

1 Introduction

The residential sector plays a major part in contributing to the production of greenhouse gas emissions through everyday energy consuming activities within households, actions by individuals outside the home and the location and built form of housing (Shove and Spurling 2013; Watson 2012; Hamin and Gurran 2009; Clark 2013; Edenhofer et al. 2014). In Australia, the residential sector accounts for approximately 18 percent of national greenhouse gas emissions (Garnault 2011). Limiting global temperature increases to 1.5°C requires a substantial reduction in these emissions with urban governance actors, such as local governments, playing a central role through their programs and policies (Bazaz et al. 2018).

Australian local governments have sought to reduce household-based emissions through a suite of climate governance practices, with a particular reliance upon community engagement (Fritze et al. 2009). Community engagement programs delivered by Australian local governments seek to convince individuals of the need to respond to climate change and build their capacity to act accordingly (Hargreaves 2011). The form and content of these programs have been strongly influenced by behaviour change theories designed to overcome a real or perceived knowledge deficit in relation to climate change or in undertaking a specific mitigating action (Southerton et al. 2011). Such programs form part of a broader appreciation of behaviour change theories to tackle policy problems by governments internationally and reflect the individualisation of responsibility typical of a neo-liberalisation of Western political and policy making contexts (Science and Technology Select Committee 2011; Marsden et al. 2014).

Practice theory fundamentally challenges the assumptions underpinning these programs, arguing that behaviour change-based methodologies are limited in their understanding of the complexities of specific activities and the relationships between them (Shove 2010). Practice theorists posit that a focus on the role of individuals obscures the systemic change required to respond effectively to climate change (Warde 2005; Shove and Spurling 2013). As a consequence, opportunities for more complex and nuanced climate governance interventions may be missed (Shove 2010; Moloney and Strengers 2014).

By contrast, practice theory shifts the focus of policymakers and practitioners away from the individual to everyday practices such as cooling, heating, cooking and travelling, and in doing so offers a deeper appreciation of the elements and socio-technical systems shaping how we live (Shove et al. 2012; Røpke 2009). The performance of each of these practices is rarely conducted with regard for their contribution to climate change; rather, we cook to have food to eat, we heat or cool rooms to be comfortable and we travel to reach a particular destination (Hager and Morawicki

2013; Guerra Santin 2011; Innocenti et al. 2013). Shifting from a behaviour change framing opens up new opportunities for policy and interventions based on an understanding of what people actually do (Spurling et al. 2013). However, despite critiques of the assumptions and theoretical underpinnings of existing forms of community engagement, adherence to behaviour change-based approaches remains strong amongst Australian local governments (Moloney and Horne 2015; Moloney et al. 2010; UrbanTrans 2008). While practice theory critiques have gained traction within academic circles and to some extent within policy circles in the UK (Spurling et al. 2013; Hoolohan and Browne 2020), there is little evidence of practice theory being considered as a viable approach within the local government sector in Australia.

In this thesis, I consider how practice theory might move beyond its analytical contributions and be usefully adopted by Australian local governments seeking to respond effectively to climate change. In doing so, I identify three primary gaps in knowledge to which this research responds.

The first lies in the application of a governance framework to identify the complexities associated with developing effective responses to climate change and to assess the efficacy of using practice theory as a central plank in these responses. Levin et al.'s (2012) original conception of climate change as a super wicked problem and the subsequent development of a methodology to overcome its complexity factors also remains under-explored (Lazarus 2008). I draw on this super wicked framing to make the case for practice theory as an approach worthy of addressing the complexity factors associated with climate governance. I also employ the solutions development methodology to analyse local government responses to climate change, including both existing behaviour change-based models as well as those informed by practice theory and, in doing so, advance understanding and the applicability of the framing of super wicked problems.

The second research gap is a contention that part of the reason that practice theory has struggled to evolve from a useful tool of analysis to an integral part of how governments operate is as a result of an under-examination of practices of governance practices and their relationship to the very household practices they seek to influence. I seek to rectify this by building on previous work in this area, most notably by Schatzki (2011; 2016), Keller et al. (2016) and Macrorie et al. (2015).

The third concerns how practice theory can be usefully applied to community engagement practices performed by Australian local governments. This extends existing literature on practices in interventions, including by Spurling et al. (2013) and Strengers and Maller (2014), with an examination of the role of local governments as performers of practices. In addition, I extend thinking by Geels (2011, 2018) and Watson (2012; 2020) on how practice theory can lift its gaze from the specific to the systemic to drive transitions towards more sustainable outcomes.

