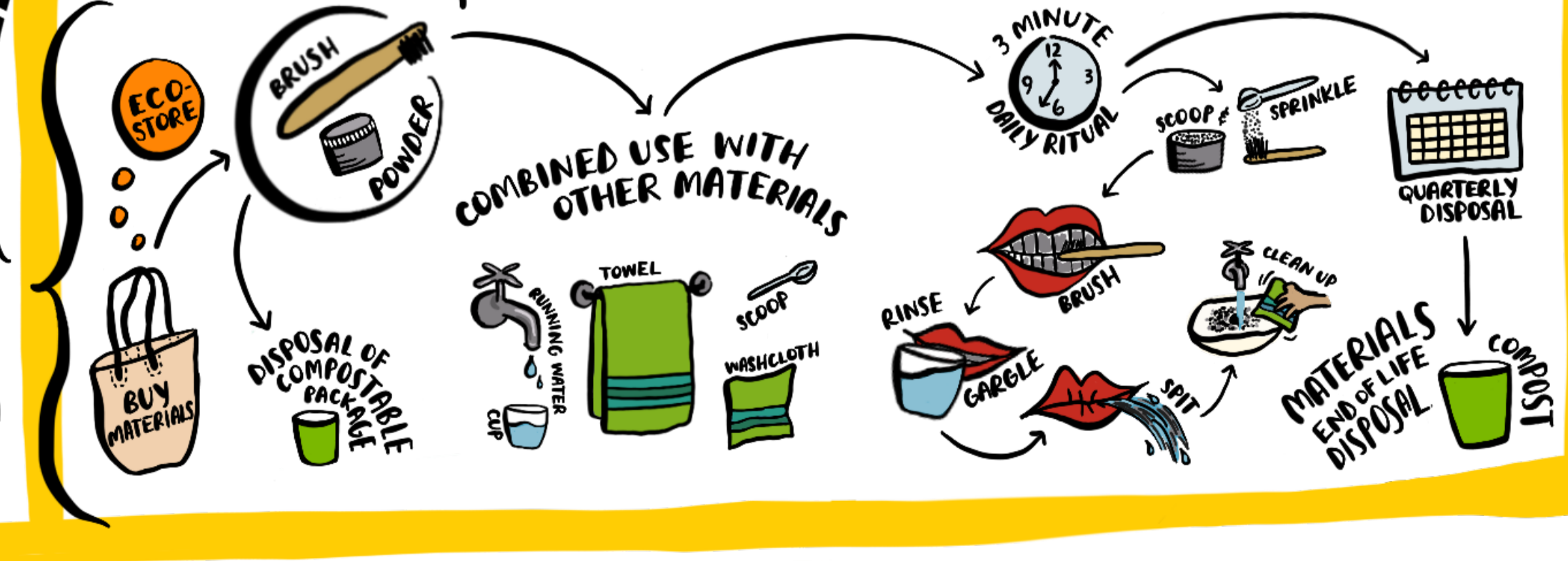
POST-INDUSTRIAL HYGIENE FOCUS  
[CLEAN & FRESH] [WHITER SMILE]



**BRUSHING YOUR TEETH: WAY TWO**



SUSTAINABLE WAYS OF BEING  
[CLEAN & FRESH & ECO-FRIENDLY]





## Appendix C:

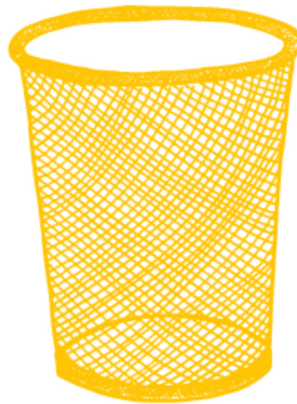
This appendix presents a collection of 'reflective doodles' that were created in order to think through new concepts drawn from literature and theory.

Some of these have been published on social media, where their key concepts have been communicated using simplified (unacademic) language. They have retained the square format commonly used in the social media environment.

This process of thinking through drawing, of visualising concepts and verbalising them using lay language, has been a key aspect of closing the divide between practitioner and researcher.

