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# **Structuring for Serendipity: Family Wealth Creation, Farmer Autonomy and the Pursuit of Security in an Uncertain Australian Countryside**

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A thesis submitted in fulfilment of the requirements  
for the degree of Doctor of Philosophy  
in the Faculty of Science

at

The University of Sydney

by

Erin F. Smith

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2015



For my Mum and Dad,  
who farmed through the 1980s in New Zealand.



## Declaration

I declare that this thesis is the result of my own independent research and that all authorities and sources that have been used are duly acknowledged.

Part of Chapters 4 and 9 have been accepted for publication:

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Estelle Dryland was enlisted for editing services. She proofread the main body of this thesis (Chapters 1-9), but not the prefatory material, Tables of Contents, Figures or Tables, List of References or Appendices. Estelle's editing was limited to detecting and correcting the presentation of the text to conform to standard usage and conventions (e.g., spelling, quotations, italics, lists, word usage, punctuation, charts, in-text citations, headers and footers etc.). As well, she provided advice on sentence structure, voice, tense and how to avoid ambiguity.

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Erin F. Smith

1 December, 2014



Abstract of a thesis submitted in fulfilment of the requirements for the  
Degree of Doctor of Philosophy

**Structuring for Serendipity: Family Wealth Creation, Farmer Autonomy and the Pursuit  
of Security in an Uncertain Australian Countryside**

**By Erin F. Smith**

The social and economic particularities of family farms have captured researchers' attention for numerous years. Despite these efforts, international rural scholarship lacks a clear, analytical sense of how and why family farms are organised in the ways that they are. The preeminent purpose of this thesis is to contribute to a clearer understanding of this important research problem. With its focus upon farm enterprises rather than farm activities, this thesis provides a critical examination of the internal logics underpinning the emergent patterns of the socio-economic organisation of Australian farms.

To explore these patterns, this thesis adopts Johnsen's (2003) conceptualisation of farm enterprises as three-way coalitions between farm businesses, farm households and the respective property holdings. Changes to the Australian agricultural property regime are used as the lens through which to observe how the organisational logics of farm enterprises are recalibrated in response to environmental policy reforms. The specific reform of interest is the separation of land and water titles in effect in Australian irrigation districts. Despite the obvious economic significance of separating water titles from land titles, the ways that this impacts on farm organisation remain under-researched. Hence, this thesis uniquely brings together scholarship on family farming with that of water reforms.

Reflecting the exploratory nature of the study and its focus upon farm enterprises, a novel qualitative research method known as farm life history is used to generate in-depth narratives of the historical development of 40 farms in the Australian state of Victoria. Twenty-one of these are from an irrigation district where land and water titles have been separated, and nineteen from a dry land region unaffected by the reforms.

The interpretive chapters of this thesis comprise a detailed analysis of the ways in which the ownership configurations of farm businesses, land and water assets embody farmers' aspirations for building wealth and maintaining autonomy. These aspirations are jointly articulated in the concept of 'structuring for serendipity'; a concept that elevates the notions of risk, uncertainty and security as critical drivers shaping farm-level responses to contemporary agricultural conditions. The thesis ends by concluding that the organisational forms observed within the



Australian agricultural sector ultimately represent farmers' pursuit of a personal sense of security in a constantly changing and uncertain countryside.

**Keywords:** Family farming, farm organisation, land ownership, water ownership, farm life history, Australia

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# List of Abbreviations

ABS	Australian Bureau of Statistics
ARC	Australian Research Council
CAP	Common Agricultural Policy
CEWH	Commonwealth Environmental Water Holder
CoAG	Council of Australian Governments
EEC	European Economic Community
FIRB	Foreign Investment Review Board
GFC	Global Financial Crisis
G-MW	Goulburn-Murray Water
GL	Gigalitre (as in a gigalitre of water)
MDB	Murray-Darling Basin
MDBA	Murray-Darling Basin Authority
ML	Megalitre (as in a megalitre of water)
NVIRP	Northern Victoria Irrigation Renewal Project
NWC	National Water Commission
NWI	National Water Initiative
sMDB	southern Murray-Darling Basin
SMSFs	Self-managed superannuation funds
VACP	Value of agricultural commodities produced

## **A note about the use of pseudonyms**

In this thesis, the anonymity of all interviewees is maintained. Individual farmer informants are identified using a system of codes. Farmers were from one of two study sites: either the Murray-Goulburn Valley or Corangamite. The respective study site is signified by the abbreviations MV and COR. The abbreviation is followed by a number unique to the farm enterprise, then either the letter M or letter F to indicate the respondent's gender. All farmers who participated in the study are referred to in this way. Cases in which only one partner from a farming couple participated are identified as explained, but when reference is made to the farming couple the absent partner is identified according to their relationship to the interview participant. For example, only the male partner from the Murray-Goulburn Valley farm 1926 was interviewed; thus, in-text the following phrasing is used 'MV\_1926M and his wife...'. However, both partners from the Corangamite farm 0342 were interviewed; thus, they are referred to in text as 'COR\_0342M and COR\_0342F...'.



## Chapter 1

# Rural Spaces and Farm Organisation: A Renewed Focus

## Introduction

The dynamics of family farm organisation, and the ways in which these dynamics shape and are shaped by rural geographies, are under-theorised in the contemporary Australian context.

Understanding these dynamics at the farm-level is critical to developing nuanced theorisations about the role of productive agriculture in processes of contemporary rural change as well as “the use and regulation of rural space and rural commodities” in the 21<sup>st</sup> century (Woods, 2009b, p. 850).

Heightened concern about globally significant issues such as the production and supply of food, the control of energy resources, and responses to climate change from both society and the polity has reinvigorated debate surrounding the future of agricultural production in advanced capitalist economies. These highly contested issues, and their interaction with the farming sector, have overlaid earlier challenges to the role and meaning of rural areas. Such challenges have emerged due to new ways in which the countryside is valued, including 1) the introduction into rural areas of non-traditional residents through amenity migration and rural tourism; 2) new approaches to food production and the creation of local food networks; and, 3) the increasingly contested nature of the right to use environmental resources such as land and water. Although such debate is far from resolved, the nature and character of farms organised around a family unit amidst this contemporary context remain under-researched. While there is an increasing body of substantive research investigating the relationships between farming, policy, food and nature, there is a dearth of up-to-date research that adequately examines the “canvas of agricultural change” in line with which these relationships are being reconfigured (Evans, 2009, p. 218).

This thesis responds to this research gap by developing an analytical framework for understanding agrarian change and the emerging social and economic geographies of family farming in 21<sup>st</sup> century rural Australia. It uses changes to the property regime upon which agriculture was established as a lens through which to examine emergent patterns of the socio-economic organisation of farming. Changes to property regimes have the potential to transform the ways in which farmers organise their business assets and their farm production, with implications for the structure of the wider agricultural industry and the sustainability of rural landscapes. Specifically, I look at how farmers integrate, negotiate or resist government-

initiated changes to land and water ownership in Victoria, Australia. Australian water reforms have resulted in a clear separation of land and water titles within many agricultural irrigation districts, effectively removing the historical tie between these two business (and environmental) assets. These reforms have fundamentally altered the private property regime on which Australian irrigated agriculture was established and, by extension, have potentially recalibrated the organisation of farm enterprises. This invokes the core question of this research:

How has the separation of land ownership and water access ownership impacted upon the socio-economic organisation of Australian farm enterprises?

The Australian state of Victoria provides a suitable context in which to explore this question because this jurisdiction has typically led changes and innovation in water management since before Australian Federation in 1901. Victorian agriculture contributes almost one-quarter of Australia's gross value of agricultural production (VACP) (Australian Bureau of Statistics, 2013b), and is responsible for 28% of the national gross value of irrigated agricultural production (Australian Bureau of Statistics, 2013a). Siting this study in Victoria also provided opportunities to engage with the research question across two study sites that are broadly similar in terms of industry composition and agricultural development: the Murray-Goulburn Valley and Corangamite. Whereas the Murray-Goulburn Valley is an irrigation district wherein the separation of land and water titles has great significance, in Corangamite, a dry land agricultural region, these changes have no material effect. This thesis' inclusion of a dry land region alongside an irrigation district represents one of the first attempts to integrate the burgeoning literature of the impact of water markets with the broader geographical and sociological literature addressing the structure and organisation of farming. It is also the first study to investigate processes of farm organisation using an embedded qualitative research approach known as 'farm life history' (see Riley, 2010; Riley & Harvey, 2007a). This approach is operationalised using three techniques: 1) farm tours; 2) in-depth-interviews; and, 3) graphic interview prompts (e.g., land parcel mapping and timelining). Together these techniques position the farm enterprise (comprising a farm business, a farm household and land and water holdings) as the unit of analysis and generate farm biographies that describe the historical development of each farm.

## **The Australian Farming Sector: Research Gaps**

The Australian farming sector has not always been characterised by family farms. Despite land reforms directed at establishing small farmers as early as 1860 (McMichael, 1984), it was not until close to the end of the 19<sup>th</sup> century that small-holder farmers became the centre of Australia's agrarian model of development (Craig & Phillips, 1983; Davidson, 1981). Prior to

this period, broad scale pastoral holdings held by wealthy ‘squatters’<sup>1</sup> dominated European agriculture in the Australian colonies. A growing European population and new political ideologies drove the transition from this farming system to a system of family farming. With reference to the Western Australian context, Tonts (2002, p. 104) argues that the governing authorities of the time considered themselves to be “...the architect[s] of a desired cultural landscape and social class”. Enactment of the ‘yeoman ideal’ (i.e., freehold properties, family operated, cultivated) and policies encouraging closer land settlement patterns was seen as the way to create a prosperous, virtuous society.

Such policies have since been discontinued; but, there remains a strong familial element within Australian agriculture. Consistent with trends in other developed countries, farms organised around a family unit continue to dominate the Australian agricultural sector in a numerical sense (Productivity Commission, 2005). This persistence of family farming has confounded the ‘old agrarian question’ namely, that in the contexts of globalisation and agro-food corporatisation there is a general trajectory away from farms organised around a family unit towards larger, more corporate forms of agricultural organisation. Brookfield (2008) contends that the most sensible response to this problematic is to invert the old agrarian question. In other words, he advocates that the family farm, as a form of social organisation, warrants renewed research interest and should be considered as an enduring form of organisation that evinces a capacity to adjust to the modern world. Exploring the rationalities and ways in which farms are organised in the 21<sup>st</sup> century is the first impetus for this research.

The majority of research that investigates family farming from the perspective of its social organisation has been conducted in Britain and to a lesser extent in North America and New Zealand. Much of this work dates from the 1980s, a time when British geographers reasoned that research efforts should “centre on the farmer and his [sic] family” because they were the “principal landowners, controllers of farm businesses and major suppliers of labour to the industry” (Gasson et al., 1988, p. 13). As such, they sought to develop more sophisticated theorisations using political economy perspectives to explain the persistence of family farming amidst fundamental changes to government-agriculture relations made post-World War II (see, for example, Gasson & Errington, 1993; Marsden, Munton, Whatmore, & Little, 1986; Whatmore, Munton, Little, & Marsden, 1987; Whatmore, Munton, Marsden, & Little, 1987). By the late 1990s, interest in the internal and external dynamics of family farms was undergoing something of a hiatus (Lobley & Potter, 2004). In the early 2000s, Johnsen (1999, 2003, 2004) revived these earlier intellectual efforts to understand better the impacts of economic deregulation upon family farms. Working in the New Zealand context, she sought to identify

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<sup>1</sup> Australian squatters were agriculturalists who occupied large tracts of land outside of the defined government boundaries of the day. Initially, their occupation was illegal; that is, before formal leases were administered by the governments of each Australian colony. The ‘period of the squatters’ spanned *circa*.1831 to 1855 (Roberts, 1924).

long-term shifts in the social and cultural meanings ascribed to family farming following the New Zealand government's sudden economic deregulation of the agricultural sector 15 years earlier. More recently, de Raymond (2013) has investigated the organisation of agricultural production among field-crop family farmers in France. In contrast to the earlier British-based political economy research that focused on the structural determinants of farm organisation, Johnsen and de Raymond's works emphasise the importance of farmer agency within processes of farm organisation. Thus, the second impetus for this research is to extend Johnsen's (2003) call for further critical actor-oriented studies conducted at the farm-level that are nested within the broader socio-economic, political and environmental contexts of farming.

With the exception of Johnsen and de Raymond's works (see also Argent, 1999; Pritchard, Burch, & Lawrence, 2007), researchers outside of the United Kingdom have not pursued the research trajectories that the British geographers established. This is surprising given that one of the key conclusions from that body of literature was that processes of agricultural restructuring are not only historically but also locally contingent (Friedmann, 1986b; Gasson et al., 1988; Marsden et al., 1986; Marsden, Munton, Whatmore, & Little, 1989; Munton & Marsden, 1991). In other words, different agricultural regimes create different opportunities for farmers, enabling them to adjust to – or cope with – their changing economic, social, political, and environmental contexts (Almås, 2010). The absence of in-depth, contextualised investigations of farm organisation conducted outside of Britain, creates considerable scope for work of this nature to be conducted in other contexts, including in Australia.

Johnsen's (2003) work, in particular, offers a useful foundation upon which Australian-based studies may be founded. Expanding upon earlier British models, she conceptualises family farms as three-way coalitions between the farm business, the farm household and the farm property. Her analysis of the farm property domain, however, is limited to the material aspects of the farm property (e.g., the quality of farm land, infrastructure and stock). A broader definition of the term 'property' consistent with interpretations of property as an institution for ordering social relations (Singer, 2000) invites further interrogation of its role in the nature and character of farms. Expanding the definition of Johnsen's farm property domain in this way renders it eminently suited to the contemporary Australian agricultural context and impact of the separation of land and water titles upon farm organisation.

In theoretical terms, only limited analysis of the role of property in understanding the dynamics of the farming sector has been undertaken despite clear acknowledgement of the fact that the development, exploitation and commoditisation of rural property rights are important drivers of socio-economic change (Marsden, 1995; Marsden, Murdoch, Lowe, Munton, & Flynn, 1993). While the concept of property is both flexible and time specific, in general, the regime underlying Australian agriculture has been highly stable. Hence, the separation of land and

water titles represents a major disjuncture of historically significant proportions. Nevertheless, although there is an extensive literature investigating farmers' use of the Australian water market to manage their water assets and on-farm water requirements (see Chapter 2), there are no Australian studies that specifically consider how the role of water as an asset separate from land affects Australian family farm organisation.

To the extent that this general theme has been studied, most of the extant work focuses upon farmers who have been directly impacted by changed water policies. Some researchers conclude that farmers situated within irrigation districts that allow water trading have better adjustment and restructuring trajectories available to them than their counterparts in dry land farming regions (Bjornlund & McKay, 1999). But, this hypothesis is yet to be empirically tested. I will argue that there is research scope to situate the role of the separation of land and water titles within the broader processes of agricultural organisation, processes that can be explored by extending the parameters of enquiry to include non-irrigated farms in dry land areas. Exploring the socio-economic organisation of irrigated and non-irrigated farms in contemporary rural Australia through the lens of changes to the underlying property regime is the third impetus for this research.

Before concluding this chapter with an outline of how the thesis is organised, I will address three other topics. First, I discuss aspects of positionality and my role as the researcher in this project. Second, I provide the necessary contextual information, introducing the two study sites which comprise the empirical basis of this thesis: this takes the form of a brief overview of the agricultural development in each study site. And third, I briefly outline the chronology of Victoria's shift to a water market and a system of property rights for water. As well, I describe the basic mechanics of the current structure for water ownership and water access integral to the core research question.

## **The Role of the Researcher**

An important methodological consideration for qualitative researchers is the ways in which their social, cultural and subject positions affect the entire research process (Pratt, 2009b).

Researchers are not detached observers. They are the research instrument embedded in each research encounter, contributing to the interaction between themselves and the people they meet. This implies that all knowledge is 'situated knowledge' (Haraway, 1991) and, at best, knowledge generated in research encounters provides only a partial account of people, processes and places because everything that is reported is selected and filtered by the researcher.



I will now provide a brief autobiographical background of my own positionality in relation to this study. By providing this background, I am not attempting to render transparent the full complexity of my position within the research because such an attempt would be futile given the impossibility of ever fully knowing one's own position and those of others (Rose, 1997). My intention is to provide the reader with some insight into my own 'position of knowing'; that is, my perspective on the topic prior to commencing the research and how I became interested in processes of agrarian change.

I am a female who currently neither owns land (or residential property), a farm, nor any other form of business, characteristics that are somewhat at odds with those of the people involved in this study. In stressing this point, I do not suggest that a woman who neither owns land nor operates a business can see and feel the world as farm owners/operators interpret and perceive it. What I am suggesting is that it is reasonable and useful to attempt to do so, for, as Leibow (1993, p. xv) maintains: "Trying to put oneself in the place of others lies at the heart of the social contract and of social life itself". So, how did I come to embark upon this research project?

I began this thesis having had first-hand experience of family farming in New Zealand. In March 1982, four months before I was born, my parents took over a 280-hectare sheep farm under a 33-year lease, with perpetual right of renewal. This farm was administered according to the New Zealand government's civilian farm settlement scheme. Two years later, the New Zealand government began implementing swift changes to the economic regulation of agriculture, consistent with its neoliberal ideologies. These changes included the removal of the supplementary minimum price scheme<sup>2</sup> from which the sheep industry had been the primary beneficiary, a price scheme designed "to guarantee prices at a level appropriate for [farm] income adequacy and for the encouragement of increased farm production and export earnings" (Griffith & Grundy, 1988, p. ix). While questions had been raised about the scheme's efficacy (Griffith & Grundy, 1988), its removal – along with the termination of other production subsidies and support mechanisms – eroded confidence in agriculture, negatively impacting on rural land values. In my parents' case, the government valuation of their farm diminished by more than half. Three years later, the government decided to opt out of the farm leases. This situation posed a problem, not only for my parents, but also for many of the families established on farms under the settlement scheme. After negotiating with the government authority, and acquiring financial backing on the open financial market,<sup>3</sup> my parents were able to purchase the freehold title to the farm, and the mortgage for stock and improvements at a heavily discounted

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<sup>2</sup> The scheme was one of a range of price stabilisation and price support schemes designed to stimulate agricultural production and exports and raise foreign exchange earnings. Other measures included fertiliser and transport subsidies and various incentives for farmers to develop pastoral land and increase the number of livestock carried.

<sup>3</sup> The New Zealand finance industry also underwent deregulation at this same time.

rate. Without this discounted rate, transitioning from a leasehold arrangement to land ownership would have been impossible because devaluation of their property had unarguably placed them in a significant negative equity situation.

As a young child, I knew little (if anything) of the above events; but, some years later, at the age of 28, I had a conversation with a distant relative that triggered my interest in matters of farm structuring and agrarian change. During my first meeting with Ken, he told me that he had compiled my father's maternal family tree, much of which captured the family's farming history.<sup>4</sup> Two aspects were particularly interesting. The first concerned my great-grandfather Alfred, who rather than taking over his parent's farm, purchased under 'lease in perpetuity' 240 hectares (*circa.* 1912) in partnership with his elder brother. When the latter was killed during World War I, Alfred came under significant financial pressure from his financiers because his brother seemed to have the majority of the equity in their partnership and may have been the prime signatory to the securities. Alfred was forced to sell the farm; but, nevertheless he remained intent upon pursuing a farming career. He accordingly purchased a smaller block of land (120 hectares) freehold. Over subsequent decades, Alfred was able to triple his landholdings; and in due course, some of his children and other younger relatives took over his land. Something about this account of the difficulties Alfred encountered when pursuing a farming career and seeking land ownership intrigued me.

The second aspect was more general in nature and concerned the high degree of frequency with which various landholdings acquired by the family changed hands and were operated under various tenure arrangements. Similarly, frequent changes were made to business ownership relations due to marriages and to sons (primarily) leaving to establish their own enterprises.

Reading these accounts caused me to question two seemingly taken-for-granted characteristics of family farming; namely, the high degree of stability often ascribed to rural land ownership patterns throughout history, and the popularised increased difficulty of achieving farm ownership today compared to earlier periods of history. Thus, while farming was a common thread throughout many branches of the family tree, there seemed to be a higher degree of dynamism and complexity than one might expect from farming, particularly during much of the 20<sup>th</sup> century before the agricultural sector was exposed to the vagaries of the open market.

Since the inception of this research, indeed throughout the entire research process, I have often reflected upon these accounts from my own history. From this position, my involvement in this study has impacted upon the study design, the process of data generation, my interaction with the farmers and key informants involved, and my interpretations of the data presented in this thesis.

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<sup>4</sup> Although both of my parents came from farming families, a history of farming is more extensive on my father's side. My mother grew up on a dairy farm in the North Island of New Zealand. Her father purchased the farm under the New Zealand government's soldier settlement scheme following World War II (1945).

In the next section, I introduce the two study sites included in this research, the selection of which was partly determined by the relationship between this research and the wider Australian Research Council (ARC) Linkage Project which supported this PhD research. The objective of this wider research project has been to investigate the dynamics of farm families who have left agriculture in the Australian state of Victoria. Out of the four purpose-specific study sites chosen to meet the needs of the project,<sup>5</sup> two – the Murray-Goulburn Valley and Corangamite – were deemed eminently suited to addressing the thesis' core research question. Below, I illustrate the suitability of these sites for the current study and present a brief account of the development of agriculture in each area.

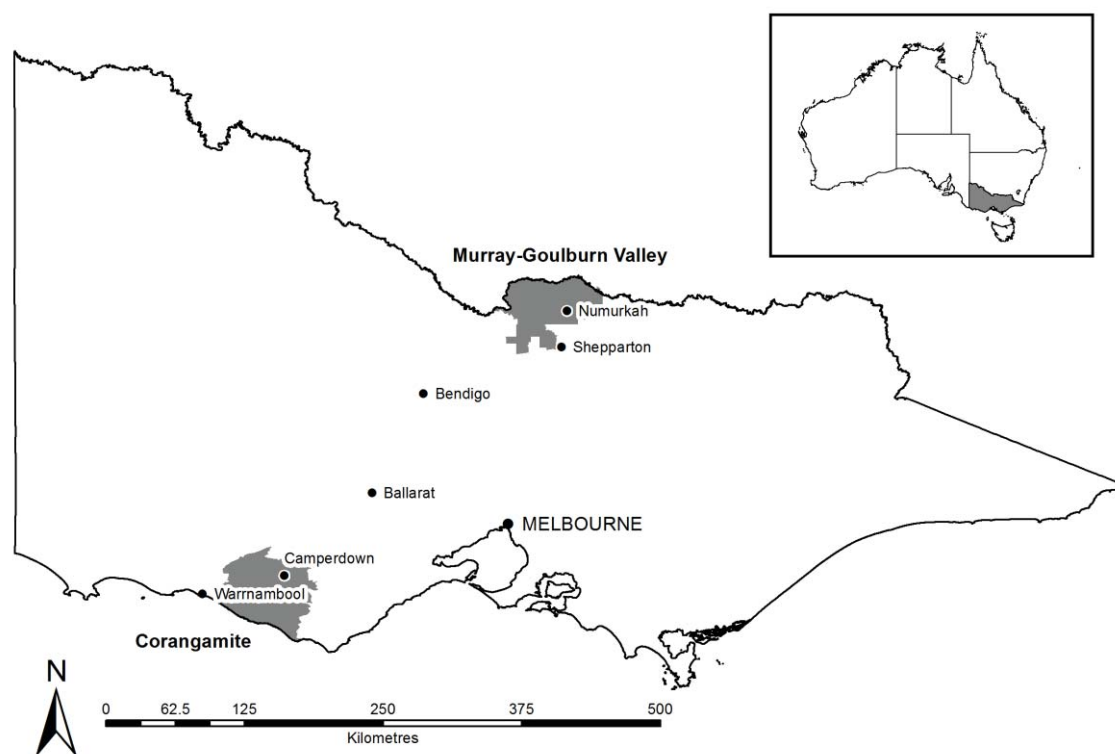
### **Introducing the Study Sites**

An intensive, field-based qualitative approach was employed to examine the interaction between farmers' businesses, households, and land and water holdings. My main goals included how to understand better: 1) the ways in which farmers manage the external pressures of their wider macro-economic, social and environmental contexts in concert with the internal characteristics of their individual farms and household situations; and, 2) if these pressures in any way differ from or are similar to those experienced in irrigation districts where land and water titles have been separated, and in dry land farming districts where water trading is not permitted.

In order to elicit the necessary rich and contextualised information from which nuanced understandings of the socio-economic organisation of Australian farms in the 21<sup>st</sup> century may be achieved, this research focused upon 40 farm enterprises in two Victorian agricultural areas: the Murray-Goulburn Valley ( $n = 21$ ) and Corangamite ( $n = 19$ ) (Figure 1 next page). By 'farm enterprise' I mean a land parcel or group of land parcels enrolled in agricultural activities by an individual or group of individuals who have the power to commit the land to one or another productive purpose. The land may be owned by an individual, group of individuals and/or other legal entities who may or may not be the same individuals who have operational control over the land. The term farm enterprise also refers to a business that supports at least one household (either an individual or a group of individuals living together who share expenses), and to a business in which members of the respective households have varying degrees of involvement in the management and operation of the farm.

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<sup>5</sup> See Appendix 1 for more detail regarding the process of study site selection for the wider ARC Project.



**Figure 1: Map of Victoria showing the location of the two study sites**

It is important to note that the selection of the Murray-Goulburn Valley and Corangamite as the study sites does not imply an intention to make broad generalisations about the socio-economic organisation of Australian farms – or even Victorian farms – and how they might be impacted by changes in property rights. Rather, the Victorian agricultural and water management contexts, and specifically these two regions, were seen as having relevance to the central debate of this thesis regarding farm organisation and agrarian change in the context of Australian water reform.

The thesis topic demanded the inclusion of an irrigation region and a dry land region which otherwise shared broadly similar attributes. The Murray-Goulburn Valley, an irrigated region, provided the necessary context in which the separation of land and water titles had particular significance. Corangamite, a dry land farming area, provided a region in which the broader socio-economic organisation of Victoria agriculture could be explored. For this reason, Corangamite made a unique contribution to this study. As outlined above, other research that has investigated the impact of water markets and farmers' use of trading opportunities has typically focused solely upon irrigation areas. In this study, the Corangamite study site, wherein the traditional property regime for land and water remains intact, served as a means to provide further insight into the organisation and nature of Victorian agriculture more generally. In turn, the in-depth farm development narratives were not constrained to an irrigation context alone.

The agricultural composition of both study sites was broadly similar, with dairy dominating and dairy intensification occurring roughly around the same time under similar political agendas. Dairy farming, in general, is one of the most intensive farming systems. And irrigated dairy farm systems have the highest percentage of agricultural water usage in all of Victoria (Australian Bureau of Statistics, 2013c). Thus, although the dairy industry was not specifically targeted, dairy farms provided an interesting and dynamic context in which to study the socio-economic organisation of farming. Also, selecting study sites with similar agricultural industry profiles seemed sensible because it allowed for relatively easy analysis without confounding variables associated with a more diverse group of industries.<sup>6</sup>

The Murray-Goulburn Valley and Corangamite are two of the three dominant dairying regions in Victoria.<sup>7</sup> Although dairy farming is a major agricultural industry in both regions, the presence of horticulture renders the Murray-Goulburn Valley more diverse than Corangamite.<sup>8</sup> There has also been a more severe contraction in the Murray-Goulburn Valley dairy industry than in Corangamite. Between 2001-02 and 2010-11, the number of dairy cattle in the Murray-Goulburn Valley fell from 150,000 to 113,000, while in Corangamite dairy cattle numbers increased very slightly (248,000 to 252,000). This was likely a reflection of the reduced availability of irrigation water in the Murray-Goulburn Valley during the Millennium drought (HMC Property Group, 2010).

The development of strong dairy industries in both regions reflects their more recent stages of agricultural development. In earlier times, both regions were traditionally dry land farming areas specialising in sheep farming and/or cropping. The historical trajectories of the study sites towards dairying, however, differed slightly for each study site. Understanding these trajectories is particularly important as they impact upon the character of the regions today. In effect, the ways in which farmers organise their agricultural production are historical artefacts of past government policies (e.g., surveyed land parcel size; subsidies, deregulation), as discussed in the two following sections.

### Agricultural Development in the Murray-Goulburn Valley

The Murray-Goulburn Valley<sup>9</sup> is located in northern Victoria, approximately 220 kilometres north of Melbourne (see Appendix 3). Goulburn-Murray Water (G-MW) provides the area's irrigation services; and, the two main irrigation systems are the Murray system and the

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<sup>6</sup> Extended justification for the inclusion of these two study sites is provided in Appendix 1.

<sup>7</sup> The third area is Gippsland, located southeast of Melbourne.

<sup>8</sup> See Appendix 2 for a comparison of the study sites' agricultural and land use characteristics.

<sup>9</sup> Consistent with the areas used in the wider ARC Linkage Project, the geographic extent of the Murray-Goulburn Valley region is defined by eleven 2010 Australian postcodes (3620, 3629, 3635, 3636, 3637, 3638, 3639, 3640, 3641, 3644 and 3649).

Goulburn system. Shepparton-Mooroopna, to the south of the study site, is the nearest regional centre with a population of 42,741 (Australian Bureau of Statistics, 2012a).

European agricultural settlement began in the Murray-Goulburn Valley in the mid-19<sup>th</sup> century with the establishment of large-scale pastoral leases, many of which changed hands frequently (Bossence, 1979; Dunlop, 1978). The Victorian Land Acts (implemented from the 1860s onwards) broke up these large farms in order to make land available to “men with little capital, who wanted the feeling of security that ownership of land generally aroused in men’s minds” (Dunlop, 1978, p. 30). This land policy led to the creation of smaller farms of not more than 320 acres.

The dry land primarily wheat growing farms that emerged over subsequent decades resulted in the region becoming known as ‘the granary of Victoria’ (Bossence, 1979; Sigley & Sigley, 2001) However, this reputation changed following the cessation of World War II when the state government compulsorily acquired 60,000 acres of agricultural land owned by 110 people at the time<sup>10</sup> in order to develop one of the many agricultural settlements for returned servicemen (Bossence, 1979). This area became known as the Murray-Goulburn Irrigation Area, a scheme that transformed the area to irrigated dairying and horticultural usage (Bossence, 1979).

The settlement scheme, which was completed in 1956, comprised dairy farms of between 80 and 170 acres. Blocks were designed to have 80 acres of commandable land (land that is suited to irrigation), with a water right of 100-acre feet,<sup>11</sup> specifications recommended by the State Rivers and Water Supply Commission. Orchard blocks were limited to a minimum of 45 acres with at least 40 acres of commandable area and 50-acre feet of water right (which was increased to 80-acre feet once the trees began fruiting) (Smallwood, 2011). The success of this settlement scheme was largely attributed to the development of irrigation (Moir Shire Council, 2010). Upon its completion, 436 ex-servicemen and their families were settled at a cost of £2,127,604 (Bossence, 1979). This government initiative was perhaps the single most influential event to impact on the structure of farm businesses in the Murray-Goulburn Valley. Although 60 years have passed since the completion of the scheme, today, the size and capital structure of each farm is partially a result of surveying decisions made during the 1940s and 1950s (e.g., land parcel size and location of irrigation/drainage infrastructure).

The planned expansion of the dairy industry in this region had flow-on effects for the Victorian dairy processing industry. In 1949, at a meeting of dairy farmers in Katunga, it was unanimously agreed that a new co-operative amalgamating many smaller dairy factories should be formed. The first factory of the co-operative opened in Cobram in 1951 (Murray Goulburn

<sup>10</sup> Many of the landowners who opposed the compulsory acquisition formed the Murray Valley Landholder’s Protection League. But, their efforts were unsuccessful. Eventually, most of the landholders sold to the government of the day (Bossence, 1979).

<sup>11</sup> An acre-foot of water right was a volumetric measure for water based on land area. That is, an acre foot is the volume of one acre of surface area to a depth of one foot.



Co-operative Co. Ltd., 2014b).<sup>12</sup> Today, the Murray Goulburn Co-operative, which processes approximately one-third of Australia's total milk volume, is the largest dairy exporter in Australia with approximately 2,580 supplier shareholders (Murray Goulburn Co-operative Co. Ltd., 2014a).<sup>13</sup>

Initially, the Murray Valley irrigation scheme was a planned dairy and orchard settlement. But, Britain's decision to join the European Economic Community (EEC) in 1973 was to create severe difficulties for both industries (Henzell, 2007). The resultant canned fruit crisis came to a head in the Goulburn Valley in 1976, around which time many orchards were converted into dairy farms concomitant with the implementation of the government's tree pull scheme (Smallwood, 2011). This scheme incentivised farmers to remove their orchards in order to prevent an oversupply of fruit (Bossence, 1979).

In the case of the dairy industry, the United Kingdom's entry to the EEC also reduced demand for manufactured dairy products. For example, in the five years prior to 1973, Britain imported on average 44,000 tonnes per year of butter and butter-related products. Post 1973, these imports virtually ceased (Australian Bureau of Statistics, 2004). As a consequence, Victoria's dairy herd numbers decreased during the 1970s, albeit not drastically. They subsequently stabilised during the 1980s and 1990s.<sup>14</sup>

The drought conditions that started to impact on the region in the mid-1990s began to be reflected in the water allocations made to both the Murray and Goulburn irrigation systems (see Appendix 4), adversely affecting many dairy farmers. Research suggests that between 2006 and 2010, there was approximately a 50% reduction in the land area used for dairying; and, the Moira Shire<sup>15</sup> experienced a 57% reduction in its number of dairy properties (HMC Property Group, 2010).<sup>16</sup>

Further details of the events and complexity of Victorian water reforms as they apply to the Murray-Goulburn Valley are provided in the next section of this introduction and in Chapter 3. Here one other water policy decision warrants mention. Following negotiations between the northern Victorian irrigators, an agreement was reached between the Victorian State Government, Melbourne Water and the Australian Commonwealth Government, to allocate \$2 billion to the 'Northern Victoria Irrigation Renewal Project' (NVIRP) (Australian Government, 2010). The objective of this project – known today as the 'G-MW Connections Project' – is to

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<sup>12</sup> Although Cobram is outside of the designated study area, milk from all of the Murray Goulburn Co-operative suppliers in the study area is processed at Cobram.

<sup>13</sup> The subsequent expansion of the Murray Goulburn Co-operative included processing facilities in southwest Victoria. Some study participants from Corangamite supply the Murray Goulburn Co-operative as well. Thus, the formation of the co-operative had implications for the development of the wider dairy industry.

<sup>14</sup> See Henzell (2007) for a discussion about the regional differences *vis-à-vis* the development and restructuring of the dairy industry in the 20<sup>th</sup> century.

<sup>15</sup> The Moira Shire closely resembles the boundaries for the Murray-Goulburn Valley study site.

<sup>16</sup> See also the dairy herd statistics quoted on p. 10.

modernise, upgrade and increase the efficiency of the northern Victorian irrigation network, including on-farm infrastructure (Goulburn-Murray Water, 2014a).

Today, the region's agricultural industry remains dominated by dairy production.<sup>17</sup> In 2010-11, the VACP in the Murray-Goulburn Valley was approximately \$461 million, 39% of which was the value of milk production. The next largest sector, cropping, is dominated by fruit production (\$126 million, 63% of all crop production) which contributed 27% of the total VACP in 2010-11.<sup>18, 19</sup>

### Agricultural Development in Corangamite

Corangamite<sup>20</sup> is located on the southwest coast of Victoria, approximately 190 kilometres west of Melbourne. The Corangamite region was named after Lake Corangamite, which is located east of Camperdown, the largest town in the study site. Warrnambool, which lies to the west of the study site as defined in this project, is the closest regional centre with a population of 29,284 (Australian Bureau of Statistics, 2012b; see Appendix 5).

Due to its accessibility from the sea and the establishment of port settlements along the coast, European agricultural settlement commenced several decades earlier (*circa*. 1830) than in the Murray-Goulburn Valley. Farms were initially established along the coastal edge before the heavily wooded area further inland was cleared to make way for additional agricultural development. Similar to the Murray-Goulburn Valley, the structure of this early agricultural development comprised large grazing runs operated by squatters (Sayers, 1972).<sup>21</sup> The Victorian Land Acts served to break up these large agricultural holdings and create smaller farms.

The natural rainfall of the area allowed for earlier establishment of dairy farms in Corangamite than in the Murray-Goulburn Valley, with dairies recorded as having been in the area since the mid-19<sup>th</sup> century (Sayers, 1972). Expansion of the industry was restricted, however, due to challenges associated with milk processing and distribution. In the final two decades of the 19<sup>th</sup> century, two key events occurred that allowed for an increase in the number of farm conversions to dairying. The first, which involved technological advancement (e.g., the on-farm milk separator), increased the efficiency and hygiene of separating the milk from the cream. The second event occurred in 1888 when, at a meeting of the Warrnambool Chamber of Commerce, the idea of establishing a dairy cooperative was proposed. But, despite these advances and the

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<sup>17</sup> Although the horticultural industry is more concentrated around Shepparton, this southern part of the region is outside the boundaries of the study site as defined in this research.

<sup>18</sup> See Appendix 1 for VACP data from the last three agricultural censuses.

<sup>19</sup> VACP data for the Murray-Goulburn Valley was derived using the appropriate correspondences to mathematically reassign data from local government areas, as reported in the Australian Bureau of Statistics' Agricultural Census, to the postcodes that comprise the study site.

<sup>20</sup> Also consistent with the areas used in the wider ARC Linkage Project, the geographic extent of the Corangamite region is defined by eight 2010 Australian postcodes (3260, 3264, 3265, 3266, 3267, 3268, 3269 and 3270).

<sup>21</sup> See footnote 1, p. 3.



expansion of dairying, Sayers (1972, p. 122) described the character of dairying in southwest Victoria during the early 1900s as follows:

Until the middle 1930s thirty-cow hand-milked herds were the usual strength of the herd. Three milkers were the average labour need, usually the family unit. It was unremitting work for the adults; drudgery for children. Milking sheds were little more than shelters, as a rule; holding yards were slush heaps in bad weather.

Further innovations that were adopted on-farm during the 1940s (e.g., milking machines, concrete yards, hot water and milking houses) improved the working and hygiene conditions of dairies in the area. The milking machine, for example, enabled herd numbers to increase; now, an individual could milk 40-50 cows alone. Subsequently, in the 25-year period prior to 1970, herd sizes increased from 60 to 130-140 cows on holdings of approximately 400 acres (Sayers, 1972). At the same time, the number of dairy farms in the region expanded through an ambitious civilian farm settlement scheme that was pursued from 1960 to 1976 in an area known as the Heytesbury.

The Heytesbury Settlement scheme had the same basic objectives as the post-World War II soldier settlement schemes; that is, to settle men and their families on farms that were defined as economic units (Fisher, 1997). While soldier settlements were a feature of agricultural development in Corangamite (e.g., the Marida-Yallock Estate near Terang and the Wiridgil Estate near Camperdown), none of them matched the size of the Murray-Goulburn Irrigation Area (Smallwood, 2011). The Heytesbury Settlement, however, which was of similar size (376 settlers established<sup>22</sup> on 29,300 hectares), increased the number of dairy cattle in the region by 25,000 head. Initially, temporary five-year leases were issued. They were later extended to full purchase leases after the settlers met their obligations in terms of on-farm improvements and stocking rates (Fisher, 1997). Apart from a short halt to the project that occurred during the early 1970s as a result of the downturn in the dairy industry (primarily caused by Britain's decision to join the EEC, see previous section), the Heytesbury project contributed significantly to the local economy for almost 30 years.

Despite the above mentioned advances made in Corangamite dairying, economic difficulties persisted into the 1980s, compounded by the 1982-83 drought which culminated in the Ash Wednesday fires<sup>23</sup> on 16 February 1983 (Jackson, 1994). The Millennium drought at the end of the 20<sup>th</sup> century, which also adversely affected southwest Victoria, resulted in the region coming under an exceptional circumstances declaration for three consecutive seasons (2006-07, 2007-

<sup>22</sup> Original estimates suggested that the development would result in 500 new dairy farms (Fisher, 1997).

<sup>23</sup> Ash Wednesday is one of Australia's most well-known fire events that caused widespread damage to property and 72 deaths in Victoria and South Australia. In the northwest of the Corangamite study site, the Cudjee/Ballangeich fire spread across 50,000 hectares resulting in the loss of 9 lives and 872 buildings (Department of Environment and Primary Industries, 2014c).

08, 2008-09, see National Rural Advisory Council, 2007, 2008, 2009).<sup>24</sup> As a result of broader dairy industry restructuring, the number of dairy farms in the wider southwest Victorian region decreased from 2,090 farms in the 1999-00 season to 1,520 farms in the 2011-12 season (WestVic Dairy, 2014).