1.1 Research Question

This research project seeks to address these gaps by examining Australian local government climate change community engagement programs through a practice theory lens. The research question to which this thesis responds is:

Can practice theory effectively re-craft Australian local government community engagement approaches in response to climate change?

Answering this question requires consideration not just of local government climate change community engagement practices, but also their relationship to everyday household practices as well as to other governance practices performed by Australian local governments. The dynamic relationship between community engagement and household practices is examined for the influences that flow both ways as community engagement seeks to shift household practices onto a more sustainable footing, while shifting and emerging household practices influence the effectiveness and structure of community engagement practices. I also examine the relationship between community engagement and other local government climate governance practices (regulation, infrastructure provision, service delivery and advocacy) and internal process practices (strategic management, working cultures and political management), how they are placed within relevant systems of practice (Watson 2012), such as energy provision and transport, and consideration of justifications for why practice theory should be employed in preference to behaviour-changed based approaches.

The research undertaken for this thesis includes document analysis of 37 local government climate change strategies, 26 local government climate emergency strategies and 95 local government climate emergency declarations, and three rounds of interviews with up to 29 local government officers.

1.2 Chapter Structure

This thesis consists of eight primary chapters, including this introduction, a literature review, methods and a conclusion. As this is a thesis with publications, two of these chapters are structured as adapted papers.

Chapter 2: Literature Review

The body of literature and theoretical underpinning that informs this research are set out in the literature review (Chapter 2). At its core is the use of super wicked problems as a framing device to highlight and understand complexities involved in developing suitable policy and programmatic responses to climate change (Levin et al. 2012). Super wicked problems extends the framing of wicked problems with four additional factors: there is a limited time to respond, it is caused by those seeking the solution, there is weak or non-existent central authority and future benefits from solving the problem are discounted (Levin et al. 2007). By highlighting complexity as a core element of climate change, the super wicked problem framing favours the use of theoretical responses that provide a holistic view of activities and the system in which they exist, such as practice theory. As the four complexity factors apply to both climate governance practices and the household practices they seek to influence, super wicked problem framing encourages policymakers and practitioners to reflect upon both sets of practices and the relationship between them.

In addition to the practice theory critique of existing community engagement approaches, a lack of reflection about climate governance practices when developing and implementing interventions is explored as one of two major critical limitations of practice theory. The other is its applicability to systemic problems at a macro-scale as highlighted by critiques from socio-technical transitions literature (Geels 2011). These include practice theory's focus on the specific which arguably makes it less suitable for examining the large-scale systemic changes required to achieve sustainability transitions (Geels 2010).

I explore the debate between practice and transition theorists and work undertaken to overcome the gap between the theories. This includes appreciation of what both approaches have to offer (Hargreaves et al. 2013) and attempts to apply practice theory in alignment with transition theory structures (Geels et al. 2015; McMeekin and Southerton 2012). In particular, I draw upon Watson's (2012) notion of *systems of practice* as a way to consider the role of practices and their relationships with one another in driving systemic change. This approach creates a structure based on how individual practices are positioned in relation to one another (within bundles and complexes) to form whole systems of practice akin to processes at work within transition theory (Watson 2012). I consider how combining systems of practice within the process-based strategic approach of transition management may help policy makers and practitioners to think through how climate governance practices, such as community engagement, can be performed in a structured manner to achieve sustainable transitions (McMeekin and Southerton 2012; Loorbach 2010).

Usefully, the super wicked framing also produces associated diagnostic questions designed to produce solutions, based on the creation of forward-looking, path-dependent policy (Levin et al. 2012). This provides a framework with which to assess local government responses to climate change, including those developed through the use of practice theory. This is important in understanding whether

proposed practice theory-based solutions are likely to be any more effective than those they are replacing.

