

Rewriting our agri-culture:

a discursive analysis on agroecology within

Australia

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Declaration

This work is substantially my own, and where any part of this work is not my own, I have indicated this by acknowledging the source of that part of those parts of the work.

Abstract

The way in which society organises agriculture affects every aspect of our lives: our approach to the land and its organisms, the building of civilisations, economic inequality, gender relations, human health and our relationship with the land's original custodians. Yet humanity has organised itself around an industrialised global food system which erodes democracy, perpetuates injustices, undermines human health and is environmentally fatal. Recognising this, farmers, activists and scholars have been calling for a transition to agroecological food systems for centuries. It is a paradigm which holistically addresses the agri-culture of our food systems; not just the sustainability of agroecosystems, but the socio-political structures that design them. This work joins the movement of literature calling for epistemic justice in the institutionalisation of agroecology in food governance. It endeavours to provide a more in-depth understanding of the discourses of sustainable agriculture that operate within Australia. It contributes to the paucity of literature covering agroecology's nascent development within the country. A poststructuralist discourse analysis (PSDA) analyses the discursive formations of sustainable agriculture operated by the state and civil society actors involved in the debate. It will examine if there are any spaces of "dislocation" through which the paradigm of agroecology can emerge in mainstream discourse. Ultimately, it will reveal how the historic institutionalisation of productivist discourses by dominant groups has resulted in an epistemic community which remains unfavourable to a just transition towards agroecological food systems by 2100.

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Table 1: Table of Abbreviations

PSDA	Poststructural Discourse Analysis
MNC	Multinational corporation
FAO	United Nations Food and Agriculture Organisation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
SDG	Sustainable Development Goals
NFP	National Food Plan
DAWE	Department of Agriculture, Water and the Environment
DFAT	Department of Foreign Affairs and Trade
DAFF	Department of Agriculture, Fisheries and Forestry
ACOLA	Australian Council of Learned Academics
FCA	Farmers for Climate Action
NFF	National Farmers Federation
AFSA	Australian Food Sovereignty Alliance
R&D	Research and Development

Introduction

“Societies that can listen to the small voices and take that and change accordingly are the societies that survive change and can accommodate environmental consequences. Those societies that can’t hear the small voices and smother them are the ones that have a problem”

- (Diamond, *Collapse: How Societies Choose to Fail or Succeed*, p. 135)

The purpose and significance of this thesis is multi-faceted. On a preliminary level, this thesis is about catalysing greater discussion about agroecology in Australia’s national discourse. It joins effusive scholarly debates challenging the unsustainability of the current industrial agricultural system, one which has been a major contributor to the transgression of five planetary boundaries and which enforces asymmetric power relations across the globe (Campbell, et al., 2017 ; ETC Group, 2017). It also joins an emerging movement promoting agroecology, a holistic agricultural paradigm which harnesses the ecological and social potential of diversified farming and food systems (Rosset, et al. 2011).

On a deeper level, this work is about questioning the nature in which we institutionalise knowledge. Guided by agroecology’s interrogation of undemocratic and colonised agricultural knowledge systems, this paper will investigate the epistemologies defining prevailing food structures. It therefore analyses how the culture of who we listen to in our food systems affects the culture of our political and social systems and vice versa.

This research will therefore contribute timely new findings to existing literature by addressing the following research question:

Evaluate the potential for a just transition to agroecological food systems in Australia by 2100.

The 2100 timeline was chosen with the recognition that the transformative change needed for food systems transition will require immediate and urgent systems re-evaluation. Whilst the news cycle remains focused on ‘Net Zero by 2050’ debates and 2021’s COP26 conference in Glasgow, this work aims to utilise this public momentum to galvanise national agroecological discussion. And although it recognises that food systems revision often requires generations of political change, this thesis heeds the IPCC’s dire warnings of rapid climate disaster precipitating beyond the 1.5 degree Celsius mark within the century (IPCC, 2018).

Emerging from the thesis question are the following sub questions which will inform data collection and analysis:

- i. *Analyse the epistemological debate surrounding the discourse development of agroecology in Australia*

- ii. *Examine the potential spaces of 'dislocation' in the national discourse through which agroecology can be developed as a formal epistemic community.*

The relevance of these questions to the existing literature lies in their value to the discipline of agroecology itself; they articulate the crux of agroecology's epistemological investigation into the production of power. The data analysis is therefore guided by Laclau & Mouffe's work on 'dislocations', or areas of new meaning and power can be constructed in the debate (Laclau & Mouffe, [1985] 2001). It will examine if there are discursive formations which represent 'dislocations' in sedimented structures, through which agroecological discourses can emerge.

This is achieved through the work as per the following structure. **Chapter 2** reviews the literature covering the emergence of agroecology in the global and domestic arena. It explains where agroecology as a novel paradigm fits in amongst the various discourse developments of sustainable agriculture (such as the organic foods movement, and regenerative agriculture) and how its political framework transcends its counterparts. It concludes with an explanation of how this research contributes to the current policy setting and state of literature regarding agroecology. **Chapter 3** sets up the epistemic premises of productivism which will be identified in the data analysis. It also defines post-productivism's (as manifested in agroecology) ontological premises, and the epistemological frameworks which derive from them, that guide this current study. The chapter then examines the poststructuralist theory which frames the research, particularly Foucault's work on discourse, and Laclau and Mouffe's conceptualisation of "dislocations". **Chapter 4** explains how these methodological frameworks distil into the chosen research method, Poststructural Discourse Analysis (PSDA). It also introduces the data organised into three subgroups. **Chapter 5** presents the results of the PSDA analysis, followed by an in-depth discussion of the data. **Chapter 6** summarises the work's key contributions and provides recommendations for future research.

Ultimately, this thesis will argue that the historical institutionalisation of productivist discourses by dominant groups has resulted in an epistemic community which remains unfavourable to a just transition towards agroecological food systems. It does this by highlighting how the institutionalisation of agroecology in the international setting is dominated by productivist appropriations of the paradigm, a regime which is fatally flawed in the context of the climate crisis. It will then reveal how Australian literature on the paradigm sparsely reflects emerging agroecological movements across the country and is already reflective of the empiricist epistemological biases defining the international debates. Finally, it will reveal the dominant discourses of settler colonialism, neoliberalism and productivism which are legitimised by hegemonic actors. While they are not unchallenged, these discourses are historically entrenched and limit the emergence of 'dislocations' through which agroecology can be developed. The rationale for this research agenda, and the research methodology, will be explored in the next chapter.

2. Background and Literature Review

This chapter will first demonstrate the growing body of literature which exposes the failures of the industrial agricultural regime. It will then present two examples of paradigms which respond to this issue: the discourse developments of the organics movement and regenerative agriculture. This will be followed by an outline of the contours of the international ontological and epistemological debate surrounding agroecology, as well as its empirical advantages as a sustainable food system. The last section will define the Australian epistemic community as nascent and literature on the issue as sparse, a problem space which this work aims to address.

2.1 The industrial agricultural regime – a failing system

There is a growing and undeniable body of literature which delineates the failures of the industrial agricultural system (Campbell, Rosin & Stock, 2013; Kimbrell, 2002; Mann 2021). Massy (2021) defines the prevailing agricultural ideology as one dominated by large, specialised and highly mechanised farms geared towards maximising production and profit. Scholars attribute the rapid globalisation of the regime to the legitimisation of dominant paradigms such as economic rationalism and neo-liberalism (de Wit & Iles, 2010); and the ‘colonial conceptualisation of territory as commodity’ (Mann, 2021, p. 18). The paradigms are encompassed by ‘productivism’ a discourse centred around the simplification of complex ecosystems for the main goals of maximising production and profit (to be discussed more in section 4.3) (Wilson 2001). This discourse is legitimised by actor networks such as MNCs and neoliberal international organisations such as the World Bank and United Nations Food and Agriculture Organisation (FAO) (Roche & Argent, 2015).

The effects of this prevailing system are widespread and intergenerational. Moore (2015) demonstrates how the system’s highly consolidated global market has reconfigured peasant ecologies in Asia, Africa and Latin America away from regimes of self-sufficiency and towards multiple patterns of dependency (on commodified inputs, such as hybridised seeds and fertiliser, and credit markets). The ETC Group has published numerous reports on how these peasant farmers – 500 million smallholder farmers who produce 70% of the world’s food – are themselves disproportionately at risk of food insecurity due to their lack of food sovereignty (ETC Group , 2017). Meanwhile, the industrial regime only produces around 30% of the world’s food (ETC Group , 2017).

As the mega profits of MNCs are dependent on substituting destructive inputs for natural function, these actors have driven the Earth further into the Anthropocene. The FAO highlights how the regime consumes 70% of all freshwater on Earth annually (2017, p. 6), while Massy points out that it is responsible for

approximately 80% of forest loss (2021 , p. 175). Campbell et al., (2017) presents the grave warning that this food system is a major contributor to the transgression of five planetary boundaries (biosphere integrity, biogeochemical flows, land-system change, fresh water use and climate change). The FAO warns governments that at this rate of environmental destruction, “business as usual” is no longer an option if the targets set by the 2030 Agenda for Sustainable Development are to be met (2017, p. 7).

In Australia, modern management practices such as set-stocking, intensive cultivation, heavy tillage and industrial fertiliser and chemical use have resulted in ongoing land degradation and destruction of soil structure (George, McFarlan & Nulson, 2012 ; Lindenmayer, Cunningham & Young, 2002). Over the last 200 years, more than 70% of Australian soil has been degraded, whilst agricultural land clearing has decimated biodiversity levels (Massy, 2021, p. 160 ; Stevens, 2001-02). It has led Australian farmers such as Geoff Brown to criticise the current status-quo of zero-till, chemical-type farming as a “disabled system”, one in which established sources of knowledge such as product agronomists, the Department of Agriculture and the CSIRO are “so far behind” (Massy, 2021, p. 164).

For centuries, the dominant system of industrial agriculture has been championed as the solution to eradicate widespread hunger and malnutrition within our growing global population. Its “capitalocentrism” (Massy, 2021 , p. 291) has greatly benefited the dominant power base of agronomists, scientists and multinational product suppliers and manufacturers who attempt to dominate and control the land, whilst severely marginalising the peasant farmers who are the most effective at sustainably feeding our population (Moore, 2015). However, the increasing volatility of climate change is revealing the inability of this system to support the world’s population in a sustainable way (Jumba, et al., 2020). Magnifying the urgency of the crisis is the COVID-19 pandemic’s exposure of “the fragility of a food system built to rely on interconnectedness and complex global supply chains that facilitate trade between nations” (Mann, 2021 p. 4). In the face of a hegemonic, yet fatally fragile and vulnerable structure, a revolutionary approach to farming is required, one which will transform the system towards one of more diversity and resilience. Agroecology provides such a response. But before this literature review engages with agroecology directly, it must first introduce the various discourse developments of sustainable agriculture which have led up to it.

2.2 Responses : the discourse developments of organic and regenerative agriculture

The recognition of agroecology as a key strategy to solving the world’s multiple crises represents the most transformative end of a spectrum of sustainable food movements, including the market development of organic foods and regenerative agriculture. This section will provide a contextual overview of two

agricultural justice movements pre-agroecology, and will demonstrate how the latter is unique in its approach.

There is an effusive agrarian literature on the organics movement. These range from the paradigm's ability to recuperate soil health devastation (Vaarst, et al., 2006); its ability to empower the disenfranchised small-scale farmer (Kiggundu, et al. 2014 ; Pugliese, 2002); and its protection of rural communities, local economies and human health (Häring, et al., 2001 ; Butler, et al., 2008 ; Huber, et al., 2011).

However, recent studies highlight how, what started as a transformative movement has been delocalised and marketized into an organic industry full of vast monocultures. Dixon (2018) found that a high propensity of organic farms in the United States operated on monocultural, rather diversified farming systems, which did not protect the farming ecosystem from the rapid spread of diseases. In Australia, Lyons (1999) found that industrial approaches to organics involved MNCs such as Walmart, Purina, Danone, Nestlé, and Kellogg 'greenwashing', or attempting to construct an image of corporate environmental responsibility without altering their industrial production of monocultures. Critiqued as "capitalism in green disguise" (Konstantinidis, 2018), this corporate co-optation of organics demonstrates an alternative food movement which has surrendered its environmental focus to the appropriation of big capital (Jaffee & Howard, 2010).

Practiced by peasant and Indigenous farmers for centuries, regenerative agriculture is an approach to food and farming systems which aims to recuperate biodiversity, soil, water and nutrient cycles, economies and communities (Gosnell, Gill & Voyer, 2019 ; Fernandez Arias, Jonas, Munksgaard & Salatin, 2019). Influential Australian regenerative farmer Peter Andrews believes that regenerative farming is about more than just sustaining the land but represents the active rebuilding of existing systems towards full health. His call for the return of landscapes to their efficient function pre-settlement represents the movement of environmental stewardship led by nationwide networks of regenerative farmers (Andrews, 2006 ; Chapin et al. 2009 ; Massy 2021)

Iles points out how the deeply influential agricultural movement in Australia has resulted in a vast education industry around the holistic planned grazing of livestock. However, it has also resulted in the marketisation of ecological farming practices in the US (such as carbon credits for soil health, or ecological products sold to companies like Patagonia Provisions) (Iles, 2020). It is this commercial discourse which distinguishes regenerative agriculture from agroecology.