Today, the Corangamite agricultural economy remains dominated by dairy production. In 2010-11, the VACP produced in Corangamite totalled \$543 million, 65% of which comprised the value of milk.<sup>25, 26</sup> Forestry, fisheries and tourism (particularly the Great Ocean Road) are also important industries in Corangamite.

### **Property Rights for Water and Market-Based Instruments: The Victorian Context**

The creation of exchange values for water, and a market in which water products can be traded, is the primary mechanism for allocating surface water resources in Australia. But, this method of allocation has only emerged in the last 30 years. The management of Australia's water resources for the purposes of agricultural production has a much longer history dating back to the late 19<sup>th</sup> century when the severe impacts of drought upon a newly-established form of permanent agriculture (Davidson, 1981; Harris, 2005) made water management a "key social and political issue" in the colony of Victoria (Smith, 1998, p. 151). This situation catalysed a series of legislative changes, but the problem of securing reliable water supplies for agriculturalists persisted. Significant investment in water storage and delivery infrastructure was imperative.

Subsequent works and infrastructure projects, combined with further legislative changes spearheaded by Alfred Deakin, Victoria's first Minister for Water Supply, meant that Victoria historically led the way for water resource management in Australia (Rankin, 2013). In particular, *The Irrigation Act 1886 (Victoria)* served as the original legislation upon which all future Australian water laws would be based.<sup>27</sup> This legislation established the original principles of water management, the most important among which was to clarify that proprietary rights to water were vested in the government. This nationalisation of rights enabled the government to proceed with large-scale water delivery infrastructure projects that would

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<sup>24</sup> In Australian agriculture, an exceptional circumstances declaration initiates the availability of a range of government support provisions for farmers.

<sup>25</sup> See Appendix 1 for VACP data from the last three agricultural censuses.

<sup>26</sup> VACP data for Corangamite was derived using the appropriate correspondences to mathematically reassign data from local government areas, as reported in the Australian Bureau of Statistics' Agricultural Census, to the postcodes that comprise the study site.

<sup>27</sup> It should be noted here that an earlier report by G.A. Gordon (Chief Advisory Engineer of Water Supply to the Victorian Board of Works) and Alexander Black (Victorian Assistant Surveyor General) concluded that large-scale irrigation projects were unlikely to be successful in the Australian context. Davidson (1969, 1981) provided two excellent accounts of the difficulties encountered when establishing and maintaining irrigated agriculture in Australia.

ensure the distribution of water to land holders for the purposes of irrigated agriculture (Rankin, 2012). To this end, the legal nexus between water access and land ownership was established; that is, land ownership (or legal occupation) was a prerequisite to being able to access water for agricultural purposes.<sup>28</sup>

These statutory arrangements persisted for almost a century until new ways of managing water resources began to emerge in the 1980s. Consistent with the reforms taking place in other Australian jurisdictions, a system of transferable entitlements became the preferred approach to meet competing demands for water. This change to Victoria's water management system followed recommendations made in the 1980s to the effect that "the existing nexus between the title to land and the entitlement to water [should] be broken so as to permit the transfer of water more in accordance with the economic needs of users" (Public Bodies Review Committee, 1984, p. 243).<sup>29</sup> Herein lay the foundations for managing water resources on the basis of market principles that were largely contrary to those established 100 years earlier (Rankin, 2012).

At this point, two key terms require definition: 'a water access entitlement' and 'a water allocation'. A water access entitlement (often shortened to 'water entitlement'), or 'water right' to use the historical terminology, is what was tied to land and granted the legal occupier of the land access to water resources. In the pre-water trading system, water rights were effectively granted for a fixed term and, from a legal perspective, could be cancelled or amended by the relevant authorities without compensation (McKay, 2008). In the current system, a water entitlement represents "a perpetual or ongoing entitlement to exclusive access to a share of water from a specified consumptive pool"<sup>30</sup> (National Water Commission, 2011c, p. 138). A water allocation is the specific "volume of water allocated to a water access entitlement in a given [irrigation] season... The size of the allocation depends on how much water is available in the water resource in that season" (National Water Commission, 2011c, p. 138).<sup>31</sup> Water entitlements and water allocations are typically expressed in megalitres (ML).

These new statutory arrangements were put in place by the Victorian *Water Act 1989*, which remains the overarching piece of legislation governing water management in the state. Initially,

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<sup>28</sup> This trajectory for water management was reinforced in 1905 with the passing of the *Water Act 1905 (Victoria)* (Rankin, 2012).

<sup>29</sup> These recommendations which were part of a broader review of the "efficiency, effectiveness, structure and role of Victoria's public bodies" (Public Bodies Review Committee, 1981), commenced in 1980. This process included an extensive review of non-metropolitan water industry structures and institutions. The Public Bodies Review Committee charged with the review had powers to recommend changes to public bodies, including how and over what period change should be implemented.

<sup>30</sup> The consumptive pool is "the amount of water resource that can be made available for *consumptive use* in a given water system under the rules of the relevant plan". Consumptive use is the "use of water for private benefit consumptive purposes including irrigation, industry, urban and stock and domestic" (Intergovernmental Agreement on a National Water Initiative, 2004, glossary; original emphasis).

<sup>31</sup> There is some variation in the specific terminology between Australian jurisdictions. In an effort to avoid confusion and to remain consistent with the terms most commonly used in the literature, the National Water Commission's terminology is used throughout this thesis.

only temporary trading – the trading of water allocations – was permitted,<sup>32</sup> two years later, permanent trading – the trading of water entitlements – was introduced.<sup>33</sup> While trading of water products was now possible, changes were introduced incrementally amidst concerns about the potential adverse consequences, such as negative regional economic impacts, potential for stranded assets, and ideological unease about the commoditisation of a public resource (National Water Commission, 2011c). This degree of caution was also reflected in a gradual refinement and loosening of regulations and trading rules including the introduction of interstate trade (formally agreed to in 2006) and the final legal separation of land ownership and water access ownership culminated in 2007-08 (National Water Commission, 2011c; Order declaring water systems in Northern Victoria, 2007; Order declaring water systems in Southern Victoria, 2008).<sup>34</sup> While the tie between land and water had been partially severed when permanent or entitlement trading was introduced, water entitlements remained tied to land somewhere; that is, when traded, a water entitlement would dislocate from the land parcel of origin and re-attach to the destination land parcel. In contrast, formal separation allowed for water entitlements to be purchased by non-land owners.

Under the new arrangements, the tariff system for water was also overhauled through a process of ‘unbundling’ which separated water rights into three distinct components: ‘a water share’, ‘a water delivery share’, and ‘a water use licence’ (Figure 2 next page).<sup>35</sup> This was the water ownership system to which the Murray-Goulburn farmers who participated in this research were exposed. At the time of unbundling, all water entitlement owners were granted high reliability, low reliability water shares, a water-use licence; and, water delivery shares which were attached to the respective land parcels. This process required the involvement of a range of rural actors including farmers’ lending institutions and the relevant water management authorities.

The rationale behind these changes was the argument that farmers would benefit from greater flexibility in how they managed and structured their agricultural businesses. It would enable farmers to more easily liquidate their water rights, thus freeing up capital to invest in other aspects of their enterprises. Water could then be leased back from people owning water entitlements. Farmers would also have greater flexibility in terms of their borrowing

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<sup>32</sup> Temporary trading, which began slightly earlier, gained momentum once the *Water Act 1989* (Victoria) came into force (National Water Commission, 2011c)

<sup>33</sup> It should be noted here that entitlement trading within irrigation districts (introduced in 1991) was permitted for three years prior to entitlement trading between irrigation districts (introduced in 1994) (Department of Natural Resources and Environment, 2001).

<sup>34</sup> These legislative changes came into effect in the northern Victorian irrigation districts on 1 July 2007; specifically the Broken, Bullarook, Campaspe, Goulburn, Loddon, Murray and Ovens water systems (Order declaring water systems in Northern Victoria, 2007). Parts of each of the Goulburn, Murray and Broken River systems are within the boundaries of the Murray-Goulburn Valley study site. A year later (1 July 2008), these changes were extended to the Thomson/Macalister and Werribee water systems in southern Victoria (Order declaring water systems in Southern Victoria, 2008).

<sup>35</sup> The transition from the earlier ‘bundled’ arrangements to the ‘unbundled’ arrangements is outlined in the conversion rules (Conversion rules for regulated water systems in Northern Victoria, 2007).

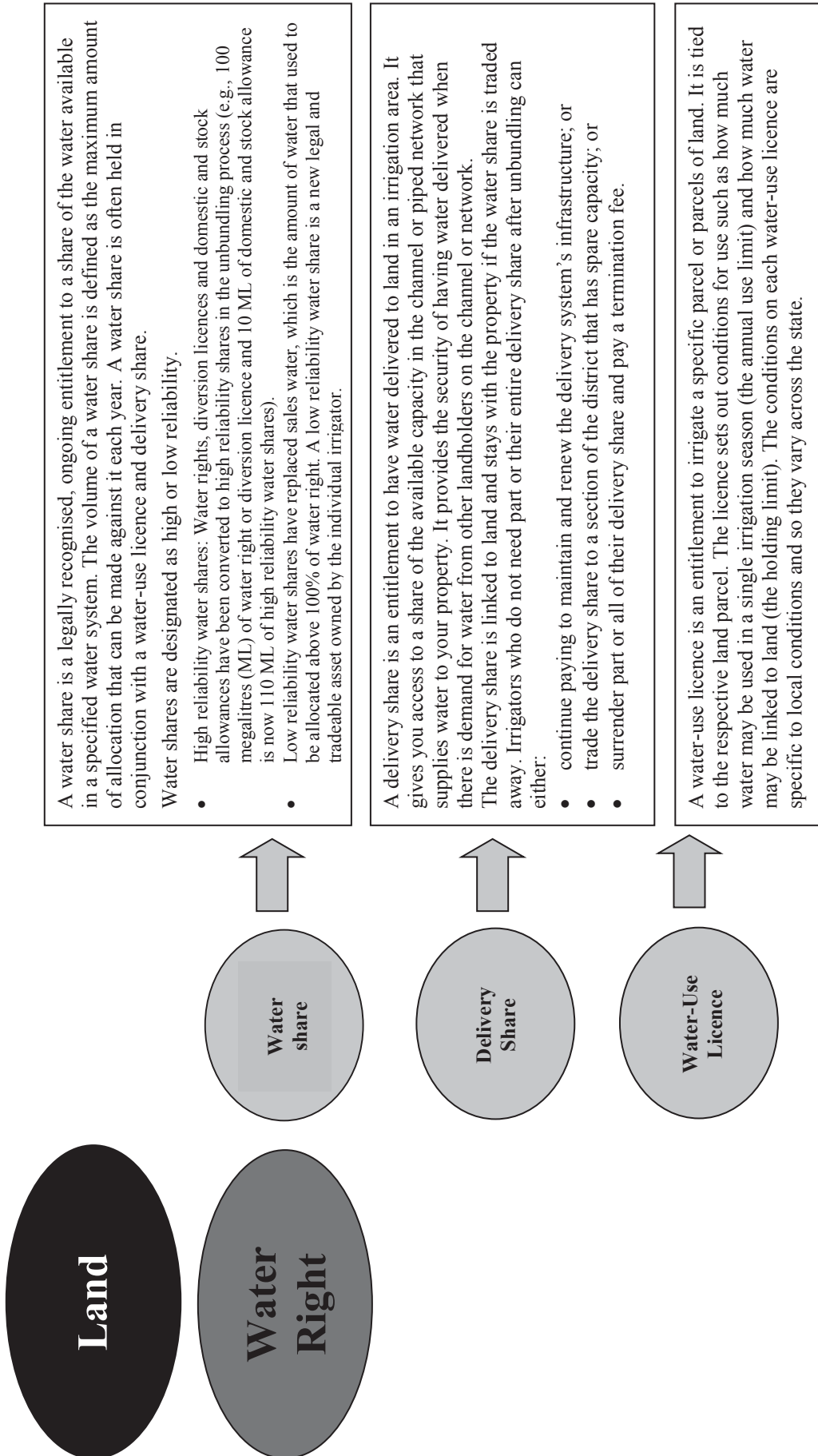
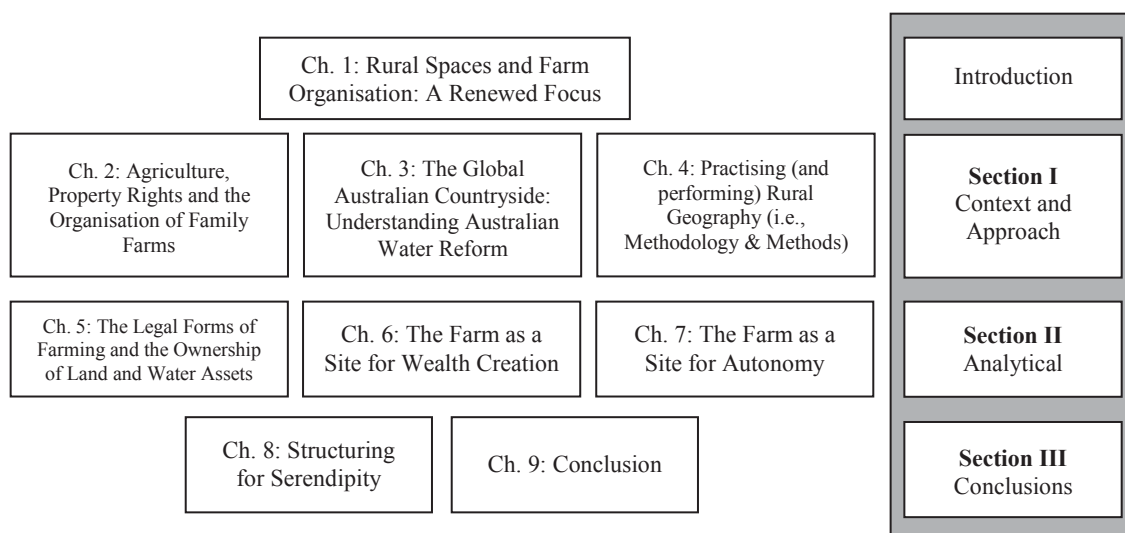


Figure 2: The 'unbundling' of water rights in Victoria (Department of Environment and Primary Industries, 2014a)

arrangements. Whereas prior to unbundling, mortgages could only be for approved for land purchases, now mortgages could be granted specifically for water shares. Farmers could better manage their water needs by adjusting the reliability and the timeliness of water delivery. Finally, farmers could now purchase water without first needing the capital outlay to purchase land as well, by extension, benefiting share farmers or leasees (Barlow & Coates, 2008). In sum, this system made available to farmers a broader range of land and water ownership structures and combinations.

## Organisation of the Thesis

This thesis is organised into three main sections: 1) the positioning of the study within the broader theoretical and methodological literature; 2) an analytical section that addresses the core research question about the separation of land and water titles and the links to how Australian farms are now organised; and, 3) conclusions that re-frame the extant models of farmers' aspirations and farm organisation according to the concept of 'structuring for serendipity' (Figure 3 below).



**Figure 3: Organisation of this thesis**

Following this introduction, the research context and approach are presented in Section I. Chapter 2, which positions this research in the broader research literature, further develops the key argument appertaining to agrarian restructuring at the farm-level and the role of property relations in farmers' decision-making with regards to the organisation of their farms. The farm organisation literature is categorised into two discrete eras: 1) the work of Whatmore et al. from the 1980s; and, 2) the work of Johnsen from the early 21<sup>st</sup> century. Taken together, these two eras of farm organisation research expose the research gap to which this study contributes.



Chapter 3 interprets Australian water reform and its historical trajectories using aspects of Woods' (2007, 2011b) concept of the 'global countryside'. Aspects of this theoretical approach provide a useful way to organise the key developments that characterise the unique contours of Australian water policy. Chapter 4 then outlines the methodological approach and methods used in this study. First, I consider the methodological implications for rural research of deliberately including everyday practices and making the place of research matter in research encounters with farmer participants. These considerations led me to employ a methodological innovation called 'farm life history' as a suitable means of engaging with the core research question of this thesis.

Second, I provide a description of the 40 Victorian farm enterprises included in this study and how I generated the life history of each farm. The final section of this chapter reflects the fact that farm life history has rarely been applied in studies of rural environs; thus, following Riley (2010) and Riley and Harvey (2007a), I offer my reflections regarding the utility of these methods for investigating the socio-economic organisation of Australian farms.

Chapters 5 to 7 comprise Section II, the analytical chapters of the thesis. Chapter 5 details the first of two parts of the analysis. Specifically, it begins to extend the current understanding of how and why Australian farm enterprises are organised in particular ways by providing a detailed examination of the legal forms and asset ownership arrangements deployed by farmers in this study. Thus, it provides the necessary contextual foundations for the second part of the analysis comprising two mutually constitutive themes explored in Chapters 6 and 7, which develop a socio-cultural analysis of the farmers' proprietary arrangements for their land and water holdings. This part of the analysis takes the form of viewing farms as sites for achieving farmers' wealth creation and autonomy aspirations.

Chapter 6 considers farms as sites for building family wealth. I elucidate this notion using a series of calculative practices that my farmer informants used to narrate the development of their farms. Farmers' calculative practices demonstrate that they have a highly refined sense of needing to calculate the economic returns on their land and water assets because they are embodied in their aspirations for creating wealth. While the metrics used and conclusions reached with regard to land assets were similar throughout the sample, the metrics used and conclusions reached by the Murray-Goulburn Valley farmers with regards to their water assets were more varied based upon the diverse ways in which water ownership aligned with their aspirations.

An examination of farms as sites for maintaining autonomy is the focus of Chapter 7. Farmers' pursuit of control over their social and economic lives is underpinned by their deliberate attempts to create sets of circumstances within which other rural actors have limited influence. Common to the wide range of circumstances created by the farmers in this study is individual

land ownership *vis-à-vis* more flexible ways for enrolling land in farm operations (e.g., leasing). In contrast, different farmers rationalised either the ownership or disposal of their water assets as a means by which they created control over their businesses and households. Crucially, farmers' decisions about the configurations of their land and water assets do not simply reflect their desires to control their present-day social and economic circumstances, they also reflect the ways in which farmers' actively seek to maintain their capacity to organise and reorganise their enterprises in the future.

The third, and final, section presents the conclusions of this thesis. In Chapter 8, the final substantive chapter, I position the preceding arguments within a reframing of the extant conceptual models of farmer aspirations. Inspired by theoretical works from Ulrich Beck, Anthony Giddens and Pat O'Malley, who contend with the ways in which risk, uncertainty and security shape everyday life, I develop the concept of 'structuring for serendipity'. Structuring for serendipity encapsulates the joint articulation of farmers' aspirations for wealth creation and autonomy, decentring the assumption that a key motivation for many farmers is to ensure that a stable farm business will be available for the next generation. Instead, it draws researchers' attention to the ways in which the notions of risk, security and uncertainty need to be elevated as critical drivers shaping farm-level responses to contemporary conditions. In the context of the core research question with which this study is concerned, structuring for serendipity reveals the ways in which persistent Australian water reforms have intensified the uncertain context within which Australian irrigators must operate. The study concludes in Chapter 9 where I summarise the thesis, acknowledge the study's limitations, and highlight its key conceptual and methodological contributions.





## Chapter 2

# Agriculture, Property Rights and the Organisation of Family Farms

## Introduction

Rural areas are in a constant state of change. Although notions of nostalgia and perceptions that rural areas are ‘backward’ and unchanging pervade popular rural discourses, residents of rural areas are constantly responding and adjusting to new conditions. New conditions are initiated by climatic events, economic developments, local council regulatory changes, central government policy initiatives, and lifecycle and family considerations. In turn, the spatial dimensions of rurality also change.

There is now a vast social science literature conceptualising the role, production and meaning of rural space. This body of literature has evolved considerably since the 1980s, due to changes in the composition of agriculture and the impact of new developments in theory, especially with respect to the ‘cultural turn’ in the social sciences. Both of these drivers have led researchers to consider the increasingly multi-faceted and contested nature of rural spaces; rurality is now much more than simply being about the production of food and fibre. However, amidst these changes, farming and the production of food and fibre remain a visible dimension of rural areas, crucial to analyses of the patterns and processes of change in rural environs. And, perhaps more importantly, agricultural production has been recognised as having a vital role in sustainable rural development from social, economic and environmental perspectives (Marsden, 2003; Marsden & Sonnino, 2008; Van der Ploeg, 2000).

This chapter builds from this contemporary scholarship with a view to developing a deeper examination of how the organisation of family farming relates to contemporary rurality. I do this by bringing together three areas of literature. First, I canvass the ways in which researchers have theorised rural change from a political economy perspective, concluding that micro-scale investigations of farm-level change usefully complement an understanding of macro-structural processes. Then, I examine the social scientific literature that offers explanations for the nature and character of the farming sector, arguing that more recent conceptualisations of family farms which position ‘the farm’ as a coalition between three domains – the farm business, the farm household and the farm property – have utility for contemporary research. In particular, I argue that exploring changes to property rights is a useful prism through which to conduct critical actor-oriented studies at the farm-level that are nested within the broader socio-economic, political and environmental contexts of farming. Third, I consider the current state of knowledge

regarding the significance of property and land tenure for farm organisation, and suggest that in the Australian context the social and economic geographies of farming can be explored via the separation of land ownership and water access ownership. I conclude the section by reviewing the Australian-based research that reports farmers' use of the water market. Taken together, the combination of these three arguments not only comprises the unique contribution of this thesis, but gives rise to the research question that guides the inquiry: How has the separation of land ownership and water access ownership impacted upon the socio-economic organisation of Australian farm enterprises?

## Theorising Rural Change

The development trajectory for theorising contemporary rural change has been marked by researchers' recognition of the increasingly differentiated character of rural areas, both within and between regions (Marsden, 1995, 2003; Murdoch, Lowe, Ward, & Marsden, 2003). The dynamics of this increasing differentiation, which captured the attention of rural researchers towards the end of the 20<sup>th</sup> century, re-oriented the research agenda towards new, largely non-agricultural issues of rurality, initially conceptualised as 'post-productivism'. This research agenda heightened emphasis to topics such as cultural industries, mining economies, sustainability and counterurbanisation, replacing the "traditional agrarian heartland" of rural studies (Tonts, Argent, & Plummer, 2012, p. 295).

### The Emergence of the Post-Productivist Countryside

Research interests are invariably linked to observed changes in the use and regulation of rural space. These changes have given rise to notions of 'post-productivism' and 'multifunctionality' as frameworks to explain the increased role of non-agricultural interests and actors in rural space (Halfacree, 1997). The resultant diversity and spatial heterogeneity were initially conceptualised by British researchers as post-productivist (see, for example, Ilbery & Bowler, 1998; Ward, 1993). But, when closely interrogated, the post-productivist countryside proved difficult to define. It was typically considered as opposite to an earlier era of 'productivism' when there was "a commitment to an intensive, industrially driven and expansionist agriculture with state support based primarily on output and increased productivity" (Lowe, Murdoch, Marsden, Munton, & Flynn, 1993, p. 221). Wilson (2001), in his well-known review of post-productivism, identifies seven key dimensions in how it was developed *vis-à-vis* productivism: ideology, actors, food regimes, agricultural production, agricultural policies, farming techniques, and environmental impacts. Taken together, these dimensions underline the erosion

of agriculture in occupying a central, hegemonic position in rural areas and in society more generally.<sup>36</sup>

While post-productivism gained significant traction among rural scholars, its use and prevalence were widely critiqued in the United Kingdom (Evans, Morris, & Winter, 2002; Walford, 2003; Wilson, 2001), Europe (Potter & Tilzey, 2005) and Australia (Argent, 2002) because it seemed to provide an incomplete explanation of what was happening in rural areas. The key criticisms were:<sup>37</sup>

1. Post-productivism was developed in Britain, with uncertain applications and relevance to other developed economies (Walford, 2003; Wilson, 2009a);
2. Conceptual understandings tend to focus on changes in agricultural policies, and fail to adequately take into account “actor-oriented and behaviourally grounded research”, some of which indicated the enduring nature of productivism (Argent, 2002; Walford, 2003; Wilson, 2001, p. 77);
3. There was an assumed linearity whereby post-productivism was a stable state that followed an earlier period of productivism (Argent, 2002; Wilson, 2001); and,
4. Any transition to post-productivism in the developing world might differ from developed world processes (Wilson, 2001).

The explanatory power of post-productivism in the Australian context was not considered until the early 21<sup>st</sup> century (Holmes, 2006). Argent (2002, p. 107) argues that whereas “a strong case [could] be made that agricultural ‘productivism’ was pursued by [Australian] national and State governments during the post-war period”, it was considerably more difficult to prove that there had been a subsequent shift towards post-productivism. Although Argent stresses that the farming sector is experiencing one of its most intensive periods of change since European settlement, he contends that the post-productivist paradigm fails to adequately explain the marked differentiation between Australia’s rural regions, and the complex transitions being experienced and enacted at the farm-level. That is, because not all rural areas have equal opportunity to take advantage of activities considered post-productivist, and attitudinal change among rural actors will be spatially and temporally uneven. With regards to the latter, productivism seems to persist as strong determinants of the socio-economic, cultural and environmental character of some rural areas (see also Burton, 2004).

The inadequacy of post-productivism to explain the complexity of rural change was also noted in the British context wherein it originated. Wilson (2001) sees this as a reflection of the widespread use of political economy approaches by rural researchers that emerged during the 1980s. Early discussions of post-productivism, built upon a similarly structuralist perspective,

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<sup>36</sup> See Wilson (2001, pp. 80-81) for a full discussion and key references.

<sup>37</sup> Wilson (2007) discusses each of these criticisms according to four fallacies: 1) the fallacy of spatial causality; 2) the fallacy of spatial homogeneity; 3) the fallacy of temporal linearity; and, 4) the fallacy of global universality.

also tended to focus upon policy changes at the level of the nation-state (Argent, 2002; Wilson, 2001). Consequently, investigations of macro-structural processes tended to dominate the agenda, resulting in a dearth of micro-scale research.

### Towards Greater Theoretical Sophistication: Multifunctionality and Multifunctional Rural Transitions

Researchers have sought to address the limitations of post-productivism by arguing that rural spatial transitions should be viewed as a spectrum along which both productivist and post-productivist forms could co-exist (Wilson, 2001, 2007).<sup>38</sup> This perspective is particularly useful because positioning productivism and *non*productivism (the true opposite of productivism) as the two end-points on a continuum neatly brings together two sets of knowledge regarding how the role of – and the value placed upon – agricultural production has been transformed in western nations: the productivist/post-productivist literature already discussed and the literature exploring notions of ‘multifunctionality’.<sup>39</sup>

While the idea that agriculture has multiple functions other than food and fibre production is not new, the concept of multifunctionality as a way to understand contemporary rural transitions is a more recent development. Used in these ways, ideas of multifunctionality originated in Europe largely in response to debate surrounding the role of agriculture in society and the economy in the wake of declining farm incomes, and recognition that rural development initiatives must be broadened to include non-agricultural actors and activities (see 'The Cork Declaration', The European Conference on Rural Development, 1996). Wilson (2001, 2007) contributes greater conceptual clarity to the notion. Drawing on transitional theory, he defines multifunctionality as a “conceptual territory bounded by the two extreme agricultural transition pathways of productivism and nonproductivism – a space that, compared to the [productivist/post-productivist] transition model, better encapsulates the temporal non-linearity, spatial heterogeneity, global complexity, and structure-agency inconsistency that characterizes agricultural and rural decision making across the globe” (Wilson, 2009a, p. 379).

Multifunctionality has resonated more strongly among Australian rural researchers than post-productivism (see, for example, Argent, Smailes, & Griffin, 2007; Holmes, 2006, 2008; Smailes, 2002). Holmes (2002, 2006, 2008, 2012), one of the strongest proponents of multifunctionality as a way of understanding rural change in Australia, advocates for a broadening of the concept to explain rural transitions beyond those solely related to changes in

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<sup>38</sup> Earlier, Ilbery and Bowler (1998) had argued that productivist and post-productivist processes ran parallel.

<sup>39</sup> ‘Multifunctionality’ is perhaps the most frequently used term to describe the multiple functions of agriculture and rural space. However, Wilson (2001, p. 77) proposed the term ‘multifunctional agricultural regime’; claiming it “better encapsulates the diversity, non-linearity and spatial heterogeneity that can currently be observed in modern agriculture and rural society”.

the agricultural sector.<sup>40</sup> Thus, transitions in rural environs can be understood as a “radical reordering in the three basic purposes underlying human use of rural space, namely *production*, *consumption* and *protection*” (Holmes, 2006, p. 142; original emphasis). Holmes’ (2006, p. 158) conclusion is that the defining feature of contemporary rural transitions is a shift away from the monofunctional use and regulation of rural space “in which production values, notably agricultural, held sway... towards complex, often dynamic and contested multifunctional modes, involving a variable mix of consumption and protection values, alongside production”.<sup>41</sup> Although notions of multifunctionality seem to address the diversity of contemporary rural experience more comprehensively than post-productivism, research efforts tend to be policy-based or economic in perspective. There is a paucity of research that adequately explores the “geography of multifunctionality” at a range of scales, including at the farm-level (Wilson, 2009b, p. 269).

Irrespective of whether it was conceptualised across a spectrum of productivist/non(post)-productivist action, multifunctionality, or multifunctional rural transitions, this body of literature paints a picture of the nature and characteristics of contemporary rural change as increasingly complex. Taken together, these conceptualisations make room for productivist agriculture to remain one of many different usages of rural environments. Despite this, these theoretical developments have, in some respects, resulted in the rural literature being dominated by research concerned with the post-productive or multifunctional aspects that originally catalysed these developments within rural studies. In Australia, this is most clearly seen in the strong research emphasis on agri-environmental schemes and governance, the development of alternative food networks, and in amenity migration patterns, for example. Following the spike in global commodity prices in 2008, however, an intense spotlight was directed towards food production systems; and, narratives of food security for a growing world population “re-invigorated reliance upon the conventional agri-food paradigm and its associated packages of technologies” (Horlings & Marsden, 2011, p. 441). Researchers’ interests in the productive aspects of agriculture were similarly renewed (Almås & Campbell, 2012; Burton & Wilson, 2012).

### The (Re)emergence of Productive Agriculture: Neo-Productivism

In response to the shortcomings of post-productivism and multifunctionality, a small group of researchers have developed theorisations to explore the persistence of intensive, specialised agricultural systems (Burton & Wilson, 2012; Dibden & Cocklin, 2005; Evans et al., 2002;

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<sup>40</sup> Wilson, himself, acknowledged his own conceptualisation was narrowly defined (see Wilson, 2001, 2007).

<sup>41</sup> Holmes argues that differing combinations of these three values have produced seven ‘modes of occupance’ in rural Australia: productivist agriculture; rural amenity; small farm or pluriactivity; complex multifunctionality; marginalised agriculture; commodified nature; and conservation (see Holmes, 2006, 2012 for a full explanation).

Marsden & Sonnino, 2008; Potter & Tilzey, 2005; Tilzey, 2000). These attempts take into account the different political contexts – Britain, Europe, Australia and New Zealand – in which the research was conducted, but all focus upon the ways in which relations between market rule, agriculture, rural society and government are re-worked and re-aligned.

Perhaps the first conceptualisation of the ways in which productive objectives remain important in the countryside was ‘neo-productivism’, a term seemingly coined by British researchers Morris, Evans and Winter (1999). In their critique of ‘post-productivism as the new orthodoxy’, Evans et al. (2002, p. 328) use the term to describe the “extension of productivist principles in agriculture” within more sustainable farming systems.<sup>42</sup> However, neo-productivism failed to capture serious research attention until Burton and Wilson (2012) re-launched the concept, arguing it is a useful umbrella term to bring greater conceptual clarity to an otherwise piecemeal literature. Burton and Wilson identify four strands of neo-productivism: market productivism, competitive productivism, cooperative productivism, and repositioned productivism (see Appendix 6).

The concept and typology of neo-productivism is crucial to any understanding of agriculture and the regulation of rural space because it redirects one’s attention towards the persistence and importance of productivist forms of agriculture. Yet, the approach developed by Burton and Wilson remains a political economy of agriculture. It explains the relations between the government, the market, and the agricultural sector, and does not take into consideration farm-level objectives and change. It may be argued that such macro-structural concepts are neither intended to incorporate events and processes at smaller scales, nor to explain farm-level dynamics. Wilson (2009b, p. 278), however, suggests otherwise. Articulating his conceptualisation of agricultural multifunctionality as a “spatially complex nested hierarchy”, he argues that these complex processes need greater interrogation at a range of scales. Unless researchers grapple with the spatiality of the productive aspects of rural and agricultural change, like post-productivism, concepts of neo-productivism can only provide partial explanations of the ways in which farmers organise their economic and social lives. In much the same way as non-agricultural research topics were pursued following the development of post-productivism, contemporary micro-scale research, that attempts to uncover the ways in which neo-productivist processes are experienced by farmers, evinces a research gap worthy of attention.<sup>43</sup> In the next section, I return to the “traditional agrarian heartland” of rural studies (Tonts et al., 2012, p.

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<sup>42</sup> Evans et al. (2002, p. 328) point out that their use of the term neo-productivism “in no way implies that agriculture has shifted from productivism to neoproductivism in a dualistic sense”.

<sup>43</sup> This is not an altogether new observation. In the 1990s, writing in the context of another macro-structural theory, Buttel (1996, p. 33) argued that “the globalization perspective needs to ‘bring agrarian sociology back in’ and devote more attention to farm- and farm household-level dynamics and implications of world-economic integration. ... It remains crucial to research structures and conditions of farming. The structures and practices of agriculture are critical not only because these are important in rural livelihood configurations and rural economies. They are also the single most important factor shaping the environmental effects of agri-food systems”.



295) by examining the social scientific literature in which researchers have explored ‘the farm’ as a topic of investigation, what I term ‘the socio-economic organisation of family farming’.

## The Socio-Economic Organisation of Family Farming

Rural researchers have wrestled with the agrarian question for some time. In general terms, the subject of enquiry has been the trajectory of agricultural change from a population of smallholder family farm enterprises to capitalist farms from which ‘the family’ has been removed. Researchers have repeatedly concluded, however, that farming organised around a family unit indeed persists in contemporary rural space, albeit in dynamic and changing forms (see, for example, Brookfield, 2008; Cheshire, Meurk, & Woods, 2013; de Raymond, 2013; Johnsen, 2003, 2004; Pritchard et al., 2007; Roberts, 1996). These observations prompted Brookfield (2008) to challenge the research community to reorient their subject of enquiry to questions that interrogate why family farms continue to survive and why they are likely to survive in the future.<sup>44</sup> In line with Brookfield’s challenge, in this section I present the second assertion that underpins the research question addressed in this thesis: changes to the property regime underlying agriculture represent a useful lens through which critical actor-oriented studies that are nested in the broader context may be conducted. To date, there is insufficient research examining the organisation of family farms from the perspective of changed property rights. Attention is drawn to the potential influence of property rights upon farm organisation through Johnsen’s (2003) conceptualisation of family farms as coalitions between three domains: the farm business, the farm household; and, the farm property.

Family farming has not always been conceptualised this way. Prior to the 1970s and 1980s, academicians’ interest in farm families was limited to the chance inclusion of rural community studies (Gasson et al., 1988).<sup>45</sup> Despite not being a rural researcher,<sup>46</sup> Stinchcombe’s (1961) class-based analysis, which focused upon the extent to which farm capital had been separated from the farm labour process in western economies, represented one of the first attempts to create a typology of the different forms of agricultural production (i.e., the manorial, the family-sized tenancy, the family smallholding, the plantation, and the ranch). His five-fold typology, which was based upon differing combinations of four dimensions (property rights, life-style, political participation and legal privilege), was heavily critiqued by Goss, Rodefeld, and Buttel

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<sup>44</sup> Earlier, Munton and Marsden (1991, p. 109; original emphasis) wrote that researchers needed “to emphasize the continual *transformation* of the family farm rather than its resilience as a form of production”.

<sup>45</sup> Gasson et al. (1988) noted the dominance of economic perspectives in studies of agriculture throughout the 20<sup>th</sup> century, perspectives that also tended to ignore farming families.

<sup>46</sup> Stinchcombe is an American sociologist interested in law and society; science and technology; and, economy and society (Department of Sociology, Northwestern University, 2013).



(1980) who argued that his work was too descriptive and lacked explanatory power.<sup>47</sup> In response, Goss et al. (1980) rigorously applied Marx's theory of capitalist development to American agriculture, creating their own four-fold stratification of farm businesses based on occupational differentiation.<sup>48</sup> The four farm types identified were: 1) family-type farms, 2) tenant-type farms, 3) industrial-type farms, and 4) larger than family-type farms. The key factors differentiating these types were the amount of land and capital owned by the farm operator and the amount of labour provided by the operator.

Class analysis was short-lived, however. First, it seemed to have had little relevance for agriculture and rural societies in developed nations (Brookfield, 2008); and, second, these static typologies failed to satisfy British researchers who, in the 1980s, sought to apply political economy perspectives to rural change.<sup>49, 50</sup> According to Whatmore, Munton, Little, et al. (1987, p. 24), the major shortcomings of these typologies were that:

...the key sets of relations defining groups [or farm types] may or may not coincide with the observable, morphological features of the phenomena being studied. For example, farms of the same acreage, tenure and business structure may well not be categorised as a single type despite these similarities because their economic and technological conditions of production and their structural position in relation to the wider agro-industrial food complex are critically different.

In other words, the key causal mechanisms of farm development and farm restructuring were obscured by researchers' focus upon identifying farm 'types'. Notwithstanding this critique, these early typologies drew attention to the roles of land and property in farming, issues I address in the next section of this chapter. Before doing so, however, I consider the body of literature in which researchers have addressed the dynamics of farm organisation. This literature can be loosely divided into two eras: 1) subsumption and the processes underlying the nature of farming; and, 2) farms as three-way coalitions. These two eras of research are separated by a period of time in which researchers' directed attention towards the concept of farm adjustment strategies.

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<sup>47</sup> Stinchcombe's typology was not based on empirical work.

<sup>48</sup> Goss et al. (1980) used statistics reporting the economic and social structure of American agriculture to construct their typology.

<sup>49</sup> Notably Terry Marsden, Sarah Whatmore and Richard Munton (see, for example, Marsden et al., 1986).

<sup>50</sup> See also the edited volume by Cox, Lowe, and Winter (1986) for a further statement on the need for a political economy of agriculture.

## Subsumption and the Processes Underlying the Nature of Farming: The First Era of Farm Organisation Research

In the 1980s, British theorists used political economy models to make visible the causal mechanisms through which family farming was being transformed under capitalism (Whatmore, Munton, Little, et al., 1987). These efforts were undertaken in the midst of debate surrounding the position and persistence of the family farm within a capitalist system that was expected to bring about its demise (see, for example, Friedmann, 1986b; Goodman & Redclift, 1985; Mann & Dickinson, 1978). The British theorists argued for “a revised conceptualization of the family farm under capitalism” and closer examination of the processes underlying the nature of farming were required, rather than simple identification of social forms (Marsden et al., 1986, p. 498). That is, “both internal *and* external relations of production” needed to be incorporated into theoretical frameworks in order to understand more fully agricultural transformations (Whatmore, Munton, Little, et al., 1987, p. 21; original emphasis).

These dynamics were theorised using the concept of subsumption, a notion describing “...the process by which relations of production become commoditised and reconfigured by the disciplines of market competition” (Whatmore, Munton, Marsden, & Little, 1996).<sup>51</sup> On-farm production processes and social relations could be transformed either directly (real subsumption) or indirectly (informal subsumption). This differentiation, in turn, created four ideal-types of farm business, against which variations from empirical work could be assessed: 1) marginal, closed enterprises; 2) transitional, dependent enterprises; 3) integrated enterprises; and, 4) subsumed enterprises.<sup>52</sup> These ideal-types are depicted in Figure 4 (next page).