# CREATING CHANGE

REFLECTIVE DOODLING IN  
DESIGN FOR TRANSITIONS



BY NIKI WALLACE

IT'S ALL  
ABOUT  
THE



CONTEXT

THE  
STATUS  
QUO

@RETHINK RUBBISH

AND ALMOST  
EVERYTHING  
WE DO REINFORCES IT

is  
unsustainable

SUSTAINABLE  
DEVELOPMENT  
IS AN

OXYMORON



THE  
essential  
CONTRADICTION  
OF CAPITALISM

IS THAT IT  
EXPLOITS AND  
DESTROYS  
ITS OWN CONTEXT

@RETHINKRUBBISH

#JOANNABOEHNERT

@RETHINKRUBBISH

THEY  
COMMUNISE  
THE COSTS WHILE THEY  
PRIVATISE THE  
PROFITS...

#PANARCHY

AND  
THAT  
MAKES

POLLUTION  
PROFITABLE

WITHOUT

ecology

THERE IS NO

ECONOMY

@RETHINKRUBBISH



↑  
MONEY LIVES  
HERE TOO!

IAN M<sup>c</sup>HARG



~~WASTE~~

IS ONE OF OUR

**BIGGEST**

ENVIRONMENTAL

**THREATS!!**

**CONSUMPTION**

EXCESS<sup>'''</sup>  
CONSUMPTION

IS A .

design  
PROBLEM



WHAT IT  
COSTS

@RETHINKRUBBISH

IS NOT  
WHAT  
IT  
COSTS!

the  
CHEAPEST

stuff

COSTS  
THE  
EARTH

THE  
PROBLEM  
WITH

plastic  
IS THE WAY WE

USE IT



it's only

**CONVENIENT**

'TIL IT'S

**NOT...**



oh  
THE

I NEED  
A NEW ONE!

LIES

I HAVE  
TO WORK  
HERE...

WE TELL

OURSELVES

@RETHINKRUBBISH

I CAN'T  
CHANGE...

THE  
CLIMATE

IS

changing

@RETHINKRUBBISH

FASTER

THAN WE ARE

#DAMIANWHITE

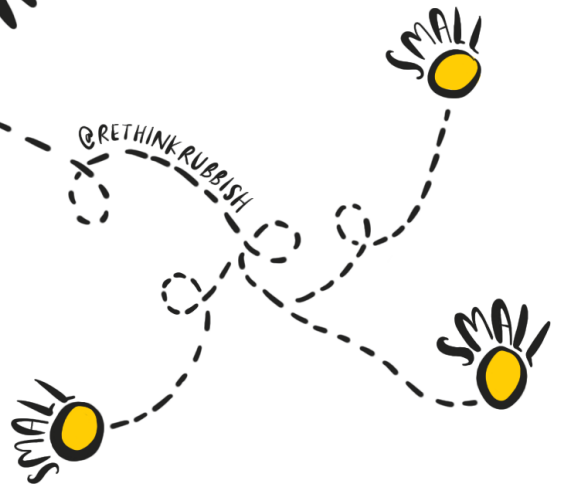


BE PART OF  
SOMETHING

BIG &

change

SOMETHING



# CARBON FOOTPRINT COMPARISONS

2 KG/CO<sub>2</sub>e



CARBON  
FOOTPRINT  
WARS

GROW

WHAT

YOU



@RETHINKRUBBISH



CARBON  
FOOTPRINT  
WARS

BLACK COFFEE



VERSUS A



LATTE



# CARBON FOOTPRINT WARS

ONE EMAIL



FOUR GRAMS OF CO<sub>2</sub>

THAT'S THE SAME AS  
1 FLUSH



WITH AN @ ATTACHMENT



UP TO...  
FIFTY GRAMS OF CO<sub>2</sub>

THAT'S THE SAME AS  
4 PEOPLE DRIVING 1KM



CARBON  
FOOTPRINT  
WARS

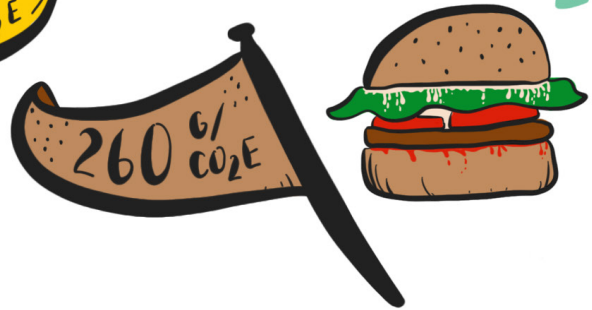
RIDING  
A BIKE...