As Tammi Jones, President of the Australian Food Sovereignty Alliance (AFSA) argues, regenerative agriculture remains, "capitalist agriculture with better inputs" and "iterative rather than transformational" (Jonas, 2021). This is similar to Mann's critique of "personal consumption" movements (such as the organics movement), in which she argues that they risk a "reductionism that splits food out from the larger

political project of creating equity and resilience in our food systems” (Mann, 2021 p. 29). Such critiques highlight how the lack of critical theory from the organics and regenerative movement renders them vulnerable to the same commodification and consolidation which maintains the status quo.

The movement towards ecologically and socially just food systems therefore involves a diverging spectrum of iterations of sustainable agriculture. Whilst agroecology inherently features organic food systems and regenerative farming practices, it is unique in its political strategy of systems transformation (Mann, 2021). As the next section will discuss, agroecology transcends practice and science, to constitute a movement and a political framework.

2.3 Agroecology - the international epistemological debate

As a response to these limitations, there is an extensive discussion regarding agroecology in scholarly debates and international policy-making. Bellamy & Ioris set out a nexus of debates surrounding agroecology, focusing on its conceptual definitions, as well as the epistemological debates regarding how, or whether, to institutionalise its knowledge systems (Bellamy & Ioris, 2017).

The mainstream promotion of agroecology is spearheaded by the FAO. Their approach to the paradigm focuses on what Bellamy & Ioris define as ‘scientific agroecology’, a narrow, technologically-focused approach to sustainable food systems associated with Western scientific epistemologies and methodologies (Bellamy & Ioris, 2017). With publications such as the “10 Elements of Agroecology”, the FAO (2018) promotes the paradigm as a modern approach to sustainable farming, a ‘technological fix’ used to continue intensifying food production without majorly altering current organisations of society (Gliessman, 2003 ; Loconto & Fouilleux, 2019 ; Pimbert, 2018). Its hosting of annual ‘Symposiums on Agroecology’, and more recently, the UN Food System Summit, which transpired in late September, aims to create democratic spaces for farmers, scientists, agribusiness and governments to engage in food systems discussion.

However, Bernard & Lux (2017) critique the FAO’s appeared change of stance as superficial and depoliticising the power imbalances which they have historically created. Pimbert (2018) argues that the FAO Symposiums do not consider agroecology as a radical alternative to the green revolution which cannot exist with agribusiness. Deijl’s (2017) discursive analysis of the 2016 Symposium in Budapest reveals an institution which continues to “appropriate and subjugate” local knowledge, while Canfield, Anderson & McMichael describe the UNFSS as a “powerful alliance of multinational corporations, philanthropies, and export-oriented countries to subvert multilateral institutions of food governance and capture the global narrative of food systems transformation” (2021, p. 2). This epistemological approach to agroecology meets

global urgency for food system transformation with the depoliticisation of the regime's political and social imbalances.

This mainstream approach represents an epistemological prejudice towards scientific empirical knowledge. It reveals a normative choice, one which denies the need for a systemic reprioritisation of power in the current state of affairs. This recognition forms the basis of another - or some would argue, truer - conceptualisation of agroecology as "political agroecology" (Bellamy & Ioris, 2017). This counter-movement to Eurocentric definitions of agroecology occurred in the late-1970s and early-1980s, when hundreds of non-government organisations (NGOs) in Latin America voiced concerns in regards to the ecological and social consequences of the Green Revolution (Altieri, 1999). The movement is spearheaded by civil society actors such as La Vía Campesina (LVC), an international farmers movement which champions agroecology as an essential part of their fight for food sovereignty and peasants' rights (International Forum for Agroecology, 2015). They recognise in agroecology a new, more participatory approach to resource management strategies and technology dissemination, one led by small-scale, peasant and Indigenous farmers who were previously victim to the intensification of the industrial agricultural regime (Altieri & Toledo, 2011).

This movement saw a shift in global bodies of literature. Proponents such as Gliessman, Altieri et. al. (2003) shifted away from their previous scientific focus on agroecological principles towards a focus on agroecology as an action-oriented, transdisciplinary movement. De Molina (2013) has examined how agroecosystems are socioecological constructions produced through power relations, while Tornaghi & Dehaene (2017) call for a more radical decoupling of capitalism and urbanism through agroecological transitions. Mann recognises the fundamental contribution of agroecology as "its role as a political strategy and praxis of change, activated through relations between co-producers in food communities" (2021, p. 28). This effusive dialogue on the nature of agroecology signals a paradigm which responds to the industrial regime's reductionist view of food systems as an economic chain of 'soil to plate'. It signals a complex view of food but as a "network of men and women, of knowledge, of methods, of environments, of relations" (Petrini, 2007, p. 175 cited in Mann).

This section has highlighted how the institutionalisation of agroecology in the international setting is dominated by productivist appropriations of the paradigm, a discourse which the work will discuss at length in upcoming sections. Introducing the contours of the international epistemological debate is key in analysing how these dynamics will play out in the domestic arena, a key area of investigation which will be explored in Chapter 6.

2.4 Agroecology - the empirical facts

Beyond the ontological and epistemological contestation of agroecology, the paradigm has proven empirical advantages over the industrial model of farming. This can be evidenced even under orthodox criteria of maximising relative and absolute production. An analysis of well-designed urban permaculture farms (permaculture being a key agroecological organisation of crop production) in Cuba found them to be 15 times more productive than non-permacultural farms in rural regions (Altieri, et al., 2017). What allows the productivity levels of agroecological systems to compete with that of industrial systems is its diversified farming model. Its replacement of chemical inputs, optimisation of biodiversity and stimulation of species interactions builds long-term soil fertility, plant resilience and healthy agro-ecosystems (iPES Food, 2016). As such, research into individual farmer cooperatives in the Sancti Spíritus province of Cuba found that the replication of small agroecological farms across the country could produce the food needs for more than 70% of the population (Rosset, et al. 2011). In 2008, the peasant farmers within that region produced 50% of total food produce whilst only operating on 27% of the land, attesting to the paradigm's ability to achieve self-sufficiency (Rosset, et al. 2011).

In recognition of these advantages, recent studies have documented agroecology as a holistic and effective strategy to ensure food security and improved food nutrition even in the regions most affected by climate change. In regions such as Sub-Saharan Africa and Australia, agroecology has been explored as an effective strategy to combat the effects of erratic rainfall patterns, erosive runoff, groundwater salinisation, and long periods of drought (Goïta & Frison, 2020 ; Pereira, et al., 2018 ; Massy, 2021).

Furthermore, the paradigm's focus on smaller, territorialised food systems has resulted in it being less carbon intensive than industrial farming. For a city of 10 million people, over 6,000 tonnes of food need to be imported every day, contributing to the carbon emissions associated with an average of 1,000 miles travelled daily (Altieri, Nicholls, Rogé, & Arnold, 2017). For Greater Sydney's population of 5.3 million therefore, an industrial agricultural system requires over 500 miles worth of emissions everyday from transport alone. Agroecology's design around localised food supply chains on the other hand significantly reduces this strain on the environment, and provides a more climate resilient alternative (Altieri & Toledo, 2011).

On an empirical level of analysis, agroecosystems have demonstrated their capacity as a viable and productive alternative food system to the fatally unsustainable industrial one. This analysis has revealed an ability to secure long-term national food sovereignty and security in even the most food-insecure regions. Its formation around horizontal modes of knowledge-exchange rejects disempowering impositions of non-contextualised knowledge on peasant farmers, whilst its championing of ancient agrarian heritage empowers Indigenous communities (Rosset, et al. 2011 ; Schmutz, 2017). As a country facing severe

ecological and rural crises, Australia would benefit greatly from an institutional investigation into agroecology. The next section will address how the domestic epistemic community is approaching this.

2.5 Agroecology - the Australian epistemic community

Current scholarship concerning sustainable agriculture in Australia is predominantly grounded in the industrially based paradigm of ‘productivism’. Led by the work of Diehl, George, Harper et al., Mason & Knowd and the CSIRO, this scientific approach demonstrates no explicit mention of agroecology, and thus inhibits the discussion from investigating its social and environmental potential as a transformative discourse (Diehl, 2020 ; George, Harper et al., 2012 ; Mason & Knowd, 2010 ; Williams, et al., 2002).

Scholarship which explicitly discusses agroecology as a cultural movement in Australia remains few and recent. The most extensive analysis of agroecology in Australia is Iles’s work on the politico-economic “lock-ins” inhibiting the institutionalisation of agroecology (Iles, 2020). He also analyses openings through which the movement can develop, such as Australia’s rich culture of farmer-to-farmer learning and the resurrection of Indigenous agricultural knowledge (Iles, 2020). Cross & Ampt (2017) provide insights into the “communities of practice” in Southeast Australia pioneering movements of native grassland innovation and cropping strategies. Jonas & Wessell (2020) provide an exposition on how agroecology’s foregrounding of Traditional Owners knowledge can help the country decolonise agriculture, while Marsh (2020) studies community gardens in Tasmania to show the significance of agroecology in improving community health and wellbeing.

This counter-movement is symbolised by the “The Peoples’ Food Plan” (PFP), published by the Australian Food Sovereignty Alliance (AFSA). Australia’s first crowdsourced policy document, this manifesto draws from the perspectives of smaller-scale farmers, social enterprise and community-based food initiatives to call for a more secure, equitable and resilient food system (this source will be discussed at length in the Data section of the paper) (AFSA, 2013). Meanwhile, Fernandez Arias et al.’s book “*Farming Democracy*” – also published by the AFSA – details the pathways of eight family farms integrating regenerative and agroecological principles into their farming systems (Fernandez Arias, Tammi, Katarina, & Joel, 2009). However, from their regional surveys of agroecology, Cross & Ampt conclude that there is ultimately not enough attention given to farmer-driven agroecological innovation as the pioneers of transitions towards sustainable farming systems (Cross & Ampt, 2017).

Although not entirely agroecological, the discourse of regenerative agriculture has increased in popularity particularly after the unprecedented fires and extended droughts suffered in recent years. Massy’s nationwide account of farmers transitioning away from the ‘Mechanical Mind’ of the prevailing regime demonstrates the power of farmer-to-farmer networks in healing not just the land, but the culture of

agriculture (Massy, 2017). Peter Andrews's work on biodiversity and climate recovery on his large industrial farm has led to the paradigm being taken more seriously by scientists, big agri and politicians alike (Andrews, 2006).

However, this inclusion of agroecological principles in organics and regenerative movements still remains grounded in an industrial framework which privileges empiricism and dismisses the movement's social and political merits. Argent argues that regenerative agriculture is pioneered by large industrial farmers and risks de-politicising the social and cultural importance of agroecology (Argent, 2002). Mayes contributes to this counter-movement, examining how organic and regenerative farming movements alike are still influenced by "Enlightenment ideas of improvement, colonial practices of agriculture as a means to establish ownership, and anthropocentric relations to the land" (Mayes, 2016). His work aims to deconstruct all discourses of agriculture as being non-neutral, as they all involve a settler-colonial history of racialised oppression. For example, he critiques the PFP's objective of 'urban farms for every town and city' as being dismissive of the marginal Indigenous populations within cities (as a result of colonial histories), thus their lack of access to such proposed sustainable food systems (Mayes, 2016). Schlosberg, Rickards & Byrne (2018) similarly raise the point that contemporary natural resource management (NRM) appropriates Indigenous notions of caring for Country and remains entangled in Western and scientific epistemologies. Further, while Massy (2021) shows an increasing number of regenerative farmers engaging with the region's original Aboriginal custodians, he argues that their traditional knowledge is typically discounted or sidelined.

Pascoe and Gammage have published conclusive work reveals an Aboriginal land management culture that was both systemic and scientific. Their work spearheads an incipient movement towards a native reclamation of agricultural heritage (Pascoe, 2018 ; Gammage, 2012). It not only highlights how Indigenous farming practices are inherently agroecological (in that they are communal, regenerative and based on social equity) but reminds policy-makers that only sincere dialogue and listening to Indigenous knowledge and ethics can ensure a holistic future of sustainable food systems in Australia.

Ultimately, literature on agroecology remains nascent, sparse and already reflective of the empiricist epistemological biases dominating the international discussion. Its goals of Indigenous empowerment and farmer-centric healing of the land remain inhibited by dominant Western scientific epistemologies.

2.6 Conclusion

In summary, the discourse developments of organics and regenerative agriculture have provided more popular approaches to the sustainable agriculture movement due to their political and industry palatability. Agroecology has been recognised on the international level as a potential solution to the world's

developmental crises, however this mainstream redefinition of the term has been criticised as leaving existing structures of power unchallenged. The social movement is yet to emerge as a formal epistemic community in Australia. The paucity of literature that does involve implicit discussions of agroecology is not yet reflective of the emergent movements occurring on the ground and features a methodological leaning towards more scientific positivist epistemologies. This thesis will respond to this gap in the literature by investigating the discursive formations in the epistemological agroecology discussion in Australia.