Interrogation of their ideal-types of farm businesses using data from farms located in three areas of England revealed that processes of subsumption were occurring in particular ways (Whatmore, Munton, Marsden, et al., 1987). The majority of farms were clustered towards the lower ends of the direct and indirect subsumption axes; that is, the majority of farms exhibited high levels of family ownership and management.<sup>53</sup> And, processes of indirect subsumption (e.g., technological, credit and marketing relations) were more prevalent than processes of direct subsumption (e.g., ownership and management of the business, land, and other means of production).<sup>54</sup> Differences between the three study areas were suggested to be associated with differing agricultural sectors, historical practices of land tenure, and the ways in which each

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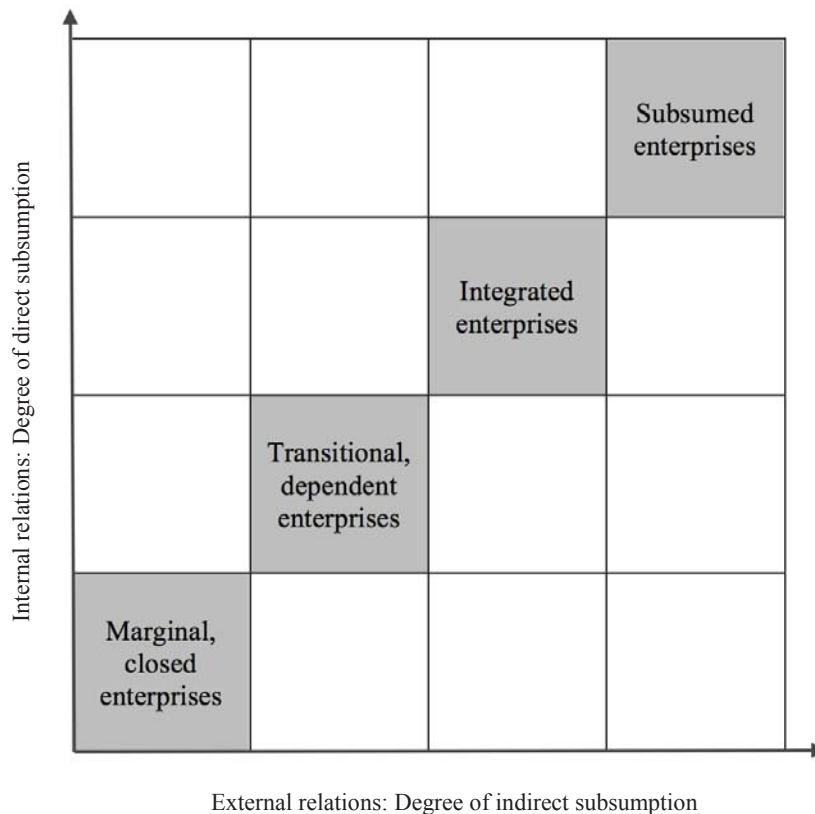
<sup>51</sup> Whatmore et al. developed their subsumption thesis in a two-part paper published in two consecutive issues of *Sociologia Ruralis* (Whatmore, Munton, Little, et al., 1987; Whatmore, Munton, Marsden, et al., 1987). Both parts are essential reading for understanding the authors’ intent and theoretical positions.

<sup>52</sup> Whatmore (1991, p. 54) relabelled these categories “to highlight the significance of an underlying transition in the organising principle of internal relations of family farms... a transition from ‘family *labour*’ to ‘family *capital*’ as the level of commoditisation increases”. Thus, ‘marginal, closed enterprises’ became ‘family labour farm’; ‘transitional, dependent enterprises’ became ‘transitional farm’; ‘integrated enterprises’ became ‘family business farm’; and, ‘subsumed enterprises’ became ‘non-family labour farm’.

<sup>53</sup> The authors argue that this pattern would likely differ if alternative measures were used such as agricultural production/output or size of agricultural holding rather than the number of farm businesses.

<sup>54</sup> Below, I discuss Marsden, Munton, and Ward (1992) who explored the implications of this finding.

area was related to neighbouring areas particularly in the case of opportunities for non-agricultural diversification (Whatmore, Munton, Marsden, et al., 1987). Accounting for spatial heterogeneity in these ways was foundational to much of the subsequent research undertaken by rural and agricultural geographers.



**Figure 4: Ideal-types of farm businesses based on degree of direct and indirect subsumption (Whatmore, Munton, Little, et al., 1987, p. 32)<sup>55</sup>**

NOTE:

Direct (real) subsumption: “the *direct* ownership and control of the means of production on the farm, the transformation of the agricultural labour process through the full commoditisation of labour relations, and a strong influence over the development of the technical means of production by corporate capitals external to the industry. In the extreme, farm family involvement is effectively eliminated” (Whatmore, Munton, Little, et al., 1987, p. 27; original emphasis)

Indirect (informal) subsumption: “the appropriation of surplus value from the farm production process by external capitals without necessarily transforming the farm production process or directly controlling the technical means of production but entailing some degree or form of *indirect* control over production relations on the farm” (Whatmore, Munton, Little, et al., 1987, p. 27; original emphasis).

The theoretical and methodological complementarity pursued by Whatmore et al. represented a major advance in the understanding of the dynamics of agricultural change at the farm-level.

This approach demonstrated the heterogeneous character of farm businesses, and the significance of local circumstances. By disrupting the dichotomy that had developed in theoretical debates between family and capitalist modes of agricultural production, Whatmore et

<sup>55</sup> See Appendix 7 for descriptions of each ideal-type.

al.'s approach challenged the accepted 'treadmill' logic that assumed a direct progression from 'family labour farm' to 'non-family farm' (Whatmore et al., 1996).<sup>56</sup> Instead, Whatmore and colleagues argued for a more nuanced conceptualisation; that is, individual farms would display "various and staggered movement up and down the [subsumption] scales as they adjusted their relations of production in response to family and business investment cycles, as well as their interaction with the wider relations of agricultural production" (Whatmore, Munton, Little, et al., 1987, p. 34).

Other rural scholars subjected Whatmore et al.'s analyses of agricultural change to intense scrutiny. Conceptual and empirical objections were raised, including the selection of indicators for assessing degrees of subsumption which, in turn, rendered the subsumption thesis as having given inadequate treatment to farmer agency and ethnographic complexity (Gilg, 1995; Moran, Blunden, & Greenwood, 1993; Munton & Marsden, 1991; Short, 1996). However, a closer reading of Whatmore et al.'s subsumptionist argument in the context of their broader research efforts weakens these criticisms. In the quote that concludes the preceding paragraph, for example, Whatmore et al. clearly acknowledged the influence of ethnographic factors such as stages of family and business development. And, in their earlier conceptual paper advancing the political economy approach, they noted the importance of incorporating farmer agency, as well as internal family relations (Marsden et al., 1986).<sup>57</sup>

Although Whatmore et al. recognised the significance of these influences from a conceptual perspective, their initial publications emphasised structural influences (e.g., internal and external sources of labour, land tenure, credit relations and dependence upon technology). Later articles (e.g., Marsden et al. 1992)<sup>58</sup> gave heightened focus to farmer agency by suggesting that the *interaction* between external capitals and internal farm production processes were crucial to analyses of agricultural change; that is, social processes such as marriages, plans for succession and illness combine to influence the ways in which capital penetrates farm businesses. Marsden et al.'s attempts to integrate different 'social trajectories' of farm families with patterns of subsumption revealed that increased levels of subsumption were correlated with increased commitment to family continuity on the land. The evidence, they concluded, suggested that

...the likelihood of the survival of farm families into the next generation appears to increase as farms become more engaged with technological, marketing and credit links, and, generally, as they experience a higher level

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<sup>56</sup> Short (1996), who attributes this as Whatmore et al.'s seminal insight, also argues that Whatmore, Munton, Marsden, and Little's contribution was fundamental to increasing the academic credibility of rural geography.

<sup>57</sup> Although these authors recognised the importance of farmer agency in their conceptual paper (Marsden et al., 1986), this is one area of their work upon which I seek to build. I discuss this below in the context of the 'second era of farm organisation research'.

<sup>58</sup> Interestingly, despite this attempt to incorporate elements of farmer agency and ethnographic complexity into the subsumption thesis, according to *Google Scholar*, Marsden et al. (1992) have been cited far fewer times than the original article in which the concept and methodology were developed (Whatmore, Munton, Little, et al., 1987).

of subsumption of production relations through more complex labour and farm business structures (Marsden et al., 1992, pp. 423-424).

Rather than interpreting this finding as somewhat contradictory, the authors argue that there was “a *complementarity* between the social bases of family continuity and succession *and* the increasing tendency for external capitals to reduce the independence and autonomy of farm families” (Marsden et al., 1992, p. 423; original emphasis). Put another way, farm families synchronised their own desire to remain farming alongside the demands of capital.

The research trajectory set by Whatmore and colleagues waned in the mid-1990s. For this reason, the influences of internal farm relations, other than succession and inheritance, were largely never explored in a similar framework. Similarly, although frequently noted in the literature, the interaction between farms and new state policies were also not fully investigated (Moran et al., 1993). In some respects, the ‘project’<sup>59</sup> was left incomplete as rural circumstances changed and rural researchers pursued new research interests using new theoretical frameworks. But, it also left questions concerning whether it was possible to more fully integrate these varied influences upon farm organisation into a single approach; that is, an approach that proposes a type of middle ground theorisation to understand “the intra- and inter- relations of land owning and occupying families” (Moran et al., 1993, p. 22). In this thesis, I argue that the work of Johnsen (2003) provides a useful framework by which this integration might be achieved (see below). But, before discussing her work, an important point about geographic heterogeneity should be made.

Despite the strong theoretical foundations laid by the British group twenty years ago, research of a similar ilk was not pursued as vigorously outside of Britain; in particular, there is limited work exploring farm-level dynamics within Australian historical and local conditions.<sup>60</sup> This is particularly surprising given researchers’ repeated observations regarding the historical and local specificity of farm organisation (Friedmann, 1986b; Gasson et al., 1988; Marsden et al., 1986; Marsden et al., 1989; Munton & Marsden, 1991).

The particularities of Australian agriculture as opposed to British agriculture were noted in the previous section. They can also be demonstrated by the differences in the ways in which family farming developed between Britain and settler societies such as Australia and New Zealand. In Britain, from the end of the 19<sup>th</sup> century, the association between families and farm businesses increased in significance. A series of economic and social changes raised the cost of hired labour, rendering farm families more important to the functioning of farms due to the internal supply of labour they provided. Prior to this, British agriculture reflected a tripartite structure

<sup>59</sup> Whatmore et al. (1996) used the term ‘project’ to describe their broader political economy research agenda for understanding agricultural and rural change.

<sup>60</sup> It should be noted that this observation is not limited to the Australian context. Indeed, Woods (2009a) argues that the evolution of British rural geography may be the anomaly, not the rural geographies that have developed in other western nations.

based on landlord, tenant and labourer (Gasson et al., 1988). In contrast, family farming in Australia seems to have been a product of the social ideals promoted by early colonial governments (Botterill, 2000).

In light of these differences, the farm organisation literature would benefit from analyses conducted in other economic, social and political contexts. The research reported in this thesis responds to this knowledge gap by exploring the Australian context wherein few studies investigating similar topics of interest have been conducted (c.f., Pritchard et al. (2007); Argent (1999)). Yet, given the enthusiasm with which Australia has adopted market-led agriculture, it offers a potentially contrasting context to the earlier British-based work in which to explore the emerging social and economic geographies of family farming.

Although few researchers outside of Britain adopted similar research interests at the time, Lobley and Potter (2004, p. 500) note that during the last decade of the 20<sup>th</sup> century and the early years of the 21<sup>st</sup> century, in general there was a hiatus in research directed towards “any systematic updating of micro-empirical knowledge”<sup>61</sup> about the nature and character of the farm sector. Instead, the dominant concept used to understand family farming was the ‘adjustment strategy’ (Evans, 2009), which functions as a conceptual bridge between the two eras of farm organisation research identified here.

### The ‘Farm Adjustment Strategy’: A Conceptual Bridge

The concept of the ‘farm adjustment strategy’,<sup>62</sup> as Evans (2009) rightly observes, emerged from the same political economy of agriculture project that inspired closer examination of the internal and external dynamics of family farming. The concept was used to “emphasise the importance of the state and economic conditions in constraining the actions of farm businesses whilst offering scope to acknowledge that the operators of farm businesses usually retained a modicum of choice in their actions under such conditions” (Evans, 2009, p. 217).

Although Marsden et al. (1989) did not use the term ‘farm adjustment strategy’, they described the ‘survival strategies’ or ‘strategies for coping’<sup>63</sup> used by farmers during the unstable political and economic circumstances that marked the end of the 1980s. Their intention was to highlight the individual responses and adaptations that farm families were making at the time. The survival strategies they observed in West Dorset, England were categorised into three groups: 1) changes to farm occupancy and indebtedness; 2) changes in farm business organisation; and, 3)

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<sup>61</sup> Lobley and Potter’s (2004) observation was made in their article reporting farm adjustment strategies. In the following section, I differentiate the farm adjustment strategy literature from the farm organisation literature. But their observation is still relevant to the argument being made here.

<sup>62</sup> The term ‘adjustment’ had been applied to agricultural change prior to the 1980s, including in Australia (see, for example, Cuthbertson, Stoeckel, & Kreitals, 1974; Paul, 1976). But, it tended to be applied in a semantic fashion to simply describe ‘change’, rather than being used as an analytical device.

<sup>63</sup> See also Munton and Marsden (1991).



farm labour readjustment and family continuity. While their discussion focuses upon how farmers organised and reorganised the internal dynamics of their farms in the context of wider structural processes, their analysis does not consider farmers' use of non-agricultural forms of income. In this way, the subsequent literature that addressed farm adjustment represents something of a departure because the term was taken up by researchers investigating pluriactivity; that is, the ways in which income gained from outside of the farm contributed towards the functioning of the farm business (see, for example, Bryden, Bell, Gilliatt, Hawkins, & MacKinnon, 1992; Evans & Ilbery, 1993; Evans & Ilbery, 1992; Ilbery, Bowler, Clarke, Crockett, & Shaw, 1998; Ilbery, 1991; Shucksmith & Smith, 1991).

Use of the concept of farm adjustment strategies as a means to understand farm diversification has endured. Lobley and Potter (2004), for example, identify six types of farm adjustment or restructuring: 1) minor change, 2) traditional restructuring, 3) agricultural integration, 4) on-farm diversification, 5) off-farm diversification, and 6) capital consumers. Each of these types varied according to the degree to which farmers can be said to be actively disengaging from mainstream agriculture. But, the extent to which farmers diversified their business activities away from agricultural pursuits is not entirely clear. In Lobley and Potter's study, the largest group (45%) in the typology were those who employed 'traditional, agricultural restructuring' strategies, while those who diversified their activities away from agriculture accounted for only 27% of the sample. Similarly, Shaw and Hale (1996) found that rather than broadening their business activities, farmers preferred to enhance the asset value of their farm property holdings. Such findings highlight the continued persistence of productivist agriculture and the need to understand better the drivers behind farmers' decisions regarding farm organisation. They also reinforce the following observation made by Shucksmith, Bryden, Rosenthal, Short, and Winter (1989, p. 345): "[A] preoccupation with forms of diversification or pluriactivity is likely to be less helpful analytically than a focus on underlying farm business and farm household strategies". These underlying strategies are what "determine the deployment of resources on farms" (Shucksmith et al., 1989, p. 353).

Yet, the analytical value of 'strategies', as used throughout the broader social sciences, was considered problematic (Crow, 1989). There was no consensus "concerning such fundamental issues as what is to qualify as a strategy, the nature of the relationship between strategies and agency, or the relationships between strategies and rationality" (Crow, 1989, p. 2).<sup>64</sup> Up until relatively recently, these theoretical issues seem to have been neglected. Evans (2009, p. 217) claims that for the most part "fundamental questions about the issues that qualify[ied] as 'strategic', their time-scale, cohesiveness, scope and deliberateness were all glossed over or not even broached" by rural scholars addressing farm adjustment strategies. A core problem is that

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<sup>64</sup> Crow (1989, p. 2), delineating the explanatory limits of strategic analysis, called for strategic analysis to be "supplemented by other accounts of social relations".

much of the farm adjustment literature utilises quantitative survey methodologies that often lend themselves to categorisation (see, for example, Evans & Ilbery, 1993; Lobley & Butler, 2010; Lobley & Potter, 2004).

This position raises the issue of suitable terminology to describe the central topic of investigation in this thesis. I have opted to adopt terminology similar to that articulated by Brookfield (2008, p. 110), who uses the term ‘farm organisation’ and argues that “organization is the key to any realistic definition” of family farming as distinct from other forms of farming (e.g., industrial farms, tropical cash-crop plantations). This study does not seek to understand how farmers are adjusting in the contemporary Australian context; rather, it seeks to understand how and why Australian farms are organised in particular ways. In this way, unlike the farm adjustment literature presented above, it aspires to a closer examination of the dynamics driving farm organisation rather than to categorise the strategies that have emerged in response to shifts in the political and economic milieu. In my view, Brookfield’s term ‘farm organisation’ requires greater specificity. Thus, the full term for the topic under investigation in this thesis is: *The socio-economic organisation of farming*. Inclusion of the qualifier socio-economic captures the inherent relationship between the two domains that have been at the conceptual heart of family farm research: an economic entity – the farm business – and a social unit – the farm household (Friedmann, 1978, 1986a; Gasson & Errington, 1993; Lem, 1988).

This perspective raises the following question: Is there a set of common motivations and drivers that influence how farms change over time and why they look the way they do in contemporary Australia? In short, the farm adjustment literature represents something of a conceptual weigh-bridge between the two eras of literature which I bring together in order to advance contemporary theorisations of farm organisation: 1) the work of Whatmore et al. from the 1980s (discussed above); and, 2) the work of Johnsen from the early 21<sup>st</sup> century (discussed below).

### Farms as Three-Way Coalitions: The Second Era of Farm Organisation Research

A small number of researchers have contributed to ending the hiatus in the micro-empirical work investigating patterns of land use and farm organisation: this work constitutes the second era of research that informs the current study. I differentiate this work from the farm adjustment literature because rather than categorising farms based on the ways in which farmers deploy and redeploy their principal assets, these researchers, notably de Raymond (2013) and Johnsen (1999, 2003, 2004), attempt a deeper understanding of the social norms and practices underlying the complex micro-geography of farm organisation.<sup>65</sup>

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<sup>65</sup> Cheshire et al. (2013) also reported similar research about the decoupling of farm, farming and place. However, their study involved only a minority group of elite, globally engaged Australian farmers. My particular interest is in farm organisation from the perspective of a much larger group of farmers (i.e., those who have not directly extended their farm operations beyond Australia).



de Raymond (2013) claims that structural shifts towards more specialised farms in northern Côte d'Or, France, resulted not only from external economic pressures, but also from the internal dynamics of farm enterprises and households. While this finding is not altogether new, the novel contribution of de Raymond's (2013, p. 292) analysis is that he does not make maintenance of inheritance the fundamental issue for the reproduction of family farms. Rather, family farming, as an institution, "can be understood as a set of practices which can, in part, be separated from one another, and which farmers are able to recombine in a singular fashion, depending on the context". These practices involve modifications to workload, family structure and farm management. In other words, "farming ceases to be a physical job, an occupation confining one to a rural region in demographic decline" (de Raymond, 2013, p. 292). Such circumstances do not render inheritance impossible: they effectively enable it. Crucial to any understanding of how farms are organised, de Raymond's study emphasises the role of farmer agency as farmers recombine the different aspects of their farms in personally beneficial ways to achieve their work, lifestyle, and economic aspirations.

A precursor to de Raymond's work was Johnsen's (1999, 2003, 2004) examination of change at the farm-level in response to macro-economic restructuring and the deregulation of the agricultural sector implemented by the New Zealand government in the 1980s. Although her work reiterated the findings from earlier agrarian research that emphasised the local specificity of agricultural transformation, she also emphasised the variable ways that this was experienced at the level of the individual farm family. Like de Raymond, Johnsen (2003, p. 146) draws attention to the ways in which rural actors play "an active role in the negotiation of restructuring outcomes" (Johnsen, 2003, p. 146) and, by extension, contribute to the variability of the experiences of agricultural deregulation. Specifically, Johnsen considers actors' gender, knowledge and experience, values and attitudes, as well as their goals for the farm. In her view, actors' personal circumstances and attributes impact the likelihood of actors responding to change, and the particular responses they choose to deploy.

Both researchers do well to address farmer agency within systematic conceptualisations of family farming; but, in some respects this comes at the detriment of wider socio-economic arguments about farmers' use of different forms of business and asset ownership. For example, in her consideration of the changes farmers made to their business, Johnsen (2003) only includes three dimensions: 1) changes to the size of the farm; 2) farm diversification into other agricultural commodities; and, 3) changes to farm practices and labour patterns. de Raymond (2013), who affords greater attention to the business arrangements utilised by the field-crop farmers in his study, reveals that the decreased work commitments required when running a field-crop enterprise compared to a livestock enterprise enable inter-farmer cooperation which is expressed through informal partnerships. These partnerships, however, typically do not involve

joint asset ownership so they are easily reversible.<sup>66</sup> de Raymond (2013) further suggests that underlying the use of easily reversible informal partnerships by the farmers in his study was a desire to maintain control, and to ensure that future separation of such partnerships would proceed trouble-free. However, he neglects to address the business and asset ownership structures employed by the individual partners and the specific relationships created between allied entities. Other research, however, suggest that investigating these structural elements of farms is worthy of researchers' attention (McAllister & Geno, 2004; Moreno-Pérez, Arnalte-Alegre, & Ortiz-Miranda, 2011; Pritchard et al., 2007; Weller, Smith, & Pritchard, 2013).

Consideration of these structural aspects of farm organisation was evident in the first era of farm organisation research in which researchers drew attention to factors that influenced the choice of farm business structures such as changes in family composition and taxation incentives (Marsden et al., 1989). But, contemporary understanding of how such business structures are utilised by farmers is limited. Much agricultural research includes reference to the business structures used by primary producers; however, for the most part, insight is limited to information gained from the inclusion of one of two questions on a questionnaire primarily developed for other purposes (see, for example, McAllister & Geno, 2004; Reeve, 2001; Tonts, Halpin, Collins, & Black, 2003).<sup>67</sup> While these studies illustrate the largely family-based nature of agriculture in which partnerships are the dominant business model, they fail to comprehensively assess the relationships between family and legal enterprises which likely have profound social implications for farm life (McAllister & Geno, 2004).

Johnsen and de Raymond's partial treatment of structural influences upon family farms gives rise to the same question posed following the earlier discussion of the first era of farm organisation research: Is it possible to more fully integrate the varied influences upon farm organisation into one single approach?

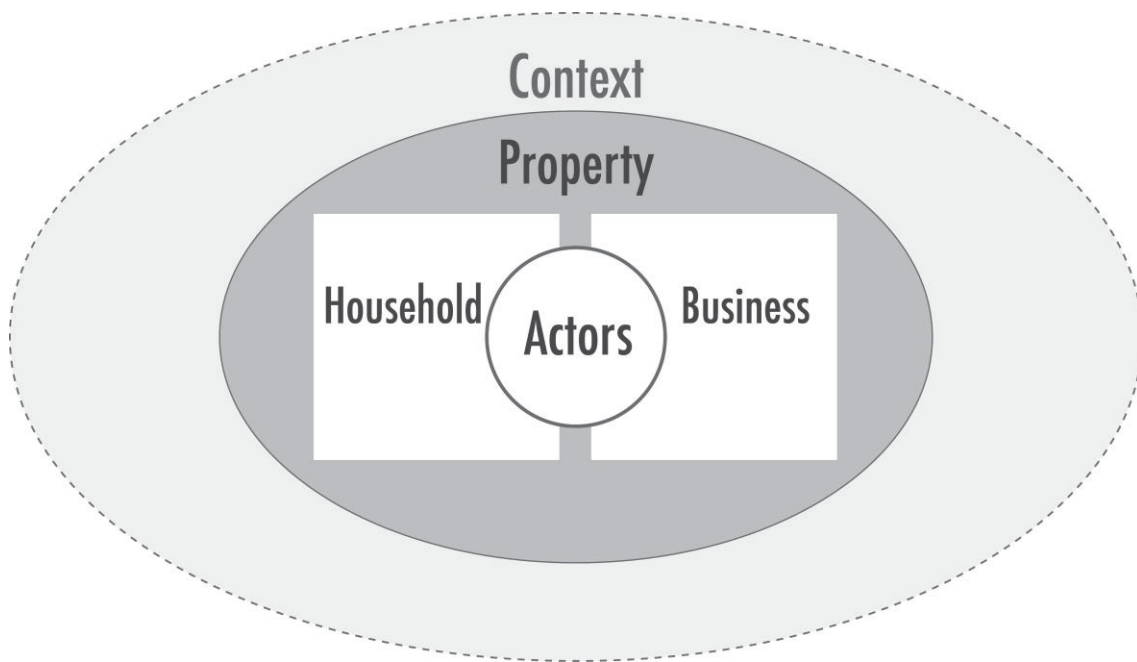
Johnsen (2003) advances our conceptual understanding of family farms by building on the notion that family farms are an interaction between a farm enterprise and a farm household. In doing so, she develops 'an actor- and context-sensitive approach' that depicts farms as a three-way coalition between three principal domains – the farm enterprise, the farm household, and the farm property (Figure 5 next page).<sup>68</sup> This conceptualisation provides a way forward for greater inclusion of structural processes as well as farmer agency and associated social norms and practices.

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<sup>66</sup> de Raymond (2013) notes that these novel partnership arrangements emerge under particular circumstances associated with the life stages, and life aspirations of the farmers concerned.

<sup>67</sup> Although the title of Tonts et al. (2003, p. vii) (*Rural communities and changing farm business structures: An assessment of the socio-economic impacts*) alludes to consideration of how farm business structures are changing, their work largely focuses on "the growing corporate involvement in agriculture, either through the direct ownership of properties or through contracting arrangements with family operators". This thesis considers farm business structures more broadly.

<sup>68</sup> These three domains have been researched from alternative perspectives: see Farmar-Bowers and Lane's (2009) decision systems approach.



**Figure 5: Johnsen's original actor- and context-sensitive approach to reading the family farm unit (Johnsen, 2003, p. 131)**

Her model is particularly influential because her inclusion of the property domain explicitly recognises the ways in which the place of the farm interacts with the social and economic units. Johnsen contends that material aspects of farms shape on-farm changes: “The enterprise and the household are inexorably entwined with a third, physical domain – the farm *property*” (Johnsen, 2003, p. 131; original emphasis). Johnsen defines this quite narrowly (farm size and land quality), but her general approach is consistent with a wider notion of property as a mechanism for ordering social relations (Singer, 2000), as discussed in the next section. In effect, people are connected to land and places through the social institution of property. This broader framing of property distinguishes the contribution of this current work from those of Johnsen and de Raymond.

A wider framing of the concept of property is consistent and essential given the re-alignment of farming in contemporary Australia today with neoliberal ideologies. Many of Australia's environmental policies have been characterised by the government either encouraging (and coordinating) grass-roots action or introducing market mechanisms (Higgins, Dibden, & Cocklin, 2012; Lockie, 1999; Lockie & Higgins, 2007; Lyster, 2002), approaches that stand in stark contrast to the command and control techniques of direct regulation. Viewing Australia's agri-environmental governance trajectory as a linear transition towards ever greater application of neoliberal principles belies both its complex and, at times, contradictory nature.<sup>69</sup> Nevertheless, the impact upon the ways farmers integrate, negotiate or resist new environmental management

<sup>69</sup> See Higgins and Lockie (2002) and Lockie and Higgins (2007) for insightful discussions about the complex and, at times contradictory nature of Australian agri-environmental governance.

techniques offer an intriguing way in which to explore the socio-economic organisation of farm enterprises. As Argent (2002, p. 97; emphasis added) concludes in his critique of post-productivism, there is strong evidence that “the Australian farm sector and rural landscapes are being shaped by the complex interactions between the ‘productivist’ ideals held by farmers ... *and the growing environmental regulation of farming*”, rather than by the dynamics typically associated with a post-productivist countryside.

Thus, the focus of the present study is not upon how Australian farms are transformed under capitalism *per se*; instead, it is concerned with understanding how Australian farms are being transformed in the context of the increased use of neoliberal, market-based environmental management mechanisms to address resource allocation issues. The discussion now turns to the third assertion leading to the research question guiding this research: The separation of land ownership and water access ownership as a means of allocating natural resources can be used to understand better the impact on farm organisation of changes to the agricultural property regime.

### **The Socio-Economic Organisation of Farm Enterprises: Property as a Social Institution**

I concluded the previous section arguing that contemporary changes to the management and allocation of natural resources have opened up a new perspective from which the socio-economic organisation of farming may be investigated. In the Australian context, many of the changes to environmental regulation have involved the creation of markets and exchange values for natural resources such as biodiversity, carbon and water. These techniques have required the creation of new forms of property, or at least modifications of the existing bundles of property rights. Once a decision has been made to submit environmental resources to an individualised property rights regime, there are profound implications for both policy and legal systems (McHarg, Barton, Bradbrook, & Godden, 2010). Not only are they profound for national institutions and administrative systems, but such changes also impact on the structure of other socio-economic institutions embedded at smaller scales including individual farm enterprises. Questions about property as a social institution in farming and how this is expressed through land ownership and proprietary arrangements have been under-researched, especially in the Australian context. In this section, I argue for a conceptual broadening of the property domain in Johnsen’s actor- context-sensitive model. When viewed from this perspective, the separation of land and water ownership represents a significant change to the Australian agricultural property regime which warrants fine-grained research inclusive of farmers’ attitudes towards land, their superannuation plans, local land markets, the likelihood of intergenerational transfer

of the farm business, and farmers' aspirations for their children.<sup>70</sup> More nuanced accounts of how farmers negotiate these issues would complement the small amount of work already completed addressing some of these issues on an individual basis (see, for example, Bjornlund & Rossini, 2010; Wheeler, Bjornlund, Zuo & Edwards, 2012).<sup>71</sup>

### Instruments of Regulation: Property Rights and Agriculture

Property rights are crucial to the patterns and processes of rural development (see, for example, J. Holmes, 2011; Lowe et al., 1993; Marsden, 1995; Marsden et al., 1993). From a macro-structural perspective, and the perspective of individual agents, property rights are “instruments of regulation” (Marsden et al., 1993, p. 39). While on the one hand, “[t]he state plays a crucial role upholding property rights but also periodically modifies them to accommodate forces of restructuring” (Marsden et al., 1993, p. 39), on the other, property can be a facilitative device, a tool (or set of tools) used by individuals for their own purposes. Voyce applied this concept to the governance of Australian family farms. Citing Sugerman and Rubin's (1984) use of the concept, he argues to the effect that “property law, in conjunction with the family [farm] social unit, may be seen as a ‘facilitative device’” (Voyce, 2007, p. 136). Facilitative laws<sup>72</sup> or devices

...do not impose duties or obligations. Instead, they provide individuals with *facilities* for realising their wishes, by conferring legal powers upon them to create, by certain specified procedures, and subject to certain conditions, structures of rights and duties within the coercive framework of the law. For example, the law conferred on individuals the power to mould their legal relations with others, by marriages, contracts, wills, companies and trusts [and property] (Sugerman & Rubin, 1984, pp. 9-10; original emphasis).

In other words, facilitative laws are defined by state agencies that determine the “range of permissible conduct” [by constituents; but they are also] “instruments through which private individuals may expand or contract their autonomy” (Sugerman & Rubin, 1984, p. 11). Viewing property in this way broadens the possibilities for what rural researchers may consider within Johnsen's (2003) property domain. This conceptualisation should draw attention, not only to the social significance of property rights for land, but also to the potential social significance of new forms of property and their implications for farm organisation.

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<sup>70</sup> See the National Water Commission's ‘Second Biennial Assessment of progress in implementation of the National Water Initiative’ (National Water Commission, 2009). This point is discussed in the section titled: Farmers' Use of the Australian Water Market: Current Knowledge.

<sup>71</sup> Bjornlund and Rossini (2010) consider the implications of climate change, water scarcity and water markets for farmers' wealth accumulation and farm succession. Wheeler, Bjornlund, et al. (2012) consider patterns of farm succession in irrigation districts in the southern Murray-Darling Basin, Australia.

<sup>72</sup> Sugerman and Rubin (1984, p. 9) also used the term “power-conferring laws”.

The concept of property is complex and multifaceted. When attempting to illustrate the complexity of property, a helpful analogy to employ is the iceberg given that “much of its significance is submerged” (Minogue, 1980, p. 10). Voyce (2007) extends Minogue’s iceberg analogy beyond property (ownership) as simply a complicated concept to include the social relationship of property owners. Voyce (2007, p. 132) writes:

This analogy [of an iceberg] can also be applied to the social relationship of property owners. Above the figurative water lies the legal apparatus – the company structures, the trust forms, the partnership agreement and the recognition of ‘legal’ or equitable forms of ownership. Below the ‘water’ is the biggest and most important part of the ‘iceberg’: the social structure that supports the legal apparatus.

Recognition of the significance of the social structure that supports the legal apparatus led Voyce (2007, p. 132) to argue that “the state’s dealings with property’s underlying social structure should not be ignored but rather carefully explored”. Equally, attention should be directed towards the behaviour of property-holding subjects (in this case farmers) because they are the principal landowners, land occupiers and controllers of farm businesses in rural areas.<sup>73</sup>

Application of the iceberg analogy to the socio-economic organisation of farms renders the legal business and ownership structures used by farmers much more visible than the social structures and decisions that exist ‘beneath’ them. These social structures, and the rationalities for the ways in which farmers enrol property in their enterprises are likely to shape the socio-economic organisation of farms. This position, in concert with viewing property as a facilitative device, acknowledges farmers’ agency. In sum, the focus of this research is upon those aspects of the socio-economic organisation of farming that are below the ‘waterline’.

It is important here to acknowledge that the state’s dealings with property are not insignificant. Macro-scale modifications to property rights can be made to accommodate forces of restructuring (see Marsden et al., 1993). Herein lies the significance of the separation of water access ownership from land ownership. The introduction of the water market and eventual legal separation of land and water titles signalled Australia’s national and state governments’ agreement to 1) accommodate the necessary forces of restructuring; 2) enable the reallocation of water resources between competing user groups; and, 3) facilitate the adjustment of farmers to a more water scarce future.<sup>74</sup> Although, notions of property are specific to time and place (Blomley, 1998; Voyce, 1995), meaning that the property regime for Australian agriculture has

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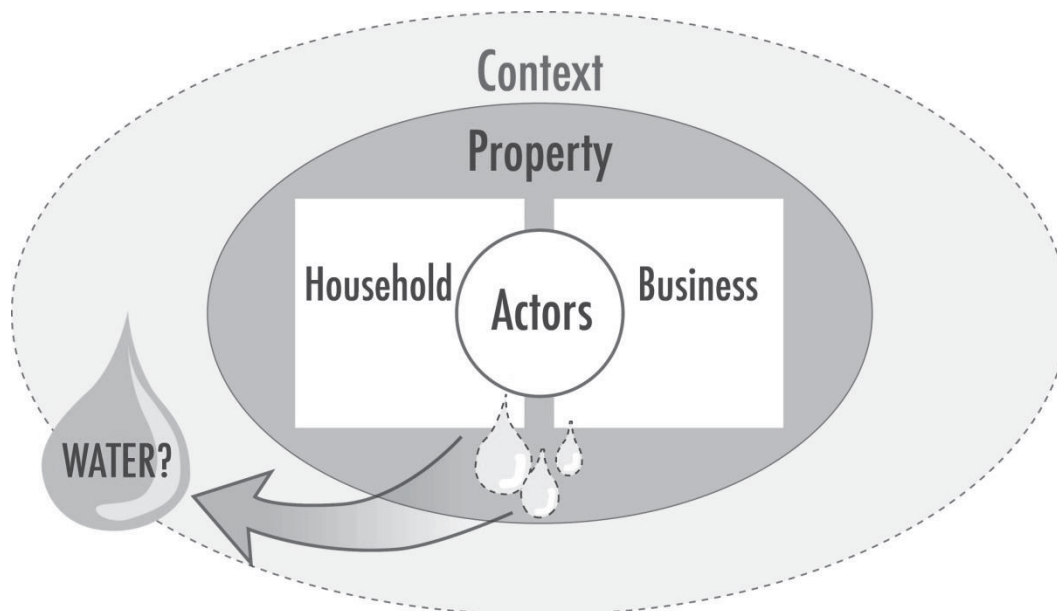
<sup>73</sup> In the late 1980s, Gasson et al. (1988) argued for increased research focus upon farmers in the context of the dissolution of the tripartite structure of the agricultural industry in Britain, adding that farmers also warranted research attention because they were the major suppliers of labour to the industry. In many ways, researchers have responded to their observation; thus, nowadays there is a reasonable body of literature reporting the internal and external dynamics of farm labour relations. Here the argument is made in the context of limited Australian-based research with regard to property relations within the farm unit.

<sup>74</sup> The key drivers, events and dynamics of Australia’s water reform process are examined in Chapter 3.



not been completely static since the establishment of private land ownership, the separation of land and water access ownership represented one of the most fundamental changes to property relations for irrigated agriculture. Indeed, from a water allocation and water usage perspective, this change represented a distinct rupture in how water resources had historically been managed (Rankin, 2012).

In the introductory chapter, I outlined the basic mechanics of the current structure for water ownership and water access as applied in the state of Victoria, a framework integral to the core research question of this thesis. In sum, these reforms created an independently tradeable asset separate from land (water shares), which farmers can hold in perpetuity.<sup>75</sup> For the purposes of this study, Johnsen's (2003) conceptual understanding of family farming is adapted and presented in Figure 6 (below).



**Figure 6: An actor- and context-sensitive approach adapted for the Australian context in which water access ownership has been separated from land ownership. Adapted from: (Johnsen, 2003)**

The creation of an independently tradeable water asset significantly modifies farmers' degree of 'local' freedom, presenting them with a suite of new options for accessing and managing their primary productive assets. For example, farmers could dispose of their water share holdings but retain their land holdings as a means of freeing up capital for on-farm investment. Another potential scenario that could be used by new farming entrants with little capital or financial backing was matching access to land via lease-hold arrangements and the opportunistic purchase of temporary water allocations (or the establishment of a lease agreement for water

<sup>75</sup> The specific quantum of water is subject to modification as per the provisions in the National Water Initiative (NWI) (Intergovernmental Agreement on a National Water Initiative, 2004).

access). The extent to which structures such as these align with either the broader business and household aspirations of farm families, or the social values farmers ascribe to land and water ownership, remains poorly understood. As such the discussion now turns to the ways in which researchers have treated property and land ownership in the rural studies literature.

### Property Rights, Land Ownership and Land Tenure: Current Knowledge

The significance of property rights, land ownership and land tenure to the organisation of farming has long been a feature of agrarian research. These concepts, which received substantial research attention in the 1970s and 1980s, were typically interrogated from a Marxian perspective of the rent relation (Harvey, 1982; Massey & Catalano, 1978; Whatmore, 1986). Changes in the social structure of agricultural land ownership from the landlord-tenant system to owner occupation (see above), and the subsequent institutional interest in land, were particularly attractive to researchers due to the implications they had for the behaviour of capital (Winter, 2007).

Agricultural land ownership, and changes to ownership structures in particular, have much significance in contemporary Australia amidst debate surrounding institutional ownership of land resources. Such debate, however, is not altogether new. There is a striking similarity between the contemporary Australian context and the context in which Whatmore (1986, p. 122) stressed that forms of land ownership, other than institutional ownership, remain important.

We certainly cannot properly understand the social organisation of agriculture, its characteristic business structure, or the importance of the family in modern agriculture, without comprehending how landownership mediates the use of land in agricultural production, and effects the production and distribution of surplus value in the process.

At the time of her writing, there was growing interest in the significance of institutional land ownership in Britain (Northfield Committee, 1979; cited in Whatmore, 1986). In contemporary Australia, however, this issue has taken on a different slant, specifically foreign ownership of land and the future of Australia's food sovereignty. In tandem with public concern about food and national security is concern about the extent of international interests in Australian agricultural land (and water) assets, commonly termed 'foreign land grabs' (see, for example, Bitá, 2011; Keane, 2013; Mann, 2012). These heightened concerns, combined with recognition that there was limited data available regarding foreign land ownership, resulted in the Commonwealth government commissioning the Australian Bureau of Statistics (ABS) to compile a report outlining the amount of land and water owned by non-Australian entities. The Bureau found that although there was spatial differentiation around Australia with regard to the



percentage of agricultural land that had some level of foreign ownership, at the national scale, 11% of land had some level of foreign interest (Australian Bureau of Statistics, 2011b). Even though this percentage was only an estimate, individual Australians or Australian entities owned the vast majority of agricultural land. So, it is essential to remember that foreign ownership “is only one expression of the contradictions associated with land rights as a fictitious form of capital. There are other, more important, social forms, such as [institutional ownership by Australian entities], owner occupation and land-based credit relations” (Whatmore, 1986, p. 121).

Nevertheless, what is the current state of knowledge about land ownership relations in rural and agricultural change? The extant literature provides considerable examples of studies in the British and American contexts (see, for example, Baker & Thomassin, 1991; Geisler & Salomon, 1993; Grossman, 2000; Ilbery, Maye, Watts, & Holloway, 2010; Munton, 1995, 2009; Quinn, Fraser, Hubacek, & Reed, 2010; Ravenscroft, 1999; Salomon, 1993; Ward, Marsden, & Munton, 1990), with recent contributions from Scandinavia (Forbord, Bjørkhaug, & Burton, 2014; Pouta, Myyrä, & Pietola, 2012) and Australian (J. Holmes, 2011, 2012; Mendham, 2010; Mendham & Curtis, 2010; Pritchard, Neave, Hickey, & Troy, 2012).