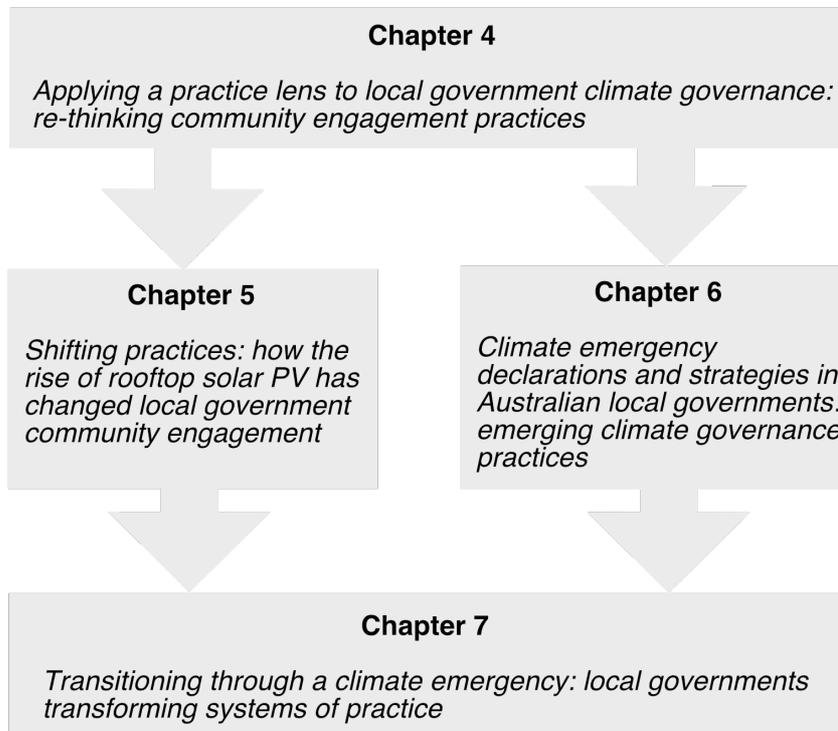
Chapter 3: Methods

Chapter 3 sets out the research methods employed in this thesis. I have employed qualitative methods to understand the construction of local government climate governance practices, including community engagement. These include analysis of climate change strategies and programs from a range of local governments across Australia, including both metropolitan and regional councils. I also conducted three rounds of interviews with local government officers to better understand how current climate change community engagement practices are structured, how they align with and are influenced by other climate governance practices, their response to changing practices within households (notably the widespread adoption of rooftop solar as a dominant emissions reduction technology) and their perceptions of practice theory and elements of transition theory as viable alternatives to current approaches. In addition, the rise of the climate emergency movement during this research project necessitated additional data collection through an analysis of climate emergency declaration motions passed by local governments and subsequent climate emergency strategies, as well as drawing on secondary source public interviews with key actors in the early development of this movement.

Finally, my positionality as a practitioner within the local government sector and the limitations of the research approach are discussed.

The remaining chapters of the thesis explore how community engagement practices are structured and performed, and how they have been shaped by external influences, as set out in Figure 1.1:

Figure 1.1: Structure of Thesis by Chapters



In Chapter 4, I establish the structure and positioning of climate change community engagement practices as performed by Australian local governments. I then explore the first set of influences on these practices, resulting from the widespread adoption of rooftop solar by Australian households (Chapter 5). The second set of influences is the emergence of a social movement encouraging local governments to declare and act upon a climate emergency (Chapter 6). Finally, I consider how these influences can be incorporated into a structured way forward for local government climate governance and the role of the community within this process (Chapter 7).

Chapter 4: Analysing Local Government Community Engagement Approaches through a Practice Lens

Chapter 4 addresses the second identified gap in knowledge: how practice theory might be employed to help reframe and redesign governance practices. I analyse current community engagement practices performed by Australian local governments through the lens of practice theory, including how they have developed and their constituent elements of meanings, competencies and materials. This chapter draws on original research including a review of 37 sustainability and greenhouse strategies and programs from Australian local governments, and interviews with 29 local government officers.

I draw out the commonalities and relationships between the three primary practices that constitute community engagement (recruitment, engagement and evaluation), as well as their relationship to other local government climate change governance practices (regulation, the provision of infrastructure, service delivery and advocacy to higher tiers of government and other stakeholders) and with local government internal process practices (financial and risk management, strategic planning and local politics). This chapter identifies shortcomings in existing forms of climate change community engagement, including limited resourcing resulting in short-term interventions, a reliance on climate change as a motivation for individuals to change their everyday household practices and an adherence to behaviour change-based methodologies.

Finally, this chapter considers how community engagement and other relevant governance practices might be altered to increase their effectiveness in responding to climate change. I draw on Spurling et al.'s (2013) approach of *re-crafting* individual practices, *re-integrating* the relationships between practices as well as between bundles and complexes of practices, and *substituting* practices. I explore how local governments have undertaken elements of this approach and consider what a more thorough application might achieve. In doing so, I ask whether this approach focusing on practices and their relationships is sufficient to address the systemic causes of climate change.

Chapter 5: Shifting Practices: How the Rise of Roof-top Solar has Changed Local Government Community Engagement

While community engagement practices are performed to influence household practices, this is not a one-way relationship. Chapter 5 explores how changes in the performance of household practices have, in turn, shaped local government climate change community engagement practices. The rise of a popular renewable energy technology, rooftop solar, has changed materials associated with existing energy consuming household practices as well as created a new practice in its own right: distributed

renewable energy production. As per the previous chapter, I draw upon document analysis of 37 local government climate change sustainability strategies and existing programs and interviews with 29 local government officers.