This chapter will first survey the growing body of literature which exposes the failures of the industrial agricultural regime. It will then present two examples of paradigm responses to the problem: the discourse developments of the organics movement and regenerative agriculture. This will be followed by an outline of the contours of the international ontological and epistemological debate surrounding agroecology, as well as its empirical advantages as a sustainable food system. The last section will define the Australian epistemic community as nascent and literature on the issue as sparse, a problem space which this work aims to address.

3. Theoretical Overview

This chapter will lay the methodological foundation which will explain why poststructuralist discourse analysis (PDSA) is the most appropriate theory to use for this work. It will analyse the ontological premises, in conjunction with the epistemological frameworks that derive from them, of productivism and post-productivism which guide the work's investigation of the Australian debate. This chapter will then demonstrate what the extant scholarship on sustainable agriculture in Australia has not been able to answer because of its methodological limitations. This will take the discussion to poststructuralism and what the theoretical framework can contribute towards answering the research question. It will investigate Gottweis's conceptualisation of policy as "phenomena...rather than facts", as well as Laclau and Mouffe's "dislocations", both key analytic frameworks to be employed for the data analysis of Australia's agricultural policy (Gottweis, 2003 ; Laclau & Mouffe [1985] 2001). This chapter will provide the methodological framework required to analyse the epistemological debate surrounding the discourse development of agroecology in Australia. This is a key sub-question to be addressed before answering the central question evaluating the potential of such just food system transitions before 2100.

3.1 Agroecology as post-productivism – ontological and epistemological premises

There exists a strong base of literature which compares productivism and post-productivism (Evans, et al., 2002 ; Wilson 2001 ; Tilzey & Potter, 2008 ; Roche & Argent, 2015). These studies are based off key factors such as their ideology, actor networks, food regimes, production, policy and environmental approaches. However, none provide a concise conceptualisation of the two paradigms' ontological premises and the epistemological frameworks that derive from them¹. This section will respond to this gap in the literature by presenting a spectrum of thought which guides iterations of agriculture, from industrial agriculture (representing the productivist paradigm) to agroecology (representing the post-productivist). As visualised in *Table 2*, this sui generis contribution will demonstrate how varying discourses of sustainable agriculture are based on diverse and intersecting epistemic premises. The function of the productivist analysis is to set up the key discursive features currently defining - and fatally biasing - the international and Australian epistemic community. This will establish the principles of the dominant productivist discourse to be further analysed in Chapter 6. Analysing the epistemological frameworks of post-productivism, beginning from its ontological premises, will then articulate agroecology's critiques of this

¹ This thesis supports Marsh, Ercan and Furlong's (2017) position claiming the relationship of ontology preceding, and directly influencing, epistemology. This thesis employs this stance of ontology as the "view about the nature of the world" (Marsh, et al., 2017, p. 178). Deriving from this is epistemology, which analyses the "what we can know about the world" (p.178).

prevailing food regime. This section will set up the epistemic premises to be explored in subquestion ii's analysis of the Australian epistemological debate.

Lowe, Murdoch, Marsden, Munton & Flynn define productivism as the commitment to intensive, industrially-driven and expansionist agriculture, with a state-supported goal of increasing output and productivity (1993, p. 221). As boosting food production from domestic sources became the paramount aim of rural policy post World War II, a network of institutions concerned themselves with the goal of securing national self-sufficiency through the 'modernisation' of the agricultural product (Wilson, 2001). This regime included state agencies, private input suppliers, financial institutions and research and development (R&D) centres, all legitimising the implicit beliefs in economic rationalism and neo-liberalism (Massy, 2021 ; Wilson, 2001 ; Roche & Argent, 2015). This involved increasingly intensive farming techniques and an extractive and destructive approach to nature in order to maximise food production.

Productivism's approach to social phenomena aligns itself with a more foundationalist, or realist ontological framework. From this perspective, the world is viewed as being composed of discrete objects that are independent of the observer or researcher (Marsh, Ercan, & Furlong, 2017). This assertion of a real world which exists independently of our knowledge of it can be seen in productivism's framing of the environment guided by the disciplines of the natural sciences and economics (Tilzey & Potter, 2008). The research centres, private input suppliers and state agencies legitimising the productivist regime operate on the absolute and unconditioned truths produced by the biochemists, genome scientists and engineers. This combined network of actors view nature as a black box to inject chemical inputs in for the enhancement of productivity (Massy, 2021).

Emerging from this foundationalist ontology is productivism's epistemological framework of positivism. This position asserts that as relationships in social phenomena exist independent of our perspectives, they can be studied directly and impartially by objective researchers (Hiller, 2006). This empiricist tradition posits that knowledge uncovered through research is absolute and securely founded in observation and/or indisputable reason (Philips & Burbules, 2000). This is manifested in industrial agriculture's prioritisation of the contributions of the 'technical' scientists, and its marginalisation of knowledge bodies which call for the protection of the environment for reasons of cultural or spiritual connection. It is also reflected in productivism's conservative respect of property rights, a colonial conception employed to nullify the cultural connections and ownership Indigenous communities have over the land (Wilson, 2001 ; Connell, 2007). These epistemic principles are set out in *Table 1* and will be evidenced in Chapter 6's analysis of the productivist concepts defining discourse development of sustainable agriculture in Australia.

Post-productivism on the other hand is guided by a more complex ontological positioning. As mentioned in *Table 2*, post-productivism, and by extension, agroecology, recognises a degree of materialism that tempers the extreme constructivist view. Its focus on the organisation of material food systems represents what Schlosberg & Craven's define as 'sustainable materialism', or the focus on "the stuff of everyday life....on the development of alternative systems and counterflows of both power and goods" (2019, p. 3). This perspective accounts for the place attachment farmers and Indigenous communities experience with the land. It can be seen in Australia's First Nations people expressing their relationship with "Country", as one that both "gives and receives life", and can also lead to the suffering of physical and mental illnesses if this ecology is degraded (Rose, 1996, p. 7).

This dual focus on objective 'real' worlds and their unobservable social phenomena calls for a critical realist ontological framework. However, as seen in *Table 2*, post-productivism also demonstrates a strong anti-foundationalist analysis on the complex social construction of power relations and subjectivities (Mann 2021 ; Marsh, Ercan, & Furlong, 2017). This ontological framework is useful in analysing the dominant agri-food system as a food regime structured by the rules of historic hegemons. Lang & Heasman's (2015) work on food regime theory provides a crucial articulation of the anti-foundationalist approach to the human world as being contingent on the dynamic perspectives of individuals and groups. Their investigation into how the neoliberal discourse of productivism conditions global and regional food systems offers a deeper understanding of de Molina's conceptualisation of agroecosystems as existing beyond the farmland and into areas of governance (Lang & Heasman, 2015 ; de Molina, 2013). Agroecology's critiques of the dominant industrial model therefore represents post-productivism's ontological assertion that the ideological and economic security enjoyed by the prevailing industrial system is a product of the hegemonic structures legitimised by the state and industry.

Following from this anti-foundationalist view of reality as a social construction is post-productivism's interpretivist epistemological view. This view recognises that knowledge is culturally conditioned by the dynamic perspectives of individuals and groups. Proponents of this framework therefore believe that it is illogical to argue for the capacity of independent knowledge of an external world; no observer can be objective as each researcher is an active participant in their identified social construction of reality (Hamilton 1998; Wilson, 2001)

From this perspective, post-productivism challenges the 'objectivity' of the knowledge dependency between policy makers and scientists, and questions the normative choice involved in different frameworks of sustainable agriculture (Bellamy & Ioris, 2017). This is articulated in agroecology's rejection of the industrial regime's universal application of Eurocentric agricultural practices and foundations of knowledge. It conveys post-productivism's assertion that no ethical nor political judgement is ever decontextualised or non-situational (Brint, Weaver , & Garmon , 1995). Instead the paradigm maintains that its farming practices are not importable; truly sustainable farming systems are situational and uniquely

designed against the ecologies and communities in which they operate. The conceptual framework of agroecology therefore reconfigures global food chains around place-based, geographically specific food systems (Tornaghi & Dehaene, 2017). Unlike productivism’s hegemonic positioning of the ‘immutable’ scientific truths, post-productivism and agroecology analyses every actor in the food regime as a participant in their selected ideology.

Productivism		Post-productivism	
Foundationalism	Positivism	Critical Realism	Interpretivism
Operates on the absolute and unconditioned truths produced by scientists	Agricultural knowledge uncovered through research is absolute and securely founded in observation and/or indisputable reason	Focus on both objective ‘real’ worlds and their unobservable social phenomena	Challenges the ‘objectivity’ of the knowledge dependency between policy makers and scientists
	Marginalisation of knowledge bodies centred around cultural or spiritual connections		
			Anti-foundationalism
Causality operates independently of the observer. Ignores potential partialities of researchers in their interpretations of the world	Conservative respect of property rights (nullifies the cultural connections and ownership Indigenous communities have over the land)	Analyses dominant food regime as a social construction determined by hegemonic power relations	Reconfigures global food chains around place-based ecologies and knowledge systems

Table 2: Epistemological and ontological comparisons of the productivist/post-productivism spectrum

Although *Table 2* represents a dualistic comparison of the two paradigms, this section supports Wilson's claim arguing the non-linearity of the post-productivist transition (Wilson, 2001). In other words, it highlights a non-linear and intersecting spectrum of productivist/post-productivist thought which guides current iterations of sustainable agriculture. This is important for analysing the discourse debates surrounding the organics and regenerative farming and identifying how agroecology builds off them.

For example, the organic movement challenges the 'objectivity' of the biochemical revolutionists in the agriculture industry of the 1920s, but fails to confront its own social construction as a hegemonic reconfiguration of sustainable agriculture by big capital. It exemplifies the inconsistent and non-linear transition of post-productivism. Whilst regenerative agriculture's more ecology-centric approach to farming is more effective at rejecting the universal application of Eurocentric agricultural practices, it remains embedded in the economic and sociopolitical systems that reproduce the capitalist organisations of nature. Like the organics movement, its lack of a critical theory of change iterates a similar construction of corporate power relations. Agroecology aims to avoid these conceptual co-optations by presenting a clear praxis of change which disengages global food chains and empowers farming communities (Mann, 2021). However, like any discourse, it is subject to appropriation by productivist forces. As explored in the Literature Review, this involved the FAO appropriating the term as a 'technological fix', mobilising the powerful discourse of 'feeding the world' in order to justify their industrial approach of 'scaling up' agroecology (Lang & Heasman, 2015).

More importantly, this section is important in demonstrating how the ontological and epistemological frameworks of post-productivism guide the research. Post-productivism's anti-foundationalist and critical realist frameworks articulates agroecology's criticisms of the dominant agricultural food system as a regime constructed by the rules of historic hegemons. This ontological approach to the historical contingency of food systems guides the answering of the research question by investigating how the social construction of Australia's food system can be re-gearred towards more agroecological principles. Post-productivism's interpretivist view of policy makers and researchers as active participants in their social constructions of reality grounds agroecology's rejection of the industrial regime's universalisation of Eurocentric epistemologies. This framework is key in addressing the first research sub question. It will guide the analysis of the epistemological debate surrounding the discourse development of agroecology in Australia in Chapter 5.

This thesis is therefore guided by the epistemic frameworks of post-productivism and agroecology. They will be employed throughout the work to analyse how actors engage with and appropriate discourse to legitimise their power. But before this chapter will discuss this poststructuralist approach in depth, it must outline the limited theoretical space that it will contribute to.

3.2 The current theoretical space

As discussed in the literature review, current scholarship on sustainable agriculture within Australia is predominantly grounded in an industrially-based paradigm of ‘productivism’ (Diehl, 2020 ; George, Harper et al., 2012 ; Mason & Knowd, 2010 ; Williams, et al., 2002). From a poststructuralist perspective, there is work on the discourses of farming masculinity and distress (Bryant & Garnham, 2012); discourses on farmer resistance to climate change (Fleming & Vanclay, 2010 ; Iles, 2020 ; Cross & Ampt, 2017); and shifting discourses of rural and regional Australia (Lockie, 2000). However, none yet conduct a discourse analysis on the epistemological debate of agroecology’s institutionalisation. This thesis will therefore employ the poststructuralist framework to address these limitations.

3.3 Poststructuralism: discourse, truth and power

As mentioned in the Literature Review and previous section, agroecology’s ontological foundation challenges discourses forged in fields of power which continue to reproduce the repression and marginalisation of subaltern voices. This necessitates a poststructuralist methodological approach to investigate how power is produced.

Proponents of poststructuralism focus on discourse, or a “system of meaningful practices that form the identities of subjects and objects”, as a channel through which elites exercise power (Howarth, 2000 p. 3-4). Among Derrida and Lacan, Foucault remains one of the most influential thinkers behind this movement (Dermawan, 2020 ; Yazdannik, & Mohammadi, 2017). An interrogator of modern liberal capitalist societies, he analysed discourse as the institutionalised patterns of knowledge that become manifest in disciplinary structures and operate by the connection of knowledge and power (Foucault, 1979).