The Scandinavian and British research tends to focus upon landowner responses to policy and legal instruments intended to regulate patterns of farmland ownership and occupancy (Forbord et al., 2014; Ilbery et al., 2010; Pouta et al., 2012). Research undertaken in Norway and Finland, demonstrates that these instruments have tended to increase the incidence of land tenancy, while more traditional owner occupation has decreased (Forbord et al., 2014; Pouta et al., 2012). In the British context, changes to agricultural tenancies overlaid upon increased levels of owner occupation throughout the 20<sup>th</sup> century have created hybridised land occupancy structures, with farm businesses operating across a more diverse set of property arrangements (Ilbery et al., 2010).

The absence of similar policies and legislation in Australia renders problematic the direct application of many of the interpretations suggested by these international studies.

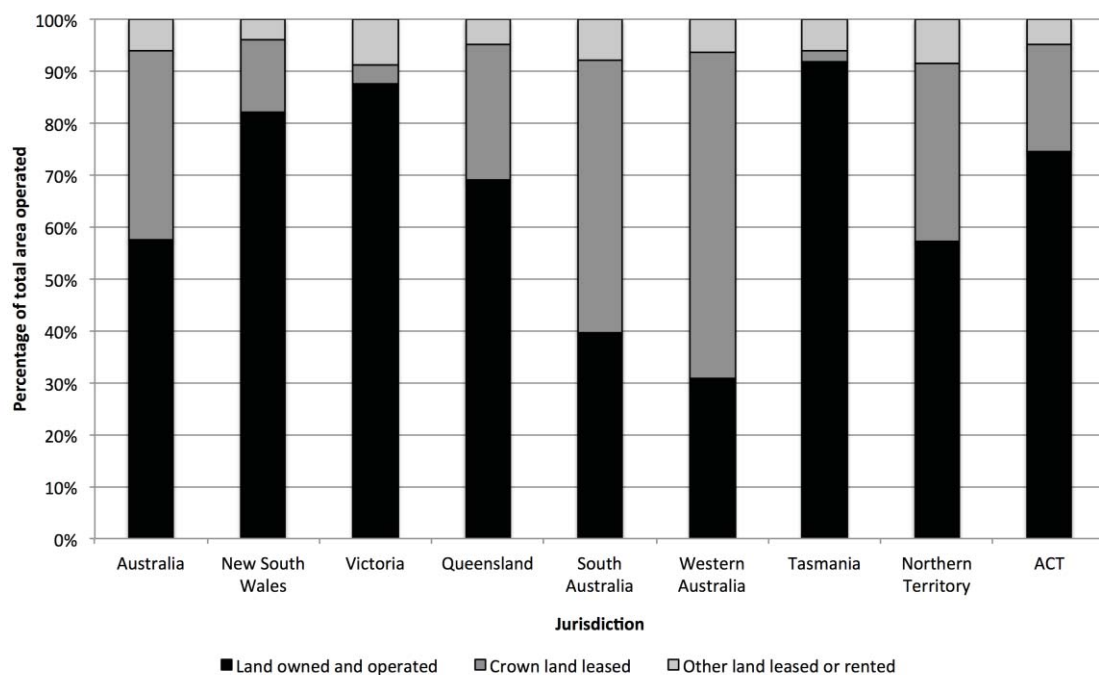
Consideration of the limited amount of Australian-based research suggests that a different set of dynamics is influencing rural land ownership patterns. For example, Mendham and Curtis (2010) predict that 50% of properties larger than 10 hectares<sup>76</sup> in the Corangamite watershed, southwest Victoria, will change hands between 2006 and 2016, double the rate of the previous decade. They delineate this trend in the context of high levels of amenity in-migration. And, J. Holmes (2011, 2012) notes that changes in land tenure on the Cape York Peninsula, northern

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<sup>76</sup> Mendham and Curtis (2010, pp. 658-659) justify this threshold, noting that it is “accepted in Australia as a way of separating rural and urban land use”.

Australia, reveal changed regional trajectories away from extensive pastoralism towards a future characterised by conservation and Indigenous agendas.

At the farm-level, however, there is a paucity of Australian-based research offering explanations for farmers' land tenure preferences.<sup>77, 78</sup> The most recent land ownership statistics (2006-07) suggest that patterns of land tenure are spatially variegated between Australian states and territories (Figure 7 below). Although 57% of the total area of Australian agricultural land holdings are owned and operated, at the state and territory levels, this percentage decreases to 31% in Western Australia, and increases to over 90% in Tasmania. In Victoria, the jurisdiction covered by this study, 86% of agricultural land is both owned and operated (Australian Bureau of Statistics, 2008). Apropos of leased land, land leased from the Crown comprised the majority of land leased or rented for Australia as a whole, as well as in all the states and territories except Victoria and Tasmania. In Victoria and Tasmania, there was a low percentage of Crown leased land, meaning most rented land was leased from other individuals and organisations (Figure 7 below).



**Figure 7: Land tenure in Australian states and territories (2006-07). (Australian Bureau of Statistics, 2008)**

NOTE: "Area of holding: Includes all occupied and maintained land owned, leased or rented, land worked by sharefarmers and all road permits. Excludes land leased or rented to others" (Australian Bureau of Statistics, 2011c, glossary of terms).

<sup>77</sup> Broad, Fulton, and Clark's (2003) Rural Industries and Research Development Corporation report, addresses some of the issues with which this thesis is concerned. However, their work is limited to the Tasmanian context and they do not engage comprehensively with the broader agricultural geography and sociology literature beyond that concerning land tenure.

<sup>78</sup> Australian researchers have considered the implications of changed agricultural land tenure arrangements for communities (Santhanam-Martin & Nettle, 2012), land degradation (Malafant, Atyeo, & Derbyshire, 1999), and regional futures (J. Holmes, 2011, 2012).

Out of this Australian research, however, not one work adequately uncovers the internal logics and rationalities of farmers' decision-making with regards to the structures they choose to incorporate land into their enterprises, and how their decisions interact with their business and household domains. Such examination can only be achieved by conducting in-depth research at the farm-level.

An important outcome of this body of literature is that “further and more in-depth research is required on both land ownership and property rights in order to understand their ‘consequential geographies’ in different farming areas” (Ilbery et al., 2010, p. 433). The notion of consequential geographies of property is credited to Blomley (2005) who, writing about the significance of property more generally, suggests that one way the consequential geographies of property may be explored is through examining “the interesting ways in which property helps produce particular landscapes” (Blomley, 2005, p. 127), and one might add particular forms of agricultural organisation. Australian water reform is one modification to agricultural property rights in which a distinct territorial pattern – or consequential geography – could be expected to emerge given that the inherent spatiality of irrigated agriculture has been constrained to historically determined irrigation districts. This change to the dominant agricultural property regime should alert interested parties to the implications for the organisation of farming and the possible economic and social functions of water ownership now that it has been unbundled from land. (It also has implications for the ways in which data are generated. This is taken into consideration in the research methodology and methods outlined in Chapter 4.) Farmers' responses to this series of reforms are the topic of the final section in this chapter in which I examine the Australian-based water market literature.

### Farmers' Use of the Australian Water Market: Current Knowledge

The separation of land and water titles has a range of implications for property relations in the agricultural sector (Bjornlund & O'Callaghan, 2004). However, how these implications are negotiated at the farm-level remains under-researched. Much of the general understanding of the impact of water markets and the separation of land and water titles is based upon three sets of research problematics: 1) trends in farmers' water market participation (Wheeler, Loch, Zuo, Bjornlund, 2014; Wheeler, Bjornlund, Shanahana, & Zuo, 2009); 2) the relationship between different types of market participation and farmer/farm characteristics (see Bjornlund, 2002; Wheeler et al., 2009; Wheeler, Bjornlund, Zuo, & Shanahana, 2010); and, 3) the broader social and economic impacts upon farmers and irrigated communities (see Fenton, 2006; *Frontier Economics*, 2007; National Water Commission, 2010).

A range of factors seem to underlie farmers' water market behaviour including water availability (and hence the size of water allocations made against entitlements), input/output

prices, and the water requirements of agricultural activities (Wheeler, Bjornlund, Shanahan, & Zuo, 2008; Wheeler et al., 2010). Other factors include farmer attitudes towards farming and/or water trading (Wheeler et al., 2010; Wheeler, Zuo, Bjornlund, & Lane Miller, 2012), a farm's financial position (Thampapillai, 2009; Wheeler, Zuo, et al., 2012), questions of sufficient off-farm income (Thampapillai, 2009), and whether or not a family successor has been identified (Thampapillai, 2009; Wheeler, Bjornlund, et al., 2012). There are also distinct patterns in farmers' water trade behaviour with regard to the size of their water entitlement and the size of their on-farm irrigated area. Wheeler, Loch, et al. (2014, p. 34) report a number of trends across Australia's Murray-Darling Basin (MDB) including: "non-traders own smaller water entitlements"; "buyers of water (either entitlements or allocations) have larger irrigated areas than water sellers"; and, "water buyers generally own smaller water entitlements (all types) than water sellers".

Wheeler et al. (2009, 2010) employ an innovation adoption framework to explain farmers' increased use of water markets. Their work suggests that there are differences in farmer characteristics between those who engaged in water trading earlier and those who delayed their participation, and between the characteristics of farmers and their farms when the allocation and entitlement markets are considered separately. However, the recent rapid growth in entitlement trade (since 2007-08) needs to be interpreted alongside increased opportunities to sell water shares, rather than simply being seen as an outcome of an increased willingness to trade water on the part of farmers. Since 2007-08, the Commonwealth government has periodically purchased water entitlements from farmers for environmental purposes (Wheeler, Zuo & Bjornlund, 2014; National Water Commission, 2012). Consequently, "up to one-fifth of all irrigators in the MDB sold water entitlements to the Australian Commonwealth in the period from the beginning of 2008 to the start of 2012" (Wheeler, Zuo, et al., 2014, p. 72).

In the context of this study, decisions about water ownership can fundamentally alter the asset base of individual farms. The potential scale of implications was demonstrated in concerns raised by the legal fraternity at the time when land and water titles were legally separated in Victoria (Barlow & Coates, 2008; Glover, 2011; Young, 2007). These included concerns over probate law, equity law and family provision law.<sup>79</sup> With regards to intergenerational transfer, Glover (2011) argues that prior to unbundling, water shares were distributed to the person/persons to whom the farmland had been left. Following unbundling, water shares came to be considered part of the residuary of the estate. This required specific treatment in wills; otherwise, land and water assets could be separated during the estate settlement process. These concerns demonstrate the potential significance of the separation of land and water for the socio-economic organisation of farm enterprises.

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<sup>79</sup> Also known as 'testator's family maintenance'. See Voyce (1994) for a discussion of these provisions in the context of Australian family farms.

In addition, farmers' abilities to manage their newly separated productive assets could have consequences for the value of their properties (Bjornlund, 2001; Bjornlund & O'Callaghan, 2004), which, in turn, could influence the lending behaviour of the farmers' financial institutions.<sup>80</sup> Options for how farmers combine their water and land holdings have been further increased by the specific rules and regulations governing water trade, water delivery and the range of water products available. Options are also determined by the broader administrative realities of the governance system.<sup>81</sup> Taken together, these opportunities provide a number of new ways for farm owners to manage and re-structure their land and water holdings. Novel combinations of land tenure could emerge which, in turn, may reconfigure the business and household domains of farm enterprises. If particular ways of organising the primary productive assets of irrigated agriculture are adopted widely by farmers, new structures of agricultural production and accumulation may emerge in rural Australia. With reference to such a change in the New Zealand context, Coombes and Campbell (1996, p. 14) conclude that the "old mode of regulation" was being replaced by new forms of regulation and accumulation in accordance with the introduction of macro-economic reforms. In the context of Australian water reform, the extent to which new accumulation strategies involving water are being adopted in favour of more traditional forms of regulation and accumulation is poorly understood.

Irrigated agriculture, water reform, and any subsequent impacts upon agricultural production and farm organisation are highly territorialised; the separation of land and water titles only applies within designated irrigation districts. So, how is the contemporary Australian agricultural context shaping (and reshaping) farm organisation outside of irrigation districts? Writing in the context of farm adjustment policies, Bjornlund and McKay (1999) draw attention to the differences in adjustment opportunities between irrigation and dry land farming regions. They argue that better opportunities to adjust to changing circumstances are available to irrigation farmers than their dry land farming counterparts due to a range of inherent characteristics associated with population densities, economies, amenity values and proximity to regional centres which, taken together, provide more alternatives for farm restructuring. While this line of argument seems logical, it implicitly assumes that water reforms provide structuring opportunities which are attractive to farmers and that there is sufficient water available for farmers to utilise the opportunities afforded by the unbundling of land and water titles. In the current Australian context, the Commonwealth government is the single largest owner of water products, purchased principally for the purposes of reallocating water resources to non-

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<sup>80</sup> There are also implications for farmers' stamp duty obligations (Morley, 2007).

<sup>81</sup> Examples from the Victorian context include farmers' capacity to 'carry over' water allocations from one irrigation season to the next as a risk management strategy; water delivery charges, many of which are tied to land titles; and, limits regarding the quantum of water that can be applied to a given land parcel.

consumptive uses.<sup>82</sup> This is a vastly different water reform context from the one about which Bjornlund and McKay were writing. It also seems that this argument is yet to be empirically tested. Thus, an examination of the complexities of farmers' responses to water reform would benefit from contextualisation against other drivers of agricultural change that shape and reshape farm organisation more broadly. This suggestion highlights a bias implicit in the water markets literature discussed above.

The extant literature examining the impacts of Australia's water reforms upon the agricultural sector and rural communities reliant on irrigation farming is conducted with the objective of better understanding the economic and social dynamics of water markets. The present study, however, adopts an alternative approach. In this thesis, water markets and the separation of land and water titles are not the primary objects of investigation; rather, farm organisation is the object of interest. Placing farm organisation at the centre of the enquiry enables the insights generated here to contribute to filling a critical national knowledge gap identified by the National Water Commission (NWC): "Separating out the relative importance of water reform from other factors driving [rural and agricultural] change" (National Water Commission, 2009, p. 204). This recommendation was the result of the NWC recognising that there was

...insufficient understanding of the processes and causes of structural adjustment and a paucity of data at the necessary spatial and temporal scales to enable effective monitoring of adjustment. ...the success of the overall national water reform process will ultimately depend on how well the adjustment process proceeds in irrigation-dependent communities (National Water Commission, 2009, p. 204).

Research has revealed that water trading is not necessarily the primary driver of change of water use and trading in irrigation-dependent communities (Frontier Economics, 2007; National Water Commission, 2010, 2012). Frontier Economics (2007, p. xxi) concludes that "water trading is a catalyst for other drivers of change in rural economies, rather than being, of itself, the primary driver of change". Similarly, an assessment of the social, economic and environmental impact of water trading on the southern Murray-Darling Basin (sMDB) found that there were similarities across regions with regard to changes in population and employment in agriculture irrespective of their unique water trading histories. These observations led to the conclusion that

...other factors (for example, drought) are more significant drivers of changes in the [social and economic] indicators, and that changes in regional water use due to trading did not play a significant role in influencing overall

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<sup>82</sup> See Chapter 3 for further discussion of the Commonwealth government's involvement in water reform and the Australian water market.



socioeconomic outcomes at the regional level in the sMDB over the study period (National Water Commission, 2010, p. x).

Apropos of these important insights, it is necessary to realise that they were generated from studies that mainly focused upon the regional impacts of water trading. This means that the ways in which water reform is reconfiguring internal farm relations, relative to other drivers, remain under-explored.<sup>83</sup> And, importantly, in 2011, the NWC noted the persistence of broader data deficiency: Since the first assessment of the progress of the National Water Initiative (NWI),<sup>84</sup> “there [had] been little progress in improving our understanding of the socioeconomic impacts of water reform. ...there remains a need for better data on, and analysis of, the socioeconomic impacts of changes in water availability” (National Water Commission, 2011b, p. 128).<sup>85</sup>

In sum, the objective of this study is to disentangle the influence of water reforms from other factors impacting on agricultural change at the farm-level using the conceptualisation of farms as three-way coalitions. The legal separation of land and water titles in particular provides a lens through which to explore how farmers integrate, negotiate or resist changes in the social institution of property. In order to achieve this, a broader understanding of the agricultural sector is required, rendering necessary a concurrent examination of the socio-economic role of property within dry land farming regions.

## Chapter Summary

The preceding discussion forms the theoretical justification for this study. It has been developed by way of three key assertions. First, the key developments in the ways in which rural change has been theorised by rural researchers were outlined in order to demonstrate that although theorists have redirected attention towards forms of productivist agriculture, a useful complement to these approaches would be further investigation of farm-level dynamics and how macro-structural processes are expressed on the ground. Throughout the 1990s, these macro-structural theories of rural change paid little attention to the persistence of productivist agriculture as post-productivist and multifunctional ideas were pursued. The most recent macro-structural literature highlighting ideas of neo-productivism redirects our attention to the

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<sup>83</sup> While both reports from the NWC (2010, 2012) include a section addressing the impacts on individual irrigators, these analyses are conducted from the perspective of farmers’ use of water markets and the impact upon farm production. Thus, there is little consideration of the socio-cultural aspects of water ownership and its use alongside land ownership.

<sup>84</sup> The ‘National Water Initiative’ is Australia’s blueprint for water reform. See Chapter 3.

<sup>85</sup> The third biennial assessment (National Water Commission, 2011b) is the most recent report regarding progress made in achieving the objectives and outcomes of the National Water Initiative. An amendment made to the National Water Commission Act passed in 2012 (*National Water Commission Amendment Act 2012* (Commonwealth)) changed the timeframes for assessments from every two years, to every three years. The next assessment is due in 2014.

importance of productivist agriculture in understanding the ways in which rural areas are changing, while also retaining more traditional elements of rurality.

The second assertion was developed via a discussion of two eras of research; specifically, current conceptualisations of family farming might be advanced by using changes to property rights as a lens through which to investigate the socio-economic organisation of farming. The point made was not that accounts from either the first or second era of farm organisation research are wrong, but simply that none of them is sufficient. Johnsen's conceptualisation of farms as three-way coalitions, however, provides a framework for incorporating the impact of both structural influences and the influences of individual actors with agency upon the economic and social geographies of family farms.

In the third section, in order to examine farm organisation through the lens of changed property rights, I have broadened Johnsen's conceptualisation of the 'farm property' from only including the material aspects of farms to a conceptualisation that incorporates property as a social institution. As a social institution, the farm property can be considered an instrument of regulation used by government and a facilitative device used by property-holding subjects for their own means. This conceptualisation not only highlights the issues of structure and agency discussed in the context of the farm organisation literature, but also draws attention to the potential implications for agriculture when property regimes are modified. In Australian irrigation districts, the historical property regime has been disrupted by the separation of land and water titles, the impact of which is poorly understood from the perspective of the socio-economic organisation of farms. Thus, fine-grained research that will facilitate a better understanding of the importance of water reform in the context of other drivers of change is warranted.

In Chapter 4, wherein I describe the methodological position of this study and the research techniques used, I argue that a research approach inspired by oral history, known as farm life history, is a qualitative methodology that can be used to investigate the interrelationships between farm households, farm businesses, and the associated land and water holdings. Before moving to the methodological discussion, however, in the next chapter I interpret the chronological development of Australian water reform through aspects of Woods' (2007) concept of 'the global countryside'. This interpretation provides a critical appreciation of the Australian national-scale processes through which new ways of managing water have been created and implemented; and provides the macro-scale backdrop against which the farmers' accounts of farm organisation illustrated in the second half of this thesis should be interpreted.





## Chapter 3

# The Global Australian Countryside: Understanding Australian Water Reform

## Introduction

In this chapter, I examine the history of Australian water management, with particular reference to the last 30 years. This historical-contextual backdrop shows how, along with the activities of local, regional and national (water) regulations, global processes have been influential in the making, transforming and (re)shaping of rural spaces in Australia. This analysis applies Woods' (2007) concept of the 'global countryside' as a framework to unpack the many tangled local, regional and global processes and events which have influenced Australia's history of water reform and, by extension, have contributed to the re-constitution of rural spaces across Australia.<sup>86</sup> Exploring the precise entanglements between particular rural places in Australia and global processes through the lens of Woods' global countryside promises an exciting research agenda that has yet to be pursued. Here, I do not intend to provide a critique of – or build upon – Woods' conceptual framework. Instead, I use some of the key characteristics of the global countryside as a useful way of framing the discussion.

The four main sections that constitute this chapter are organised according to the most relevant characteristics of the global countryside that may be observed in the changes made to water access and ownership in the Australian agricultural context. Specifically, the sections consider: 1) new sites of political authority; 2) contested space; 3) the transformation of the discursive construction of nature and its management; and, 4) new opportunities for non-national and non-agricultural property investment. The chapter begins with an overview of Woods' conceptualisation of the global countryside.

## The Global Countryside

When viewed in this historical context, it may be that to write of the contemporary condition of Australian agriculture in the context of globalisation seems somewhat paradoxical (Argent, 2011). Australian farmers and the Australian agricultural sector have always been influenced and impacted by global processes. During the colonial era, for example, the nation's agricultural

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<sup>86</sup> I am not suggesting that water management and changes to the ways in which water resources are valued are the only, or even the most important, global processes influencing rural areas. However, Australian water reform can be considered a distinctive case of the ways in which Australia and its rural areas are entangled with global events and processes.

sector was tightly interwoven with political and economic networks of the British Empire, shaped and supported by development capital provided by either wealthy immigrants or British-based investors such as the Australian Agricultural Company. Flux in the international marketplace has also impacted on Australian agriculture, influencing both the types of agricultural commodities produced for export and the prices received. Although the main markets for Australian agricultural commodities have shifted over time (most markedly when Britain joined the EEC in 1973), the agricultural sector remains export-oriented and continues to shift with changes in the international demand.<sup>87</sup>

Notwithstanding the longstanding global links which have defined Australian agriculture, recently there has been a broadening of interest in the role of globalisation processes in rural change because, as Woods (2007, p. 500) notes, “what makes the experience of contemporary globalization different to earlier conditions of rural change is the intensity and immediacy of the global networks of connections and flows into which rural localities may be enrolled”.

Following this observation, Woods coined the term ‘global countryside’ to describe a “condition of global interrelatedness ... which is partially articulated through certain rural localities to a greater or lesser degree, depending on locally specific engagements with and responses to globalization” (Woods, 2007, p. 486; see also Argent, 2011).

Despite recognition that theories of globalisation can still be usefully applied in rural studies, there are gaps in the general understanding of how globalisation processes impact upon rural economies, rural societies and rural landscapes. Woods (2011a) observes that the application of theories of globalisation in rural contexts has been limited in scope because the literature tends to be dominated by investigations of macro-scale processes (e.g., the dynamics of global value chains and the emerging regulatory regimes of the global economy). The dominance of these foci mean that there are “few studies of the integrated impact of globalization processes in specific rural localities” (Woods, 2011b, p. 270).<sup>88</sup> Woods, whose global countryside begins to respond to these concerns, suggests that the global countryside provides a “framework for developing a locality-based analysis of globalization in rural areas” (Woods, 2011b, pp. 270-271).

Generally speaking, the notion of a global countryside refocuses attention on the importance of global relations in the production and re-production of rural space, as well as on the impacts these relations have upon the lived experiences of rural actors. It emphasises the hybridity and ever-changing nature of the interaction between human and non-human entities, the interconnectedness between the global and the local, and the new networks, actors and

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<sup>87</sup> See Dibden, Potter and Cocklin’s (2009) conceptualisation of competitive productivism to describe the current agricultural regime in Australia (Appendix 6).

<sup>88</sup> Woods (2011a) sought to advance the notion of a global countryside through an analysis of rural change and associated political contests in Queenstown, New Zealand. His main focus was on amenity migration.

processes that interact with local entities. It is through these processes, Woods (2007) argues, that hybrid rural spaces are created; spaces that remain distinctive, but which are also changed from their previous condition. What, then, might be the key characteristics of the global countryside?

According to Woods (2007), if a truly global countryside were to exist, it would be identifiable by the expression of ten characteristics (Table 1 below). Although Woods (2007) clearly describes each characteristic, he asserts that the global countryside does not yet exist, so any number of these characteristics may be expressed to lesser or greater extents.

**Table 1: Characteristics of the emergent global countryside (Woods, 2011b)**

1	Primary sector and secondary sector economic activity in the global countryside feeds, and is dependent on, elongated yet contingent commodity networks, with consumption distanced from production.
2	The global countryside is the site of increasing corporate concentration and integration, with corporate networks organized on a transnational scale.
3	The global countryside is both the supplier and the employer of migrant labour.
4	The globalization of mobility is also marked by the flow of tourists and amenity migrants through the global countryside, attracted to sites of global rural amenity.
5	The global countryside attracts high levels of non-national property investment, for both commercial and residential purposes.
6	It is not only social and economic relations that are transformed in the global countryside, but also the discursive construction of nature and its management.
7	The landscape of the global countryside is inscribed with the marks of globalization, through deforestation and afforestation; mines and oilfields; tourism infrastructure; the transplantation of plant and animal species; and the proliferation of symbols of global consumer culture, and so on.
8	The global countryside is characterized by increasing social polarization.
9	The global countryside is associated with new sites of political authority.
10	The global countryside is always a contested space.

Applying this model as an organisational framework to understand Australian water reform, four characteristics seem to have particular utility:

1. The global countryside is associated with new sites of political authority (#9).
2. The global countryside is always a contested space (#10).
3. It is not only social and economic relations that are transformed in the global countryside, but also the discursive construction of nature and its management (#6).
4. The global countryside attracts high levels of non-national property investment, for both commercial and residential purposes (#5).

In the discussion that follows, I use Woods' seventh characteristic – the landscape of the global countryside is inscribed with the marks of globalization – as tangible expression of the ways in which global processes interact with the processes of Australian water reform. Each of the other four characteristics listed above might be considered as examples of the subsequent marks inscribed in the landscape by global/local interactions.

Using these characteristics, I argue that ideas emanating at a global scale such as environmental sustainability, water security and neoliberalism have become entangled with the particularities of the Australian context. These particularities include: 1) Australia's political composition as a federation of self-governing states; 2) the influence of the Australian Constitution; and, 3) broader micro-economic reforms. Non-human influences are also observable, as impacting upon these relations, specifically the Millennium drought that was experienced throughout much of the country from the mid-1990s to approximately 2010. Indeed, this likely played a greater role in hastening water reform than any other factor.

### **Inscribed with the Marks of Globalization: Australian Agriculture and Australian Water Reform**

Australian rural landscapes are inscribed with the marks of globalisation first wrought at the time of European settlement. Exotic pasture species (and pests) were introduced, along with farming practices and landscape values inherited from Britain. The impact of more contemporary global processes upon Australia's rural areas is also evident in the growth of other primary industries e.g., mining backed by foreign capital (Haslam McKenzie, 2011; Petkova-Timmer, Lockie, Rolfe, & Ivanova, 2009), the growth of tourism (Jackson & Murphy, 2006; Selwood, Curry, & Jones, 1996), migration to amenity rich places (Burnley & Murphy, 2004; McManus & Connell, 2011), and the necessary infrastructure required to support these developments.

Irrigation for agricultural purposes was an important aspect of the development of Australian agriculture, with crucial global links. The success of international irrigation projects, such as those in California visited by Alfred Deakin in the 1880s, inspired early irrigation development in Australia (Pigram, 2006). Subsequently, the first Australian irrigation projects – Renwick, South Australia and Mildura, Victoria – were led by irrigation planners/engineers William and George Chaffey, the Canadian brothers who had been responsible for much of the development of California's water resources. Thus, irrigation ideas, techniques and practices that developed outside of Australia influenced decisions about which areas were to be transformed from dry land to irrigated agriculture. These ideas coalesced with the emerging political ideologies of the time that considered water scarcity to be one of the biggest hindrances to the nation's development. This deeply entrenched attitude meant that within a century, Australia had the highest area of irrigated land per capita among developed nations (Davidson, 1969).<sup>89</sup> The resultant network of irrigation channels and water storage facilities created to enable the

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<sup>89</sup> In the first decade of the 21<sup>st</sup> century, Australia continues to have the highest water storage capacity per capita in the world (Commonwealth of Australia, 2007).

widespread application of water to agricultural land represent some of the tangible marks in the landscape indicative of the global rural.

The ways in which irrigation development and technologies imported from distant lands contributed to processes of place-making should not be underestimated. The creation of irrigation districts inscribed differentiation and heterogeneity upon the Australian landscape, spatial differences that have re-emerged in the context of contemporary water reform. When viewed in this context, the following question may be posed: To what extent are globalising processes driving the latest iteration of water reforms in rural Australia?

One of the fundamental changes in the management of Australia's water resources is evident in the way in which the Commonwealth government has become a 'new site of political authority'. Although the agricultural sector has been responding to new sites of political authority for many years now (e.g., the World Trade Organisation), until 2007 the primary sites for water governance were the state governments. In the following section, I discuss how state governments have referred their water management responsibilities to the Australian Commonwealth government, and hence rescaled governance of this issue.

#### **New Sites of Political Authority: Australian Federation and the Australian Constitution**

Institutional structures for water access and water ownership are also inscribed by "colonial patterns of ordering and transforming nature" (Gibbs, 2009, p. 2964) because they too were founded upon ideas imported from afar. The Common Law Riparian Doctrine, which was imported from Britain where land owners had the right to make reasonable use of water sources on or adjoining their lands (Pigram, 2006; Tisdell, Ward, & Grudzinski, 2002), framed Australian agriculturalists' access to water until the mid-1880s. As agricultural demand for water access increased in the latter decades of the 19<sup>th</sup> century, including demand from landowners who were located away from watercourses, riparian rights became inadequate. Reforms ensued as each colonial government sought to address water access issues. Although the Commonwealth of Australia was formed in 1901, the state and territory governments retained responsibility for water management; thus, the next 100 years of water management were characterised by relative stability in terms of the controlling authorities. In the last ten years, however, there have been dramatic shifts regarding the level of government that has responsibility for water management. These shifts, delineated by Australia's political system of a federation of independently governing states, have resulted in new sites of political authority impacting upon the decision-making process and structures for agricultural water management. Contemporary water management in Australia emerged in pre-Federation Victoria under the leadership of Alfred Deakin, the Commissioner for Public Works and Water Supply. New statutory and administrative structures were catalysed by changes to patterns of rural settlement

that resulted from new land policies (e.g., *The Land Act 1869* (Victoria)). These policies increased the rural population by encouraging small-scale, family farming, a situation that elevated water delivery, water access and water rights to a pressing political issue during the 1877-81 drought. Out of this context, Deakin established the supremacy of future state governments in water matters. After visiting California's irrigation schemes, he recommended that irrigation development should proceed whereby

...responsibility, care and custody of water [should] only be invested in the state, the state's right to water must not be compromised by riparian rights to anyone else, and the rights of the individual and the state need to be properly defined in order to avoid lengthy and costly legislation (Smith, 1998, p. 153).

Riparian rights were subsequently abolished. The ownership and management of water resources as vested in the Victorian government were first enshrined in legislation with the introduction of *The Irrigation Act 1886* (Victoria). This legislation also "instituted a system of centralised administrative allocation of water rights, managed by a public water authority" (Tisdell et al., 2002, p. 15). Following Victoria's lead, other colonial governments made similar legislative changes (Clark & Renard, 1972; Pigram, 2006).

The above developments set the stage for critical debate during federation negotiations. Issues regarding the control and management of Australia's water resources were so important that had they not been settled, federation would likely have proven unsuccessful (La Nauze, 1972). The outcome included control and ownership of water resources being vested in (remaining with) the state and territory governments as reflected in Section 100 of The Australian Constitution: "The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation" (*Commonwealth of Australia Constitution Act 1900* (Austl.)). In this way, the primary site of authority for water management that would remain until the end of the 20<sup>th</sup> century was established.<sup>90</sup>

The impact upon water management of these arrangements has been profound. Kildea and Williams (2010, p. 596; original emphasis) recognising the significance of Section 100, state that water management policy and its associated institutions are

...both shaped and constrained by the *Australian Constitution* and, in particular, by the federal design of the constitutional system. The constitutional framework has, for good or ill, determined the extent of state and Commonwealth influence over river management. It has had a bearing

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<sup>90</sup> The Commonwealth's ability to intervene in water matters was limited to the provisions in Section 51 of The Australian Constitution.



on whether management initiatives have served local or national interests and on whether they have been cooperative or imposed by the federal government.

That is, each subsequent phase of Australian water management has been marked by a “tension between the need for better coordination, and the requirement to preserve state autonomy” (Connell, 2007, p. 32). However, less than two decades after federation, the need for a co-operative approach to manage the multi-jurisdictional Murray-Darling river basin was recognised.<sup>91</sup> However, it was difficult to shift the state governments’ authority over water management. The first co-operative agreement – the River Murray Waters Agreement – was signed by the New South Wales, Victorian, South Australian and Commonwealth governments in 1914 and was legislated in each of the states the following year. The agreement established the River Murray Commission (which later became the Murray-Darling Basin Commission, and then the Murray-Darling Basin Authority), the entity mandated to implement the agreement. The Commission’s primary task was to manage water quantity according to the sharing arrangements stipulated in the agreement. Other tasks included the cost sharing of infrastructure development and maintenance. A shortcoming of this management model was that individual commissioners felt loyalty to their own state governments, meaning that “the management of the water resources of the River Murray and the rights to take and use those resources were still very much ruled by state law and policy” (Gardner, Barlett, & Gray, 2009, p. 37). Although the River Murray Waters Agreement was amended several times in response to political and economic shifts over the following seven decades, individual state governments continued to act within their boundaries until the mid-2000s, despite these co-operative attempts (Pigram, 2006, p. 170).

The next major event that foreshadowed the eventual increased involvement of the Commonwealth in water management occurred in 1994. The Council of Australian Governments (CoAG) meeting that year included debate regarding the development of a water resource policy, the implementation of which was tied to the broader micro-economic reform process being developed at the same time (see next section). This bore fruit ten years later when much of south eastern Australia was experiencing a severe drought. Negotiations between the state and Commonwealth governments culminated in an intergovernmental agreement signed in 2004 which produced the National Water Initiative (NWI): “Australia’s blueprint for ongoing water reform by governments” (National Water Commission, 2007, p. 4).

Despite the intent of the NWI, progress towards better water management and water sharing arrangements was slow. States operating in the interests of their individual priorities maintained

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<sup>91</sup> Focus here upon the Murray-Darling catchment should not suggest that these problems are isolated to this catchment; rather the importance of the Murray-Darling river system as a productive agricultural region and its cross-jurisdictional nature have elevated it to the focal point of Australian water management.



an ad hoc, complex network of different “water policies, allocation procedures, security of supply, maturity of water resources development, and ... measures already in place to manage water use in the interests of efficiency and sustainability” (Pigram, 2006, p. 163). Wide-spread drought was also intensifying, best illustrated by the 2006-07 inflows to the MDB that only totalled 1,040 gigalitres, almost half of the previous lowest inflow in 1914-15 (Murray-Darling Basin Commission, 2007). Against this backdrop, political pressure increased for a national approach to water governance, particularly of the MDB (Wentworth Group of Concerned Scientists, 2007). In January 2007, Prime Minister John Howard responded with the National Plan for Water Security (Howard, 2007a, 2007b), an initiative underpinned by the need to have the relevant state and territory governments refer their powers of water management to the Commonwealth government<sup>92</sup> thereby rendering explicit the Commonwealth government’s involvement in water management. Queensland, New South Wales and South Australia agreed; but, despite several months of negotiation, Victoria refused to refer its water management powers.

This failure to gain agreement from all of the relevant states shaped the introduction of the *Water Act 2007* (Commonwealth) (henceforth referred to as ‘The Act’) and its constitutional basis. Its successful passage through parliament was based upon a series of constitutional provisions that would prove insufficient for effective governance (Kildea & Williams, 2011), but which were significant in the context of broader global trends (see next section). The Act established the Murray-Darling Basin Authority (MDBA), an entity replacing the Murray-Darling Basin Commission, the aim being to ensure integrated and sustainable management of Basin water resources (Department of the Environment, 2014d; *Water Act 2007* (Commonwealth)). A further new institutional arrangement created by The Act was the Commonwealth Environmental Water Holder (CEWH), the task of which was to manage the Commonwealth’s water resources designated for environmental purposes. Later, this entity was to become the water-buying arm of the Commonwealth government that engaged directly with farmers via water purchases for re-allocation for environmental purposes.

The above discussion demonstrates the impact of Australia’s constitutional arrangements upon water management. Although The Act established a legal role in water management for the Commonwealth government, Victoria’s refusal to refer its powers forced the Commonwealth to draw on other constitutional provisions that have much significance when one considers the ways in which global processes shape rural Australia. Among the provisions relied upon by the Commonwealth were its powers with regard to external affairs (Section 51 of The Australian Constitution). It chose a range of international environmental management agreements to which Australia is a signatory upon which to found The Act. In this way, environmental discourse

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<sup>92</sup> These powers were limited to water management within the Murray-Darling Basin catchment.

occurring at a global scale begins to shape debate at the national scale which, in turn, shapes the outcomes of water reform for agriculturalists. Thus, new sites of political authority emerging external to Australia are contributing to the contestation over Australia's countryside. The discussion now turns to examination of these influences.

### Contested Space: Australian Water Reform as an Expression of Global Environmental Discourse

Rural Australia has always been a contested space. Colonisation involved conflict and contestation with the indigenous population over land. Then, contestation over the pattern of land occupancy emerged between large-scale, wealthy agriculturalists and the colonial authorities who sought to control land development and settlement patterns. Graziers, however, largely ignored regulations, utilising land for their own purposes. And so began a sustained period of agricultural production dominated by 'squatters' who, at least, initially paid no rent for the use of land (Roberts, 1924). The main point of contention seems to have been the question of who would exercise control over land – the authorities on behalf of the British government, wealthy elites, or should small-scale farmers be allowed to establish their own businesses? Small-scale, family farming became the political preference with most jurisdictions pursuing land settlement and agricultural production through settlement schemes designed to increase the number of farming families, thus constraining the development of corporate farms (Davidson, 1997).

Rural Australia is no less contested today; but, the fulcrums of contest have shifted. Although issues of resource control and ownership are at the crux of the contest, contemporary contests in rural Australia involve questions about the most appropriate use of natural resources, including productive and non-productive usage. The transition to multiple (and competing) usage of the countryside has been termed by Woods (2003, p. 312) a new 'politics of the rural' in which "the meaning and regulation of rurality itself [is] the primary focus of conflict and debate". In other words, the function of rural space is questioned and contested. Holmes (2006) neatly describes this transition by conceptualising the rural as places where three values are contested: values of production, consumption and protection (see Chapter 2).

The emergence of consumption and protection values in Australia in the latter decades of the 20th century has challenged the position of privilege held by agriculture, heralding the demise of 'countrymindedness' (Aitkin, 1985) and fundamentally altering the status of the industry in society, politics and the economy (Smith & Pritchard, 2014). These broader societal changes have contributed to the development of new ways of managing water, many of which challenged the earlier colonial foundations of water management (Gibbs, 2009). These colonial foundations created an engineering and expansion ethos designed to achieve greater economic

productivity via agriculture. However, by the 1980s, “conflict was growing between [these] old developmental objectives [of water management] and the newer coalescence of economic and environmental objectives” (Tisdell et al., 2002, p. 19).

This conflict was embedded within a growing awareness of the extent of environmental degradation wrought by decades of water resource exploitation, and a growing Australian government neoliberal economic reform agenda (see next section). Over time, this resulted in the emergence of two objectives for the management of water (and, indeed, most environmental) resources: economic efficiency and ecological sustainability (Watson, 1990). By extension, erosion of agriculture’s status as the dominant use of water resources commenced (Smith & Pritchard, 2014). These two objectives are reflected in the major intergovernmental agreements that were created in the 1990s and 2000s. The Water Resource Policy, endorsed by CoAG in 1994, recognised “that action needs to be taken to arrest widespread natural resource degradation in all jurisdictions” and that “a strategic framework to achieve an efficient and sustainable water industry” was required (Council of Australian Governments, 1994, Attachment A). Subsequently, 2004 saw the formulation of the NWI: “The objective of the Parties in implementing this Agreement is to provide greater certainty for *investment* and *the environment*, and underpin the capacity of Australia’s water management regimes to deal with change responsively and fairly” (Intergovernmental Agreement on a National Water Initiative, 2004, para. 5; emphasis added).

Tisdell et al. (2002, p. 19) note that these twin objectives reflected similar developments at an international level where environmental objectives needed to be considered alongside economic, social and cultural objectives. Thus, at a national scale, these developments may be seen as the negotiation of global environmental discourse in the Australian political, economic and social context. Such negotiation becomes explicit with regard to international treaties aimed at achieving ecological sustainable development to which the Australian Commonwealth government has agreed. Consequently, institutions such as the United Nations Conference of the Parties may also be considered a new site of political authority impinging on the making of Australian rural space, a consequence starkly demonstrated in the *Water Act 2007* (Commonwealth).