This chapter examines the role of local governments in encouraging the uptake of solar as a result of climate change strategies that emphasise measurable reductions in emissions, favouring technologies over behavioural changes. I note that the meanings associated with local government community engagement to encourage solar have shifted from a pro-social emphasis (such as responding to climate change as a moral issue) to pro-individual (such as personal financial gain). This analysis highlights that as local governments have re-crafted their community engagement practices, they have adopted new roles that further support the uptake of this technology extending the reach to households normally excluded from the rooftop solar market, such as renters and low-income households. I consider whether future forms of community engagement might build upon the competing motivations (pro-social vs. pro-individual) to accelerate additional adoption by households of distributed renewable energy production, and what this might mean for the role of local government, both within climate governance and energy provision systems of practice.

Chapter 6: Climate Emergency Declarations and the Emerging Role of Local Governments in Mobilising Change

In addition to the influence of household practices, as outlined in Chapter 5, local government climate change engagement practices are also subject to influences from external practices, including those performed by activists, pressure groups and other governments. In Chapter 6, I explore the growing influence of the emerging climate emergency movement that seeks a stronger, more urgent role for local governments responding to climate change (Council Action in the Climate Emergency 2018). The movement calls on local governments to actively engage with other stakeholders, including households within their communities, other tiers of government and actors within relevant systems of practice.

The declaration of a climate emergency by local governments started in the City of Darebin, in Melbourne, in 2016 and has been followed by an additional 94 local governments throughout Australia (Aidt 2019). This movement gained prominence during the process of undertaking my research and therefore warranted consideration as a potential influence in shaping how local governments respond to climate change. In this chapter, I explore how local government climate governance practices may shift as a result of declaring a climate emergency and if and how this can reframe the relationship between local governments and households.

I draw on guidance produced by climate activists and early-mover local governments that seeks to define climate emergency governance and identifies four common principles: a requirement for more urgent action to reduce emissions, new roles for communities (including as advocates to other tiers of government and as co-managers of the response), the need to consider climate change throughout all local government operations and an emphasis on increased collaboration with other relevant actors. I then draw on empirical evidence in the form of 95 council motions declaring a climate emergency and 25 climate emergency strategies, to consider if and how these principles have been adopted by local governments. I pay particular attention to what these emergent forms of climate emergency governance mean for the relationship between local governments and their communities.

Chapter 7: Driving Transitions in Local Government Climate Governance Systems of Practice

The preceding chapters draw on practice theory as a lens for analysing existing local government climate change community engagement practices. This has enabled an exploration of local government climate governance practice dynamics and how they have been influenced by changes within household practices (such as the rise of rooftop solar) and external governance movements (such as the emergence of the climate emergency framework). In this final chapter, I look forward and explore the suitability of using practice theory to help design interventions at the system scale.

Starting from the shortcomings in practice theory identified in the literature review (Chapter 2), I focus on how local government practitioners might develop strategic approaches to creating and supporting desirable transitions. To achieve this, I place Watson's (2012) systems of practice within a transition management framework to suggest how local governments might take account of rapidly shifting dynamics within climate governance and plot a way forward to a desirable climate-responsive outcome. I find that the triggers for self-reflection built into transition management and its broadened focus away from single actors holding responsibility, aligns with an approach in which visions of altered systems of practice can be attained. This requires collaboration between local governments and relevant actors as well as closer integration of different climate change responses, notably through framing climate emergency meanings to integrate mitigation and adaptation policies and interventions. This chapter draws upon interviews with eight local government officers, selected from the original grouping of 29, to test the acceptance of practice theory and transition management as an alternative to existing approaches.

Conclusion (Chapter 8)

Finally, Chapter 8 draws together the findings of this thesis assessing the applicability of practice theory within local government climate change governance with a particular focus on community engagement. This includes reflecting upon the relationships between different governance practices and how these interact with the everyday household practices they seek to influence, as well as with practices enacted in other relevant systems, such as energy provision. It notes that these relationships are dynamic and flow both ways, encouraging practitioners to not only think about the household practices they seek to influence but also their own governance practices and how those are influenced by what households and other actors do, whether in the adoption of new technology or a call to action on the part of local governments.

This chapter highlights the value of thinking in systems of practice and how the relationships between these not only shape how current practices are performed but can be shaped to achieve more effective outcomes. These outcomes can be assessed against the complexity factors and solutions criteria of the super wicked problem framework. In doing so, the thesis identifies opportunities for future research for how practice theory can shift from the theoretical to the practical for a vital government sector responding to climate change.