Foucault argued for the ontological primacy of power operating through the ‘microphysical’ architectures, techniques and procedures throughout society (Foucault, 1975, p. 26). He aimed to redefine politics as power operating through the production of knowledge and discourse across an intersecting network of institutions (Dini & Briganti, 2017). The selection and institutionalisation of these discourses would then form a “discursive regime”, or a body of knowledge through which actors could enforce their disciplinary institutions of social control (Foucault, 1972-1977, p. 113). This is evidenced in Panizza & Miorelli’s (2013) approach to social orders as being never fully structured, but rather, open political intervention and dislocations. Howarth & Stavrakakis (2000) adds to this conceptualisation by stressing the historical contingency of systems and rejecting essentialist conceptions of social agency.

Although his analysis wasn’t state-centric, he did account for the state’s superstructural role in producing and transmitting scientific knowledge (Foucault, 1979). Foucault conceptualised the relationship between

the state and research institutes as a “power-knowledge nexus” (1972-1977, p. 132), from which the state institutionalised the scientific truths it required for its rational problem-solving. However, it was through the power networks of the family, church, university and army, through which this language was reinforced and circulated.

As such, Foucault identified truth as operating in a “circular relation with the systems of power which produce and sustain it” (1972-1977, p. 133). An expression of the larger post-positivist movement, poststructuralism therefore argued that there is no accessible ‘objective truth’, but rather, discourses which elites enforce as ‘unquestionable’ through their non-neutral language.

3.4 Policy phenomena as “articulations”

Poststructuralism is therefore a useful framework in critically analysing the unquestioned truths circulated through society. Here this critical approach will be used to provide insights into agroecology’s criticisms of the dominant agricultural regime. Highlighting this is Gottweis’s conceptualisation of policy phenomena as articulations rather than facts (Gottweis, 2003). He argues that all knowledge presented by political institutions is historically contingent and represents ongoing constitutive practices of re-presentation.

As such, poststructuralist policy analysts reject essentialist accounts of policy making which assume an underlying essence for objects, human subjects, and social formations (Howarth & Griggs, 2020, 307). Rather, the legitimacy of the technical and scientific knowledge employed through policy is determined by the hegemon (often the state). Gottweis argues that this legitimisation process allows the state and its apparatus (such as markets and research institutions) to monopolise areas of problem definition and marginalise dissenting interpretations (Gottweis, 2003). Nabers builds upon this with his work on articulations being contingent on shifting subjectivities, or the “never-ending circle of the political” (Naber, 2017 p. 422). This approach is supported by Doty’s definition of discourse as “a system of statements in which each individual statement makes sense” (Doty, 1993, p. 302). Poststructuralism therefore focuses on the complexity of statements, outside of which reality cannot be understood. It determines policy as constitutive of a “discursive structure”, one which is, “not merely a ‘cognitive’ or ‘contemplative’ entity; [but] an articulatory practice which constitutes and organises social relations (Laclau & Mouffe 1985, p. 96). By analysing policy as “discursive structures”, this work is well equipped to examine the epistemological debate concerning the articulations of agroecology in Australia.

3.5 Dislocations

This leads to why poststructuralism is a useful methodological approach for this work. Poststructuralist discourse theorists posit that interests and preferences operate in multiply located hierarchies of power

which are socially constructed and ceaselessly fluctuating (Baxter, 2008; Henderson, et al., 2007). This is a key tenet that can be applied to an analysis of agroecology, a paradigm whose various interpretations have been influenced by different discourse constructions of sustainability.

For example, a poststructuralist methodological approach offers a key understanding into the shifting focus of Western academic discussions of agroecology across time. Early literature on the topic in the late 1990s began solely as a scientific framework of “natural resources management for poor farmers” (Altieri & Rosset, 1996 ; Altieri, 2002). Half a decade later however, leading proponents such as Gliessman and Altieri shifted away from this empiric focus towards a discussion of agroecology as an action-oriented, transdisciplinary movement (Gliessman, et al., 2003). This phenomenon can be explained by poststructuralism’s anti-essentialist conception of agency and specifically, Laclau’s key theoretical concept of “dislocation”.

Alongside work co-authored with Mouffe, Laclau posits that dislocations reveal the structural openness of the social system, when sedimented understandings, identities and meanings are disrupted to reveal their historical contingency (Laclau & Mouffe, 1985). They argue that dislocations denote temporally and locally split subjectivities which are infinitely dispersed (Laclau & Mouffe, 1985; Laclau, 1990). This conceptualisation framed within a discursive field involves the disruption of sedimented discourses which, consequently, signify the possibilities for new discourses. It is, therefore, viewed as a productive moment in which new power centres are created, representing “both the condition of the possibility and impossibility of a centre at the same time” (Laclau, 1990, p 40). As such, this constitution of a dislocated structure as decentred compliments Foucault’s ontological framework of the ‘microphysics’ of power (Laclau, 1990, p. 40 ; Foucault, 1975).

This theoretical framework, therefore, articulates the productive moment of identity re-evaluation in which leading agroecological scientists were able to shift the mainstream debate towards a new discursive formation of an *interdisciplinary* agroecology. This involved a “decentring” of power, when the interdisciplinary research highlighted the importance of knowledge being sourced from the subaltern - from peasant and Indigenous farmers, rather than exclusively environmental scientists (Gliessman et al., 2003 ; Naber, 2017).

This dislocations framework is, therefore, fundamental in analysing the areas of potential ‘dislocation’ in Australia, areas where identities can be influenced by non-hegemonic actors to democratise the epistemic community. Pertinent to this research also is Naber’s work, in which he uses the notion of dislocation to conceptualise crisis as a “lack, deficiency or failure in the social fabric” (Nabers, 2017). He argues that the notion of dislocation is essential in recognising nations as not homogenous, but constantly struggling with internal deficiencies and external antagonisms. This work will apply Nabers’s recognition of social deficiency to the climate crisis in the Australian context. Drawing from his work, it will examine whether

a rapidly deteriorating climate will be enough to disrupt the sedimented discourses of conservative farmers groups and the state.

3.6 Conclusion

This chapter has outlined why poststructuralism is the most appropriate tool for analysing the discourse developments of agroecology operating in Australia. It first outlined the productivist premises which Chapter 5 will demonstrate as dominating the epistemological debates. It then defined the epistemic frameworks of post-productivism which guide agroecology and the work itself. It then defined the limitations of the current theoretical space to which this work responds and the methodological tools used to do so. Gottweis's emphasis of policy phenomena as articulations, rather than facts, strengthens the argument for discourse deserving a prominent position in policy analysis (Gottweis, 2003). Nabers's "never-ending circle of the political" (2017, p. 422), and Foucault's "discursive regimes" operating in the "power-knowledge nexus" (1972-1977, pg.113) provide key frameworks which guide the data analysis in Chapter 5. Further, Laclau and Mouffe's conception of "dislocations" illuminates the vast and complex aeras through which identities can be influenced to create productive new power centres (Laclau & Mouffe, 1985).

All these methodological elements will be key tools in evaluating the possibility of transitions to agroecological food systems in Australia by 2100. The next chapter will show how these methodological elements culminate into the research method of post-structural discourse analysis, an effective critical interpretation of power structures.

4. Research design

4.1 Poststructuralist discourse analysis

In concerning itself with hegemonic discourses and associated power relations, agroecology therefore lends itself to a poststructuralist discourse analysis that accentuates the constitutive capacity of discourse in knowledge production. Howarth & Stavrakakis define discourse analysis as the “practice of analysing empirical raw materials and information as discursive forms” (Howarth & Stavrakakis, 2000, p. 6). Their approach treats linguistic and non-linguistic data, such as “speeches, reports, manifestos, historical events, interviews, policies, ideas, even organisations and institutions”, as signifiers that constitute a “discourse” or “reality” (2000, p. 6).

One criticism received by the method is its underdeveloped conceptualisation of political institutions (Panizza & Miorelli, 2013). Mouzelis (1988) argues that PSDA’s emphasis on the need for a radical rupture from the existing institutions of reality fails to acknowledge the importance of everyday politics in facilitating the maintenance and redefinition of political identification. However, while there is a scarcity of references to institutions in PSDA literature, a more nuanced reading of works in the field reveals how scholars have dealt with various ‘structures’ related to institutions in different, more productive ways (Panizza & Miorelli, 2013). Howarth looks at institutions and policy as ‘sedimented discourses’ which have become relatively permanent and durable, but have varying degrees of stability (Howarth, 2000, p. 120). Laclau’s conceptualisation of institutions as “systems of social organisation” (1990, p. 172), and Glynos and Howarth’s as “social logics’ (2007), introduce similar ideas of rules which determine the identity of agents and their ability to act. PSDA as a body of literature therefore involves an extensive, albeit not explicit, discussion of institutions. This focus on institutions is imperative for the research’s investigation into the institutions guiding Australian epistemologies of agroecology. It is key in evaluating the possibility of institutional change and food systems transitions by 2100.

PSDA and poststructuralism is also criticised as focusing on the issues and not enough on solutions (Panizza & Miorelli, 2013). However, the search for Laclau’s dislocations counters this criticism, as it represents the searching for new knowledge and power centres. It is through productive process that the epistemological debate will be democratised, a normative drive which grounds Chapter 5. This research design outlines how this approach to finding solutions is structured.

4.2 Research Design

The data this thesis will investigate will mainly centre around policy documents, declarations and interviews sourced from a range of units of analysis. This data is organised around the first sub-question and is collected around the actor subgroups involved in the epistemic discussion. This data structure is outlined in the table below.

<i>i. Analyse the balance of discursive power behind the institutionalisation of sustainable agriculture in Australia</i>	
Government	Report on the Implementation of the Sustainable Development Goals (2018)
	National Food Plan [NFP] (2013)
	Ag2030 (2021)
Civil society (orthodoxy)	Australian Council of Learned Academics [ACOLA] – “Australia’s agricultural future” (2015)
	Farmers for Climate Action [FCA]– “Change in the air: defining the need for an Australian agricultural climate change” (2016)
	National Farmers Federation [NFF] – 2030 Roadmap (2018)
Civil society (heterodoxy)	AFSA – The People’s Food Plan (2013)
	Landcare Australia -
	“2010-2020 Framework for Landcare” (2010)
	“Community Call for Action” (2010)
	“2020 Annual Report” (2020)
	“Landcare in Focus” magazine (May 2021)

Table 3: Data selection centred around sub-question i

This PSDA is defined by its vast selection of data sourced from different actors to answer the research question. Because agroecology has not yet been formalised as an epistemic community in Australia, there is no constructive debate led by one actor which this work can conduct an in-depth discourse analysis on. Rather, the discursive formations of agroecology perpetuated by one actor must be analysed in conjunction to, and in comparison with, the discursive formations led by another. The data is therefore derived from a range of sources, such as policy documents, policy proposals, government websites, procedural outlines

and blog posts. It also analyses what Howarth & Stavrakakis define as “non-linguistic data”, such as “historical events...ideas, even organisations and institutions” (Howarth & Stavrakakis, 2000, p. 6). This work recognises the importance of analysing this data as key defining features of the discursive formations of actors. A structured examination of the main actors leading the political-economic debate is therefore key in analysing the spaces in which agroecology can be formally consolidated in Australia’s national discourse.

The actor subgroups were determined in order to explore how knowledge is culturally conditioned by the discursive formations of dominant groups. The first subgroup analyses the hegemon who has historically been responsible for the legitimisation of dominant regimes of truth. Similar to the governance of the FAO in the international setting, the Federal government is selected for its hegemonic status. Being guided by Foucault’s (1975) ontological framework of power being ‘microphysical’ in structure, this research also looks at the discursive operations of civil society actors, and their role in legitimising and marginalising various knowledge bodies. This section then identified two civil society subgroups: one representative of the dominant orthodoxy, and one representing dissent towards it. This identification of subgroups is based on the understanding that knowledge and power is culturally conditioned by a complex and intersecting network of actors. This ontological framework of the social system which will prove fundamental in assessing potential areas of ‘dislocation’, and ultimately evaluating the possibility of food systems transitions.

To do this the research is guided by four questions:

1. Who is engaged in the discourse development?
2. Who is excluded/included in the discourse?
3. How are the issues framed?
4. Who does the ‘speech’?

The answering of these questions is key in understanding the operations of power through these discourses. They ground the discussion of each subgroup to demonstrate how institutions legitimise knowledge bodies and marginalise others.

4.3 Grouping the actors

The main section of the thesis, which analyses the balance of discursive power behind the institutionalisation of sustainable agriculture in Australia, will begin with a PSDA of the Australian government’s attitudes towards agroecological principles. Due to the lack of policy documents or

statements which explicitly discuss agroecology, it discursively analyses policy documents which address the state's stance on sustainable agriculture. This includes the 2018 "Report on the Implementation of the Sustainable Development Goals", the 2013 "National Food Plan", and the 2021-2022 Budget section, "Ag2030".

The next two subgroups investigated in this discussion are the civil society groups representative of the heterodoxy, and the civil society groups representative of the orthodoxy. The second data subgroup includes exemplary texts published by civil society organisations who legitimise the productivist neoliberal knowledge bodies of the hegemonic state. These include the Australian Council of Learned Academics's (ACOLA) 2015 paper, "Australia's agricultural future", and the National Farmer's Federation's [NFF] 2030 Roadmap, published in 2018. It also will analyse the 2019 publication, "Change in the air: defining the need for an Australian agricultural climate change" published by the Farmers for Climate Action (FCA) group². Similar to the analysis of the state, this data selection features little to no mention of agroecology explicitly. Some of the sources discuss principles which are inherently agroecological but refrain from identifying the novel paradigm, and others demonstrate a more productivist approach to sustainable farming. This discursive analysis will demonstrate how the civil society groups frame the future of sustainable food systems in Australia.