Prior to 2007, although the term ‘sustainability’ had been in common usage throughout all levels of Australian government, it had not been widely included in legislation (Tisdell et al., 2002). The Act, however, explicitly stated that the presiding Minister and the MDBA must take into account the principles of ‘ecologically sustainable development’ when performing their functions (*Water Act 2007* (Commonwealth), section 21(4)). Herein lies the importance of the way in which The Act was drafted to enable the Commonwealth to legitimately intervene. Without the referral for powers from the relevant state governments (see previous section), the

Commonwealth relied upon a combination of provisions found in Sections 51 and 122 (Government of Territories) of the Australian Constitution. For the purposes of this discussion, Section 51 XXIX – external affairs – is of most interest because this clause is invoked on the basis of Australia’s environmental management obligations<sup>93</sup> (*Water Act 2007* (Commonwealth)). The main obligations relate to Australia’s signatory status to the Ramsar Convention, the Convention on Biological Diversity, and the Climate Change Convention.<sup>94</sup> Kildea and Williams (2011), citing case law, argue that this constitutional basis framed The Act in such a way that “[t]o be a law with respect to ‘external affairs’, the law must be reasonably capable of being considered appropriate and adapted to implementing the treaty” (*Victoria v Commonwealth (Industrial Relations Act Case)*, 1996, 187 CLR 416). If The Act could not meet this test, then the courts might rule the legislation unconstitutional (Kildea & Williams, 2011; Williams, 2010).

Pursuant to this legislative mandate, the MDBA released the first Guide to the Murray-Darling Basin Plan (henceforth referred to as ‘The Guide’) in October 2010. The Guide recommended that water extraction from the river system be reduced by 3,000-4,000 gigalitres signalling a 22-29% reduction in current water use; in some parts of the Basin, this may have meant up to 35% decrease in water diversion limits (Murray-Darling Basin Authority, 2010). Not surprisingly, The Guide’s proposal met significant opposition from agriculturalists and residents of the MDB, opposition that culminated in copies of the proposed plan being stacked into bonfires and burnt at public meetings. The ensuing conflict took the form of contestation regarding the meaning and regulation of the countryside. While on the one hand, the MDBA was required to “ensure the return to environmentally sustainable levels of extraction for water resources that are overallocated or overused” (*Water Act 2007* (Commonwealth), section 3(d)); on the other hand, the rural and regional residents’ responses may be viewed as apprehension regarding the re-regulation of the countryside, an intervention that could potentially undermine their livelihoods. The political furore that erupted following the release of The Guide was attributable to the MDBA’s interpretation of The Act. Doubt surrounded the extent to which environmental outcomes should be prioritised over social and economic considerations in order for the intended Murray-Darling Basin Plan (henceforth referred to as ‘The Plan’) to faithfully implement the international environmental conventions underpinning The Act (Bonyhady, 2012; Rothwell, 2012). The fallout from this debate brought re-drafting of The Plan to a more balanced version in which less water would be made available for the environment (2,750

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<sup>93</sup> The objectives of the Act are i) “to enable the Commonwealth, in conjunction with the Basin States, to manage the Basin water resources in the national interest; and, ii) to give effect to relevant international agreements (to the extent to which those agreements are relevant to the use and management of the Basin water resources)” (*Water Act 2007* (Commonwealth), part 3(a)).

<sup>94</sup> Other international agreements considered ‘relevant agreements’ under the *Water Act 2007* (Commonwealth) are the Japan-Australia Migratory Bird Agreement, China-Australia Migratory Bird Agreement, and the Republic of Korea-Australia Migratory Bird Agreement.

gigalitres) (Bonyhady, 2012). This version of the Plan was passed through the Commonwealth parliament at the end of 2012.

Parallel to these debates, moreover, was an emergent environmental discourse about security in Australian water management. Effective water management that achieves sustainable outcomes has been construed by state and national governments as the means to Australia's future security. This securitisation of water is reflected in the objectives of the Commonwealth's *Water Act 2007* wherein it seeks to achieve "water security for all uses of Basin water resources" (*Water Act 2007* (Commonwealth), part 3(e)). Similarly, notions of needing to secure water resources have also been expressed through a range of policy documents, most notably the National Water Commission's (NWC) 2011 assessment of the NWI subtitled 'Securing Australia's Water Future' (National Water Commission, 2011b), and John Howard's National Plan for Water Security (see previous section). In addition, the objective of the Commonwealth government's Water for the Future<sup>95</sup> initiative – to provide national leadership for water reform – was framed by the need "to secure the water supply of all Australians" (Department of the Environment, 2014a, para. 14). The notion of water security and its connection to human security in Australia reflects similar discursive shifts at the global level (see United Nations University Institute for Water Environment and Health, 2013).

It may be argued that notions of security have always been part of Australia's water management history because in many cases the rhetoric of 'drought-proofing' the nation justified continued and sustained development of water resources for consumptive use (Davidson, 1969).<sup>96</sup> However, what seems to be unique about the current water reform context are the multi-faceted ways in which water is understood as a security issue. Water is no longer seen as a means of 'drought-proofing' the Australian economy; rather, it is seen as a crucial element in "sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems" (United Nations University Institute for Water Environment and Health, 2013, p. 1).

Contestation between different uses for water is one example of the way in which a new 'politics of the rural' is emerging in Australia. In this context, rural space and the use of water resources is predominantly a contest between production and protection values, a contest that is increasingly shaped by the environmental debate surrounding sustainability and security taking place both internally and externally to Australia. The Australian expression of this global debate is, subsequently, negotiated within the context of the Australian Federation and constitutional

<sup>95</sup> "Water for the Future is a ten year, \$12.9 billion investment in strategic programs, improving water management and delivering a range of water policy reforms in both urban and rural areas" (Commonwealth of Australia, 2010).

<sup>96</sup> Another example, the Commonwealth's intervention in the Snowy Mountains Hydro-electric Scheme was justified "on the premise that the scheme was linked to national defence". These arrangements also relied upon Section 51 of the Constitution (Pigram, 2006, p. 45).

requirements. Questions about the best use of water resources invariably lead to further questions about how limited resources are best allocated. The ways in which water resources are allocated and re-allocated in Australia, reflecting a neoliberal ideology, are explored in the next section.

### The Transformation of the Discursive Construction of Nature and its Management: Neoliberalising Australia's Water Resources

Increased concern for environmental degradation and the sustainable use of natural resources at both global and national scales coincided with concern about the economic efficiency and suitability of Australia's water management framework (Tisdell et al., 2002). By the end of the 1970s, the post-World War II boom was waning. It had become increasingly obvious that the logics of Australia's water industry were financially unsustainable because: 1) aging infrastructure required costly renovation; 2) the costs of developing new water supplies to meet unrestrained demand had increased; and, 3) stakeholders were becoming increasingly frustrated by the inefficient allocation of water (Randall, 1981). Over time, these concerns created space for a re-working of Australia's institutional and management frameworks for water, a re-working that transformed the mechanisms for managing water into a market-based system vastly different from the statutory foundations established in Victoria at the end of the 19<sup>th</sup> century (Rankin, 2012).

Recognition of the problems associated with water delivery and usage did not, however, predispose successive Australian governments to pursue a neoliberal, market-based approach to management of water resources. In the early 1980s, for example, Randall (1981) proposed two potential solutions for remedying the economic inefficiencies of the country's water economy: 1) an efficiency-oriented system of administered prices; or, 2) the creation of a water market.<sup>97</sup> In order to understand the transition towards a market-based water management system, an understanding of the broader economic reform agenda implemented by Australian governments at the time is required. Australia's adoption of these economic reforms exemplifies how global processes are entangled at the national level, entanglements that have implications for both the agricultural sector and rural Australia in general.

The last three decades in Australia have been characterised by a marked shift in the nature of economic and social regulation. Successive governments have embraced increased global integration via multilateral free trade agreements, international alliances, and a commitment to market-based competition (Chester, 2012). Initially, greater exposure to the global economy was pursued via macro-economic reforms during which the dollar was floated, financial markets were deregulated, and control over foreign exchange removed. At an international level,

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<sup>97</sup> Although Randall proposed two options, he clearly articulated a preference for a market mechanism.



however, changes in micro-economic policy were also occurring (Forsyth, 1992). These micro-economic reforms, which had a distinct neoliberal character, were guided by “strong individual property rights, the rule of law, and the institutions of freely functioning markets and free trade” (Harvey, 2005, p. 64). Application of these principles resulted in the significant restructuring of the Australian economy which saw a wide range of economic sectors – including agriculture and the water industry – subjected to these new logics.

Apropos of these principles, their application to natural resources demonstrated a discursive shift in perceptions of how nature is constructed, and subsequently in the techniques considered appropriate for its management. Often termed ‘the neoliberalisation of nature’ (Castree, 2010), this transformation involved the subjection of biophysical resources to the neoliberal logics of privatisation, marketisation, deregulation, and re-regulation. It saw boundaries between “the market, the state, and civil society [(re)negotiated] so that more areas of people’s lives are governed by an economic logic” (Castree, 2008, p. 143). Australia’s application of these principles to water resources has created what many consider to be the most developed water market in the world, a system viewed as an exemplar for policies elsewhere (Garrick, Lane-Miller, & McCoy, 2011).

Experimentation with the marketisation of water resources was first implemented in South Australia in 1983. Other Australian jurisdictions followed suit, generally allowing for the temporary or seasonal trade of water allocations before allowing the permanent trade of water entitlements (National Water Commission, 2011c). Although tightly regulated, these first tentative steps towards a market for water set the stage for subsequent wide-ranging reforms that further entrenched the commodification of Australia’s water resources.

The 1994 CoAG meeting officially endorsed neoliberal principles as they applied to water. In general, the principles agreed at CoAG included the removal of all subsidies and a commitment to full cost-recovery of water services. The governments also agreed to “implement comprehensive systems of water allocations or entitlements backed by separation of water property rights from land title and clear specification of entitlements in terms of ownership, volume, reliability, transferability, and, if appropriate, quality” (Council of Australian Governments, 1994, Attachment A). The important point here is that CoAG 1994 fundamentally determined the trajectory for all subsequent modifications to the mechanisms of water management, giving further weight to the transformation to a system of tradeable water rights across Australian jurisdictions (Tisdell et al., 2002).<sup>98</sup> In practice, what this meant was that debate surrounding how water should be allocated and managed was limited to policies that

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<sup>98</sup> It should be noted here that CoAG 1994 brought about the official endorsement of a system of tradeable water entitlements separate from land at the national level. From as early as 1984, such a system had been proposed by the Victorian government (see Public Bodies Review Committee, 1984).

were achievable in the context of water trading and the principles agreed to in the Water Resource Policy (Council of Australian Governments, 1994).

Although changes were being effected at the policy level and water trade was officially permissible in many areas, the efficacy of the market went largely unrealised because water entitlements were not capped until 1997 (National Water Commission, 2011c; Sinclair Knight Merz, 2008). Moves to officially limit water extraction from the Murray-Darling began in 1995 when a moratorium on future water extraction was introduced, a move that was followed by 'The Cap' which limited water extraction from many river systems to 1993-94 levels and created the conditions for water trading to develop. The underlying logic of the cap was to achieve security of supply for existing water entitlement holders; as well, it was an attempt to arrest further environmental decline of the river systems by maintaining existing flow regimes (Murray-Darling Basin Commission, 1998).

While the decision to pursue clear property rights for water was made in 1994, contestation between the Commonwealth and state governments, as outlined in the previous section, has resulted in geographical unevenness as to when the various trading reforms and separation of land and water titles officially occurred. Whereas New South Wales, for example, passed the equivalent legislation in its *Water Management Act 2000* (NSW), Victoria did not pass the relevant legislation until 2007-08. This, in turn, has resulted in geographical unevenness among agriculturalists regarding the opportunities available to them for using the water market.

These processes have also been circumscribed by non-human factors such as the Millennium drought that began in the mid-1990s and continued largely unabated until 2010. The drought not only shaped national and state government policy responses (see previous section), it also shaped farmers' engagement with the water market. In general, between the 2001-02 and 2010-11 irrigation seasons there was a trend towards an increased volume of trading in seasonal water allocations, a trend attributable to a number of water market features including storage levels and the subsequent allocations made, and market prices, all of which were influenced by the much reduced rainfall experienced at the time (National Water Commission, 2011a). Other non-human factors were also influential in these processes; specifically, the location of particular farms and historical decisions regarding which irrigation system would service particular land parcels. The Murray-Goulburn Valley study site that was used for the purposes of this thesis is a case in point. The study site spans two irrigation systems – the Murray system and the Goulburn system – with each system being serviced by different water storages and channel networks. These historical decisions meant that the drought impacted on farms differently depending upon whether they were serviced by the Goulburn or Murray irrigation systems. For example, water storages on the Goulburn system (Lake Eildon) were diminished prior to those on the Murray system (Dartmouth Dam). This meant that water allocations on the Goulburn system were



reduced by up to 50% five years prior to the Murray system allocations being impacted to the same degree (see Appendix 4; Goulburn-Murray Water, 2014b), in turn, shaping when and how farmers needed – or decided – to engage with the water market (Bjornlund, 2008).

Similarly, farmers' engagement with the water market was shaped by locally-specific trading rules such as the restrictions imposed on the downstream movement of water from above the Barmah Choke. (River flows in this section of the river need to be tightly controlled in order to protect the Barmah–Millewa Icon site (National Water Commission, 2010).) These biophysical constraints, reflected in local water policies, determined the water market participation of farmers on the Murray system (Zone 6A, Victorian Murray, above the Barmah Choke).

Although there are myriad other factors involved such as farm system type and commodity prices, the point I stress here is that farmers in different irrigation districts were confronted with water scarcity and opportunities for trade at different times. Thus, although the transformation of water into a tradeable commodity had taken place at the policy and legislative level, the transformative process at the farm-level was temporally and spatially uneven demonstrating the intersection between macro-scale changes in policy and regulation with local characteristics.

Hence the transformation of Australia's water management framework should not be interpreted as some pure form of the neoliberalisation of nature. Rather, it should be interpreted as consistent with the notion of the global countryside, a rural space that only partially exists – and to varying degrees – across space. When Australia's water reform process is viewed in this way, it aligns with Mansfield's (2004, p. 580) assertion that

...our understanding of neoliberalism needs to acknowledge that it is something created in practice, and that through practice, it becomes varied, fractured, and even contradictory. In this sense, neoliberalism is inherently geographical. It not only varies across space, but it is constituted through specific sionatural relations and practices.

Neoliberal approaches to water management and increased awareness of environmentally sustainable water use have created a system in which water resources for consumptive use are officially limited, heralding the creation of imposed scarcity of this natural resource and, by extension, marking the end of an era during which agriculturalists could use water without restraint. Yet, while the water market has been used by farmers to redistribute water among agriculturalists, this mechanism has achieved little in the way of fundamentally re-distributing water to other uses, including the environment. In order for this to occur, land and water titles required clear separation. In the next section, I consider some of the potential implications for rural Australia of the separation of land and water titles in the context of opportunities for the penetration of non-agricultural and non-national property investment.

## Opportunities for non-National and non-Agricultural Investment: Separating Land and Water Titles

The opening up of places to global markets, consumers and capital has been a key feature of globalisation; and the dynamics of how external capitals penetrate agricultural production systems has long been a topic of interest for rural researchers. As noted earlier in this chapter, research has tended to concentrate upon the ways in which global corporations entered agricultural value chains and rural areas (see, for example, Burch & Lawrence, 2013; Burch, Rickson, & Lawrence, 1996). However, considerably less attention has been directed towards the impact upon rural localities of flows of global capital investing in the ownership or access to natural resources other than land.<sup>99</sup>

As suggested above, a key pillar of the Australian water reform process since the CoAG meeting in 1994 has been the transition towards “comprehensive systems of water allocations or entitlements backed by separation of water property rights from land title” (Council of Australian Governments, 1994, Appendix A). The NWI in 2004 provided further clarification of the nature of the intended property rights for water. Specifically, “[t]he *consumptive use* of water will require a water access entitlement, separate from land, to be described as a perpetual or open-ended share of the *consumptive pool* of a specified water resource” (Intergovernmental Agreement on a National Water Initiative, 2004, para. 28; original emphasis).

The creation of water access entitlements in perpetuity contrasted with earlier arrangements when licences that permitted access to water resources were for a fixed term and could be cancelled or amended by the relevant authorities without compensation. That is, while water licences did not legally constitute property, for the most part they were viewed as a ‘right’ and for this reason there was an expectation of renewal among licence holders (McKay, 2008). In the new system, it was proposed that the precise characteristics of a water access entitlement should be exclusive, able to be traded, bequeathed or leased, able to be subdivided or amalgamated, be mortgageable, enforceable, and recorded in publically-accessible water registers (Intergovernmental Agreement on a National Water Initiative, 2004, para. 31).

Although the policy intent was for the separation of land and water titles, the process towards clear specification of property rights for water proved complex; and, in some cases, incomplete (Cruse, 2008). In his discussion of the current nature of water rights in Australia, McKenzie (2009, p. 443) observes that the “tension between the existence of property rights in water and the flexibility required for adaptive management of water resources ... [places] pressure on

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<sup>99</sup> Researchers who have considered the impact of non-traditional forms of capital entering rural land markets include Whatmore (1986), Munton (1984), Broadbent and Pritchard (2011), who examined the realities of institutional and foreign land ownership. Other authors have considered the impact of amenity migrants who purchase property in rural areas (McCarthy, 2008; Swaffield & Brower, 2009).

States to create water rights that are actually something less than property rights even if they are rhetorically described as such”.

These contemporary arrangements for water access and ownership hold much significance for the nature and character of irrigated Australian farms. They contribute to the (re)production of rural space by providing farmers with a greater range of options for organising their primary productive assets of land and water, options that include the purchase of land and combining this purchase with a leasehold arrangement for water, and *vice versa*. Similarly, current owners of land and water may choose to sell their water asset to a corporate entity such as a superannuation fund, and then enter into a fixed-term, fixed-price contract to use the water allocation. However, there is limited knowledge regarding the prevalence and structure of such arrangements; and, for the most part, the water market is dominated by the trade of water allocations and water entitlements with a marked absence of more sophisticated water products (National Water Commission, 2011c). This is not to suggest that innovation in water ownership arrangements is completely absent: companies such as Water Investments Australia (2009) identify themselves as seeking to purchase agricultural assets, including water, from farmers and then establishing lease-back contracts. Similarly, private equity investment manager Blue Sky Alternative Investments Limited (2013) has an investment fund targeted towards Australian water entitlements. Despite the existence of these activities, however, the extent to which they will become drivers for the production and (re)production of rural Australia is yet to be ascertained.

Despite the gaps in knowledge, a political and regulatory framework exists for increased levels of investment from outside of Australia. From the perspective of the global countryside, the penetration of external capitals into the agricultural sector and, consequently, rural areas is primarily concerned with non-national property investment. Here, one can conceive of hybrid engagements between locally-based irrigators and sources of global capital as the separation of land and water titles allows for mobile capital to penetrate agriculture and rural economies in new ways. The potential implications of non-national ownership of Australia’s water resources for rural areas, natural resource management and Australian sovereignty have not gone unheeded in the public domain. Various media outlets have published stories on this topic over the last few years (see, for example, Berg, 2012; Cowie, 2011; Snow & Jopson, 2010). In particular, attention has focused upon the ease with which foreign interests can acquire a stake in Australia’s land and water because only transactions “where the total assets of the business

exceed \$248 million” require approval from the Foreign Investment Review Board (FIRB) (Treasurer, 2013).<sup>100</sup>

These above concerns urged the Commonwealth government to amend the relevant legislation. In late 2010, the government created the *Foreign Acquisitions Amendment (Agricultural Land) Bill* (Commonwealth), after which they contracted the ABS to conduct a survey of foreign ownership of Australia’s land and water resources. The survey revealed that 91% of water entitlements by volume were wholly owned by Australian-owned businesses (Australian Bureau of Statistics, 2011b). Following this survey, the Commonwealth commissioned a parliamentary inquiry into the national interest test of foreign agricultural acquisitions applied by the FIRB.<sup>101</sup> The inquiry made 29 recommendations including the establishment of a national register for foreign ownership of agricultural land within which foreign ownership of water entitlements would also be recorded (Senate Standing Committee on Rural and Regional Affairs and Transport, 2013).

Although there is limited data available regarding the extent of foreign-owned water (and land – see Chapter 2) assets, the potential of the separation of land and water titles to redistribute water entitlements away from the traditional holders – irrigation farmers – to other water owners is demonstrated by the Commonwealth government’s water buy-back programme. The Commonwealth became a purchaser of water entitlements and allocations via the CEWH created under the *Water Act 2007* (Commonwealth) (see previous section) in order to provide water for environmental purposes. Collectively, the Commonwealth’s water buy-back programme represents the single biggest transfer of water access rights away from agriculturalists, resulting in the Commonwealth becoming the single largest owner of Australian water entitlements. As of 31 August 2014, 1,342 gigalitres (GL) of entitlements had been secured, including an annual average volume of 1,142 GL available for the environment (Department of the Environment, 2014c).

Irrespective of the origin of non-agricultural capital, the inherently spatial aspect of irrigated agriculture means that the opportunities for investment in Australia’s land and water differ between irrigation districts and dry land areas. Put another way, the separation of land and water titles and the nature of irrigation districts introduce new avenues for non-agricultural and non-Australian capital to enter agricultural production in a way that is not possible in dry land areas or areas where water access remains tied to the land. These reforms have the potential to contribute to even greater heterogeneity (and perhaps inequality) in Australia’s countryside.

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<sup>100</sup> Although this is the current threshold, on 26 June 2013 the Senate Rural and Regional Affairs and Transport References Committee tabled a report regarding foreign investment and the national interest in the agricultural sector. In the report, the Committee recommended that the FIRB should review “any proposed foreign acquisition of an agribusiness where investment exceeds 15 per cent or more in an agribusiness valued at \$248 million (indexed annually) or exceeds \$54 million” (Senate Standing Committee on Rural and Regional Affairs and Transport, 2013, p. xvi).

<sup>101</sup> Earlier a consultation paper had also been commissioned (Commonwealth of Australia, 2012).

## Chapter Summary

This contextual chapter, which has explored the history of water access and ownership and associated water policy reforms in Australia, highlights how these very important aspects of Australian agriculture have been influenced by – and are currently tightly entangled with wider and shifting global processes. The discussion was structured around five key characteristics of the global countryside, a conceptual framework which has recently surfaced in debate surrounding the drivers and nature of rural change.

My highlighting of these characteristics and their links with Australia's water reform process does not suggest that these processes are entirely new. The marks of globalisation expressed through European ideals pertinent to landscape and socio-economic progress have always been a feature of the development of Australia's water resources and the subsequent making of places in rural Australia. Inspecting water reform through this lens, however, draws one's attention to the ways in which Australian agriculture has become immersed in a global network of environmental discourse, international agreements, and neoliberal ideologies. It also delineates the ways in which these global processes are negotiated by the particularities of the Australian context, particularities that include a federation of independently governing states in which irrigation development and drought-proofing the agricultural sector were considered imperative for the economic and social prosperity of the nation (Davidson, 1969). Thus, developing and subsequently maintaining irrigated agriculture typically has been socially and politically acceptable. The ways in which these features have coalesced have produced a neoliberal regime that while identifiable as such, is a distinct variant when compared to other Anglophone liberal market-based economies with irrigated agricultural industries (e.g., New Zealand, Britain and Canada) (Chester, 2012). I now turn my attention to the methodological position I have adopted and the research techniques I have implemented in order to explore the socio-economic organisation of 40 farms in the Australian state of Victoria.

## Chapter 4

# Practising (and performing) Rural Geography

## Introduction

In Chapter 2, I argued that understanding the processes of change enacted and experienced by farming populations requires highly nuanced, farm-level research. This chapter addresses the methodological issues inherent to this objective. The aspiration of this study, to generate in-depth, contextualised accounts of how farmers organise and reorganise their farms in response to changed property rights, of necessity demands a qualitative methodological approach.

Researchers have long recognised the utility of qualitative approaches as an appropriate foundation for the study of rural society. Notably, since the 1990s, rural geographers have more frequently used qualitative approaches (Woods, 2010).<sup>102</sup> This study is positioned along a similar line of qualitative enquiry, one in which detailed accounts of lived experiences are credible sources of information from which enhanced understandings of societal structures and processes may be gained.

Given the large body of literature that justifies this methodological approach, these arguments will not be repeated here. Instead, the chapter begins by engaging with contemporary issues for the practice of qualitative, rural geographical research. Specifically, I argue that farm life history, a rarely used research approach (Riley & Harvey, 2007a; Riley, 2010) which draws upon situated knowledges and the importance of historical narratives, provides a suitable framework for examining farm organisation in a way that is consistent with the contemporary theorisations of family farming discussed in Chapter 2. Within this framework, I utilise the guiding principles of polylogicism (deliberation over where research encounters take place) and performance (embodied dispositions of everyday life) to create space for the use of emplaced research encounters in studies involving farmer participants. The incorporation of these principles into the methodology of a study that draws heavily upon insights from the political economy of agriculture aligns with Cloke's (1997, p. 372; original emphasis) wish to retain what he regarded "as important insights from political economy approaches and to place these

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<sup>102</sup> Woods (2010) observes some geographical differences with regard to the dominance of qualitative research practice. Qualitative approaches tend to be favoured by British rural geographers, while researchers in other parts of the world (i.e., North America, Europe and Australia) frequently use quantitative approaches.

*alongside* some of the exciting ways of seeing rurality and ways of doing rural studies which draw on aspects of the cultural turn”.<sup>103</sup>

Having established the methodological position used in this study in Section One of this chapter, Section Two describes the specific procedures used. This includes the sampling procedures and sample descriptions, the processes of data generation, and the analysis techniques applied. Then, in the third and final section, following Riley and Harvey (2007a) and Riley (2010), I offer some critical reflections on the use of farm life history as an emerging technique for understanding rural and farm-level change.

### **Farm Life History: A Qualitative, In-Depth Interview Approach**

Farm life history provides a sound epistemological and methodological base for understanding the modifications to farm organisation over time in a way that is consistent with the tripartite conceptualisation of family farms presented in Chapter 2. This approach draws upon oral history, a methodology that privileges people’s personal recollections of events from within their own lifetimes. So, before elaborating on farm life history, I will first highlight the primary methodological underpinnings of oral history.

While oral history has typically been a methodological tool used among historians (Perks & Thomson, 1998; Thompson, 2000),<sup>104</sup> the extent to which oral history methodologies have been utilised within the spatial sciences remains a point of contention (c.f. Riley & Harvey, 2007a; Trower, 2011b). However, there is general consensus that the approach is a useful addition to the geographer’s methodological toolkit when exploring individuals’ subjective relationships with their environments (Riley & Harvey, 2007a, 2007b; Trower, 2011a). It “can be used to gather knowledge of localities, including knowledge that is part of local culture, by accessing people’s firsthand experiences of and bodily involvement with specific physical environments” (Trower, 2011a, p. 3). Despite the approach having the potential to create place-specific, personalised narratives, some geographers have been critical of the, at times, superficial treatment of place among studies in which oral history has been used. That is, “a general focus ‘on’ a specific place simply frames the research and provides one of the parameters”, rather than being more comprehensively deliberated over or theorised (Andrews, Kearns, Kontos, & Wilson, 2006, p. 156). In the current study, I aspire to more robust treatment of place,

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<sup>103</sup> It should be noted here that researchers’ interest in the theoretical and methodological possibilities arising from a focus upon practices and performance emerged from dissatisfaction with the apparent over-emphasis upon representational theoretical and methodological frameworks with which ‘the cultural turn’ was first concerned.

<sup>104</sup> Researchers typically differentiate ‘oral history’ from ‘oral tradition’. The latter refers to “stories, songs, and dialects passed down through generations by word of mouth” (Trower, 2011a, p. 1); that is, oral traditions “move beyond the life history of one individual” (Riley & Harvey, 2007a, p. 392). In contrast, oral history is typically used to refer to oral recollections delineated by an individual’s lifetime (Riley & Harvey, 2007a; Trower, 2011a).



particularly in light of recent methodological advances concerning the site selection for where research encounters occur. I elaborate on this issue below.

The primary methodological strength of oral history is the way in which it can access ‘situated knowledges’ (Haraway, 1991), ‘from the ground’ so to speak. The way in which it can generate contextualised understandings of social phenomena has rendered oral history particularly useful for revealing the lived experiences of social groups that are often hidden or marginalised from more mainstream accounts (Perks & Thomson, 1998). But, this need not be the only way in which the approach is utilised. Oral history may be used to problematise existing meta-narratives in much the same way as other qualitative methodologies have been developed in response to recognition that the world is socially constructed and contingent (Pratt, 2009c). As demonstrated by Riley and Harvey (2007b, p. 349; see also Riley and Harvey, 2007a), the use of oral history generated new understandings about rural landscape change that acted “to disrupt unproblematic and one-dimensional accounts” and reinforced “the importance of the personalized and lived experiences of individuals”.

Riley and Harvey’s use of oral history is foundational to the research reported in this thesis. But, other works in which oral history has been used to illuminate the personalised and lived experiences of rural actors warrant brief consideration. Perhaps the most well-known investigation of rural people’s lives is George Ewart Evans’ (1958)<sup>105</sup> study of agricultural workers in East Suffolk, conducted at a time when on-farm labour relations were being transformed by social and technological changes. But, whereas Evans’ main objective was simply to preserve historical knowledge, more recent applications of oral history in rural studies have been strategic, in the sense of revealing socially contingent life-worlds (Egoz, 2000; A. Holmes, 2011; Riley, 2010; Riley & Harvey, 2007a).

All of these studies capitalise on another key methodological strength of oral history, which is the way in which it deliberately incorporates a longer-term temporal dimension. In the Ouse River Project reported by A. Holmes (2011), historical narratives from rural actors involved in land and river management were combined with ecological research to understand better the relationships between rural land use, biodiversity, and flood management. The actors’ oral histories generated more conclusive accounts of changes in streamside ecology and land use over time, providing important historical information that had hitherto remained unrecorded and was thus not available to the project by other means. Yet, as will be argued here, the application of oral history can also be usefully extended to examine processes of farm organisation.

The longer-term perspective provided by oral histories lends a useful complement to studies of farm organisation reliant on more of a ‘snapshot’ approach. Researchers investigating farm structuring typically limit the time period of most concern to the recent past, which leads to

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<sup>105</sup> George Ewart Evans has been referred to as the pioneer of oral history.



longer-term histories of farm development and adaptation being overlooked. In Evans' (2009) study of agricultural adjustment in the Welsh Marches, for example, sole focus was upon changes that farmers had implemented in the five years prior to the study. Although a longer period of time was considered in Johnsen's research (1999, 2003, 2004), work that is foundational to the current project, her analysis was largely limited to the 15 years between the implementation of agricultural deregulation in New Zealand and the time when she conducted her research. Such temporal constraints are often justified on the basis of concern regarding individuals' capacity to recall events accurately. In its endeavour to counteract inaccurate recall on the part of research participants, oral history typically includes multiple interviews. In this way, oral history is differentiated from standard qualitative interviewing. Multiple interviewing benefits the research process by: 1) allowing the researcher to establish rapport with participants over time; and, 2) providing an opportunity for the researcher to prepare between interviews in order to follow-up responses and prompt for further information about the topic/s at hand (George & Stratford, 2005).

Having discussed the key methodological underpinnings of oral history relevant to the current study, the discussion now turns to farm life history. Riley's (2010; see also Riley & Harvey 2007a) work is of foremost significance here due to his innovative use of farm life history *vis-à-vis* oral history. The fundamental difference between the two approaches is that farm life history displaces the primary object of enquiry. Unlike oral history, in which the focus is upon the life experiences of an individual, farm life history positions the farm as the entity of most concern. In effect, farm life history captures a chronology of farm events orchestrated by farm owners'/operators' decisions (Riley & Harvey, 2007a). This comprehensive approach should be differentiated from other qualitative methods in which a question or questions about the history of individual farms are inserted into a more generic enquiry (see, for example, Sutherland et al., 2012).<sup>106</sup>

When applied to the conceptualisation of family farms used in this thesis – the three-way coalition between household, business and property – each of these domains can be rendered as having separate yet intertwined histories, that is, histories which can be illuminated through the narratives of farm actors. Taking account of the historical dimension peculiar to the methodology is particularly important for the incremental way in which water reforms, including the progressive loosening of the tie between land and water, have occurred in Australia since the early 1980s (see Chapter 1 and Chapter 3).

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<sup>106</sup> A study in the farm organisation literature that most closely resembles the research approach adopted in the current study is that of Munton and Marsden (1991, p. 110), who conducted a series of interviews in the 1980s in which they generated information on "changes in land occupancy and ownership, business organization, farm labour, the nature of the farming system, on- and off- farm sources of income, levels of indebtedness and family structure".

Positioning the farm as the central object of enquiry provides a stable ‘thread’ around which detailed historical narratives may be generated. Just as people’s lives change, sometimes quite dramatically, so too can the composition of landholdings that constitute a given farm enterprise. Irrespective of these changes in individuals’ lives, the family life cycle, or the combination of landholdings, the farm business provides a touchstone throughout the development of the enterprise. Changes in the socio-economic organisation of agricultural enterprises can, then, be traced alongside the existence of this business entity. However, this does not mean that the business domain is the farmer’s highest priority or that it is central to the socio-economic organisation of farming. It simply means that it is the one domain common to the life history of the farm enterprise. Each aspect of the socio-economic organisation of farming has a parallel history across life cycle changes and the acquisition or disposal of land parcels, for example. The implication for data generation is that the process can be structured around the ‘business enterprise life history’.<sup>107</sup>

Having established the broad methodological framework used in this study – farm life history – the discussion now turns to the question of tactics; that is, how might farm life history best be operationalised? Here, the tripartite conceptualisation of farming has proven methodologically useful. This perspective resonates with recent methodological debates about place and performance that have opened up new ways of thinking about research methods. In line with these developments, the discussion now turns to an exploration of the use of polylogicism and performance as guiding principles for implementing farm life history.

### Polylogicism: The Role of Place in Research Encounters

While place is a central concept in geographical investigations of social phenomena, it is rarely problematised in methodology. Nevertheless, it is becoming increasingly accepted that qualitative studies need to consider how participants construct their individual and social identities during an interview, and how place influences this construction (Anderson, 2004; Anderson, Adey, & Bevan, 2010; Brown & Durrheim, 2009; Elwood & Martin, 2000; Sin, 2003). Anderson et al. (2010, p. 590) argue that while the social relationships formed during research encounters have been widely discussed and critiqued, the ‘where of method’ has received markedly less attention. In many cases, “...methodological approaches have envisioned place as a simple backdrop that provides the means to exercise methodological praxis, rather than explicitly seeking to understand the spatiality of that praxis”. In order to facilitate more explicit understanding of this spatiality – making place matter – Anderson et al. (2010, p. 590; emphasis added) propose a ‘polylogic approach’ that

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<sup>107</sup> This methodology bears similarity to the labour history approach adopted by Coombes & Campbell (1996) and Taylor & Little (1995) in their investigations of the role of pluriactivity in rural adjustment in New Zealand during the mid-1990s.

...moves away from configuring research method as a dialogue (e.g., between researcher and researched) ... towards method explicitly including researcher, researched, *and the place of methodology*. From a polylogic approach, the material placing of methodological techniques should be deliberated over as systematically and reflexively as the choice of technique and the social positioning of the researcher is at present.

Although the polylogic approach proposed by Anderson et al. can (and, perhaps, should) occur in all geographical research arenas, it seems particularly relevant to research investigating the experiences of farming populations and the socio-economic organisation of their enterprises because of the locally embedded nature of farmers and the intimate relationship they have with the land upon which they live and work (see, for example, Convery, Bailey, Mort, & Baxter, 2005; Flemsæter, 2009; Gray, 1998). Johnsen (2004), however, calls attention to other ways in which the ‘place of farming’ – the physical land comprising a farm – is important; that is, the material aspects of farmland (and stock, infrastructure, machinery) interact with and co-constitute the other elements of the farm enterprise (e.g., the individual, business, household and wider context).

Recognition of the importance of place should have implications for the research methodologies and data generation techniques one utilises. It seems highly likely that the knowledge a researcher gains from an interview conducted around a kitchen table will differ from that gained while outside on the farm, for example. If the farm property matters to one’s understanding of farm organisation, the farm property should also matter to the ways in which one generates research data.

Riley and Harvey (2007a) highlight the importance of consideration to where research encounters are conducted. Advocating for more ‘place-bound’ narratives in the construction of knowledge about rural places and the associated processes of change, they specifically encourage greater use of approaches that include conversations out on the farm. When out on the farm, the physical landscape and other material aspects of farms (e.g., infrastructure, stock, and machinery) contribute to the production of knowledge by providing visual cues for conversation (Riley, 2010; Riley & Harvey, 2007a). These triggers can elicit narratives about present-day circumstances as well as create connections with the past. Thus, Riley and Harvey (2007a) report an event during one interview in which the farmer was able to point out landscape features and describe processes/decisions that occurred several decades earlier and how they were reflected in the present landscape.

This land was what was kept as tilled land as the soil is slightly better, if you look just over the river you move on to rougher land. You can see the ridge in that field, that was where that was ploughed during the war ... and the

corner of that next field was taken out for two acres of potatoes ... oh, and then in the distance, the rough land was taken by the ‘War Ags’ [War Agricultural Executive Committees]<sup>108</sup> for improving (Riley & Harvey, 2007a, p. 395).

Following this initial descriptive process, the interviewer was able to enquire about each field, seeking greater detail about the changes that had taken place.

Another benefit of interviewing in carefully chosen places with which participants have a personal association is the creation of “incidental paths to be followed” (Riley & Harvey, 2007a, p. 396). Riley and Harvey recount the way in which an old, derelict tractor initiated a narrative about how this piece of machinery represented an important transition in the farm enterprise because it enabled the farmers to undertake more widespread ploughing and achieve greater levels of efficiency. Such serendipitous occurrences are more difficult to create in more static interview contexts, such as around the farmhouse kitchen table.

Following Anderson (2004), Riley aligns his argument for specifically enrolling place – the farm – in rural research practice within theorisations of identity formation. He draws on the notion of ‘constitutive co-ingredience’, an idea that encapsulates not only the “reciprocal influence” between people and places, but also recognises that the self and place are “essential to the being of the other” (Casey, 2001, p. 684). As argued in Chapter 2, the property domain encourages one to think about more than the material aspects of the farm property. The farm property, a territorialised space, is contained within a series of land parcel boundaries that reflect property as a social institution of land ownership and land tenure arrangements. Situating research encounters out on the farm enables the physical space of the farm to be visited or toured. Apropos of Riley and Harvey’s work, research encounters were not only conducted on the farm, but they also involved travelling around the farm. Thus, Riley’s situating of the research encounter on the farm drew upon methodological innovations associated with the ‘mobilities paradigm’ (Hein, Evans, & Jones, 2008; Sheller & Urry, 2006). This approach seeks to harness the benefits from moving across a landscape (Anderson, 2004; Brown & Durrheim, 2009; Evans & Jones, 2011; Holton & Riley, 2014; Kusenbach, 2012). Unlike Riley’s use of farm walks that arose from ‘methodological serendipity’, in this study, moving around the farm was a deliberate strategy employed to initiate the construction of individual farm life histories. The deliberate inclusion of mobile research methods also points to methodological innovations that have emerged out of recognition of the performative aspects of social life.

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<sup>108</sup> War Agricultural Executive Committees were government-backed organisations tasked with increasing food production in Britain during both the First and Second World Wars. At the start of the Second World War, they were given powers to determine land use, the type of crops grown, and to order land to be ploughed for improved arable use (Short, 2007).

## Performance: The Role of Everyday Practices in Research Encounters

Instead of asking respondents to describe their world, researchers have become more interested in listening to... respondents talk while they are in their worlds (Pratt, 2009a, p. 526).

Performative aspects of social life have been a topic of investigation for social researchers across a range of disciplines since the publication of Goffman's (1959) *The Presentation of Self in Everyday Life*. Goffman's argument was that people strategically perform in social life (front-stage situations) to achieve particular goals. Subsequently, performance and the related notion of performativity have become important conceptual tools to interrogate "taken-for-granted social practices" and to recognise "the creativity of everyday life" (Gregson & Rose, 2000, p. 434). Researchers from the spatial sciences, including researchers of the rural, have also expressed interest in the utility of these conceptual tools, prompting some to call for greater attention to be directed towards the performance and enactment of rural social life (Carolan, 2008; Edensor, 2006). Here, I engage with the literature advocating for greater use of performative approaches. Specifically, I focus upon the methodological implications of deploying these approaches in rural contexts.