POWERED  
BY BANANAS



POWERED  
BY BURGERS



YOUR  
RUBBISH

GETHINKRUBBISH

*reveals your*

HABITS

DO YOU  
NEED  
IT?

@RETHINKRUBBISH

OR JUST  
WANT IT?



GOING  
ZERO WASTE IS JUST A

BIG BUNCH OF

SMALL CHANGES

BABY STEPS

@RETHINKRUBBISH

Climate change

IS AN

OPPORTUNITY

@RETHINKRUBBISH  
FOR

SYSTEM  
CHANGE

WE'VE GOT

11

YEARS TO

save

the

PLANET

\*GASP\*

IF YOU  
WANT TO  
CHANGE  
THE WORLD  
THEN START  
BY CHANGING  
YOURSELF

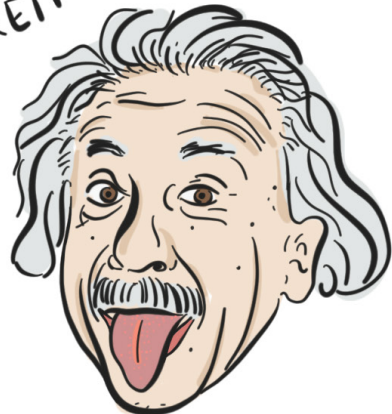
@RETHINKRUBBISH

YOU CAN'T  
SOLVE A  
PROBLEM

WITH  
THE  
SAME

THINKING  
THAT CAUSED IT

@RETHINKRUBBISH



IT'S NOT ENOUGH TO

care

WE HAVE

TO

DO

SOMETHING

@RETHINKRUBBISH

the  
MOST  
COMMON  
WAY

people

GIVE UP  
THEIR POWER

IS BY THINKING

THEY  
DON'T HAVE  
ANY.



ALICE  
WALKER

TO  
ACT IS TO  
CHANGE  
ONESELF  
AND THE UNFOLDING  
UNIVERSE  
AS WELL

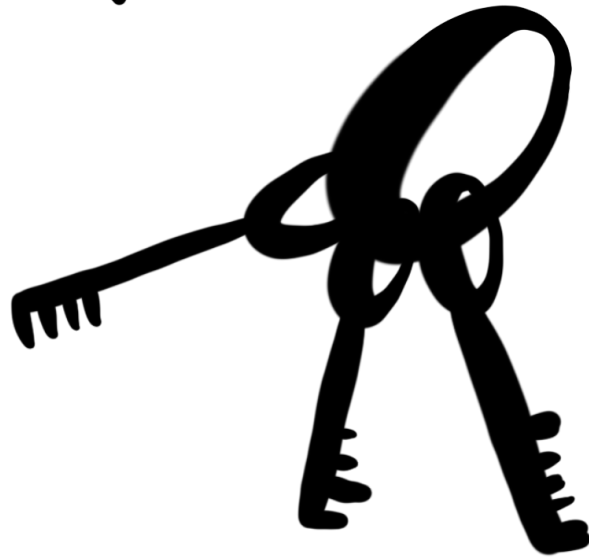
ARTURO  
ESCOBAR



collaboration

IS THE

KEY



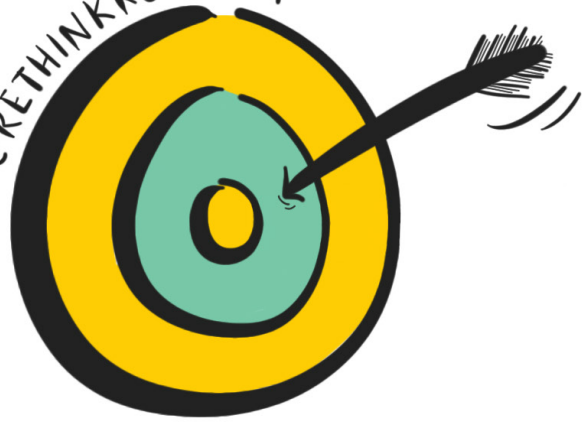
slow  
IT

DOWN

@RETHINKRUBBISH  
FASTER  
ISN'T ALWAYS  
BETTER!