The next subgroup includes texts published by organisations representative of the heterodoxy in agricultural sustainability discussions. The Australian Food Sovereignty Alliance's (AFSA) 2013 publication, "The People's Food Plan", was Australia's first crowdsourced policy document. It is a key text symbolising civil society's counter-movement to the government's "National Food Plan". The Landcare Program was chosen for its unique position as state-sponsored community participation in natural resource management (Curtis & Lacy, 1998). Although Landcare is a national-not-for-profit organisation of farmers networks supporting stronger land stewardship, its funding - and therefore policy - priorities are sourced from the government. This actor is therefore unique in its operation as a government externalisation of community-driven resource management. An analysis of Landcare will involve a range of sources, such as its "2010-2020 Framework for Landcare" (2010), its attached "Community Call for Action", its "2020 Annual Report", and the May 2021 edition of its "Landcare in Focus" magazine. This section will analyse the actors' epistemic position on the possibility of food systems transition in Australia by 2100.

² Although written by the Australian Farm Institute, this work is commissioned, published and promoted by the FCA as one of its "strategic plans" (FCA, n.d.). It will therefore be analysed from the perspective of the FCA as a source that informs their discourse.

4.4 Limitations

In analysing the discursive formations promoted by the various actors involved in discussions of sustainable agriculture, one point to note is the absence of policy documents or formal statements which explicitly discuss agroecology (only the FCA's source and AFSA's "People's Food Plan" discuss agroecology to varying extents). One might argue that this raises a methodological issue, as it reveals an inability to fully account for the ideological attitudes of the Australian government and the remaining civil society groups on agroecology specifically. However, here Foucault is useful in pointing out that absences are as much produced as presences; they themselves represent a political stance to discursively analyse (Foucault, 1979, p. 103). In the case of the Australian government and certain civil society actors, this lack of formal recognition of agroecology - as an important element in the discussion of sustainable agriculture - represents a clear articulation of certain political and economic biases. As such, the produced absence of discourse on agroecology is a normative choice which the research will investigate.

4.5 Conclusion

The PSDA method will therefore prove useful in analysing how power operates in the field of discourse. Specifically, it will analyse the politics of the scientific statement; it will be used to examine the data sets discussed below to outline the 'discursive regime' (Foucault, 1972-1977, p. 122) of power being enforced in the Australian epistemological debate concerning agroecology. A PSDA methodological approach is key in analysing the areas of potential 'dislocation' in Australia, areas in the discursive debate where identities can be influenced to make the epistemic community more participatory and democratic.

5. Data and Discussion

This section will address the first research sub-question. It will:

- i. *Analyse the epistemological and ontological debate surrounding agroecology as part of the discourse development of sustainable agriculture in Australia.*

This is a key foundational step in approaching the second sub-question, “Examining the potential spaces of “dislocation” in the national discourse and will ultimately contribute to evaluating the possibility of just transitions to agroecological food systems by 2100 in Australia. As mentioned in the Research Design chapter, the Australian discussion is broken up into three sub-groups: government, civil society representative of the orthodoxy, and civil society representative of the heterodoxy. By conducting a PSDA on all the sources, this section will analyse how the dominant discourses of colonialism, neoliberalism and productivism limit the emergence of dislocations through which agroecology can emerge.

5.1 Government

The PSDA analysis of the government’s discursive approach looked at three publications and policies addressing sustainable agriculture: the 2018 Report on the Implementation of the Sustainable Development Goals (SDGs), the 2013 National Food Plan (NFP), and the 2021-2022 Budget’s investment plan for the agricultural industry, Ag2030.

- *Report on the Implementation of the Sustainable Development Goals (2018)*

After a PSDA analysis of the 2018 “Report on the Implementation of the Sustainable Development Goals”, one point of concern is that in Australia’s first progress report on its SDG actions, the words “sustainable agriculture” only appear once in the 130 page document (Department of Foreign Affairs and Trade [DFAT], 2018). Instead, the section on the “Zero Hunger” SDG reaffirms Australia’s national identity as “a strong advocate for open markets and free trade” (p. 30). It is steeped in language arguing the importance of “open and transparent global agriculture[s]..not only for Australia’s agricultural exporters, but [to also help] strengthen global food security” (p. 30). This productivist ideology is historically institutionalised in the 19th and 20th century view of agriculture as core to the country’s economy, as well as the staunch neoliberal approach to the industry governments have taken for the last 35 years (Iles, 2020).

As of 2020, Australia exports around 60-65% of its agricultural output (Iles, 2020). The Report attributes this achievement to the importance of R&D, a sector which has helped Australian industries “double productivity over the past 25 years” (p. 31). It heralds research and development corporations focused on

improving productivity, through practices such as improving water efficiency and increasing the profitability of fertiliser use (p. 31). Further, the Report's section on the 13th SDG, 'Climate Action', omits any discussion of how the agricultural industry generates more than a third of manmade greenhouse gas emissions (DFAT, p. 87 ; Cai, et al., 2007).

The Report does involve a brief discussion of Indigenous involvement in the Zero Hunger discussion. However, this discussion is limited to a productivist discourse of "the commercialisation of [spinifex] nanofibre technology" for "enterprise" opportunities in remote Australia (p. 29). Further, its discussion of Indigenous food insecurity is limited to addressing "access [to] fresh fruit and vegetables", "support and licensing arrangements for retail and remote stores" and "school nutrition projects" (p. 30). This discourse frames the issue as one to be addressed from the supply side of economics, rather than with systemic changes to racialised food systems. Such language reveals the predominant national interest of enhancing the "profitability, productivity, competitiveness and long-term sustainability of Australia's primary industries" (p. 29) . This productivist discourse exposes a greater safeguarding of the sustainability of the industrial agricultural regime over the sustainability of food systems.

This Report symbolises what Gottweis terms as a "re-presentation" of the issue of tackling food security. It frames the concern as one that can be combated by a strengthened corporate agricultural sector and greater research and development (Gottweis, 2003). Furthermore, its engagement with the issue of sustainable agriculture is severely limited to the advantage of the government's priority of free trade and open global markets. These re-presentations are constitutive of Australia's institutionalisation of the SDG's, itself a depoliticised discursive regime which has been criticised as failing to confront how capitalist food systems systemically entrench global hunger and inequalities (Belda-Miguel et al., 2019 ; Mann, 2021). This report, therefore, demonstrates the entrenchment of Australian politics in a national and international discourse of industrial agriculture which remains inhospitable to openings for agroecology to emerge.

- *National Food Plan (2013)*

The government's 2013 National Food Plan (NFP) was branded as the government's "roadmap for the future of Australia's food industry" (Department of Agriculture, Fisheries and Forestry (DAFF), 2013, p. 3). Similarly engrained in neoliberal doctrine, the paper views the environment as merely a source of extraction, stating its key goals as "agricultural productivity [increasing] by 30%", and the "value of Australia's food-related exports [increasing] by 45% (in real terms)" (DAFF, p.9). A running theme throughout the paper is how "Asia's rise will have profound effects on Australia's food system" (p. 6), of how "[seizing] the opportunities of the Asian century" (p. 7) will be the deliverer of growth prospects both for the national economy and the farmer. It is clear from such productivist language that the environment is reduced to a commodity to help the nation achieve economic success on the global stage.

Further, the federal government transfers responsibility for environmental destruction intertemporally, arguing that, “historically, using natural resources for food production in Australia has had environmental costs such as soil erosion”, and to smaller jurisdictions, highlighting that “States and Territories are responsible for land use planning” (p. 74). On the issue of Indigenous food security, the paper frames it as a challenge to be approached by, “[improving the] choice and quality of food offered in stores” (p. 58). This omission of both the structural issues impeding Indigenous food security, and the state’s role in the historical production of the predicament, reveals a clear discursive position in the greater debate of sustainable agriculture in Australia. It exposes the Federal government’s discursive position that sustainable food production is not their main imperative, nor their responsibility.

As such, the document has been criticised as a national export plan, rather than a national food plan, one devoted to the industry’s competitiveness over environmental and social concerns (Iles 2020 ; AFSA, 2013). In their critique, AFSA reveals the oligarchical representation of interests behind the NFP, highlighting how the government “hand-picked corporations and industry” to serve as DAFF’s Food Policy Working Group (AFSA, 2013, p.67). These industry interests included the Australian Food and Grocery Council (representing the interests of Heinz, Coca Cola and Nestle), Graincorp, Simplot, Linfox and Boost Juice (AFSA, 2013, p.67). The consultation process also demonstrated an absence of representatives from health and environmental groups, with the discussion round tables for industry elites operating on an ‘invitation only’ basis. It has led to AFSA’s criticism of the NFP as being “cemented within a rationalistic, neoliberal policy discourse with built in assumptions about food security favouring the big business approach” (AFSA, 2013, p.67). The NFP therefore not only has zero explicit mention of agroecology, but reflects an epistemic community unwelcoming to the discussion of agroecological principles. This is due to its top-down, exclusive inclusion of who is ‘doing the speech’, a vertical design of knowledge production which agroecology is fundamentally opposed to.

- *Ag2030 (2020)*

Ag2030 sets out the Federal Government’s investment plans in the agricultural industry, as established in its 2021-22 Budget (Department of Agriculture, Water and the Environment [DAWE], 2021).

Like the SDG Report and NFP’s, Ag2030 is reflective of the state’s entrenchment in productivist discourse. From the outset, it identifies itself as a response to the NFP’s goal of “boosting farm gate output to \$100 billion by 2030” (p. ii) (as will be discussed further in upcoming sections). The first of the paper’s 7 “themes”, “Trade and Exports”, establishes the government’s primary and “continuing focus on gaining, maintaining and expanding market access [as] essential to achieving the Ag2030 goal [that referring to the industry reaching \$100 billion by 2030]” (p. 5). It cites the importance of “supporting farmers improve and maintain access to overseas markets”, “[keeping] imports and exports flowing”, “[keeping] international

freight flights operating”, and “preserving market share for agriculture commodities” as the vital functions for the success of the industry (p. 5). A key action involved in this is the delivering of \$9 million to “expand access to agricultural and veterinary chemicals for Australian farmers, to boost farm productivity and strengthen responses to pests and diseases” (p. 6). This heavily funded program signals a continuation of the productivist regime’s promotion of commodified external inputs which Moore argues has trapped farmers worldwide in multiple patterns of dependency (Moore, 2015). This regime’s dependence on the scientific epistemologies of bodies such as the CSIRO reveals a discursive approach to sustainable agriculture which Altieri frames as “the science of natural resource management” (Altieri, 2002).

However, beyond the funding program’s grounding in productivist language, Ag2030 presents a slightly shifted discursive formation compared to the previous two sources. The first and most major shift can be seen in its discussion of the “Stewardship” theme. This theme promotes “a biodiverse and well-managed natural resource base” as a critical requirement for the building of climate change preparedness and resilience (p. 9). This initiative includes “market approach[es] to biodiversity improvements” such as payments to “farmers who plant diverse native trees” and who demonstrate “biodiversity outcomes over the course of the project” (p. 9). This explicit recognition of stewardship signals a shift away from discourses of farmers as merely food producers (as seen in the NFP), but also as land stewards who restore native ecosystems, enhance their resilience and promote human well-being (Chapin, et al., 2009).

Another signal towards an agroecological discourse can be seen in Ag2030’s promotion of deeper farmer knowledge networks. This is embodied in its piloting of growAG. Launched in April 2021, growAG is a “new online platform that showcases innovative agricultural research, technologies, and commercialisation opportunities in one central location” (p. 15). To date, the platform showcases “2002 research projects, 22 commercial opportunities and 90 agricultural organisations” (p. 15). This initiative is key in decentring the epistemologies of scientific bodies, towards horizontal learning platforms for all farmers to access. However, its focus on “[accelerating] commercialisation, [leveraging] global expertise, and [enhancing] transparency for levy payers and the community” (p. 15) reveals an attachment to productivist and commercial discourses. As a relatively new initiative, greater studies are required to assess whether growAg symbols a shift to agroecological epistemologies, or a reiteration of capitalist agriculture.

Ag2030 therefore signals a shift in the government’s discursive approach to sustainable agriculture. Its scientific and productivist approach to climate change mitigation features a promotion of methods, such as veterinary chemicals and market mechanisms, reminiscent of the scientific zealotry of the Green Revolution. However, its discussion of regenerative discourses such as stewardship, and its promotion of online knowledge sharing platforms, signals potential areas of dislocation where agroecological principles may be mainstreamed into national debate.