Approaching the study of social life from a performative perspective moves beyond social constructivist perspectives by emphasising non-discursive elements of social interaction. The grand, the epic and the seemingly small or mundane aspects of social action matter:

Performance has built up a knowledge about technologies of carnality, space and time which is aware of itself and its effects. It can do the grand and the epic but it is also aware that the "smallest" things – from the flicker of an eyebrow to the positioning of a chair, from the track of a tear to the staging of an entrance – matter (Thrift, 2004, p. 129).

Writing in the context of rural research, Edensor (2006, p. 485) adopts a similar position, arguing that Goffman's original perspective tends to overlook "unreflexive, habitual enactions"; that is, everyday iterative practices can also be considered performative. Citing three different examples, he illustrates that rural performance can be "spectacular commercial presentations [rural tourism attractions], conventional reflexive ways of experiencing the countryside [walking, mountain biking or other physical activities], carnivalesque celebrations [agricultural shows] or sedimented in the unreflexive, embodied dispositions of everyday life" (Edensor, 2006, p. 494).

In his report for *Progress in Human Geography*, Woods (2010) provides a summary of recent research that has investigated aspects of performance in rural spaces, separating this body of literature into three strands. First, researchers have directed their attention towards "practices that serve to perform rural community" (Woods, 2010, p. 837). These include participation in sports clubs, attending community events, drinking and socialising, and exchanging gossip.

Second, the ways in which farm identities and cultures are formed through embodied practices developed from research that involved farm households. The third strand of this body of literature considers rural tourism experiences as staged performances in which tourists (outsiders) consume the rural. In these studies, the performance of rurality is often the topic under investigation; that is, the researcher's intent is to capture and interpret constitutive elements of rural spaces through embodied performances. Yet, there seems room for innovative research methods; that is, for researchers to deliberately incorporate 'typical' rural performances – embodied dispositions of everyday life – into their research designs as a means to understand better a range of aspects associated with rural spaces.

In the broader social sciences, theorising social life from the perspective of performance, and highlighting the importance of the non-discursive (or extra-discursive) elements of social interaction, has created new ways of thinking about – and new possibilities for – research methods (Pratt, 2009a).

The emphasis on the extra-discursive underlines the importance of witnessing in order to understand – not just how people describe their world – but how they act in their world ... can offer opportunities to access a range of experiences and emotions that are not easily expressed through interview talk (Pratt, 2009a, p. 526).

In a farming context, myriad everyday practices or “rural competencies” (Edensor, 2006, p. 492), are integral to the running of a farm. These competencies include decisions about the sowing and harvesting of crops, routines regarding irrigation, the trading of livestock, and knowing how to obtain professional advice about numerous farming matters. All of this decision-making is performed upon a stage of production – the farm. In conjunction with these competencies is “a knowledge of locality, a geography of practical action within one's taskscapes which incorporate regular sites, routes and regions, as well as hedgerows, farm yards, barns, streams, fences and pastures as constituents of ‘activity spaces’” (Edensor, 2006, p. 492). Herein lies the methodological question at hand: How might such practices be usefully incorporated into research methods for agricultural geography?

An everyday farm practice that seems to encapsulate ‘a geography of practical action’ is the routine activity of travelling around a farm. Farm operators interact with their farms through various means of transport (e.g., motorbikes, farm trucks, tractors, walking). This practice might be modified to a request on the part of the researcher to be shown the farm via a tour of the land parcels on which the farm is operated. In this scenario, not only are the farmers engaging in a regular farm practice that embodies their ways of knowing, but their actions are also performative inasmuch as the presence of the researcher elicits a response from the farmer to present or construct their farm and their lives in particular ways. The researcher becomes a



'tourist' as the farmer determines the route taken and the sites considered worthy of being shown to an outsider. This approach should be distinguished from participant observation (a technique that has been used to research performing ruralities) because the researcher can never direct a farm tour in a manner equal to that of the farm owner, unlike the more equal level of participation that might be achieved through attendance at an agricultural show, or involvement in an outdoor activity, for example.

When used in this way, the performative aspects of farm life are not the topic of investigation; rather, the performative aspects of farm life – delivering a farm tour – are used as a methodological tool with which to understand the interrelationships between the three central domains of farm enterprises – the farm household, the farm business, and the respective property holdings. The generating of farm life histories, either 'in-the-field' or 'on-the-farm', not only elicits information about physical landscape change, but can also reveal changes in the socio-economic organisation of farm enterprises. Exploring the present-day physical boundaries of a farm is likely to illuminate historical narratives about the circumstances of any changes in land holdings. For example, the sale of land parcels will be reflected in changed property boundaries, which may have been influenced by the need to reduce farm debt so as to provide greater financial security to a farm household with young children. Touring the farm gives the farmer opportunity to identify the changes that have occurred over time, and to reflect on the corresponding processes of change. Similarly, farmers might identify changes in land use on particular parts of their property that may have been caused by commodity and/or water allocation prices at the time. In this way, current conceptualisations of the organisation of family farms permeate the process of knowledge production.

As a mobile research method, conducting farm tours has benefits for the researcher-researched interaction. Successfully establishing rapport between the researcher – an outsider – and the research participants is an important aspect of any qualitative research project. Selecting a place with which the farmer is familiar, and one which alters the interaction between the farmer participants and the researcher, might contribute further towards the establishment of rapport. Similarly, the act of giving a guided tour of the farm may reduce the formality of being interviewed by a researcher. As reported by other researchers who have used mobile methods, talking while moving through places with which the respondents are familiar reorganises the spatial arrangements between the researcher and the interviewee to being alongside each other rather than facing each other (Anderson, 2004; Brown & Durrheim, 2009; Riley, 2010). This reorganisation of the research encounter is "useful as it produces not a conventional interrogative encounter, but a collage of collaboration" (Anderson, 2004, p. 260).

## Section Summary

To conclude this section, the methodological approach presented above capitalises upon the benefits of farm life history as well as some of the more recent methodological debates within rural geography and cognate disciplines, specifically the performative aspects of rural practices and the question of where research encounters take place. Careful consideration of these issues has helped to develop a customised research approach to the investigation of the complex interactions between farmers, their businesses, their households, and their land and water holdings following the separation of land and water titles.

Specifically, the research design for this study involved an intensive, field-based qualitative study that generated farm life histories in order to highlight the important stages and factors in the evolution of each farm enterprise over longer time frames. The farm life history approach provides a research technique that is sensitive to situated knowledges, recognises location as integral to processes of knowledge production, and draws on the benefits of generating data while performing everyday rural activities. These methodological innovations were operationalised through using farm tours to initiate the construction of individual farm life histories. Thus, the first phase of fieldwork involved unstructured interviews while travelling around each farm, producing “an unstructured dialogue where all actors [both human and non-human] participate in a conversational, geographical and informational pathway creation” (Anderson, 2004, p. 260). Farm tours were then complemented by a second phase of fieldwork in which more traditional, sedentary, semi-structured interviews were conducted in order to explore each farm life history in more detail and to record farmer conversations. In Section Two, the specific procedures used to implement these methods are described, including the sampling techniques and sample descriptions, the processes of data generation, and the analysis techniques used.

## Farm Tours and Farm Life Histories in Practice

It is Reason herself which teaches us not to rely on Reason only in this matter. For Reason knows that she cannot work without materials. When it becomes clear that you cannot find out by reasoning whether the cat is in the linen-cupboard, it is Reason herself who whispers, ‘Go and look. This is not my job: it is a matter for the senses’ (C.S. Lewis, 2001, first published 1947).

This section presents the ways in which farm life histories were created and the specific data generation procedures which were implemented. Prior to describing these processes in detail, I outline the procedures for selecting farm enterprises and then provide descriptions of the farms and their owners/operators.



## Selection of Farms and Recruitment of Farm Owners/Operators

In qualitative studies, the sample size is determined by the overall purpose of the study, how the findings will be used, and the resources available. Often, the final sample size is not known at the outset of the research, as was the case with this study. However, in order to achieve the “expected reasonable coverage of the phenomenon” (Patton, 2002, p. 246), it was anticipated that a minimum of 15 farms in each study site would need to be included. Farms were selected using a purposeful random sampling procedure. “*The purpose of a small random sample is credibility, not representativeness. A small, purposeful sample aims to reduce suspicion about why certain cases were selected for study, but such a sample still does not permit statistical generalizations*” (Patton, 2002, p. 241; original emphasis).

The database from which farm enterprises were drawn consisted of all responses to the *Farm and Households Intentions Survey 2010*<sup>109</sup> from the Murray-Goulburn Valley and Corangamite. The survey sample was drawn from a wider population of farms listed in the Australian Business Register. After cleaning the records identifiable as farm businesses in this register for the purposes of the survey, questionnaires were sent to 800 farm enterprises in each of the study areas selected for the *Farm and Households Intentions Survey 2010*.<sup>110</sup> After accounting for surveys that were known to have not reached their intended recipient (e.g., insufficient postal address information, left address, unknown address), the effective sample size for the Murray-Goulburn Valley was 594 and 705 for Corangamite. The response rate for the Murray-Goulburn Valley was 21.5% ( $n = 128$ ), and 15.0% for Corangamite ( $n = 106$ ). The survey respondents were asked if they were willing to participate in future stages of the research project and, if so, to provide their contact details.

The response database from both study sites was cleaned (see Appendix 8) and, following this process, 92 cases remained in the Murray-Goulburn Valley database and 83 in the Corangamite database. Next, a random selection of cases was drawn from each database. The process used involved generating a new variable of random numbers in IBM SPSS software (Statistical Package for the Social Sciences). Each database was then ordered sequentially using this random number variable. The first 25 respondents on each list were contacted either by postal mail or email and invited to participate (see Appendix 9 for a copy of the Letter of Invitation).

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<sup>109</sup> The *Farm Household and Intentions Survey 2010* was conducted as part of the wider ARC Linkage Project supported by the Victorian Department of Treasury and Finance (see Chapter 1), and was developed and implemented prior to the commencement of this PhD research. A follow-up survey administered to the same farm enterprises was conducted in 2012. The purpose of the survey was to understand how changing circumstances influence the viability of Victorian farms and attitudes to farming. One of the intended outcomes was to identify farmers who had either already left farming at the time of the first survey or who left farming during the tenure of the ARC project. However, this objective did not preclude the participation of farmers who were continuing to operate their farms and had no intention of exiting farming. Thus, the significance of the survey to this thesis is that the survey respondents comprise the farming population from which the research sample was drawn.

<sup>110</sup> Two other areas in Victoria – the Wimmera and Sunraysia – were also surveyed as part of the wider project. The response rate for the survey across the four study sites was 18.7% (Weller et al., 2013). See Appendix 1 for a detailed description of how the study sites were selected.

During a two week period after mailing, each farmer was contacted by telephone to confirm his/her willingness to participate. In cases where farmers declined to participate, or were unable to be contacted after at least three phone calls made at different times of the day and week, the 26<sup>th</sup> farmer, then the 27<sup>th</sup> farmer was approached until 20 farmers from each study site had given consent to participate. Given the two-phase nature of the study, a small degree of attrition was expected; for this reason, 20 farmers were recruited to help achieve a final sample size of at least 15 farms from each study site. The response rates – following the invitation to participate in the research, based on phone contact being established and a clear acceptance or rejection of the invitation being received – were 78% in the Murray-Goulburn Valley and 67% in Corangamite (see Appendix 10).

### Characteristics of Farms and Farm Owners/Operators

This study was not intended to focus on a specific agricultural industry; however, the particular geographical characteristics and social histories of any agricultural area influence the types of farms that are included in studies of this nature (see Chapter 1). The Murray-Goulburn Valley and Corangamite are two of the three major Victorian dairy regions; thus, the majority of farms in the study were operating dairies. Thirty-one farms were operating dairies, and three were beef farms. Two farms (one from each study site) were cropping enterprises, and four farms in the Murray-Goulburn Valley were mixed cropping/livestock enterprises. All except one of the non-dairy farms were owned and operated by ex-dairy farmers. One of the dairy farms was an operating dairy at the time of the survey and farm tour, but was sold several weeks prior to the interview. This farm was retained in the data set because of the recent nature of the sale and the fact that the family was still living on the farm. So, while it represented a farm exit, a credible farm history consistent with the data generation approach could still be developed.

The majority of farms ( $n = 35$ ) were operated by people from farm families in which the previous generation (at least) had been farmers, 16 of which comprised a block of land farmed by the previous generation. A larger number of farms comprising no family land were in the Murray-Goulburn Valley ( $n = 15$ ), with the remaining nine farms in Corangamite. The majority ( $n = 35$ ) of farm enterprises were operated by Australian citizens: the remaining five farms were operated by immigrant New Zealanders.

Farm business owners were mostly married couples ( $n = 35$ ). Fifteen households had school-aged children and thirteen were couples whose children had left home. Nine households had working adult children living at home; in five of these cases (all in Corangamite), at least one of the adult children still living at home regularly worked on-farm. In five cases, the farm's income supported two households from the same family group. In five other cases, members of more

than one household relied on the farm for their livelihood through share farming and lease farming arrangements.

Farm business owners were predominantly aged between 40 and 59 years (66% of households). However, Corangamite farmers were slightly younger than the Murray-Goulburn Valley farmers. The average age for Corangamite was 52.4 years, while for Murray-Goulburn Valley it was 54.8 years.<sup>111</sup> Figure 8 (below) depicts the number of farm households in each age group from both study sites. Table 2 and Table 3 (pp. 89-90) summarise the information regarding the farm and household characteristics of each farm enterprise.

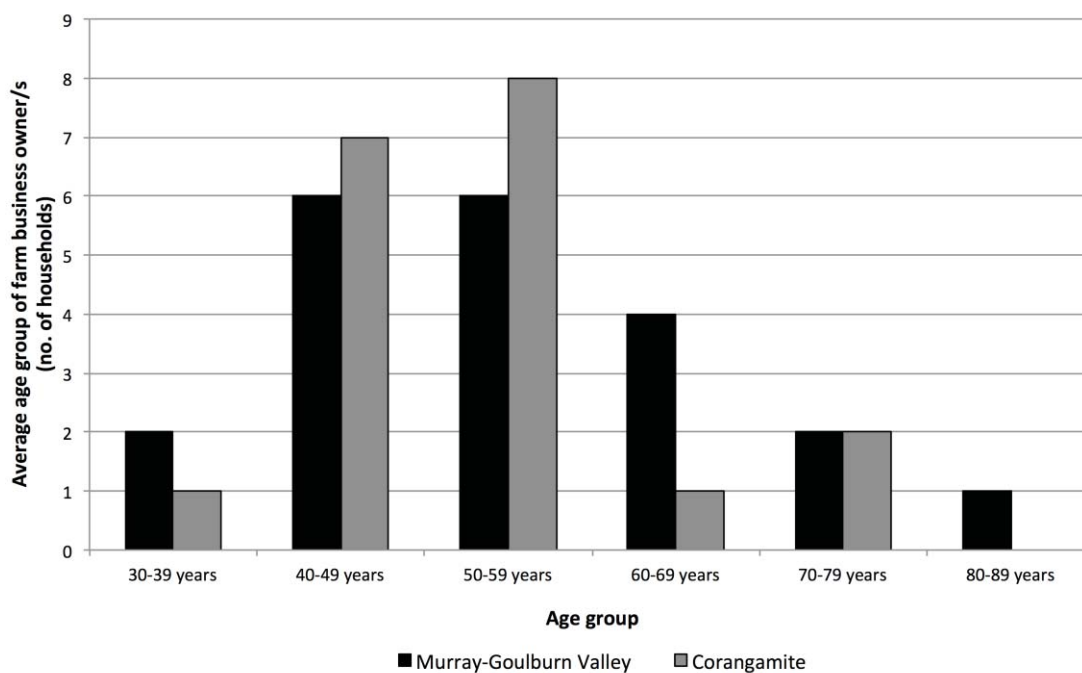


Figure 8: Average age group of farm business owner/s by study site

### Processes of Data Generation

As explained above, the data generation for this research comprised two phases: 1) unstructured farm tours; and, 2) semi-structured in-depth interviews. The maximum time that elapsed between each phase for a given farm was approximately six months and the minimum time was four weeks.

<sup>111</sup> In cases where a couple owned the farm business, their individual ages were averaged.

**Table 2: Characteristics of the Murray-Goulburn Valley farms/households (*n* = 21)**

<b>Farm No.</b>	<b>Age group of farmer or farming couple</b>	<b>Household type</b>	<b>Farm system</b>	<b>Previous generation were farmers</b>	<b>Farm comprised land owned by previous generation</b>
1750	50-59 years	Multiple family members	Dairy	Yes	No
1765	70-79 years	Single person household	Dairy	Yes	Yes
1810	60-69 years	Married, adult children left home	Dairy	Yes	No
1868	50-59 years	Married, adult children left home	Mixed farming (ex-dairy)	No	No
1872	60-69 years	Married, adult children left home	Mixed farming (ex-dairy)	Yes	No
1873	60-69 years	Married, adult children at home	Dairy	Yes	No
1926	40-49 years	Married, school-aged children	Dairy	Yes	No
1934	50-59 years	Married, school-aged children	Dairy	Yes	Yes
1965	40-49 years	Single person household	Dairy	Yes	No
2014	50-59 years	Married, adult children at home	Dairy	Yes	No
2098	40-49 years	Married, school-aged children	Dairy	Yes	Yes
2115	50-59 years	Married, school-aged children	Dairy	Yes	No
2176	40-49 years	Married, school-aged children	Dairy	Yes	No
3016	60-69 years	Married, adult children left home	Cropping (ex-dairy)	Yes	Yes
3019	80-89 years	Married, adult children left home	Mixed farming	Yes	Yes
3064	70-79 years	Married, adult children left home	Dairy	No	No
3099	50-59 years	De-facto couple, adult children left home	Mixed farming (ex-dairy)	Yes	No
3139	30-39 years	Married, school-aged children	Dairy	Yes	No
6251	40-49 years	Married, adult children left home	Dairy	No	No
6327	30-39 years	De-facto couple	Dairy	Yes	Yes
7366	40-49 years	Married, school-aged children	Dairy	Yes	No

NOTES: Two of the mixed farming enterprises no longer included the land upon which the dairy farm had been operated (MV\_1868, MV\_3099).

**Table 3: Characteristics of the Corangamite farms/households (*n* = 19)**

<b>Farm No.</b>	<b>Age group of farmer or farming couple</b>	<b>Household type</b>	<b>Farm system</b>	<b>Previous generation were farmers</b>	<b>Farm comprised land owned by previous generation</b>
0068	70-79 years	Married, adult children left home	Beef (ex-dairy)	Yes	No
0107	50-59 years	Married, adult children at home	Dairy	No	No
0135	50-59 years	Married, adult children left home	Beef (ex-dairy)	Yes	Yes
0175	40-49 years	Married, school-aged children	Cropping (ex-dairy)	Yes	No
0255	50-59 years	Married, adult children at home	Dairy	Yes	Yes
0265	30-39 years	Married, school-aged children	Dairy	Yes	Yes
0323	50-59 years	Married, school-aged children & adult children at home	Dairy	Yes	Yes
0331	40-49 years	Married, school-aged children	Dairy	Yes	Yes
0335	40-49 years	Married, adult children at home	Dairy	No	No
0342	40-49 years	Married, school-aged children	Dairy	Yes	Yes
0350	50-59 years	Married, adult children left home	Dairy	Yes	No
0490	70-79 years	Married, adult children left home	Dairy	Yes	Yes
0702	40-49 years	Married, school-aged children	Dairy	Yes	Yes
2226	40-49 years	Married, school-aged children	Dairy	Yes	No
2273	50-59 years	Married, adult children at home	Dairy	Yes	No
3899	50-59 years	Married, adult children at home	Dairy	Yes	Yes
6402	40-49 years	Married, school-aged children	Dairy	Yes	No
6441	60-69 years	Married, adult children left home	Beef (ex-dairy)	Yes	No
7370	50-59 years	Married, adult children at home	Dairy	Yes	Yes

NOTES: The land holdings of the cropping enterprise (COR\_0175) no longer included their previous dairy farm.

### *Farm Tours*

Farm tours were conducted during November 2011 on the properties of thirty-eight farmer participants. A further three farm tours (one in Corangamite, two in the Murray-Goulburn Valley) were conducted in 2012 when I re-visited the study sites to conduct the in-depth interviews. Although the time span between Phase One and Phase Two for these three farms was less than the other farms, the same sequence of research encounters, data analyses and interview preparation procedures were implemented.

Forty-one farm tours were conducted in total. No specific request was made regarding who would participate in the farm tours. In the case of farming couples, if farmers indicated that both partners were available at a particular time, I managed my schedule accordingly so as to meet with both business owners. Eighteen farm tours were conducted with only one participant; in all of these cases, the participant was male. Fifteen tours involved a primary participant and a secondary participant. That is, both participants did not participate in the full duration of the farm visit. Rather, one participant 'led' the farm visit and conducted the farm tour, while the secondary participant was involved to the extent that he/she participated in a supplementary conversation, usually in the family home prior to or after our tour of the property. In all but one of these cases, the primary respondent was male. Eight farm tours were conducted with two participants; and in all but one of these cases, the participants were the male and female business owners. The participants in the remaining case (Corangamite) were the business owners' son and a farm employee. The farm owners were unavailable at short notice.

At the outset, it was estimated that farm tours would require 1-2 hours, but for the most part would be determined by: 1) the time available on the part of the farmer; 2) their answers; and, 3) the size of their farm. Farm visits were on average 2.25 hours in duration. The shortest was 45 minutes, and the longest was seven hours. The conversations with farmers during the tours were not audio recorded. The primary reason was that electronic recording devices might disrupt the interaction between the researcher and the participant, rendering the latter more cautious when articulating his/her narrative (Flick, 2014). Instead, I used a small, unobtrusive notebook for taking notes. I also had a geographic positioning device to record the route taken during the tour, and a camera to capture anything of interest. All of the farmer participants consented to my use of these items.

### *In-depth Interviews*

Semi-structured in-depth interviews were conducted with the farm business owner/s of each farm during the first half of 2012 (Corangamite in March/April; the Murray-Goulburn Valley in May/June). These months were selected because they were among the least busy times in the dairy farming calendar. Forty in-depth interviews were conducted in total, one less than the

farm tours (one respondent in Corangamite could not be confirmed for an interview). All of the farmers in the Murray-Goulburn Valley participated in both phases of the research. Thus, the attrition rate between the farm tour and the interview phases of the study was just 2.4%.

Again, in the case of farming couples, no stringent request was made for both partners to be interviewed. Rather, I liaised with the person who naturally became the 'point of contact' for each farm. But, I always made clear that it would be good to speak to both of them if they were available. Interview length was determined by the time available on the part of the participants and the responses they provided. Interviews ranged from one hour and fifteen minutes (one interview in Corangamite) to four hours, twenty-five minutes (one interview in the Murray-Goulburn Valley). After obtaining the prior consent of each interviewee, all of the interviews were audio recorded to enable later transcription. As noted above, electronic recording devices can disrupt researcher-researched interaction; however, I felt it less detrimental to introduce a recording device during the second research encounters given that I had already met each farmer or farming couple during the farm tours and established a degree of credibility and trust.

The specific topics explored during each interview were customised to the farm development stories that were initiated during the farm tours. The structure of the interviews was guided by the land and water acquisitions/disposals unique to each farm enterprise. The conversations around these events were facilitated by two devices which acted as prompts. The first of these was a land parcel map created in ArcGIS. The maps illustrated land parcel boundaries and included map features (e.g., roads, towns, waterways, reserves, and, in the case of the Murray-Goulburn Valley, irrigation/drainage channels). The second item was a timeline depicting each farm's development that I had earlier compiled using the information generated during the farm tours. Timelines were consistent with the conceptual framework presented in Chapter 2; that is, farm enterprises can be understood as interactions between farm businesses, farm households, and a series of property holdings (see Appendix 11 for a copy of the template that was used). Further discussion of how these prompts influenced the methodology is provided later in this chapter. Table 4 and Table 5 (pp. 93-94) summarise the information about whom, from each farm enterprise, participated in the farm tours and interviews.

The study followed the social research ethics principles and practices of informed consent, participant confidentiality, and the right of the individual to withdraw from the project (up until the 30 June 2012 by which time final analysis of the results was underway). Prior to interviewing, I gave my farmer respondents a participant information statement (see Appendix 12) which described the research and their rights as research contributors. After reading through the participation information statement and answering any questions raised by respondents, I asked each individual to sign a consent form acknowledging his/her agreement to participate (see Appendix 13). Pseudonyms have been used in this thesis (and all other publication of



research results). These provisions and the conduct of the study were approved by The University of Sydney Human Research Ethics Committee.

**Table 4: Farm tour and interview participation for the Murray-Goulburn Valley farmers ( $n = 21$ )**

<b>Farm No.</b>	<b>Household type</b>	<b>Household member/s on farm tour</b>	<b>Household member/s interviewed</b>
1750	Multiple family members	Male partner	Male partner
1765	Single person household	Single farm owner (male)	Single farm owner
1810	Married, adult children left	Both, but unequal participation	Both
1868	Married, adult children left	Both, but unequal participation	Both
1872	Married, adult children left	Both, but unequal participation	Both
1873	Married, adult children at	Both, equal participation	Both
1926	Married, school-aged children	Both, but unequal participation	Male partner
1934	Married, school-aged children	Male partner	Male partner
1965	Single person household	Single farm owner (male)	Single farm owner
2014	Married, adult children at	Both, equal participation	Both
2098	Married, school-aged children	Male partner	Male partner
2115	Married, school-aged children	Both, but unequal participation	Both
2176	Married, school-aged children	Both, equal participation	Both
3016	Married, adult children left	Both, but unequal participation	Both
3019	Married, adult children left	Both, but unequal participation	Both
3064	Married, adult children left	Male partner	Male partner
3099	De-facto couple, adult children	Both, but unequal participation	Male partner
3139	Married, school-aged children	Both, equal participation	Male partner
6251	Married, adult children left	Both, but unequal participation	Both
6327	De-facto couple	Both, equal participation	Both
7366	Married, school-aged children	Both, but unequal participation	Both

**Table 5: Farm tour and interview participation for the Corangamite farmers ( $n = 19$ )**

<b>Farm No.</b>	<b>Household type</b>	<b>Household member/s on farm tour</b>	<b>Household member/s interviewed</b>
0068	Married, adult children left home	Both, but unequal participation	Both
0107	Married, adult children at home	Both, but unequal participation	Both
0135	Married, adult children left home	Male partner	Male partner
0175	Married, school-aged children	Male partner	Male partner
0255	Married, adult children at home	With business owners' son and farm employee	Male partner
0265	Married, school-aged children	Male partner	Both
0323	Married, school-aged children	Male partner	Male partner
0331	Married, school-aged children	Male partner	Male partner
0335	Married, adult children at home	Both, but unequal participation	Both

0342	Married, school-aged children	Both, equal participation	Both
0350	Married, adult children left home	Both, but unequal participation	Both
0490	Married, adult children left home	Male partner	Male partner
0702	Married, school-aged children	Male partner	Male partner
2226	Married, school-aged children	Male partner	Both
2273	Married, adult children at home	Male partner	Male partner
3899	Married, adult children at home	Both, equal participation	Both
6402	Married, school-aged children	Male partner	Male partner
6441	Married, adult children left home	Both, but unequal participation	Both
7370	Married, adult children at home	Male partner	Both

NOTES: Only the 19 farms in which business owners participated in both phases of the research are shown. The 20<sup>th</sup> Corangamite farm that was included in the farm tours (conducted by the male partner of the farming couple), but not included in the in-depth interviews is not shown because it was not included in the analysis.

### *Key Informant Interviews*

During the farm tours, I found, in general, that my farmer participants possessed little knowledge of some aspects that to me seemed integral to understanding the socio-economic organisation of farming, largely because they had hitherto relied on professional advice. The key issues were changes to land prices over time at the local scale, and the utility of different legal forms used to conduct business in Australia (see Appendix 14 for indicative interview topics).

In order to develop a more nuanced account of these issues, a series of key informant interviews with accountants and rural land agents was introduced into the research design for Phase Two. In the case of the accountants, interviews were typically 20 to 30 minutes in duration. The land agents tended to have more time available, so their interviews ranged from 40 minutes to two hours. Table 6 (next page) shows the number of key informant interviews conducted in each study site. Key informant interviewees were also given a participant information statement (see Appendix 15) and were required to sign a consent form (see Appendix 16).

A greater number of interviews were conducted in the Murray-Goulburn Valley because this is the area in which land and water have been separated; and, given that this is central to the topic of investigation, I considered it important to understand the implications of this separation from the perspective of a range of professionals engaged with farmers and the relevant issues at hand. The information generated through this series of interviews should be considered as complementary to the farm life histories, the primary source of data.

**Table 6: Key informant interviews conducted in each study site**

	Murray-Goulburn Valley	Corangamite
Farm accountants	3	3
Rural land agents	4	2
Farm consultants	1	1
Milk company field officers	3	0
Bank managers	3	0
Rural financial planners	1	0

## Data Organisation and Analysis

Theory is a human construct, not an underground reservoir of oil waiting to emerge when you drill down to it (Richards, 2009, p. 68).

The approach to data analysis used in this study paralleled that proposed by Richards (2009, p. 74); that is, that theory does not emerge from data, but rather is created through an interaction between a researcher and their data records.

The researcher discovers themes, or threads in the data, by good exploration, good enquiry. By handling the data records sensitively, managing them carefully and exploring them skilfully, the researcher ‘emerges’ ideas, categories, concepts, themes, hunches and ways of relating them. Out of such processes come bigger ideas, and, by hard work, from those loose threads can be woven something more like a fabric, of good explanations and predictions. This process is easier because it always started from some theory. The researcher, in other words, brought in theory from elsewhere.

This approach is consistent with Miles and Huberman’s (1994, p. 64) ‘empirically driven labels’ and Creswell’s (2007, p. 150) ‘data analysis spiral’ in which data analysis does not proceed in a linear manner, but proceeds in analytical circles. That is, “one enters with data of text or images and exits with an account or a narrative”. In between, the researcher organises their data records, engages with each of their records by reading and writing memos (short phrases, ideas or key concepts) as they reflect on their data, develops themes or dimensions through coding and classification procedures, classifies and interprets their data through creating codes or categories, and then represents (through narrative or visual images) their information.

Analysis of the data generated in this study was interwoven with data collection as much as possible within the time constraints imposed by financial resources available for the fieldwork. When in the field conducting in-depth interviews, the time available required at least four farmer interviews and several key informant interviews to be conducted each week. As soon as possible after each interview, I completed the contact sheet, edited the farm timeline, and wrote field notes describing the interaction and the key ideas that seemed to be relevant to the case

concerned. Memo writing of key themes, connections between ideas and different cases also commenced around this time. I commenced my interview transcription in the field as soon as time allowed.

I transcribed each interview verbatim, although not to the extent of including pauses and intonation, except in situations where emphasis or hesitation was particularly pronounced. During analysis, audio files were consulted when I wanted to recall the interaction, either to confirm or challenge interpretations of the data. Transcripts did, however, reflect the flow of conversation as much possible, recording interruptions caused by different interview participants. This seemed particularly important *vis-à-vis* interviews in which both farm owners were present to capture any disagreement in what was said, and agreement from either partner regarding what the other was articulating. I then reviewed each interview, checking for accuracy against the audio record. This process required me to listen to each interview three times prior to formal coding in NVivo. The three tasks outlined above were completed interchangeably for two reasons: first, this process enabled me to maintain as high a level of interaction as possible with the data than if the three tasks had been completed sequentially; and, second, to avoid, as much as possible, coding fatigue on the part of the researcher.

Transcripts, field notes and memos were imported into NVivo 10 to allow for more enhanced management and manipulation of the data records. Use of NVivo provided me with a suite of tools to support my analysis and enabled me to make use of “multiple strategies concurrently – reading, reflecting, coding, annotating, memoing, discussing, linking, visualising – with the results of those activities recorded in nodes, memos, journals and models” (Bazeley, 2007, p. 59).

### **Developing Farm Life Histories through Farm Tours and Semi-Structured Interviews: Reflections of a Researcher**

As already noted, my methodological approach was crucially informed by the work of Riley (2010; see also Riley & Harvey, 2007a), who provides a clear example of how oral history may be applied in agricultural settings. This technique has received limited attention in the extant literature. Similarly, rural researchers have not often critiqued the places in which interviews involving farmers are held. In this section, I discuss the utility of this technique via three key areas of research practice: 1) researcher-researched interactions, 2) using mobile (movement) methods of data generation, and 3) capturing complexity.

## The Utility of Farm Tours: Researcher-Researched Interactions

Farm tours, as a means to elicit conversation between researchers and farmers, have received limited attention in the literature. This does not mean that rural researchers use farm tours infrequently. What it does suggest is that there is a paucity of material reporting the utility of intentionally including a more embodied research encounter when conducting research with farmers. In this regard, my application of farm life history differs from Riley's (2010) work in which farm walks were a product of methodological serendipity. To this end, in this section, I reflect on how farm tours contributed to the data generation process. In particular, I focus on the ways in which this approach contributed towards my 'getting in' and 'getting along' in the field (Lofland & Lofland, 1995). I also discuss the ways in which farm tours occurred and how they differed from my original intentions.

Lofland and Lofland (1995) draw the researcher's attention to the necessary transition between developing an appropriate, robust and ethically defensible study and gaining the co-operation of all of the required parties to execute the research design – 'getting in'. Having never visited both of the study sites and as a non-Australian, the farm tours helped facilitate my successful entry into the field. One measure for determining the way in which farm tours helped gain the co-operation of farmers became evident in the study's very low attrition rate, as noted earlier. Only one farmer who had participated in a farm tour opted not to participate in the follow-up interview.

Farm tours seemed to provide an opportunity for me to establish a relationship with each farmer or farming couple within the context of a more familiar social interaction when compared to a traditional research interview setting. This was perhaps most clearly demonstrated during one of the Corangamite farm tours. When I arrived at the property, I accepted an invitation for a cup of tea inside their home. I sat with the farm family (husband and wife, along with three sons who worked on the farm) around their dining room table. After having described the nature of the research and requesting a farm tour, the conversation proceeded in somewhat of a question-and-answer format, making it difficult to glean more in-depth answers from them. Initially, our conversation was rather stilted but, once the visit moved to the farm tour in the farm ute,<sup>112</sup> the conversation opened-up and the farmers spoke more freely about their enterprise. Upon my return visit for the semi-structured interview, I was welcomed much less hesitantly, resulting in a much more comfortable interaction than the initial conversation around their dining room table.

In this way, including farm tours in the research design helped to create a research encounter during which it was reasonably easy to establish a rapport with individuals and, by extension,

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<sup>112</sup> *Farm ute* – abbreviation of 'farm utility' is a colloquial term used to describe a vehicle commonly used to conduct farm work. Typically, a ute has a single or twin passenger cabin and a cargo tray in the rear.

benefiting researcher-researched interactions across all cases. ‘Getting in’ was particularly critical in the Murray-Goulburn Valley, the irrigation study site, for despite having grown up on a farm in New Zealand, I had no previous experience with irrigated agriculture. So, for me, the theory, practice and language of irrigation were largely unknown. Farm tours enabled me to see the most commonly used form of irrigation used by my farmer respondents (i.e., flood irrigation systems) and provided opportunities for farmers to describe the history of irrigation settlement in the area and technological advances in irrigation practices. For me personally, this was integral to learning quickly, and to being able to hold suitably informed conversations with the farmers. The benefits of the farm tours also extended to learning seemingly unusual terminology used by Australian farmers, the most obvious being ‘agistment’, a word with which I was unfamiliar, to describe the process of sending cattle away from the home farm to graze.

Farm tours offered several benefits that likely contributed to better data generation throughout the research process, in essence, ‘getting along’ in the field (Lofland & Lofland, 1995). The primary benefit was the way in which I was able to build a rapport with each participant. Part of the rationale for including a farm tour in the method was to enable me, effectively an outsider, to establish myself as being from a farm background, rather than solely a city-based researcher. These characteristics, along with the fact that I was neither an Australian nor a resident of Victoria, were very ‘visible’ on first contact with farmers. The benefit of using the ‘travelling while talking’ approach was that it allowed me to communicate information about my own family’s farm background during the farm tours, a strategy which helped me to position myself as more of an ‘insider’. Indeed, on several occasions, farmers directly asked me whether or not I was from a farm. Given the personal nature of the three-way coalition between a farm business, a farm household and land holdings, sharing this type of information seemed to create a more equal balance between myself as a researcher and the farmers in terms of exchange of personal information.

Although farm tours facilitated the relationship between my farmer informants and I, interviewing while travelling around the farm unarguably shaped the nature of data generation. The discussion now turns to the effects that interview tempo and the type of landscape had upon the farm tours as research encounters.

### The Utility of Farm Tours: Using Mobile Methods of Data Generation

My intention had been to conduct farm tours via walking, an approach consistent with that described by Riley (2010). However, in most cases, farm tours were conducted using motorised transport ( $n = 35$ ), rather than walking ( $n = 6$ ). I undertook thirty-two tours in farmers’ farm utes, one on a farm quad bike, one on a tractor, and one on a Kubota (best described as a four wheel drive golf cart). Farm tours using motorised transport were not planned, but occurred for

three reasons. First, the size of most farm properties was such that walking was an impractical mode of travel if one wanted to view the entire property. Second, particularly in Corangamite, several farmers had ‘out paddocks’;<sup>113</sup> that is, blocks of land that were disconnected from their main farm property, often by several kilometres. In many of these cases, motorised transport allowed me to visit these blocks and gain a better understanding of the distance between the blocks of land that were organised as a single farm enterprise and to view the landscape in which the farmers lived. Travelling longer distances beyond their farms also provided opportunities for farmers to talk about wider contextual issues as we passed through the rural landscape. For example, in Corangamite, one farmer took me to visit the local community hall, in front of which was a plaque bearing a map of the original WWII Soldier Settlement, two farms of which he now owns. Likewise, the journey provided ‘space’ for conversation between myself and the farmer/s involved. Third, given my intention to implement a more participant-directed method, and because I was a visitor to the farm, it was important that the farmer made the decision regarding the mode of transport and the route of the tour. This most often resulted in a suggestion to take the farm ute.

Although motorised transport allowed greater distances to be travelled, the increased tempo compared to farm tours that were walked seemed to impact upon the researcher-farmer interaction. Passing through the landscape more quickly seemed to quicken the conversation; thus, opportunities for reflection and for returning to topics discussed earlier were less frequent. In one case, the farm motorbike was used for transport which served as a compromise between being able to complete full farm tours on larger properties, and restricting the speed with which the tour proceeded. In this case, the farmer frequently stopped the bike to point out things of interest and to discuss them more fully. These situations were necessary due to the noise of the motorbike, in order to hear each other clearly, frequent stopping was required. In a practical sense, however, farm tours on farm bikes are likely to be a viable option only on farms that involve contiguous land parcels due to safety and legal considerations when travelling on public roadways.

In some cases, the physical arrangements determined by sitting in a farm ute facing forward facilitated a more free-flowing conversation than had we been sitting facing each other, perhaps due to the slightly less formal nature of travelling while talking. Travelling while talking also seemed to create space for more in-depth reflection on the part of the farmer. For example, in some cases, the farmer would stop driving and lean over the steering wheel while describing some aspect of their business or their views on how government policy impacted on farm enterprises. At times such as these, the focus was no longer on the landscape, but rather the

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<sup>113</sup> Out paddock: an abbreviated term for ‘turn out paddock’. That is, a paddock or field specifically used for fodder production and grazing young stock or stock not currently used for production (e.g., dairy cows not in milk). Out paddocks are often disconnected from the main land holdings of the farm. This was especially the case in Corangamite.



articulation of a set of ideas. Travelling around participants' farms also elicited narratives that may not have been revealed had we not been out on the farm. For example, in several cases, when we visited non-contiguous blocks of land, the farmer would reveal that they had a second house that they had tenanted, or a house that they had sub-divided off a land acquisition. Similarly, during one visit when the farm tour proceeded through a gate that I had not yet seen, on the gate was a sign indicating that the owner had a registered cattle stud. Visual aids such as these enabled me to ask further questions about topics that had not yet arisen in conversation. My inclusion of farm tours was designed to allow the landscape in which the participants' farmed to trigger the conversation. The two study sites differed markedly in their topography; and, it seems that their physical differences influenced the ways in which the farm tours prompted discussion. The Murray-Goulburn Valley is an extensive, flat landscape suited to gravity/flood irrigation. The landscape has been significantly modified due to the introduction of irrigation, and the need to level land for more efficient water application to pastures. This landscape offered few vantage points to the observer. Indeed, in some cases, farmers would gesture towards a 'high point' in a paddock, subtle differences in the landscape that to the untrained eye are difficult to discern. The lack of vantage points from which to view the landscape, along with land ownership boundaries, seemed to limit the way in which the landscape triggered conversation when compared to the landscape of the Corangamite study site.