AIM  
FOR  
PROGRESS

@RETHINKRUBBISH



not  
perfection

WHEN WE

**LISTEN**

**DEEPLY**

@RETHINKRUBBISH

**WE HEAR  
DIFFERENTLY**

BRING  
YOUR  
BROKEN  
SELF



TO THE  
PROBLEMS  
YOU'RE TRYING TO  
SOLVE

A PROJECT  
ADAPTS TO  
the CAPACITY  
of the  
PEOPLE WHO  
LEAD IT

FILL THE  
POWER  
GAP  
with  
PEOPLE



@RETHINKRUBBISH

THE ONLY<sup>\*</sup>  
CONSTANT  
IS  
change

UNLESS

WE ASK

who  
we are...

@RETHINKRUBBISH



WE'LL

NEVER

EVOLVE

INTO WHO WE

COULD BE



the  
NEW DOES NOT  
NEGATE  
@RETHINKRUBBISH

the OLD, BUT  
CONTAINS and  
SUPERSEDES IT

~ CHARLES EISENSTEIN ~

HOLY  
FLUX!

THE ART OF saying



@RETHINKRUBBISH

the

PRESSURE

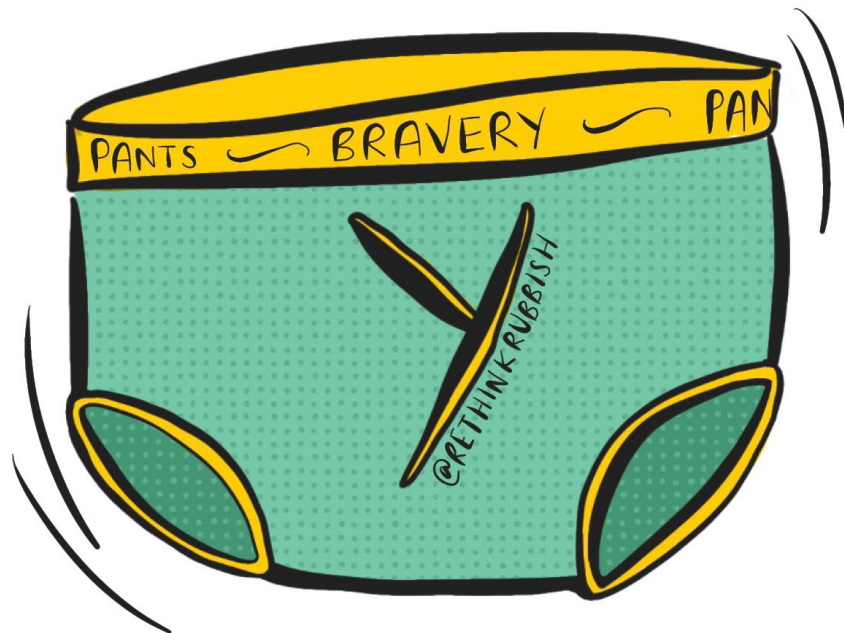
OF

slow

ON CASH FLOW



PUT ON YOUR  
BRAVE  
PANTS



IT'S  
TIME TO  
MAKE  
A NEW  
NORMAL



@RETHINKRUBBISH

less  
resolutions

MORE



ALMOSTZERO.COM.AU

REVOLUTIONS

@RETHINKRUBBISH



FIGHT FOR EARTH

ANOTHER  
WORLD



@RETHINKRUBBISH

IS NOT ONLY  
POSSIBLE  
SHE IS ON  
HER  
WAY...

ARUNDHATI  
ROY



# THIS VISUAL APPENDIX CAPTURED THE DESIGNERLY APPROACH OF 'REFLECTIVE DOODLING' THAT HAS BEEN USED FOR SENSEMAKING THROUGHOUT THIS RESEARCH.

The act of transitioning concepts from visual to verbal (and from casual to academic) was an integral aspect of my sensemaking process. Many of these doodles have been published on social media, where a 'lay approach' to their key concepts was also verbally communicated.

The process of 'reflective doodling' has helped me navigate the space between practitioner and researcher. It forged a pathway between the visual and the verbal and, as presented through the figures included in this thesis, has played a key role in my approach to knowledge building.