- *Who is 'doing the speech'?*

When analysing the state's discursive formations in the discourse development of sustainable agriculture, it is important to discuss who is promoting such discourses. Out of the five federal ministers in the Department of Agriculture, Water and the Environment (DAWE) – the department which produced the Ag2030, and which, in 2013, subsumed the DAFF, the department responsible for the NFP- none identify as Aboriginal and Torres Strait Islander (Australian Government, 2021). There does exist an Indigenous Advisory Committee with the function of advising the Minister for the Environment and Energy (Australian Government Department of Agriculture, Water and the Environment, 2021). However, this underrepresentation of Indigenous peoples in the DAWE – and in federal government more generally – highlights the lack of acknowledgement of Indigenous knowledge on land management and conservation in the process of policy making. Such an underrepresentation has rendered Indigenous knowledge – knowledge that could help remake the landscape – fundamentally invisible (Iles, 2020). This exclusion of the Indigenous voice represents a clear discursive position of the state's colonial framing of sustainable food issues. Culminated against the state's corporate intrusion and strategic partnership with the CSIRO, this marginalisation of Indigenous perspectives inhibits the emergence of agroecology in national discourse, not only as a resilient solution for food insecurity, but as a culture of situated knowledge systems and participatory food policy-making.

- *Government conclusion*

A discussion of the three policy documents and who is engaged in the discourse development reveals a particular system of knowledge and power being promoted. The SDG Report highlights how food insecurity and sustainable agricultural management are being framed as issues that can be combated by strengthened corporate agriculture and enhanced industry productivity. Meanwhile, the NFP – itself offering little answers as a national food plan – reveals the Federal government's attitude that sustainable food production is neither their responsibility nor their national imperative, solidifying their neoliberal, export-oriented approach to agriculture. However, Ag2030, whilst engrained in productivist language, showcases the potential of a discursive shift towards government supported environmental stewardship. Ultimately however, its lack of an explicit discussion of agroecology and connection to commercial discourses, signifies that productivist, industrial agriculture remains the dominant discourses. It re-enforces Foucault's argument that absences in discourse are as much produced as presences; the marginalisation of the Indigenous voice, and the exclusion of the novel discourse of agroecology, highlights a clear position on sustainable agriculture and agroecology itself. This section reveals a monopolisation of the problem definition by the state in order to enforce and justify their industrial and productivist approach to agriculture.

It therefore clearly dictates whose epistemologies are valued in the discourse development of sustainable agriculture in Australia.

5.2 Civil society – the orthodoxy

Using Foucault’s microphysical ontology of power, this thesis will continue to analyse how these dominant knowledge bodies are legitimised by civil society organisations. It will look at the organisations promoting epistemological frameworks of sustainable agriculture which are culturally conditioned by the discourses of other dominant groups, such as the state. By analysing exemplary texts from Australian Council of Learned Academics, the National Farmers’ Federation and the Farmers for Climate Action group, this section will explore how the truths preserved by dominant groups operate in “circular relations with systems of power which produce and sustain it” (Foucault, 1972-1977, p. 133).

- *“Australia’s agricultural future” – Australian Council of Learned Academics (2015)*

Like the state, the Australian Council Of Learned Academics (ACOLA) has not yet engaged itself in discussions of agroecology but has conducted research in sustainable farming in Australia. However, despite its constitution as an interdisciplinary organisation³, its 2015 research paper “Australia’s agricultural future” reveals a discussion of sustainable agriculture limited to a specific discursive formation in the epistemological debate.

Whilst the paper reveals a discursive formation more conscious of the importance of sustainable soil and water management than that of the state, it places a constant emphasis on productivity growth as key in both “making agriculture more resilient to climate change impacts”, and “[expanding] agricultural production to meet increasing global demand” (p. 72 ; 20). Additionally, ACOLA’s paper frames short term ecological decline as an issue that, “a total factor productivity growth rate of 2 percent per annum would largely compensate for” (p. 69). This reveals a legitimisation of productivist discourses, as well as colonial, extractivist attitudes towards the land.

As agroecological insights point out, such goals of dramatically expanding outputs and achieving climate resilience are contradictory and involve an inextricable conflict of interests (International Forum for Agroecology, 2015). The paper further challenges the small-scale family farm model as inadequate in the scale, “capital and skills”, and “access to advanced technologies” needed to meet global demand (p. 20). This ignores the sustainability and adaptability of farmer knowledge bodies in the face of climate change,

³ ACOLA is an interdisciplinary organisation, consisting of intellectuals from the Australian Academy of Humanities, the Australian Academy of Science, the Academy of the Social Sciences in Australia, and the Academy of Technology and Engineering (ACOLA, 2017).

as seen in the discussion of Cuban agroecological farms in section 2.4. Instead, it argues that the “farms of the future will be unrecognisable” (p. 20), stating that future farming will be guided by “automation, robotics” (p. 27), “mechatronic engineers, and ICT experts” (p. 20). This discourse represents an iteration of the technologically focused approach to sustainable food systems currently dominating and depoliticising agroecological debates.

The paper’s framing of climate change as being solved with a ‘technological fix’, is then contrasted against its concerns for declining “Australian connections to the land” (p. 25). However, its discussion of social and cultural issues features limited acknowledgement of Indigenous groups (the term “Aboriginal” and “Indigenous” is mentioned twelve times altogether in the whole one hundred- and twenty-six-page document), and is mainly framed around rural and regional communities (ACOLA, 2017). Further, the document commemorates a “history of agriculture in Australia [revealing] the resilience of farmers and farming” (p. 33), whilst failing to mention the land grabbing, exploitation and genocide that occurred to establish the industry. This discourse of omission points to a deep colonial framing of “Australian” connections to the land.

In the longer term, ACOA argues that Australian agriculture will need “transformational and system-wide changes” (p. 69), and conveys “knowledge systems and partnerships as vital to resilient and profitable farming systems” (p. 95). However, these knowledge systems are evidently not inclusive of the small-scale farmer, nor Indigenous communities, and the systems re-booting involves greater industrialised, input-heavy practices, just with different technologies. This productivist discourse of technology-driven productivity gains is problematic as it does not recognise the fundamental purpose of technology and markets as “tools to serve goals of society as a whole”, goals which have historically been “to exploit nature, enrich the elites, and ignore the long term” (Meadows, et al., 2004, pp. 8-9). It also frames peasants as “a problem for which further capitalist industrialisation is the only and inevitable solution” (Schneider, 2019, p. 92). These two discourses encompass an epistemological debate defined by the exclusive and top-down knowledge systems which agroecology fundamentally opposes. Therefore, ACOA’s appearance of interdisciplinarity and concern for industry partnerships does little to conceal the institution’s legitimisation of the state’s neoliberal and productivist agricultural discourses.

- “2030 Roadmap” – *National Farmers’ Federation (2018)*

The National Farmers’ Federation (NFF) identifies itself as the “peak national body representing farmers and, more broadly, agriculture across Australia”. Whilst the DAWE defines the NFF as the leader of Australia’s agriculture industry (DAWE, p. ii), Iles’s points out that the organisation has historically represented industrial farmer interests more than family farmers (Iles, 2020). His revealing of the NFF’s consistent lobbying of increasing trade liberalisation since its conception in 1979, highlights the historic institutionalisation of neoliberalism in farmers discourses (Iles, 2020).

This dominant discourse is epitomised in the NFF’s “2030 Roadmap”, a document developed through a series of workshops and forums across the country. It details the organisation’s “vision to exceed \$100 billion in farm gate output by 2030” (NFF, 2018, p. 5). Immediately from this initial purpose statement of the document, it is clear that the NFF’s main imperative is the advancement of the economic value of the industry through investment in “research and market-based incentives” (p. 22). Ironically, this is evidenced in its “Growing Sustainably” Pillar, in which one of the paper’s sustainability aspirations is measured by the metric of the “net benefit for ecosystem services [being] equal to 5% of farm revenue” (p. 24). This reductionist framing of environmental protection as an “ecosystem service” (p. 24) by the NFF reflects the tendency of the industrial agricultural paradigm to frame environmental sustainability within the economic terms of business transaction. This discursive framing reveals the dominance of productivism, and its expansionist and extractivist approach to the environment.

This discursive entrenchment in industrial agricultural principles is further represented in its depoliticisation of the role of big agriculture in environmental destruction. The Roadmap features a full-page quote of one unnamed “Talking 2030 Participant” saying that the “Politicisation of environmental laws presents an ever-present risk for our business. [The industry] needs a genuine partnership approach between all parties to restore stability” (p. 23). With the source of the quote remaining unknown, its framing of social justice issues as a business risk calls into question who the NFF is choosing to promote such discourses – whether it is a small scale farmer, Indigenous farmer or a representative of a large agribusiness voicing such concerns of a political agriculture remains unknown. It represents the productivist regime’s network of state actors legitimising the implicit belief in economic rationalism, neoliberalism, and an apolitical food system (Wilson, 2001).

Such questions regarding who is engaged in the discourse are further raised by the lack of specificity in who consists of the 380 “farmers and other industry experts” the NFF consulted in its 6-month long stakeholder forum leading up to the publication (p. 9). As a self-identified peak representative body of farmers across Australia, the NFF fails to demonstrate exactly whose industry interests they are representing in this keystone document, instead presenting its specific perspectives as a conflation of all industry viewpoints. Further, circumvention of the discussion surrounding the political constructions of agroecosystems betrays a discourse of omission produced through imbalanced power relations within the industry.

- *“Change in the air: defining the need for an Australian agricultural climate change” - Farmers for Climate Action (2019)*

As mentioned in Chapter 4, although this report was written by the Australian Farm Institute, this thesis will analyse it as a publication representative of the Farmers for Climate Action’s (FCA) discursive formation.

The FCA organisation is a network of over 5000 farmers and 22,000 Australians nationwide committed to climate action for agriculture (FCA, 2020). Unlike ACOLA and the NFF, the FCA has engaged in discussions of agroecology, with Iles pointing out how the civil society organisation has begun testing agroecological principles across some of their farmers networks (Iles, 2020). This is evidenced in their 2019 publication “Change in the air: defining the need for an Australian agricultural climate change”, in which they present a strategy to mitigate the negative impacts of climate change and facilitate improved agricultural resilience.

Their *raison d’être* is founded on the belief that effective Australian agriculture innovation is undermined by poor cross-country and cross-sectoral collaboration (McRobert, et al., 2019, p. 25). They argue that, in the face of “directionless, erratic and inconsistent” (p. 47) political commitments to climate action, the country needs “interdependent networks of agriculture, requir[ing] strong rapport and cohesive actions from land managers” (p. 25). This discursive stance on the epistemological debate elevates the importance of more horizontal knowledge bodies.

Included in their call for “systemic transformation” is the recognition that systemic, localised approaches to production have been superseded by the “economically-driven European model of land ownership and farming” (p. 23). As such, the paper calls for greater engagement with the “agroecological principles of Indigenous Australians that ensured balance and the predictable availability of food for their population” (p. 23). This explicit call for greater engagement with the agroecological paradigm of farming signals a new systems thinking approach pollinating the epistemological debate. Through this discursive formation, the FCA calls for “more options for compensation to primary producers” (p. 13), noting that land managers need greater policy and market support to maintain such levels of environmental stewardship.

While this source represents significant progress in opening the epistemic discussion to agroecology, the organisation still has progress to make in terms of deconstructing dominant systems of thinking. Whilst it recognises the importance of Indigenous agroecological knowledge systems in enhancing agricultural climate resilience, an investigation of the FCA’s membership Board shows zero Indigenous representation (Farmers for Climate Action, 2021). This reveals a lack of executive-level Indigenous power in the discourse promotion required for sustainable cross-cultural learning. The FCA’s colonial logics are also revealed in their economic framing of the land as the “natural capital of productive environments” (p. 56). Whilst their concern that the “ongoing decline of natural capital assets is already increasing business risk”

(p. 4) represents a serious existential concern for farmer livelihoods, it also reveals the productivist reduction of the land to capital from which to accumulate profits.

The FCA's discursive approach to sustainable farming therefore differs significantly from that of the ACOLA and NFF. Its commitment to nationwide farmer networks is distinct to that of the NFF in that it is dedicated to strengthening the discourse development of sustainable environmental stewardship within its members. This value of farmer partnerships is itself a core tenet of agroecology, a paradigm with which the FCA has directly engaged in its call for greater co-productions of knowledge with First Nations communities. This text captures the calibre of systemic social transformation demanded by agroecology—not ACOLA's vision of a system wide 'technological fix', but the ground up and community-based social movement necessary for enduring change. However, regardless of these progressive discursive innovations, the FCA remains entrenched in colonial and capitalist logics. This maintained institutionalisation of industrial agriculture represents the effects of Foucault's "circular relation" of truth (1972-1977, p. 133) in which the organisation's knowledge bodies are culturally conditioned by that of the state.