The topography of Corangamite is more varied, rolling hill country, and this offered more vantage points which seemed to encourage the farmers to identify and point out key landmarks that they would then elaborate on through narrative. For example, on one farm tour, the farmer was able to pinpoint a particular row of trees in the distance; then he was better able to describe where his current farm boundary was and how this related to the original farm boundary when his father bought the property several decades earlier. Figure 9 (next page) depicts this vantage point. The tree line/farm boundary is indicated in orange.

In sum, farm tours provided a more relaxed setting for me to introduce myself to each farmer or farming couple, and to demonstrate my commitment to the research project by organising a return visit for the in-depth interviews in Phase Two. Farm tours also served as points of departure for developing individual farm life histories. Thus, they were a valuable learning opportunity for me to gather key details about how land and water holdings contributed to the farm, and the general chronology of how the farm had developed. Now, my focus turns to consideration of the effectiveness of farm life history as a research technique.



**Figure 9: Vantage point during a Corangamite farm tour that better enabled a farmer to describe his farm boundary**

### The Utility of Farm Life History: Capturing Complexity

The development of farm life histories was primarily framed around changes in the physical boundaries of farms given the tangible nature of land parcel boundaries. Travelling around their farms allowed farmers to first identify the land parcels that comprised their farms, and then to explain the associated acquisition narratives. The resultant chronologies allowed me to gain an understanding of how these farms developed much more quickly than had I attempted this through more traditionally located interviews, particularly in the case of the more complex and usually larger farm enterprises.

The benefits consistent with multiple research encounters to ‘build’ a life history were evident in this research. For example, I was able to confirm information during the second interview that I had gathered during the farm tours, as well as prompt discussion of the topics and events most relevant to the study following reflection on my initial field notes. In several cases, the conversational and non-sequential nature of the information farmers provided during the farm tours made it confusing to understand accurately; and, in other cases, farmers provided additional information about the development of their farms that added richness to the emerging farm life histories.

However, while these aspects of the research design proved invaluable, the utility of the farm life history approach was challenged in cases that either comprised few land parcels, or had a relatively short history since establishment. For example, one Murray-Goulburn Valley farming couple had purchased their 56-hectare property comprising one land parcel in 1995; yet, despite

the intervening years, they had not purchased any additional land. In this case, dialogue prompted by land parcel acquisition was limited; but, notwithstanding, it was a fruitful interview in that the couple provided narratives of unsuccessful land purchase attempts, and of how they had organised their enterprise in this context. Thus, farm development can also be explored through acquisitions that did not occur.

Similarly, another Murray-Goulburn Valley farming couple had only purchased their 89-hectare farm in 2008, making one additional 20-hectare land acquisition. They were first in their families to own the land on which they farmed. Thus, the life history of their enterprise was not extensive. Although this was an initial limitation, the case remained analytically significant because they had purchased their farm following the unbundling of land and water and had chosen not to purchase any water shares. Thus, the conversation was rich in detail about their attitudes towards land and water assets, and the ways that they managed their farm as non-water owners.

At the conclusion of the farm tours, I found it difficult to manage the complexity inherent in the acquired data and to understand accurately the chronological development of each farm. In a bid to handle these data more effectively, I created two prompts to use during the follow-up interviews: land parcel maps and timelines. Below, I reflect on the utility of these techniques.

The use of land parcels maps in the interviews was not intended at the outset. However, following the farm tours, it became apparent that some of the larger farms involved a number of land parcels with different titling and tenure arrangements, which I found difficult to understand accurately through verbal communication alone. One way to achieve greater accuracy regarding the land parcels that currently comprise (and, in some cases, previously comprised) a farm enterprise was through the introduction of land parcel maps for each farm. In many cases, this process was largely a confirmation of what I had learned during the farm tour. But, in some cases, my interviewees introduced information about other land parcels that had not been discussed during the farm tour. The starkest example was a Corangamite farmer who operated a number of fragmented land parcels under different forms of tenure. While he was narrating changes in his farm during the follow-up interview, he revealed that on two separate occasions he had leased additional land, despite having driven past both of these blocks of land during the farm tour and not mentioning them. Such an occurrence may be attributable to people's imperfect memories, but one of these land parcels increased the area of his farm by 70 per cent, which represented a significant development in his enterprise. Therefore, it was an important revelation in terms of his attitude towards his farm and its subsequent development. Thus, the land parcel maps helped to create a shared and more complete understanding of each farm between the researcher and interviewees.

The land parcel maps were introduced as early as possible during each interview. In most cases, interviewees had little difficulty in identifying their farms and other known features. Yet their role extended beyond mere property identification. Like other visual data generation methods, the maps could be referred to later when new topics arose and spatial arrangements needed to be communicated. This was particularly useful in the Murray-Goulburn Valley due to the irrigation infrastructure that patterned the landscape, and the need to understand how the Northern Victoria Irrigation Renewal Project<sup>114</sup> was impacting on respondents' farms. For example, in the case of farm number 2014 in the Murray-Goulburn Valley, the male partner made significant modifications to the map as he explained the proposed reconfigurations to their irrigation infrastructure, providing a common understanding between he and I *vis-à-vis* the spatial aspects and other considerations involved. These descriptions were then expanded upon as he and his wife explained their thoughts about these proposals within the context of their farm assets, farm system, and aspirations for their enterprise. Moreover, an additional, but unintended benefit, of land parcel maps was their role in eliciting farmers' knowledge beyond their immediate land holdings. Respondents often spoke about neighbouring landowners and wider contextual issues that involved a spatial component, for example where different land uses tended to be concentrated. With a view to their greater inclusion in rural geographical research, land parcel maps seem to have broader application than studies of the organisation of individual farm enterprises. For this reason, they would be a valuable inclusion in research regarding broader land use change.

The second interview prompt was a timeline developed between the farm tours and the follow-up interviews. These timelines depicted the sequence of changes made since the establishment of the farm. In general, the point of establishment was taken as the time when the person (or couple) being interviewed became involved in the farm. In most cases, this was at the time of farmers' initial land acquisition, or in the case of intergenerational farms, when one or both of the interviewees returned to work on the farm.

Timelining, a graphic elicitation technique, has been used by other researchers to encourage people to talk about their lives and past experiences (Sheridan, Chamberlain, & Dupuis, 2011; Wilson, Cunningham-Burley, Bancroft, Backett-Milburn, & Masters, 2007). Such practices illuminate the interwoven nature of time and narrative: "narrative almost always requires a temporal component to be meaningful" (Sheridan et al., 2011, p. 554). The key benefits of this technique, according to Sheridan et al. (2011), include the highlighting of time and the ways in which understandings and interpretations of the past are generated. In doing so, key transition points in people's lives are identified, by extension facilitating the telling of rich narratives.

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<sup>114</sup> Recall from Chapter 1, the 'Northern Victoria Irrigation Project' is an irrigation modernisation programme funded by the Victorian State and Australian Commonwealth governments. As of 1 July 2012, the project was re-positioned into the local water authority – Goulburn-Murray Water – and re-named the 'Connections Project'. In this thesis, I use the name 'Northern Victorian Irrigation Project' by which the project was known at the time of data generation.

Thus, in a study whereby the development of farm life histories was the intended outcome, timelining seemed a useful inclusion to harness these reported benefits.

The timelines used in this study were organised according to the conceptual framework outlined in Chapter 2 of this thesis. The following categories were included: land holdings, entity, water share (for the Murray-Goulburn Valley farmers), business, household, farm system, local context, national context, and global context. The format used, and a description of each category, is provided in Appendix 11. The respective timelines were taken to the in-depth interviews for farmers to confirm the accuracy of this information, and to allow for any modifications or editing that may have been required.

The success of the use of timelines in this project involving farmer participants was mixed. Unlike other researchers (Sheridan et al., 2011), I found that the timelines did not become a central focus of the interviews. In most cases they tended to be ignored and, even when returned to, very rarely provided effective prompts for conversation. Even so, interviewees had little difficulty discussing their farm stories, and the interviews proceeded in a more organic manner that did not necessarily follow chronological order.

In contrast, and as discussed above, the land parcel maps prompted conversation more effectively and were returned to by the farmers themselves if they needed to explain the spatial arrangements of the topic at hand. For the most part, the timelines used in this study became a valuable tool, inasmuch as they enabled me to handle complex farm life histories. Thus, in general, employing a farm life history approach remains an effective way of understanding farm organisation; however, the use of tangible timelines in farmer interviews proved less effective. These reflections regarding land parcel maps and timelines were captured in my fieldwork diary after conducting the ninth (Excerpt 1) and thirteenth (Excerpt 2) interviews in the Murray-Goulburn Valley:

Excerpt 1: The land parcel maps again worked very well and the timeline less so. ...on the one hand, I have the timeline in the 'oral-history' sense, and then I have the timeline in the tangible sense of those charts that I have drawn up. I think the oral-history sense is still a very useful way to conceptualise [farm organisation], but the actual timeline charts appear to be somewhat redundant [within the context of farmer interviews].

Excerpt 2: ...sometimes it feels like the timeline is more of an interruption because people don't necessarily think about their farms in a linear fashion – the complex organism approach (COR\_0255) or the jigsaw puzzle (MV\_1926) [descriptions that farmers had used to describe the nature of a farm] is constantly being reworked or tweaked so to think about [their farms] in a linear fashion might be more of a hindrance than anything particularly in the context of an interview. However, the land parcel maps allow people to point to their farms and to tell the stories around their land acquisitions.

There are several reasons why this might be the case in the present study. First, the timelines were created by the researcher, rather than by the interviewees. This approach differs from that

used by Sheridan et al. (2011) and Wilson et al. (2007) who asked their participants to construct the timelines during the interview, accordingly the participants may have felt a degree of ownership over the process which was not created in the current study. Second, land parcel maps are likely to be more familiar to most farmers and therefore a more natural (suitable) prompt for interviews involving them. This is perhaps best demonstrated by the fact that in several interviews farmers showed me other farm maps that they had for other purposes. Third, some aspects of farm businesses were difficult to timeline. For example, in the Murray-Goulburn Valley, all of the farmers had purchased some water allocations at different points in time; but, they struggled to recall when they had bought water and in what quantities. This is likely to be a reflection of the more spontaneous nature of these purchases and the greater frequency of purchases compared to the less frequent purchasing of water shares.

## Chapter Summary

Farm life history is an effective research technique for understanding rural and agricultural issues. In this study, farmer participants were simply asked to narrate their farm development stories while travelling around their farms, narratives that were explored further during subsequent in-depth interviews. The primary purpose of the farm tours was to build rapport with my farmer respondents and to initiate the farm life histories. These data allowed me to be more informed about the farm enterprises prior to conducting the subsequent in-depth interviews, during which the data from the tours were either verified or corrected. For this reason, the interviews are the primary source of data upon which the following analytical chapters rely.

This approach elicited a set of detailed narratives describing how farmers thought about changes in the asset configurations of their farms in the context of their businesses and households. The success of the technique in this study is consistent with the positive assessments of researchers who had applied it previously in agricultural studies (Riley, 2010; Riley & Harvey, 2007a). However, this study differs from Riley's work by: 1) the deliberate inclusion of farm tours to initiate farm life histories; and, 2) the inclusion of researcher-created interview prompts (land parcel maps and timelines) for use in follow-up interviews. Although timelines proved to be a useful technique for me to use to consolidate and visualise the development of each farm, they tended to be less useful during the interviews. The land parcel maps functioned as more useful prompts, offering a valuable methodological innovation for use in studies of farm organisation and wider rural change.

In the following chapters, I present my analysis of the data generated in this study. The entry point for Section Two of this thesis is an examination of the dynamics underpinning the legal forms used by farmers in this study to organise their businesses, as well as an exploration of the

ownership arrangements for their land and water assets (Chapter 5). Then, I present an in-depth analysis explaining these arrangements. This analysis takes the form of viewing farms as sites for achieving farmers' wealth creation (Chapter 6) and autonomy (Chapter 7) aspirations. The joint articulation of these two motivations, expressed through differing configurations of land and water ownership, leads me to propose the concept of 'structuring for serendipity' in the penultimate chapter (Chapter 8). Structuring for serendipity elucidates the significance of risk, uncertainty and farmer agency to the socio-economic organisation of Australian farms.



## Chapter 5

# The Legal Forms of Farming and the Ownership of Land and Water Assets

## Introduction

In Chapter 2, I argued that the extant rural scholarship does not adequately explain either the legal forms used to organise farm enterprises or the relationships between farm business ownership and the proprietary arrangements for land and water assets. In line with the iceberg analogy presented in Chapter 2, analysis of these issues comprises two parts: 1) the legal apparatuses above the figurative waterline; and, 2) the social and economic dynamics below the surface which give rise to the legal apparatuses. This chapter examines the former, providing the necessary context within which the social and economic dynamics below the surface must be situated (Chapters 6 & 7). Section One of this chapter describes the legal forms used by this group of farmers to organise their business entities, then in Section Two, I consider farmers' proprietary arrangements for their land and water assets.

## Legal Forms for Australian Farm Enterprises

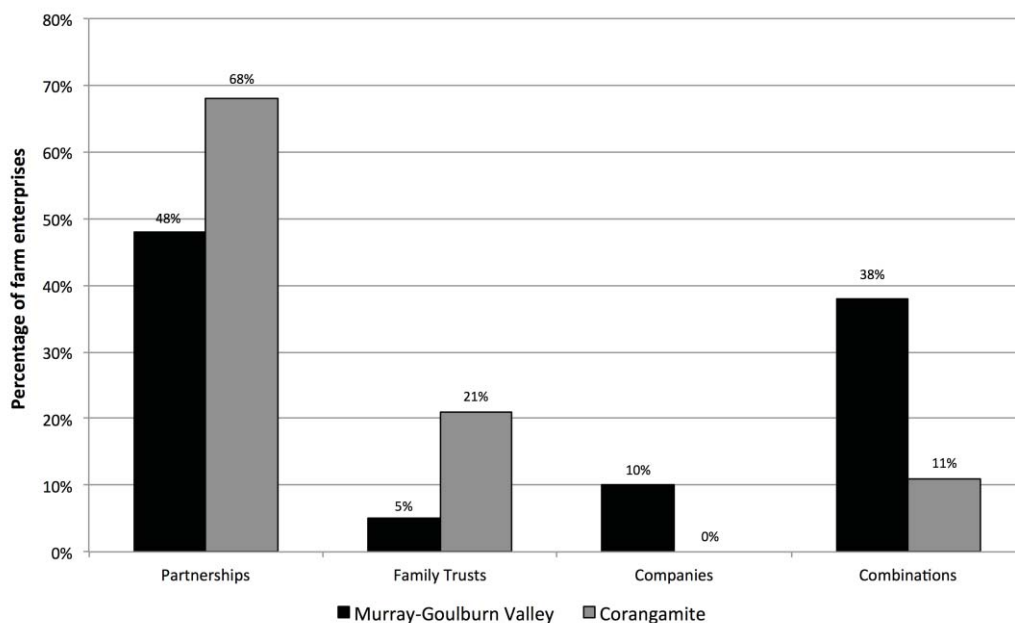
In this section, I leverage the findings reported in two Australian-based studies that use survey data to demonstrate the associations between farmers' legal forms and farmer age/lifecycle stage (McAllister & Geno, 2004; Weller et al., 2013), household composition, and physical farm size (Weller et al., 2013). The quantitative approach adopted in both studies makes it difficult to determine how these variables relate to other influences upon farm organisation. According to Weller et al. (2013), it may be that the legal forms of farming are influenced by an intricate interaction between farm business and farm household characteristics, an interaction that can only be explored in detail using qualitative research methods. To this end, I assess the legal forms used in the 40 farm enterprises in this study against the key variables identified as significant in previous studies: farmer age, family status, intergenerational succession and farm size. This is done to assess three questions that are pertinent to the broader issue of how farming is socially organised: 1) How can farmers' decisions regarding legal frameworks be understood? 2) Do farmers change the legal forms they use to organise their enterprises? 3) And finally, if so, what circumstances would give rise either to a farm business being reorganised into an alternative legal entity or to the creation of an additional legal entity alongside those already in existence?

## Legal Forms Used by the Murray-Goulburn and Corangamite Farmers

In this study, farmers' use of the legal forms available to them is broadly consistent with Australian Taxation Office data for the wider agricultural sector (see Appendix 17).

Partnerships were used most frequently, followed by family trusts and companies (sole proprietorships were not represented). Among the 40 enterprises, 25 (62.5%) farmers used a partnership, 10 (25%) enterprises were structured as family trusts and 5 (12.5%) as companies.

In an insight not picked up in the existing literature, it was also the case that a number of respondents used a combination of different legal forms. Ten farms utilised a combination of legal forms. Eight of these were located in the Murray-Goulburn Valley. In five of the ten cases, the combination was a result of the establishment of a corporate trustee to manage the affairs of a family trust. In each of these cases, the farm business owners were the respective company directors. In three cases, alongside the primary operating entities were trusts or partnerships, arrangements that reflected the ownership of specific land parcels involved in each farm. In the remaining two cases, the farming couples had established family trusts on the advice of their accountants.<sup>115</sup> The five other farms that were organised as family trusts did not have a corporate trustee: the farm owners were the trustees. In three cases, the farming couple were the only trustees; in the other two cases, at least one member of the older generation was a trustee. Figure 10 (below) presents the percentage of farm enterprises in each study site that utilised each legal form, including those in which more than one type of entity had been created.<sup>116</sup>



**Figure 10: Percentage of farm enterprises using different legal forms by study site ( $n = 40$ )**

<sup>115</sup> In one of these cases, the family trust was not used at the time of my fieldwork. The farmer concerned viewed it as a means to manage his taxation obligations when his business was highly profitable.

<sup>116</sup> Typically, percentages would not be presented for counts less than 20 (Bazeley, 2013). However, the percentage of farms using each type of business structure have been presented in Figure 10 for easier visualisation because of the differing number of farms in each study site.

I now assess the legal forms used by farmers in this study against four variables: farmer age, family status, intergenerational succession and farm size.

### The Legal Forms of Farming: Farmer Age, Family Status, Intergenerational Succession and Farm Size

Researchers have suggested that farmer age is one of the most important factors influencing the legal form used in a farm business. This implies that younger farmers are more willing to be innovative than older farmers (i.e., use more collective/complex forms) when it comes to organising their enterprises (Barclay, Foskey, & Reeve, 2007; McAllister & Geno, 2004).

When the age of the farm business owners or the average age of business owning couples were considered, farmers across all age cohorts used partnerships. Although more than half of the businesses owned by farmers in the two youngest age cohorts used forms other than partnerships, farmers of varying ages used more complex/collective legal forms (Figure 11 below).

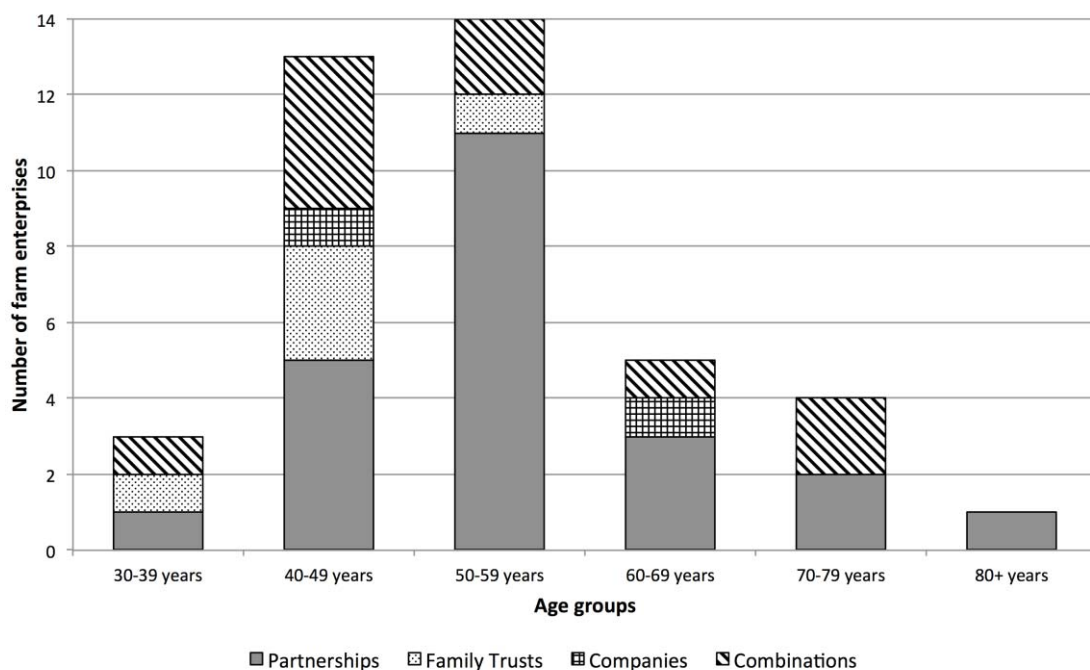


Figure 11: Number of farm enterprises that used different legal forms by average age of farm business owners (n = 40)

Given the absence of any obvious association between farmer age and the legal forms in use, the issue of life cycle stage and farm succession plans comes into focus. Weller et al. (2013) found that legal forms other than partnerships tended to be used among farmers of two particular age groups; farmers younger than 40 years of age (who had a higher propensity to use sole

proprietorships), and farmers aged 51-60 (who were more likely to use family trusts). Weller et al. suggest that lifecycle stage and farm succession issues might explain these patterns. That is, farmers younger than 40 years of age might not yet be partnered, or may not have reorganised their business arrangements to reflect any changes in their relationship status (family status). And, the family trusts used by farmers in the 51-60 year age group might reflect the ways in which adult children are being included in the business (intergenerational succession).

However, among my data, lifecycle status (Figure 12 below) and intergenerational succession (Figure 13 next page) seemed to bear no discernible effect. (In the latter case, the majority of farms were unlikely to be passed onto the next generation ( $n = 23$ ; 'no plans, succession unlikely' and 'not applicable' categories combined). Although partnerships dominated this group of farms, more complex forms were being used within nine enterprises, further suggesting that these forms may be used for reasons other than farm inheritance and succession.

Furthermore, in only four cases were specific plans being made for the introduction of children into the farm business; but, not all were organised using collective and inclusive business forms.

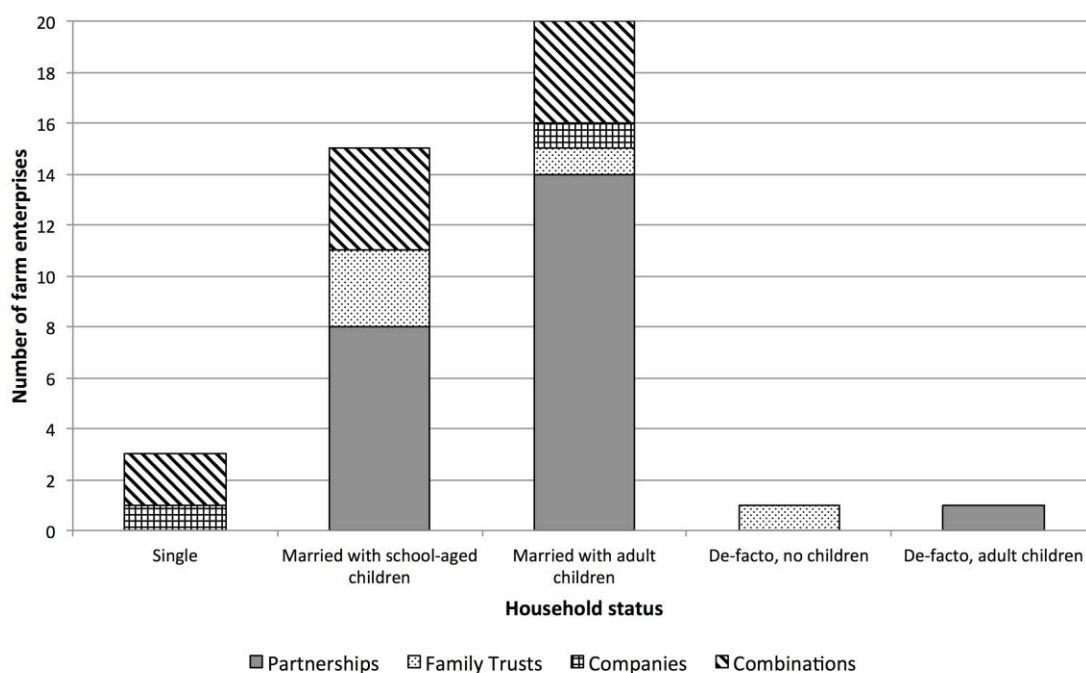
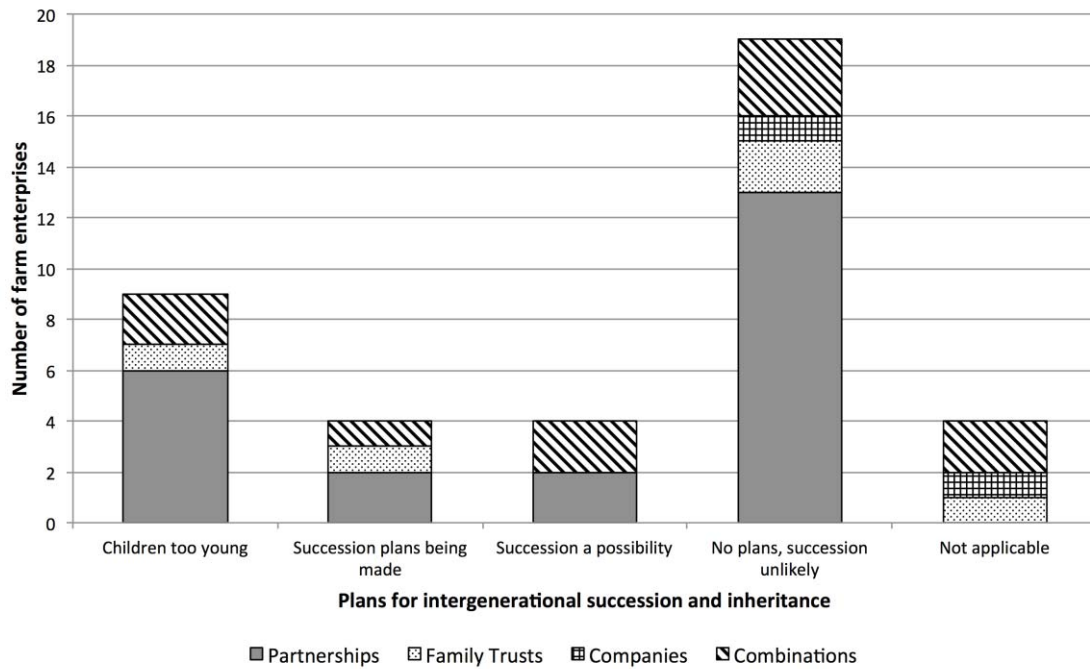


Figure 12: Number of farm enterprises that used different legal forms by family status ( $n = 40$ )



**Figure 13: Number of farm enterprises that used different legal forms by family plans for intergenerational succession and inheritance ( $n = 40$ )**

Finally, Weller et al. (2013) also suggest that farm size may prove a determinant of the legal arrangements used by farmers. Using a multinomial logistical regression analysis, they found an association between land area and legal form, particularly for farm enterprises involving more than 500 hectares, which were more likely to be organised using trust or company models. Among my respondents there was no discernible clustering visible at either end of the spectrum of differently sized farms (Figure 14, next page). Indeed, both the largest and the smallest farms utilised a collective legal form; and were structured as companies. The remaining 13 farms that did not use partnerships were distributed among farms of varying sizes. And, the three largest Corangamite farms were all structured in terms of partnerships. However, I want to stress here that these observations do not necessarily contradict Weller et al.'s result for two reasons: first, the qualitative nature of this study rendered statistically robust analyses impossible; second, the location of the study sites in two Victorian dairy regions meant that farms larger than 500 hectares – the farm size category which Weller et al. noted an association with the legal form used – were less common because dairy farms are generally smaller than extensive agricultural enterprises. Similarly, on average, Victorian dairy farms are smaller than dairy farms in other parts of Australia (Department of Agriculture, Fisheries and Forestry, 2013).

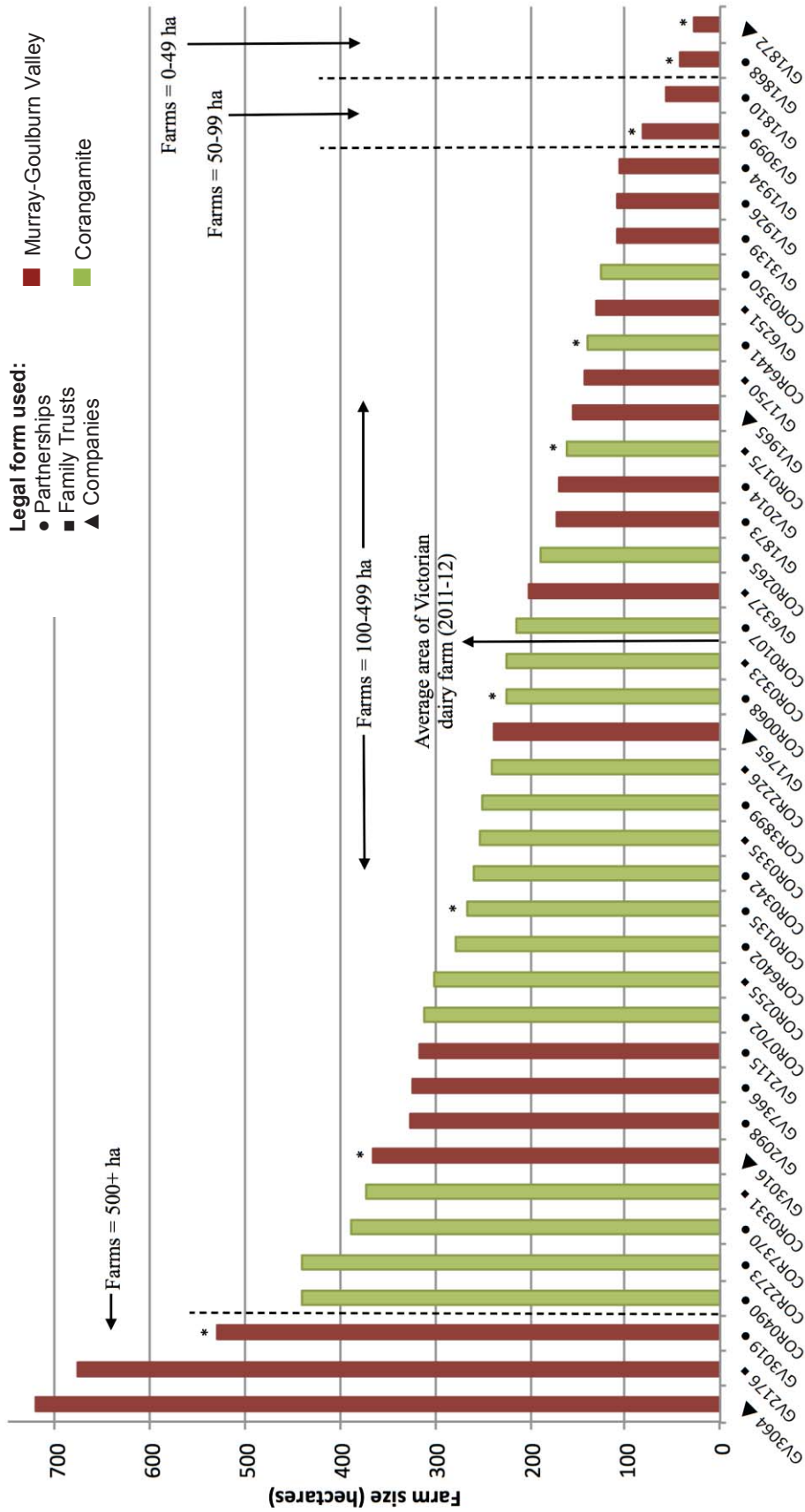


Figure 14: Area of land operated for each farm enterprise and the associated legal form (\* non-dairy farms)

Although, the quantitative data reported in Weller et al. (2013) and McAllister and Geno (2004) point to possible associations between the legal forms used in farming and the variables examined above, the fact that the full range of forms were utilised across the entire spectrum of these variables demonstrates that each may be successfully used across farms that vary widely in terms of key social characteristics. It may be that more complex dynamics are involved. Accordingly, the discussion now focuses on the key drivers associated with farmers' deployment of the legal entities that were illuminated during this research.

### The Legal Forms of Farming: The 'Taxation Imperative'

The paucity of sustained scholarship addressing farmers' use of legal and business frameworks renders difficult any substantiated statements of longitudinal trends, beyond the common observation that partnerships continue to dominate the farming sector. Although some writers suggest that this characteristic of Australian farm enterprises represents a longer-term shift away from sole proprietorships and "the customary ownership of the oldest male that was once the dominant style" (Craig & Killen, 1984, p. 226), changes to the compilation of official statistics make it difficult to quantify these claims with any degree of certainty.<sup>117</sup> If the prevalence of partnerships is a more recent phenomenon, and represents a shift from an earlier propensity to utilise sole proprietorships, then questions arise *vis-à-vis* how one might understand more recent albeit ad hoc, reports that the number of farms structured as trusts and companies is increasing in line with the small shifts noted in the Australian Taxation Office data (see Appendix 17). McAllister and Geno (2004), who attempt to demonstrate this longitudinal trend using differently-aged farmers as a proxy for time, explain these patterns in terms of farmers' intentions regarding intergenerational succession. As noted above, the results are far from clear about the potential for these variables to impact on the selection of particular legal forms. Particularly problematic is recourse to intergenerational succession and inheritance as a key influence in light of evidence that handing the farm to offspring is becoming increasingly uncertain among particular groups of farmers (Reeve, 2001; Wheeler, Bjornlund, et al., 2012), if it ever was a widespread phenomenon (Nalson & Craig, 1987). In many ways, the intergenerational character of Australian farming has more to do with the occupation of being a farmer, rather than any attachment of farm families to specific parcels of land (Nalson & Craig, 1987).<sup>118</sup>

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<sup>117</sup> For example, in 1981-82, the threshold for inclusion in the Australian Bureau of Statistics records increased from an Estimated Value of Agricultural Operations of \$1,500 AUD to \$2,500 AUD.

<sup>118</sup> Similar findings have been reported in the British context; that is, inheritance of farming as an occupation may be more common than inheritance of 'the farm' (see Marsden et al., 1989). In the Australian context, Gray and Lawrence (2001) also acknowledge that research results point to intergenerational farm succession not being universal. And, recall from Chapter 4 that while the majority of farmers in this study were from farming families, a minority were operating land parcels that had been owned/operated by the previous generation.



These sentiments were certainly endorsed in the farmer interviews in this study, which saw respondents draw attention to the range of options available for taxation and farm asset management, rather than describing the selection of their legal form in terms of personal (e.g., age) and household characteristics (e.g., likelihood of succession). But, suggestions regarding the fundamental importance of the taxation and legal frameworks in which businesses are situated are not new (Craig & Killen, 1984; Nalson & Craig, 1987). Similarly, Davidson (1997) noted how strategies employed to minimise the amount of tax paid influenced the increased use of partnerships and private companies (particularly on larger estates) in the years following World War II, a period during which farm incomes increased. Later, Black and Neilson (2000) highlighted the influence of the abolition of death duties upon the diminished use of companies. The critical role that farmers' choice of legal form has played in terms of reducing the taxation liability of their business has also been noted by researchers working outside of Australia. Marsden et al. (1989) reported that 26% of the business partnerships in their sample of 99 farms in West Dorset, England used this structure primarily for the purposes of reducing taxation.<sup>119</sup> Aside from these types of comments, there are no known systematic studies of how taxation, financial and asset management issues might be reflected in the legal forms used in agriculture. Here, I seek to contribute towards filling this gap by discussing the extent to which tax implications are driving the persistence of partnerships or business transitions in the direction of more collective forms of ownership in Australian farming.

In this study, farmers' understandings of the rationale behind their current legal entity were grounded in their belief that these decisions were determined by efficient management of their tax liability. This belief was maintained across farmers from both study sites, irrespective of the legal form in use. The statements in Table 7 (below) illustrate the ways in which farmers expressed this rationale for managing their tax affairs.

**Table 7: Statements illustrating the taxation imperative among farmers when discussing the legal forms used for organising their farm enterprises**

Respondent	Legal form	Quote
COR_0068M:	Company	The company was established mainly because we were earning too much money and paying too much tax.
COR_0335F:	Family Trust	Well I think with a trust, when you earn a lot of money, it is very, very good because it is, ummm...you know tax wise it is spread out amongst the trustees.
COR_2226M:	Family Trust	Well, look, I was going to say, yeah, in all honesty, a lot of those drivers are because of, for tax purposes.
MV_1810M: MV_1810F:	Partnership	That [forming a partnership] was tax wise. Yeah, tax, it's a good thing for tax. Yeah, yeah.
Erin: MV_1965M:	Company	So, I'm wondering given that you've got a company, why is it that you ... run a company structure? Tax. That's what I said to my accountant. See companies pay 30% tax right from dollar one. As an individual I would go up to about 40 grand before you start going to 30%. That's how we structure things.

<sup>119</sup> Although these conclusions date back 25 years, these same researchers noted that the deployment of particular business forms has varied over time and between industries and agricultural regions.

Effective management of farmers' tax liability was considered to be the principle purpose of any legal form. Farmers often cast the payment of tax, or excessive tax, either as a 'problem', or as a business cost that they preferred to minimise. One farmer, when discussing the organisation of his farm business, said:

COR\_2226M: Yeah. Well, let's face it, at the end of the day, if we never had, like to me if you don't think about these things, we could be up for, not tens of thousands in tax, you can be up for hundreds of thousands in tax. So, you've got to do, what was it? John Elliott or one of those famous Australian blokes, multi-millionaire, ohhh...it was old, the fella who died? Kerry Packer. Kerry Packer said like, like, it was one of his favourite sayings, 'if you're not thinking all the time about how to minimise your tax, you shouldn't be in business'.

The ingrained nature of this taxation imperative was reinforced when farmers pondered the use of alternative legal forms compared to their current entity. For example, MV\_2014M, who used a partnership, could "understand people having [different] systems if they've got tax problems and stuff"; and, similarly, MV\_7366M (also using a partnership) who had never thought about setting up a company, commented that such a structure "would probably get our tax rate down a bit if it was a company". MV\_6251M and MV\_6251F recalled that when they considered changing their legal form upon the departure of their equity partner, the advice they received was that they were "better off [retaining their family trust and corporate trustee combination] because one day [they] will make a big profit and as soon as you start making a decent profit you pay [the lower] company tax rate instead of [the higher] personal tax rate, so it's just worth having" (MV\_6251M). Whether or not these statements were factually accurate (i.e., whether having a company structure would in fact reduce their tax rate) is not the point. The point here is that farmers continually interpreted the selection of their legal entity in the context of appropriate means of managing their taxation liability. And as will be shown later in this chapter, farmers' accountants were instrumental in the making of these decisions.

Farmers also provided three other reasons for the selection of particular legal forms, albeit they were less common than the taxation imperative: 1) simplicity, 2) minimising compliance costs and 3) asset protection. It was among these reasons that variance between farmers who employed different legal entities may be observed.

The use of a partnership, generally between a husband and wife, was typically justified as being 'easy' or in the interests of simplicity. MV\_2014M and MV\_2014F used a husband and wife partnership because to their mind "the simpler" the arrangement, "the better". COR\_0135M also maintained a partnership with his wife because with "company structures and all that, you've got your compliance costs and all this that you've got to fork out for, so some benefits some drawbacks. Keep it simple." These notions of maintaining simplicity were, unsurprisingly, only mentioned by farmers utilising a partnership. Similar to COR\_0135M, other users of partnerships also stressed that one of the advantages of this form was lower compliance costs.

Perhaps the clearest description of the interaction between these issues of simplicity, compliance costs and tax minimisation came from a relatively young (age group: 30-39 year old) Murray-Goulburn Valley farmer, who was also a trained accountant. He described his use of a partnership with his wife as follows:

MV\_3139M: Like, a partnership's such an easy structure. Like you know, the income just gets split evenly. It's just, it's not much compliance, you know, like when you start doing accounts for trusts, you know every set of accounts you're looking at \$2,500-3,000, you know, annual accounts. Plus you have to do GST [Goods and Services Tax] returns and all the other bulls\*\*t that goes with it, so you could end up, you could go from a \$2,500 a year accounting bill to a \$20,000 accounting bill pretty quickly with very little benefit, you know. So, like I say when I start making ummm...you know, four or five hundred grand a year I will have a very complex structure. But at the moment, no.