5.3 Civil society (orthodoxy) conclusion

An analysis of texts from leading farmer civil society organisations reveals what Foucault terms as a clear "power-knowledge nexus" (1972-1977, p. 132) between the state and research institutes through which the former institutionalises scientific truths. Despite ACOLA's interdisciplinary nature, its discourse represents the inextricable conflict of interests between the goal of climate resilience being achieved through small-scale farming and high-tech, large-scale industry transformation. As a farmer-led organisation, the NFF represents the very real concerns of farmer livelihoods and the importance of maintaining a profitable, productive industry. However, its subtle, economic framing of ecological protection as "ecosystem services" points to a deeper cultural conditioning by the productivist discourses of dominant groups. Further, its depoliticisation of the role of big agriculture in environmental destruction, and evasion of the discussion of agroecosystems as political constructions, reveals a clear discourse of omission comparable to that of the state's. While the FCA's entrenchment in colonial and productivist logics highlights a need for greater discourse deconstruction, its recognition of the potential of Indigenous agroecological principles signals a more progressive approach towards systems thinking. Its calls for environmental stewardship and a First Nations-guided systemic transformation represents an emerging discourse in the debate. Ultimately, the majority of actors in this subgroup represent a legitimisation of the state's productivist knowledge bodies which prioritise rural and regional Australians over Indigenous Australians. By framing sustainability as a goal to be achieved for industry purposes, the main actors reveal an epistemological debate which remains unwelcoming to the just discourse development of agroecology.

5.3 Civil society – the heterodoxy

This thesis will now examine how the dominant knowledge bodies are challenged by civil society organisations which represent the heterodoxy of perspectives in the discursive debate. It will analyse sources from the Australian Food Sovereignty Alliance (AFSA) and the Landcare Group and how they directly engage with agroecology. This data will, therefore, finalise the groundwork for the second research sub-question. It will present the emergent discourse developments of sustainable agriculture through which agroecology can emerge.

- *“The People’s Food Plan” – Australian Food Sovereignty Alliance (2013)*

AFSA is a farmer-led organisation which advocates for food sovereignty, or what they define as “the right of peoples to nourishing and culturally appropriate food, produced and distributed in ecologically and ethically-sound ways and their right to collectively determine their own food and agriculture systems” (Australian Food Sovereignty Alliance, n.d.). Their advocacy for agroecology as, “a science, a set of practices, and a social movement practiced by Indigenous Peoples and small-scale farmers the world over” is a key feature of this approach (AMIDA, 2021). Their engagement with the paradigm features regular “Solidarity Sessions”, one in which they feature leading agroecology scholar Peter Rosset (AMIDA, 2021); their Agroecology Roadshows, which host workshops for farmer knowledge sharing of agroecological principles (AMIDA, 2021); and their Agroecology Action Research Network (AFSA, n.d.). All these “systems of social organisation” (Laclau, 1990, p. 172) reveal an effusive and evolving discourse promoting agroecology in the epistemological debate.

However, the most up-to-date and all-encompassing symbol of the counter-movement to industrial agriculture is the organisation’s “The Peoples’ Food Plan” (PFP), published in 2013. Australia’s first crowdsourced policy document, this manifesto draws from the perspectives of smaller-scale farmers, social enterprise and community-based food initiatives to call for a more secure, equitable and resilient food system (AFSA, 2013). The document’s community engagement process consisted of 40 public forums which united over 600 people nationally with the aim of discussing a vision for a “common-sense, fair and sustainable” PFP for Australia (p. 10). As discussed in the government section, the PFP was formed as a direct response to the government’s NFP, which AFSA described as representing an “oligarchic” food system of large business interests, rather than a “democratic food system” of the people’s interests (p. 29). The PFP’s commitment to participatory principles of social justice are evidenced in its key goals of “regulating corporate power” and “democratising our food systems” (p. 13). AFSA’s commitment to democratised epistemologies and social justice language highlights its discursive formation of “genuine sustainability [which is] understanding and respecting [of] natural limits” (p. 12).

AFSA's value of discursive inclusivity is further highlighted in The Plan's dedication of a whole chapter to the discussion of Indigenous Food Sovereignty, in which they state that "the rights to land and food sovereignty for Indigenous peoples are on the agenda of the fair food movement" (p. 21). It argues that engagement with Indigenous peoples and their knowledge about food and land management is crucial to an inclusive PFP. This discursive formation highlights AFSA's normative views on the epistemological debate in Australia.

AFSA's belief that a truly sustainable agriculture must be regenerative is evidenced in the paper's focus on agroecology, in particular the paradigm's ability to address and capitalise on the "interconnectedness and inter-relationship of systems: agriculture, ecosystems....climate [and] socio-economic systems" (p. 32). Further, the PFP expresses AFSA's wish to explore the potential application of agroecology in the strive to achieve food sovereignty, advocating for the incorporation of programs within all schools to educate about such agroecological principles (p. 35).

AFSA's PFP represents a discursive formation which advocates for the mainstreaming of agroecology in the discourse development of sustainable agriculture. Its call for a "democratic" rather than a "oligarchic food system" (p. 29) challenges the highly concentrated and highly industrialised dominant agricultural paradigm, whilst its engagement with marginalised perspectives represents a vision of an inclusive, community-based food systems. This drive towards epistemological democratisation, along with the paper's ontological premise in ecological economics and First Nations custodianship signals a discursive shift which deconstructs the hegemonic discourse of 'sustainability'.

- *Landcare Group*

Such questions of which systems of knowledge and power are being sustained are further raised in an analysis of the government's Landcare Program. Established in 1989, Landcare has a unique constitution as a government (specifically the DAWE)-funded not-for-profit organisation (Curtis & De Lacy, 1998). The group argues that its "greatest asset is its people" (Landcare Australia, 2020, p. 6), with its groups encompassing "farmers and farming systems groups, landowners, Landcare groups and networks, Traditional Owners....youth groups and other community groups involved in protecting, enhancing or restoring their local environment" (p. 6). The reach of Landcare's work is vast; its activities directly engage with 40% of Australian farmers and have flow on effects to 75% of farmers (National Landcare Advisory Committee, 2016). As such, it recognises itself as "the facilitator of community learning and [influencing] policies and programs for landscape change" (Landcare Australia, 2010, p. 6). It therefore positions itself at the forefront of the discourse arguing for institutional food systems renewal.

Although none of Landcare's projects explicitly address agroecology, its goals and structure feature principles that are inherently agroecological. Alongside its imperatives of managing the land and its

biodiversity, Landcare features a “locally-driven approach to local issues” (Landcare Australia, 2010, p. 5). Its design around a “respect for local knowledge” and “active participation and leadership by individuals, groups and networks” (p. 5) reveals a discursive formation similar to that of AFSA’s, one which advocates for epistemological democratisation.

This local structuring of food systems and knowledge is evidenced in Landcare’s operation of 56 regional management units across Australia, with separate arrangements in place for Torres Strait and Marine management units appropriate to the unique circumstances of those areas (Australian Government, n.d.). This territorialisation of farmers networks and food systems is a key networking structure which is inherently agroecological; it promotes shorter and less carbon intensive supply chains for produce, whilst working to feed and empower local communities (Rosset, et al., 2011). Although not “linguistic data” (Howarth & Stavrakakis, 2000, p. 6), this regionalisation of projects demonstrates Laclau’s conceptualisation of institutions as “systems of social organisation” (Laclau, 1990). Its decentring of food governance away from the state and towards regional networks of farmers signifies an emerging discourse of territorialised and participatory food systems.

This discursive formation is further evidenced in Landcare’s approach to landscapes as “integrated management systems” (p. 5). This approach recognises how the culture of agricultural systems is integrated into the “economic, social, cultural and environmental” (p. 5). Its guiding principles of “self-determination” (p. 5) and “good governance” (Landcare Australia, 2021, p. 11) within Landcare groups and networks re-enforce this holistic systems-thinking approach to the agricultural industry.

Another key agroecological principle evident in Landcare’s discursive formation is the value the organisation places on strengthening partnerships with local Aboriginal communities. Quarterly “Landcare in Focus” magazines champion stories of farmers “[soaking] up traditional knowledge for on-farm biodiversity management” (2021, p. 4), “embracing Aboriginal cultural heritage on [their] land” (2021, p. 6), “building new friendships and partnerships” (2018, p. 7), and “[cultivating] long-term relationships of mutual respect” with their First Nations People (2020, p. 11). In a magazine interview, one farmer from Sutton conveyed that “Aboriginal cultural heritage isn’t something in the ancient past...[but rather] something ongoing [which] has really enriched and enhanced our love and understanding of this landscape” (2021, p. 6). This perspective captures the Landcare movement’s view of First Nations farmers as the leading voices in their discourse of inclusively healing the land. By analysing the discourses and core values of Landcare, it is clear that the farmers network frames empowering Indigenous communities, promoting traditional ecological knowledge, and capacity building as key pathways for a successful agricultural industry.

However, this epistemological position is complicated by a deeper discursive analysis into who has the executive responsibility of the discourse promotion. As previously mentioned, Landcare is a unique example of state sponsored community participation in natural resource management (Curtis & De Lacy,

1998). Landcare groups did not develop spontaneously and autonomous of government control. Its inception in the Victorian state government in the 1980s and subsequent institutionalisation at the federal level means that it is not a ‘grassroots’ organisation in terms of authentic community participation (Martin & Halpin, 1998). In fact, the National Landcare Program Phase II Program (running from 2018-2019 to 2022-2023) is funded by the Natural Heritage Ministerial Board (Australian Government, n.d.). This Board consists of the Environment Minister and the Agriculture Minister, and is supported by the DAWE (ministerial roles which were responsible for the publication of the NFP and Ag2030) (Australian Government, n.d.). This analysis of who is ‘doing the speech’ raises the issues of the executive governance of a national farmers’ network lying in the hands of the state.

Landcare has been celebrated as a partnership between the state and rural people; an innovative approach to social theory which has resulted in the democratisation of the state. However, Iles challenges this conceptualisation as a “neoliberal” move by the government to “devolve environmental care to communities and volunteers” (Iles, 2020, p. 25). In the late 1990s, Curtis & De Lacy’s criticised Landcare’s focus on improved agricultural productivity and profitability (1998), revealing the organisation’s historic links to productivism. This leaves the integrity of the movement’s discourse of apolitical, locally autonomous self-governance vulnerable to the executive influence of the state. It reveals a conflict of interests between the bottom-up participatory governance of Landcare’s regional networks, and the top-down influence of the DAWE. It threatens Landcare’s potential as a transformative discursive movement towards inclusive farming and food, and risks it functioning as a state coordination of civil society through its economic self-interest (Iles, 2020). Regardless, Landcare’s most unique strength is its strong network capacity. This has significant potential for new discursive formations, such as agroecology, to be transmitted throughout the rural population and society more broadly.

- *Civil society (heterodoxy) conclusion*

After analysing heterodox voices in the debate it is clear that the problem definition is being monopolised by the dominant groups such as the state and mainstream civil society groups. Out of the dissenting voices, AFSA has proven to be the most disruptive actor. Whilst both AFSA and Landcare call for the mainstreaming of values such as participatory governance, co-productions of knowledge with Indigenous communities and democratised food systems, AFSA’s discursive formation is most reflective of agroecology’s calls for system wide social transformation. Whilst Landcare does not explicitly engage with agroecological principles, its nationwide rural engagement, and more importantly regionalisation of Landcare networks, is a key step towards an agroecological organisation of food systems. However, while Landcare demonstrates a strong transmission capacity for alternative paradigms of farming, the state’s executive responsibility of the organisation’s discursive formations signals a clear conflict of interest between neoliberal governance and democratised food systems. Landcare therefore represents the nuances

of an agroecosystem as a sociological construction whereby its executive decisions are ultimately not produced through the power of the farmers but through the power of the state. Thus, more government and market support is needed for the dissenting voices to gear the discourse development of sustainable agriculture towards a more agroecological paradigm.

5.4 Discussion: dislocations in the discourse

This section will now address the second sub-question of the thesis

- i. Examine the potential spaces of ‘dislocation’ in the national discourse through which agroecology can be developed as a formal epistemic community.*

It will examine the potential spaces of ‘dislocations’ in the national discourse through which agroecology can be developed as a formal epistemic community. By examining if the discursive formations in this epistemological debate reveal any openings in sedimented structures, this section will be able to answer the research question and evaluate the possibility of transitions to agroecological food systems in Australia by 2100.

The previous chapter applied Gottweis’s conceptualisation of policy phenomena as ‘articulations rather than facts’ to the Australian setting. The government’s discursive operations of settler colonialism, neoliberal ideology and productivism in the debate of sustainable agriculture reveals a clear monopolisation of the problem definition to justify its industrial regime (Iles, 2020). The strong discourse of climate constraints being overcome through the power of science, technology and the market has led to the dismissal of agroecology as a viable alternative paradigm for food systems. Further, the state’s dependence on agricultural exports as part of its national identity, and in turn, its weak policy leadership on climate change, has resulted in weak state support for farmers adopting agroecological practices. It has also led to the erosion of rural communities due to export-directed investment instead of environmental support. Therefore, despite the recognition agroecology receives in global debates for its democratic and ecological potential, it has not taken up momentum in Australia. Resistance to this dominant discourse is reflected in government-supported farmers networks (as seen in the discussion Landcare), and promotions of the growing importance of stewardship (a shift which was seen in the discussion of Ag2030). Ultimately, the impetus behind state discussions of agroecological principles articulates its historic entrenchment in industrial agriculture, and offers little space for discursive dislocations to develop.

An analysis of the mainstream civil society organisations representing hegemonic knowledge systems demonstrates what Foucault terms as the “circular relation” of truth between government, scientists and industry elites (1972-1977, p. 133). It highlights Foucault’s “power-knowledge nexus” (1972-1977, p. 132) through which the state institutionalises scientific truths to justify their political and economic interests of

maximising export-oriented agricultural growth. Gottweiss's conceptualisation of the legitimisation process between the state and its civil society apparatus provides a useful analytical framework to examine the hegemonic social formation between these two actor groups. ACOLA's promotion of technologically-driven sustainable intensification, and the NFF's prioritisation of the economic value of the industry forms the discourse which "constitutes and organises social relations (Laclau & Mouffe, [1985] 2001, p. 96). Alongside the depoliticization of the state's role in the ecological, social and racial crises plaguing Australian agriculture, these two subgroups reveal the historic entrenchment of colonialism, neoliberalism and productivism inhibiting the discourse development of agroecology. These two groups form a discourse of omission, one which involves the marginalisation of Indigenous and small-scale farmers and the absence of agroecological discussions.

However, in line with the paper's poststructuralist framework, it is established that this actor network does not operate within a predetermined structure of given 'interests' and 'preferences' (Paul, 2009). Being socially constructed, the preferences and identities of the analysed organisations are subject to change and reveal areas in their discursive formations which offer the potential of identity re-evaluation.

From the data collected, it can be concluded that ACOLA's perspective on Australia's agrarian crisis remains culturally conditioned by the colonial and productivist logics of the state. However, if a moment of social dislocation involves temporally and locally split subjectivities, ACOLA's interdisciplinary constitution is the necessary first step towards pluralistic discussions. As discussed previously, agroecology represents not just a practice of sustainable agriculture, but a culture of participatory, cross-cultural policy making. As a transdisciplinary movement, it requires the collaborations between natural scientists and social scientists facilitated by organisations such as ACOLA, in order to achieve an ecologically and socially just food system.

Whilst the NFF represents more intensive, larger farmer interests, the FCA has been a key actor in mainstreaming the discourse development of stewardship. Although it legitimises productivist knowledge bodies, the FCA represents the climate anxiety of farmers which Iles describes as a potential "enabling dynamic" for the promotion of agroecology (2020, p. 19). He raises the point that, while larger landholders have benefited from technology escalation, intensification and the government's export policy, the majority of farmers have endured years of declining rural economies, climate change impacts on crops and livestock, lengthy droughts and crippling debt (Locke, 2015). It has led to a questioning of the status quo, one which is reflected in the FCA's explicit call for a "systemic transformation" grounded in the agroecological principles of Indigenous farming. Returning to Naber's notion of crisis as a "lack, deficiency or failure in the social fabric", the climate crisis clearly poses the most existential reckoning to the farming industry and the government (2017, p. 419). As more farmers recognise the climate crisis as a failure in the social fabric of how agriculture is organised, it leads to the dislocation of sedimented discourses and understandings.

Massy's work (2021) highlights how this phenomena has already taken seed, as farmers nation-wide are applying ecological principles to farm management and are moving away from industrial agriculture. The increased participation of farmers in such discursive debates represents a decentring of power away from the hegemonic state and its apparatus. A logical assumption following this would argue that a national reckoning such as the devastation caused by the 2019 bushfires would disrupt the policy marginalisation received by small and Indigenous farmers. However, two years after the crisis, the state is in no stronger a leadership position on the issue of climate change, nor the need for food systems transformations. Further research will, therefore, be required to investigate how this important discourse of safeguarding the nation's food systems will translate into the social dislocation required for potential development of agroecology.

Australia's burgeoning culture of regenerative farming practices, therefore, provides a strong medium through which discourses of agroecology can emerge. However, as discussed in the literature review, regenerative agriculture is limited by its inability to disassociate from the political framework reinforcing the industrial paradigm. As Iles states, "regenerative agriculture – let alone agroecology – has hardly reached the supermarket aisle" (2020, p. 29). This highlights how, due to Foucault's "circular relation" of truth sustaining the hegemony and marginalising alternative paradigms, agroecology, as the more holistic discourse development of sustainable agriculture, has not penetrated the national discourse. The conservative farmers' recognition that climate change poses substantial risks to production and livelihood shows an emerging dislocation in the national discourse. However, the cultural conditioning of discourses need to be re-gearred in order for transitions to agroecological food systems to be achieved by 2100.

It is the final subgroup analysed which offers the most potential as a medium through which the national discourse can be dislocated for developments of agroecology. Both AFSA and Landcare demonstrate a commitment to epistemological democratisation and participatory governance, both of which are foundational steps towards the construction of new power centres. Their call for the reclamation of Indigenous agricultural heritage also signals the shift towards the decolonisation of industrial farming which agroecology calls for. AFSA has proven to be the most disruptive actor in challenging the sedimented understandings and identities rooted in the discursive regime of the hegemon. Their connection to the global agroecological movement and external allies such as LVC reveals much potential for the Australian movement to be strengthened in the long term. However, the radical nature of its calls for systems upheaval is vulnerable to political critique or dismissal by Australia's centri-pedal government and may face greater obstacles before being institutionalised.

Landcare has the strongest potential as a framework through which agroecology's theory of change can be expanded. This is due to its nationwide rural engagement and its (albeit limited) government support. Yet, by the same token, it is this influencing relationship of the government which limits the potential of its political framework. The network's current epistemological challenge (the executive influence the state has over project funding allocation) can be criticised, at best, as a government aim to depoliticise the network,

and at worst, as a government co-optation of a revolutionary form of community-led governance. Landcare, therefore, provides an example of democratised epistemic communities not always resulting in democratic policy formation. It also proves Wilson's claim of the non-linearity of the post-productivist transition (Wilson, 2001). Whilst the civil society initiative catalyses greater community participation in food regime building, its policy formation is still dictated by the state and its productivist values. It presents a risk of government co-optation reminiscent of the FAO's appropriation of agroecology as a 'technical fix'. This raises an area of concern regarding the greater monopolisation of the problem definition.

Regardless of government intrusion into the Landcare network, its fostering of Australia's rich culture of farmer-to-farmer learning provides the strongest medium for social dislocations to arise. This culture was cultivated by the Landcare phenomenon particularly in the late 1990s, when the movement catalysed an increased knowledge about land degradation and various NRM practices, and the regionalisation of farmer exchange networks. This emerging discourse of agroecological farmer formations can be seen in civil society organisations which the thesis has not discussed, such as Soils for Life and RegenAG. A not-for-profit charity and community-based family enterprise respectively, both Soils for Life and RegenAG provide education, training and consultancy to farmers, professional organisations and communities to "regenerate Australia's farms, soils, communities and on-farm livelihoods" (RegenAg, n.d. ; SoilsforLife, n.d.). This emergence of actor-networks promoting new paradigms (regenerative agriculture) and new discourse developments in sustainable agriculture (stewardship) highlights what Laclau (1990) argues as the impossibility of complete development in discursive landscapes. The agency of these actors has demonstrated that identities can be influenced by non-hegemonic actors to democratise the epistemic community. Whilst this moment of social dislocation has not yet been institutionalised by the state, it represents a productive construction of new power centres where sedimented understandings are disrupted to reveal their historical contingency.

5.5 Conclusion

This PSDA of the epistemological and debate in Australia has revealed that there are spaces where social dislocations exist. These include the areas of localised agroecological success across the country and the emerging discourse developments of environmental stewardship and agroecology to varying extents. The culture of farmer-to-farmer learning in Australia is rich but requires institutionalisation by the state and the markets for the full realisation of agroecology's socially just food systems. As the climate crisis reveals the "failure in the social fabric" (Nabers, 2017, p. 419) of Australia's food systems, industry will be put under increasing pressure to re-evaluate the status quo. However, neoliberal prejudices within the superstructure are steering this re-evaluation towards a high-tech, input heavy system transformation. The PSDA approach taken by this essay has been fundamental in examining the areas of dislocation where the national discourse

on agroecology has led to the deconstruction and decolonisation of hegemonic paradigms. However, it is the final evaluation of this thesis that the potential for just transitions towards agroecological food systems by 2100 remains limited. For this to be achieved in such a narrow time frame, the epistemic community would need a deconstruction of centuries of frameworks (settler colonialism, neoliberalism, productivism) that have entrenched society in the dominant system of industrial agriculture. While this paradigm is not unchallenged, it is constantly being legitimised and justified by knowledge bodies and articulations of truth which remain hegemonic.

6. Conclusion

“[s]ince our break with nature came with agriculture, it seems fitting that the healing of culture begin with agriculture, fitting that agriculture take the lead”

-Wes Jackson, *Becoming Native to this Place*, p. 26

“We all need to zoom out from our plates and see food as less of an object than a relationship, which forces us to address the commodification of human and non-human lives in the food system – and to think creatively about redesigning that system from the soil up in a system of radical hope”

- Alana Mann, *Food in A Changing Climate*, p. 29

6.1 Contributions: empirical and theoretical

This work has contributed more conceptual coherence to the agroecology to enable more productive discussion. **Chapter 2** defined the capacity for agroecology to offer a viable alternative to the industrial food regime, both as a modern political praxis and a holistic, productive strategy for food security in the face of climate crisis. **Chapter 6** outlined the agroecological epistemologies which are pollinating farmer organisations. From this discussion, it is clear that this emerging discourse represents the productive construction of new power centres and social dislocations within the industry. However, the chapter also demonstrated that this culture is being inhibited by colonialist, neoliberal and productivist paradigms. In both the international and domestic setting, agroecology is being institutionalised by hegemonic actors and appropriated into dominant paradigms. In both settings, agroecology is also developing into the epistemological debate with an empiricist bias which marginalises the subaltern voice. This work has therefore revealed an Australian epistemic community of sustainable agriculture which must be further pluralised and democratised for transitions to agroecological food systems to occur by 2100.

The work’s poststructuralist approach to policy and discourse analysis provided a new theoretical contribution to Australia’s sparse literature on agroecology. **Chapter 4** advanced the use of PSDA. It highlighted how PSDA’s aims are reflective of agroecology’s interpretivist epistemology, in that it recognises that knowledge is culturally conditioned by the dynamic perspectives of individuals and groups. This allowed the thesis to identify the Landcare movement and AFSA as the mediums through which the paradigm has the most potential of taking seed in the national discourse.

6.2 Implications : in research and in policy

This research has shown that analysing and deconstructing any epistemological biases within the Australian discussion is the foremost step in the development of democratised food governance. Although the relationship between the two processes is not linear (as seen in the Landcare discussion), they are fundamental elements in achieving just food system transitions. As such, the primary implication of these findings is the need for more politicised and interdisciplinary research as a precursor for any effective policy design and implementation.

This suggests the importance of in-depth research into sample populations within Australia to find opportunities where agroecological systems can be test-trialled. More attention should be paid to the “communities of practice” that Cross & Ampt (2017) have been studying in Southeast Australia, to examine how communities respond to the introduction of agroecological systems. From there, researchers can interpret how the principles from these instances of localised success can be transferred to larger regions or urban areas. The same principle could be applied to a comparative analysis of agroecological movements internationally, such as the Brazilian city Belo Horizonte’s effective food security system, and London’s large coalition of agroecological social movements (Clark, Foster, & Bryman, 2019). Such pathways of future research would be key in promoting the nascent and localised Australian movement in greater national discourse.

Within structures of public food policy governance, greater attention needs to be given to the perspectives of farmers. As Massy argues, “Farmers are the leaders of the land. Not politicians. Not the multinational corporations entrapping them in a commercial cycle of crop drug dependency” (Massy, 2020, p. 217). The Landcare discussion in **Chapter 5** highlights the danger of state encroachment on healthy farmers networks. The discussion of the organics, regenerative movement and the international debate in **Chapter 2** reveals the ease of corporate co-optation of food movements. If agroecology is to be institutionalised by the state, much is to be learnt from preceding sustainable food movements. Importantly, this movement must recognise the leadership of the farmers, the stewards who are already in the best position to restore landscape function and enact positive change in their environments and societies.

However, prioritising farmers alone limits the diversity of knowledge bodies from which we can learn. A priority for researchers and policy makers alike should be the elevation of Indigenous voices, the celebration of their agricultural heritage and the promotion of their epistemologies in mainstream education. As Mann points out, “decolonising food systems means recognising food as a site of colonial struggle and breaking the lock-in presented by the capitalist food economy” (2021, p.32). This paper supports this claim and argues that Indigenous leadership in discussions of agroecology is a key strategy in decolonising Australia’s policy-making scene. Only then can the nation achieve an agricultural system which empowers, rather than marginalises, our Indigenous and non-Indigenous farmers alike.

This thesis has demonstrated the importance of democratised epistemologies and participatory policy making in the realm of sustainable agriculture. As agroecology enters more into academic and political discourse, it is proving its ability to strengthen the climate and social resilience of a prevailing industry which is unsustainable, fragile and vulnerable to shock. As a country facing an agrarian crisis in its rural areas and an increasing vulnerability to climate instabilities, Australia would benefit greatly from the healing potential of the paradigm.

However, if agroecology as a discourse is to achieve long-term resilience in the political arena, it will require a consolidated basis of academic research which recognises all the socioecological aspects of the paradigm. It will require a democratised epistemological battleground led by the farmers and civil society actors already toiling to heal our land and culture. The seeds of this culture shift were germinated by this army of healers decades ago. Now it is our turn to pollinate it.

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