Apropos of farmers who were employing more collective legal forms, one other driver warrants mention: asset protection. When the more collective legal forms (family trusts, companies and combinations) are organised in particular ways, they can be used to separate asset ownership (land and water assets) from the operating business entity in the interests of protecting assets from potential litigation (Black & Neilson, 2000). Seventeen farm enterprises were organised using these more collective forms. A husband and wife couple operating one of these enterprises discussed the advantages of being able to separate asset ownership and the operating entity in the context of their transition from owning a non-farming business to owning their first farm in the 1990s. The male partner, describing their situation said:

MV\_1872M: ...we were looking at getting rid of the company because, we had that because we had a big paying [tradesman] business in Melbourne and then it got smaller and smaller and smaller, so we came up here and the accountant said, he said, 'I know it costs you more, but he said if a cow gets out on the road', he said 'even though you've got public liability', he said, 'they'll [anyone looking to take legal action] look at you and they will claim all your public liability and anything else they can get their cotton picking hands on'. So he said 'if you've got a company structure, the only thing they can get their mitts on is anything the company owns'. Now he said, 'if you own, [wife's name] and you own the farm [the land/water assets], they can't touch it'.

In this case, the operating entity was a limited liability company, while the land and assets were held in the individual names of the farming couple in order to protect their main asset – their land – from potential legal action.

### The Legal Forms of Farming: The Role of Farm Accountants

In the previous section, I have highlighted the farmers' understanding of the utility of particular legal forms. However, it became apparent to me in the early phases of data generation that most of my farmer informants had limited knowledge of the reasons that determined their chosen

legal form. Many farmers' responses were either brief or they were hesitant in the degree of specificity they provided. But, as explicated above, their explanations tended to revolve around their perception that the purpose of their business structure was to manage effectively their tax obligations. The following extended excerpt demonstrates the way in which one farmer grappled with trying to recall and understand the rationale underpinning why he and his wife opted for a partnership when they were in business with his parents. But, in the end, he was unable to provide a cogent answer. The conclusion he reached, however, clearly highlighted the vital role of their accountant in the legal organisation of their enterprise.

Erin: What was the thinking around establishing a partnership rather than going into, say, a trust or company type business structure?

COR\_0175M: Ummm...what was the thinking behind that? A company was, I'm not sure why it was. Probably because of the, we actually didn't have anything, like [wife's name] and I didn't have any ummm...I guess, we were gifted half, you know, the business. We didn't actually contribute, like ummm...like we didn't have 100 cows of our own. Ummm...but that doesn't answer why it wasn't a trust, it's more, that's more of like 'Why weren't you share farming?' or 'Why weren't you, you know...?' Ummm...I think it was, it seemed easier to, you see a trust is fairly easy to distribute funds though isn't it?

Erin: Mmmm....

COR\_0175M: Companies are, they're a separate sort of entity, they're a different, I don't know, companies are kinda, I'm trying to recall why. We sat in accountancy offices for months trying to nut all this out. I think that was the main ummm... hmmm... sorry, I can't give you a more concrete or, I think that's why, though, yeah. ... I think in the partnership arrangement, we would, at the end of the, however the year went, we were able to distribute like a trust. 'Cause we all got an allowance and from the partnership. ... Mmmm...that's how it worked. And, and at the end of the year if there was a surplus, I'm not going to use profit (laughs), ummm...yeah, it was distributed amongst [us], so that was, I would have to say that you would have to ask an accountant, our accountant, an accountant, no you'd have to ask our accountant 'cause he's the only one that knows specifically, or you know, he's got his finger on the pulse so to speak.

COR\_0175M was not alone in being unsure of the rationale behind the way in which his business was structured. There was a small minority of farmers who were able to discuss more fully the purpose and nature of their business arrangements. But, many of my farmer informants clearly stated that they were heavily reliant upon their accountants to assist them in making decisions suited to their circumstances. Within the rural geographical and sociological literature, any role played by farm accountants has been largely ignored, despite the fact that as emphasised in the quote above, they are influential actors in the countryside. Although it was not my intention at the beginning of the research to interview farm accountants, after realising

that few farmers had a comprehensive grasp of the different legal forms and of the rationales behind these decisions, I considered it appropriate to gather information about the legal forms used in farming from accountants directly.

The importance of farm accountants as professionals who have a marked bearing on the structure of Australian agriculture is perhaps best demonstrated by data from the wider ARC project survey population from which the sample of farmers interviewed in this study was drawn (see Chapter 4). Survey respondents were asked to report on their use of a range of professional services when making farm management decisions. Among the Murray-Goulburn Valley and Corangamite farmers ( $n=228$ ), accountants were the most commonly used service, with 65% of farmers reporting that they used accountants frequently or often. Agronomists were the next most commonly used service (37%) (Table 8 below). Thus, accountants have an obvious, but under reported role in the business affairs of Australian agricultural enterprises.

**Table 8: Percentage of wider survey sample from Murray-Goulburn Valley and Corangamite who reported frequency with which they used different professional services ( $n = 228$ )**

Information source	Frequency of use: frequently or often	Frequency of use: seldom or never
Frequency of accountant use ( $n = 202$ )	65%	35%
Frequency of agronomist use ( $n = 180$ )	38%	62%
Frequency of industry field advisor use ( $n = 173$ )	26%	74%
Frequency of financial advisor use ( $n = 170$ )	20%	80%
Frequency of farm business advisor use ( $n = 164$ )	13%	87%
Frequency of DPI use ( $n = 169$ )	11%	89%
Frequency of meteorologist use ( $n = 160$ )	7%	93%
Frequency of Landcare advisor use ( $n = 162$ )	5%	95%

Source: Farm Household and Intentions Survey 2010

#### *Accountants' Perspectives of Legal Forms used in the Farm Sector*

Six accountants and one financial planner, each with a substantial number of agricultural clients in the study site areas, were interviewed to ascertain their perspectives regarding the utility of different legal forms. Five of the accountants described how they had seen a general trend away from the use of partnerships toward more complex entities during their time working with agricultural clients. The sixth accountant, while acknowledging the existence of trusts and companies, concluded that under the current taxation regulations, there were still sufficient advantages associated with partnerships that he had not widely recommended his clients use alternative forms.

The seven financial professionals explained their perspectives in the context of four key drivers: 1) an increased concern with protecting against potential legal action; 2) changes in farm incomes; 3) taxation regulations; and, 4) personal interpretations of what they considered to be the best legal form for a farm enterprise.

Asset protection and the efficient management of tax were the two most extensively discussed topics during my interviews. Trusts and companies, as opposed to partnerships, provide opportunities for separating asset ownership from the trading entity, a strategy used to protect against the risk of negligence and any resultant legal action. In the case of dairy farms, one of the types of risk identified was uncontained stock causing accidents and injury to employees or on-farm contractors. A Murray-Goulburn Valley accountant described the type of structure that he had recommended to achieve the effective separation of farm operations from land (and water) assets.

MV\_Accountant 3: ...if there was someone coming in today for, looking at a, you know, a sort of, if we were talking about investing a million dollars in land, ummm...and milking 300 cows as a general rule and employing some people, ummm...they would probably, we would be probably looking at buying land in a trust. Ummm...and, or potentially in their own names. But we'd be operating, the trading entity, if it was in their own names [the land], the trading entity would be definitely one of a trust or a company.

Here, this accountant draws attention to a combination of legal forms. But his opening remarks delineate one of the reasons why partnerships that do not have the advantage of separating operations from assets might persist in agriculture. The organisational structure outlined is premised on a new enterprise in which business owners have either no or few assets and no already existing business. Another accountant, who provided further details, emphasised the role of asset protection strategies while at the same time recognising the influence of legacy structures upon the legal forms used by his clients.

MV\_Accountant 2: Yeah, look, a fair swag of the people I dealt<sup>120</sup> with still had partnerships but you would find that they would be ummm...you know, why would I send someone into an entity [trust or company]? It's because their taxable income level's potentially high. So, you would leave someone in a partnership when their incomes were still relatively in the minimal tax area. Ummm...or they had minimal risk, might have been no employees, for example. So husband and wife ummm...it would actually cost them money to probably move into a trust, so, you know, you're talking up-front costs and on-going [costs].

Here, MV\_Accountant 2 acknowledges that some farm enterprises could be low risk because the farm was a small operation with no external labour with a low risk of public liability.<sup>121</sup> In the case of an already established enterprise with this combination of characteristics, there could

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<sup>120</sup> The past tense is used here because this informant had retired from accountancy several months prior to the interview.

<sup>121</sup> Another example of a low risk farm enterprise given during my interview with MV\_Accountant 2 was a farm in a relatively remote location.



be few (if any) advantages in transitioning to a more complex entity. This observation confounds the hypothesis that legal forms are associated with age and life stage, and that they transition to more complex forms over time. Higher numbers of trusts and companies within the agricultural sector might simply reflect new entrants and the recommendations of their accountants at the time of establishing their businesses, decisions that may be guided by a concern for risk management and asset protection.

MV\_Accountant 2 also referred to the second major factor discussed by finance professionals: the nexus between farm income and suitable tax management strategies. Changes in the fortunes of agriculture and taxation regulations were attributed to the way in which companies, in particular, had gone out of vogue. For example, COR\_Accountant 1 compared companies in the agricultural sector to ‘dinosaurs’; and, MV\_Accountant 1 discussed how his accounting firm used to recommend companies during the 1990s because “farmers were making money”, a situation which created pressure to manage tax obligations. In more recent times, lower farm incomes have reduced tax pressure, and companies have become less attractive because they do not provide the appropriate vehicle to access two of the best techniques for farmers to manage their tax obligations (i.e., primary production averaging and farm management deposits).

The ways in which changes to taxation regulations shape accountants’ advice to farmers were also demonstrated by the accountants’ reference to the changing advantages and disadvantages of family trusts. In the past, family trusts provided asset protection and income distribution benefits. Distributing income between a larger number of family members, including children, has proven an effective mechanism for reducing the collective amount of tax paid. Recent changes have eroded this advantage by reducing the maximum distribution from trusts to children. However, unlike companies, trusts retain other advantages such as access to primary production averaging and farm management deposits. These advantages, along with the means to separate farm businesses from farm assets, means that trusts *vis-à-vis* companies remain a potentially more attractive option for the legal organisation of family farms.

The influence of strategies for managing tax upon the legal forms used by agriculturalists was reinforced by the limited attention these professionals paid to issues regarding intergenerational succession and inheritance. This should not suggest that such issues are not taken into account when making these decisions: it simply highlights the issues to which accountants and their farmer clients are able to respond. As summarised by the financial planner I interviewed: “The succession is different to the [business] structure, the succession can override a structure, it doesn't matter which structure you've got, you can still manage wealth transitions”. This suggests that management of tax is an immediate, annual task for all businesses. It is considered...



MV\_Financial Planner: ...as a cost, as an expense, then it's the one expense, about the one expense you can moderate where, where you've got a dollar for dollar return to your bottom line. You know, so you save a dollar on tax, you've got an extra dollar of income. You've got a dollar you didn't lose.

In contrast, passing the farm to the next generation only applies to some farms and might not be relevant for a number of years. In sum, financial professionals seem to be working to manage farmers' tax obligations as efficiently as possible, while at the same time protecting farmers' assets in situations where it is sensible to use trusts and companies. One further critical factor that influenced recommendations pertinent to the legal organisation of farms was attributable to accountants' individual preferences.

#### *Variation between Farm Accountants*

Although dominant across the agricultural sector, the percentage of partnerships varied among the six accountants' agricultural clients. One accountant estimated that 90% of his clients involved in primary production utilised a partnership; in contrast, another accountant estimated that only 30-40% of his client base did. A difference of this magnitude prompts questions. Possible explanations for this variance include the broader demographics of the farming population. For example, in areas where the average age of farmers is high, partnerships might be more prevalent due to the legacy effect noted above. In such cases, accountants' client bases may be similarly skewed towards partnerships. Another reason might be the accountants' personal interpretations of the taxation regulations, and the level of risk to which they assume farmers are exposed. The latter offered reasonable explanations in the context of the interviews conducted in this study. Excerpts from two interviews – one conducted in Corangamite and the other in the Murray-Goulburn Valley – illustrate this point:

MV\_Accountant 2: ...And, it almost [be]came one of my, as an advisor, one of my passions was to move people where I could. And when I say move, move them from a, generally a partnership situation which was pretty well used to split income between two [people] ... we would move someone from a partnership to a trust structure.

COR\_Accountant 2: ...All dairy farms should be set up in the trust structure in terms of asset protection, so it's not really related to the size of the operation at all.

In both cases, these accountants stated their preference for the legal organisation of dairy farm businesses. In contrast, however, MV\_Accountant 1 seemed to value the simplicity and “low key” nature of partnerships. He also viewed companies as unattractive due to changes to taxation laws in the last decade; similarly, he viewed trusts as having come “under attack” from the Australian Taxation Office, rendering them “more difficult to use”.

From a farmer's perspective, the influence of a particular accountant's advice was highlighted by one of the farming couples from Corangamite. The female partner said that on two occasions

they considered a change in legal form from a partnership to a trust. Their retention of a partnership model was on the basis of the advice received.

- Erin: I'm just wondering what the rationale behind having a partnership as opposed to a trust or a company might be?
- COR\_0342F: Don't even bother asking us, it's because we've been financially told to do it.
- COR\_0342M: The accountant told us that's...
- COR\_0342F: ...that's why. And we were told that the business with the trusts when the children were young, I've looked at it twice, and they said no, do it the way we're doing it. They were going to cut out the loopholes with the trusts, but they never have.

Similarly, MV\_2098M, who had purchased his parents' dairy farm and expanded the operation both in terms of herd size and land area, had always thought he and his wife "would have traded as the company, but no one would advise [them] to do that". In both cases, despite being aware of alternative legal forms, the advice of their finance professionals had been critical.

The preceding discussion of legal forms used within the Australian farming sector has focused upon those in use by this group of farmers at the time of data generation. The farm life history approach revealed greater detail than that provided by this snapshot. The approach also uncovered the ways in which legal forms either changed or remained unchanged over time. This is the focus of the next section.

### The Legal Forms of Farming: Transitions between Legal Forms

Examination of transitions from one legal form to another within a given farm enterprise helps reveal the underlying drivers of how different legal forms are used in the farming sector. Half of the enterprises within the study sample had neither modified their business structure nor altered the ownership arrangements of their enterprise. This suggests a reasonably high level of stability over time, and highlights the significance of the farmers' initial decisions to utilise a given legal form. In the case of the other half of the farms, the legal form originally established had been altered, and it is these transitions that are the focus of this section.

The enterprises in which such transitions had taken place were almost evenly divided between Corangamite ( $n = 9$ ) and the Murray-Goulburn Valley ( $n = 11$ ). Inspection of each transition revealed two broad categorisations: 1) change from one legal form to another ( $n = 11$ ); and, 2) change in the controlling owners of the business, with the original legal form retained ( $n = 9$ ). Closer inspection revealed seven different events that triggered change of legal form, or of the persons involved in the ownership of the farm business. Table 9 (next page) lists these events according to the two broad categories.

**Table 9: Number of farms in which different events triggered either a change of legal form, or a change of the persons involved in the business ownership while the original legal form was unchanged ( $n = 20$ )**

Events that triggered a change in legal form and...	...a different legal form was used	...the original legal form was retained
Departure of business partner/s	1	6
Change in relationship status	2	3
Income/taxation management	3	
Establishing an independent farm enterprise	2	
Planning for succession	1	
Farm business amalgamation	1	
General advice	1	

The most common event contributing to changed legal forms or business ownership arrangements was the departure of a business partner ( $n = 7$ ). In one case, one of two brothers elected to leave the partnership they had established with their father (COR\_7370); and, in another, an unrelated equity partner exited the business (MV\_6251). In the remaining five cases (MV\_1765, MV\_2098, COR\_2273, COR\_0255, COR\_0490), the departing business partner was a member (or members) of the previous generation who was either retiring or approaching the end of his/her/their lives. In such cases, a deliberate decision was made to effectively manage their departure alongside the continuing operation of the farm. This points to intergenerational succession and inheritance being a key influence in some changes made to legal forms. But, the way in which intergenerational succession and inheritance influenced these decisions was somewhat unexpected, as evidenced by the case of MV\_1765, an unmarried farmer who created a new trading entity in the period of time between the deaths of his parents. This resulted in the dissolution of the three-way partnership between himself and his parents and the creation of a company. His explanation of the transition in which he emphasised the influence of the advice of his accountant, appears below:

- Erin: At what point in the development of the farm did you think about establishing a company?
- MV\_1765M: It was about, ohhh...I don't know exactly, I'd have to, I never knew exactly, but at some point prior to Dad's dying the whole, the accountant organised things, that it would switch over to '[family name] Company'. Previous to that it was '[parents initials] [family name] and Son' was the operating partnership. It was Dad and Mum and myself which had been going for about, at that time, been going for about 40, 45 years, and then Mum died in 2003 and I think it was probably just after that, we started to swing it over because Dad was getting on towards [the age of] 90, then so, ahhh...setting it up for my [farm] operation and some time about then that '[family name] Company' was started, and '[parents initials] [family name] and Son' was

really phased out as, at the moment it's still, ahhh...well it is '[family name] Company'.

Here, MV\_1765M established a collective legal form – a company – in his own name. The more complex legal form was used to establish an independent farm business on the part of the younger generation, rather than being used as a legal mechanism to assist the process of farm inheritance. This family was not unique. Three other farms, in which multiple generations had been formally involved in the farm business, were also organised as family partnerships (COR\_7370, COR\_2273, COR\_0490). In contrast to MV\_1765, in these three cases a partnership was retained after the departure of a family member (or members), despite this event representing an opportunity for transitioning to another legal form.

Taking over the family farm can also result in changes to legal forms many years prior to the passing of the older generation, as demonstrated in the case of MV\_2098M, who had been in a three-way partnership with his parents. When he and his wife purchased the family farm from his parents at the time of their retirement, they established a new partnership on the basis of advice from their finance professionals. Clearly, in both cases, the underlying driver was the need to reorganise due to changes in the social structure of the ownership of the farm business. (In Chapter 7, I discuss MV\_2098M's motivation for purchasing his parents' farm.)

The significance of the changes was also demonstrated by the second most common event that triggered changes in the legal form or of the business ownership arrangements. Changes to a farmers' relationship status prompted five of the farmers to reassess the particular legal form in use. In each of these cases, the farm owner either married or re-partnered, and the resultant changes in her/his relationship status were subsequently reflected either in the legal form used ( $n = 2$ ) or in the ownership of the business ( $n = 3$ ).

The outcomes of these processes are idiosyncratic.<sup>122</sup> Recognition of this possibility highlights the interaction between the unique circumstances of farm enterprises and households at particular points in time. These dynamics can be demonstrated by the three farmers who framed their account of changes to the legal form they used in order to manage better their tax liability. In each of these cases, household aspirations and/or the cyclical nature of the fortunes of agriculture resulted in changes in the household income. In all three cases, during times of increased household income, transition to a company structure was made in order to reap taxation advantages. In one of these cases, the farm life history was sufficiently advanced to observe a later reduction in farm income which resulted in the winding up of the company and a return to an earlier partnership form. An account of this farm appears in Box 1 (next page).

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<sup>122</sup> See Evans' (2009) comment on how legal forms used in farming can 'regress', rather than advance linearly towards more corporate forms.

**Box 1****Farm life history: Business transitions – Partnership – Company – Partnership**

COR\_0068M purchased his first land parcel in 1966 and began operating a small dairy farm. Several months later, he married and established a business partnership with his wife. They maintained this partnership for almost two decades into the early 1980s. Then, on the advice of their accountant, they established a company as their operating entity. COR\_0068M emphasised two key drivers behind their decision. First, in the 1970s, his wife had started working off-farm. Due to the downturn in the dairy industry, they required additional income to supplement their farm earnings. This off-farm work continued for 23 years during which time the dairy industry improved. A combination of income sources substantially increased their household income and, by extension, their tax liability. COR\_0068M explained their situation as follows:

The company was established mainly because we were earning too much money and paying too much tax. Ahhh...[wife's name] was earning a wage, [the] dairying industry was going quite well, and we were getting to the stage where we were giving away 50 cents in the dollar [in] tax. Now, we were just working for nothing, ahhh...so it was just a decision with the accountants. We established a company, and company tax is 33%. ... So, it's not really cheating any system... it was a common business decision.

COR\_0068M and his wife maintained their company structure until ~2007 when, again on the advice of their accountant they began to wind up the company and revert to a husband and wife partnership. COR\_0068M continued:

But then, of course, we got out of dairying, our income stream has come back considerably because ahhh...and although we did think our work load might have come back a fair bit, but it hasn't ummm...but ahhh...and [wife's name] left work, so our income stream has come back considerably so we're, we are, have just about wound that company out of business.

COR\_0068M's narrative underscores the key aspects of their enterprise that had changed; specifically, the implementation of their retirement strategy via the conversion of their farm from an operating dairy to a beef farm and his wife's retirement from off-farm work, changes that reduced their household income.

COR\_0068 firmly embedded their transition to a company structure (and back to a partnership) within an understanding of what he considers to be 'good business decisions' or 'good accounting'. Yet, these good business decisions were connected to a series of factors both internal and external to the farm. That is, an initial change in legal form (partnership to company) was suggested in order to manage their tax liability, itself a result of earlier decisions to increase their household income in the 1970s when dairy incomes (external factor) were low. Similarly, a second change in legal form (company to partnership) was enacted at the time when their household income decreased (internal factor) meaning that the taxation incentives associated with a company were no longer advantageous. It was the combination of each of these drivers that gave rise to changed legal forms.

The above discussion has addressed the drivers underlying the legal forms used to organise farm businesses in this study. However, ownership of a farm business may or may not align with the ownership of land and, in the case of the Murray-Goulburn Valley, water holdings. In the following section, I examine the titling arrangements for these assets.

## Asset Ownership within Australian Farm Enterprises

The primary capital asset for many Australian farmers is the land upon which they operate. In Victoria, the regulation of land ownership was founded upon the Torrens title system. The Victorian Registrar of Titles “records property ownership changes, mortgages, property transactions and new subdivisions and protects the security of property ownership via the State government guarantee to title” (Department of Transport Planning and Local Infrastructure, 2014, para. 4). Similarly, in the case of water access ownership, the Victorian Water Register records the details of all Victorian water-related entitlements including the names of those who have been issued with water shares, the reliability, location and water quantum of the shares, the quantum allocated to each share, how much has been used, and where it has been used. As well, it records all registered interests in a given water share (e.g., mortgages and leases) (Department of Environment and Primary Industries, 2014f). These databases systematically record land and water ownership; and, the details contained within them reflect the social and economic organisation of farms. But, these registers reveal little about how or why asset ownership is organised in particular ways. First, I examine the land titling arrangements for all farms involved in the study, then the water titling arrangements for the Murray-Goulburn Valley farms.

### Land Ownership

“What we call land is an element of nature inextricably interwoven with man’s [sic] institutions” (Polanyi, 1944, p. 178). Polanyi goes on to describe land as the site of ‘human habitation’. This is especially true in the case of family farms where ‘the farm’ is simultaneously a place of work and the place of habitation for farming families. As the site of habitation for farmers, land ownership arrangements embody the social relations of farming. Inspection of the circumstances under which changes to land titles take place reinforces the ways in which family relationships undergird the organisation of rural land ownership.

### *Land Titling Arrangements*

The majority of farms comprised more than one land parcel ( $n = 36$ ). The land ownership arrangements for 12 farms comprised land parcels that were all titled in the names of the business owner or business owning couple. This means that the majority of farms ( $n = 28$ ) constituted an alternative, more complex mix of land titling arrangements. Figure 15 and Figure 16 (next page) show the percentage of land operated for each farm that was held according to various land titling arrangements for each study site.

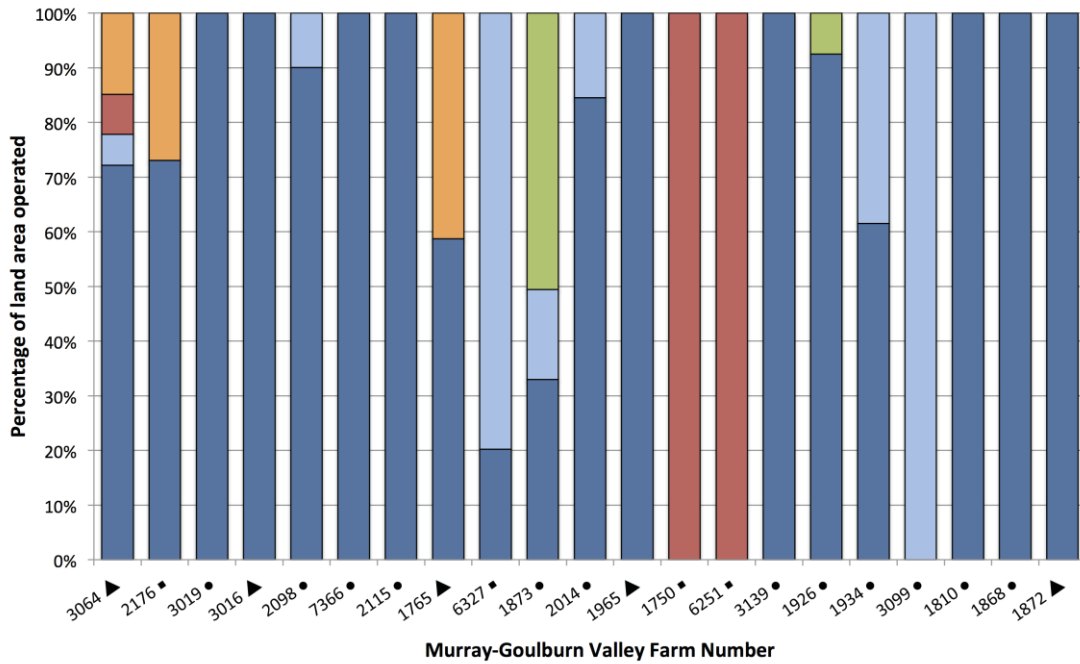


Figure 15: Land titling and legal forms used for each farm in the Murray-Goulburn Valley (total area farmed decreases from left to right)

- |  |                  |
|--|------------------|
| Land titling:  | Legal form used: |
| ■ Land held in the name/s of all business owners         | ● Partnerships   |
| ■ Land held in the name/s of some of the business owners | ■ Family Trusts  |
| ■ Land held by family corporate entities                 | ▲ Companies      |
| ■ Land leased from unrelated persons                     |                  |
| ■ Land owned by parents                                  |                  |
| ■ Other ownership arrangements                           |                  |

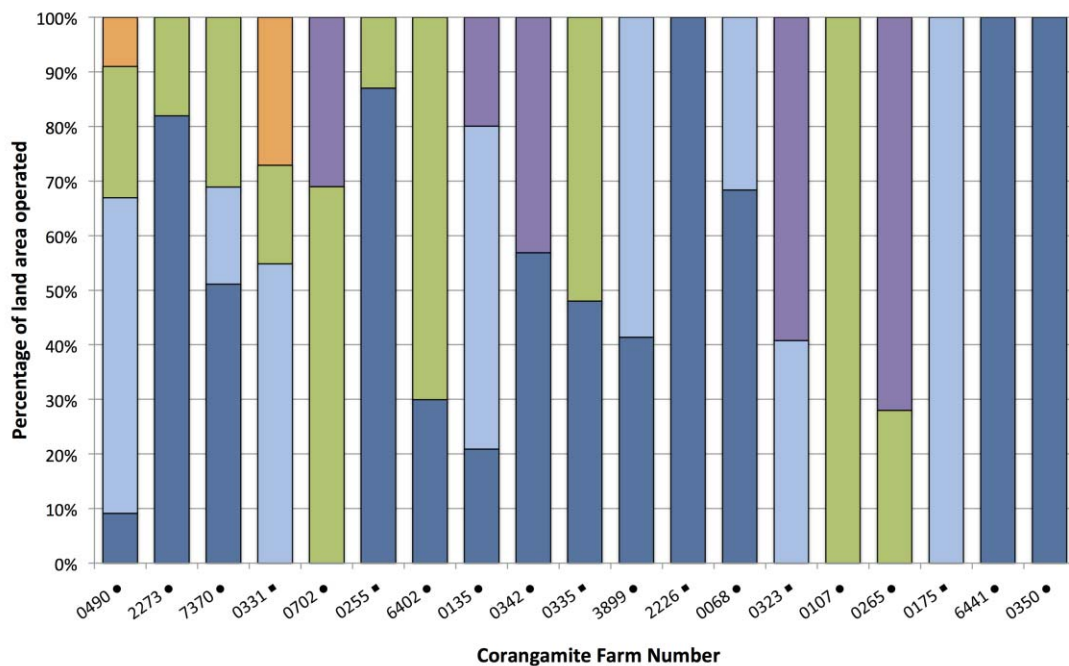


Figure 16: Land titling and legal forms used for each farm in Corangamite (total area farmed decreases from left to right)



Upon first inspection, the above charts show a greater variety of land ownership arrangements among the Corangamite farms than the Murray-Goulburn farms. Fourteen of the 19 Corangamite farms comprised more than one type of land titling, while only 9 of the 21 Murray-Goulburn Valley farms involved more than one type of land titling. The other notable feature is that the majority of the farmland among the 40 farms was held by individual title in the name of at least one of the farm business owners (represented by the dark and light blue bars). The three farms in which land was held by a corporate entity were all in the Murray-Goulburn Valley (MV\_3064, MV\_1750 and MV\_6251). In each of these cases, the corporate entity was a family company owned by the farm business owners. In the next section, I consider some of the causes for variation away from individual title in the name of farm business owners.

### *Causes of Variation in Land Ownership*

Table 10 (below) shows the farms in each study site where there was variation in land ownership arrangements according to the primary reason for the variability: all of the factors pertinent to variation that were revealed through the farm life histories are listed. In effect, most of the variation can be attributed to three factors: 1) lease hold arrangements ( $n = 12$ ); 2) intergenerational ownership ( $n = 9$ ); and, 3) marriage or changed relationship status ( $n = 8$ ).

**Table 10: Land parcel ownership for the Murray-Goulburn Valley and Corangamite farms. Cases in which all titles are held in the name/s of the farm business owners and cases in which there is variation from individual title in the name/s of the farm business owners**

		Corangamite farms	Murray-Goulburn Valley farms	Total
Variation in titling arrangements and primary reasons	Leasing	0107; 0255; 0265; 0331; 0335; 0490; 0702; 2273; 6402; 7370	1926; 1873	12
	Intergenerational ownership	0265; 0342; 0323; 0331; 0702; 2273; 3899; 7370	6327	9
	Marriage or changed relationship status	0068; 0135; 0490	1873; 2014; 2098; 3064; 3099	8
	Asset protection	0135		1
	Taxation	0175		1
	Share farmer	0490		1
	Need to mobilise finance at time of purchase		1750; 1765; 1934; 2176	4
Professional advice		3064; 6251	2	
No variation in titling arrangements		0350; 2226; 6441	1810; 1868; 1872; 1965; 2115; 3016; 3019; 3139; 7366	12

NOTE: The 'Total' column does not sum to 40 farms because in some cases there was more than one reason for variation in the land titling arrangements.

Variation in the ownership arrangements of land can be explained by the high prevalence of lease hold arrangements between my farmer informants and non-family land owners, primarily among Corangamite farms ( $n = 12$ ; green bars in Figure 15 & Figure 16). However, variation in land titling can be explained for a larger number of farms ( $n = 17$ ) when the social relations of the farm families are considered, principally through intergenerational ownership and changed inter-personal relationships. Intergenerational ownership accounted for the variation in land ownership arrangements for nine farms, eight of which were located in Corangamite. In six of these cases, members of the older generation were still alive at the time of the study and continued to hold title. In the other two cases, some land parcels were held in individual title by only one partner because of individual land inheritance. The higher prevalence of this form of land title variation in Corangamite reflected the higher incidence of inherited land among Corangamite farmers ( $n = 10$ ) than among the Murray-Goulburn Valley farmers ( $n = 6$ ). In eight cases, at least one land title was held in the individual name of only one of the business owners. In all of these cases, the land was owned by the male partner, and the titling arrangements reflected the fact that he had purchased land in his own name prior to marriage or re-partnering. The land titling arrangements had never been adjusted to reflect his changed relationship status, suggesting that there had never been a situation that required adjustment to the titling arrangements. As well, by not transferring ownership from one person to two, capital gains tax was avoided.<sup>123</sup> In these ways, changes in relationship status and the influence of intergenerational land ownership reinforce the influence upon present-day farm organisation of the historical circumstances of farm households.

### Water Ownership

At the time of unbundling, prior water rights<sup>124</sup> issued to farmers in northern Victoria were converted to a system of water shares. A water share is a share of water available from a specified water system, expressed as a maximum volume of water over a defined period (*Water Act 1989* (Victoria)). In Victoria, most water shares are further defined as one of two classes: high reliability water shares and low reliability water shares. High reliability water shares are the direct product of the prior water rights, while low reliability water shares are defined as a percentage of the high reliability water shares. The percentage differed between irrigation districts; but, in the case of the Murray Valley and Goulburn irrigation systems, low reliability

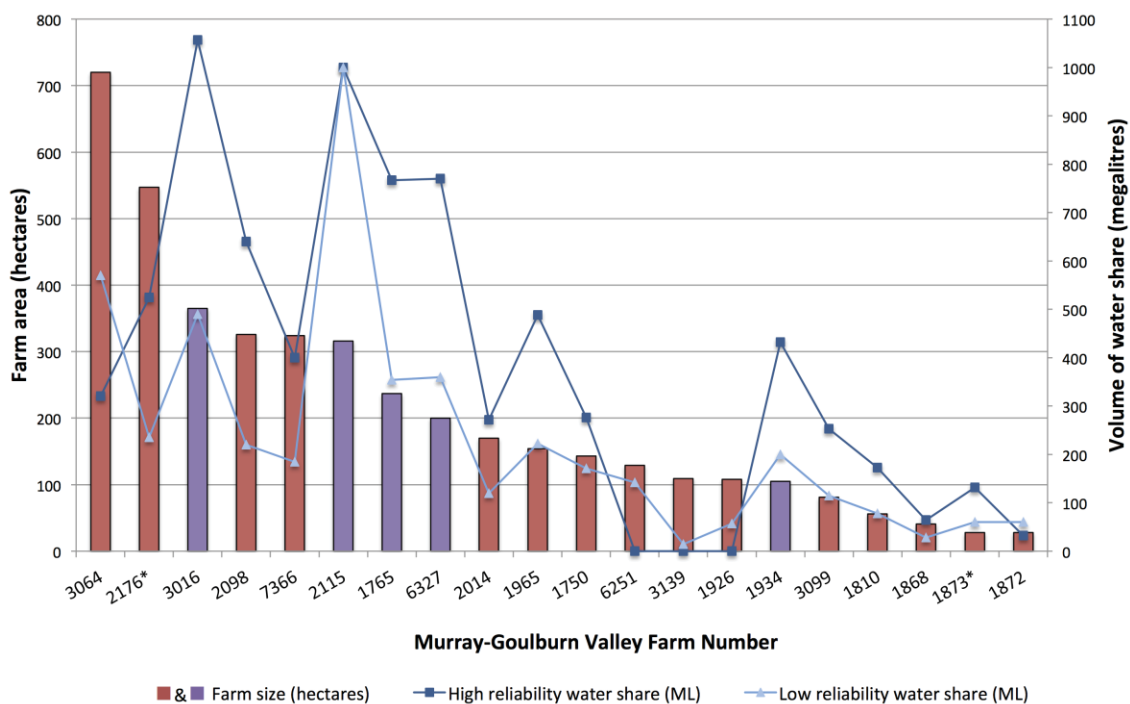
<sup>123</sup> This explanation was discussed by MV\_Accountant 2.

<sup>124</sup> The *Water Act 1989* (Victoria) refers to three types of water rights in existence prior to 1 July 2007: 'prior water right', 'prior joint right' and 'prior domestic and stock right'. The Conversion rules for regulated water systems in Northern Victoria (2007) stipulate the mechanisms for transferring from the earlier system of 'rights' to the current system of 'shares'.

water shares were defined as 48% of the respective high reliability water shares (Conversion rules for regulated water systems in Northern Victoria, 2007).<sup>125</sup>

#### *Water Share Held by the Murray-Goulburn Valley Farmers*

Figure 17 (below) presents the data for the Murray-Goulburn Valley farms with respect to the size of the high (dark blue lines) and low (light blue lines) reliability water shares that farmers owned at the time of my in-depth interviews. The areas of the respective land holdings that comprised each farm are also shown (red and purple bars).



**Figure 17: Farm area and volume of high and low reliability water shares for the Murray-Goulburn Valley farms ( $n = 20$ )**

NOTE: In order to present data that only included the land with which water entitlements could be purchased, and upon which water could be applied, some exclusions were made (signified by \*). In case MV\_2176, the New South Wales land (130 ha) and water (747 ML) they own has been removed, and in case MV\_1873 the dry land located outside of the irrigation district has also been removed (144 ha). Similarly, case MV\_3019 has been removed because it is mainly a dry land farm and the majority of the land holdings are located outside of the irrigation zone.

Figure 17 represents a snapshot of farmers' water and land holdings. Closer inspection reveals information about whether or not farmers have manipulated their water share holdings with respect to their land holdings over time. Here, I outline instances in which water shares have been manipulated, and augment them with explanatory data from the farm life histories.

Historically, water rights were allocated to particular land parcels via a formula based upon land area and quality. This backdrop enables two hypotheses about the pattern of land and water

<sup>125</sup> The percentage of high reliability water shares that was used to derive low reliability water shares was a product of earlier Victorian water reforms.

holdings one might have expected to see had water not been unbundled from land: 1) that a farm's high reliability water share would be slightly more than twice its low reliability water share; and, 2) that there would be a more-or-less similar pattern across all farms contingent to the relationship between the size of the land holdings and the size of the high reliability water share.<sup>126</sup>

Farms MV\_1965 and MV\_3099 in Figure 17 are good examples of the pattern one might expect to observe. Conversations with these two farm owners confirmed that their water holdings most likely reflected the original allocations made to the land parcels that comprise each farm.<sup>127</sup> In most other cases, the size of the land holdings – when compared to the water holdings – deviated from this pattern. Farms MV\_2115 and MV\_3064 were two of the more marked examples. In the case of MV\_3064, the size of the land holdings differed tangibly when compared to the volume of high reliability water share and the volume of low reliability water share was greater than the high reliability water share. In the case of MV\_2115, equivalent amounts of high and low reliability water share were held. So, how might these variations from the anticipated pattern be explained?

The water holding/s associated with each farm, when compared to how they reflect the water holding/s that one may have expected to see had no adjustments to land and/or water holdings been made can be categorised in one of five ways. The five categories and the number of farms in each category appear in Table 11 (below).

**Table 11: Farms categorised according to the way in which water holdings in early 2012 differed from the expected water holdings based on the land parcels that comprised each farm ( $n = 20$ ; see note Figure 17)**

Changes to water holdings	Description	No. of farms
Less than expected	The water holdings held were less than what would be expected given the land parcels that comprised the farm.	6
No change	No difference between the water holdings held by the farm owners and the water holdings that were originally purchased with the respective land parcels.	5
Decrease	The water holdings have been reduced by the current farm operator/s – net water sales.	4
Increase	The water holdings have been increased by the current farm operator/s – net water purchases.	4
More than expected	The water holdings held were greater than what would be expected given the land parcels that comprised the farm.	1

<sup>126</sup> The precise relationship between the size of land holdings and the volume of the respective high reliability water share is more difficult to ascertain because of the inclusion of land quality in the original water quantum calculations. That is, two farms of the same size would have been allocated different water rights if one farm had soil types better suited to irrigation. This information can only be confirmed by accessing the original land title records. But in the absence of such information, it is still possible to discern the general pattern across the group of farms, deviations from any expected pattern might suggest that water and/or land holdings have been independently adjusted.

<sup>127</sup> Case MV\_1934 shows a similar pattern, although the farm owner purchased a small quantity of water entitlement (12 megalitres) when permanent trading was first introduced.

Half ( $n = 10$ ) of the Murray-Goulburn Valley farmers held less water share than expected (categories ‘less than expected’ and ‘decrease’ combined). Farmers in the ‘less than expected’ category had created this situation through land acquisitions; but they had either chosen not to purchase water shares (e.g., MV\_2098, MV\_3139), or elected to purchase a smaller quantity of water share than originally allocated to the respective land parcels (e.g., MV\_1750, MV\_2176). In five of these cases, the land purchases were made post-unbundling. In the remaining case, the land purchases were made pre-unbundling, and the associated water rights had been traded away from the respective land parcels when permanent trading was permitted by the previous land owner/s. These farms differed from those in the ‘decrease’ category because the difference in their land/water holding ratio was attributable to the purchase of land without water, as opposed to the deliberate sale of water share.

In cases where the farmers had deliberately sold their water shares, they had only sold their high reliability shares, and not their low reliability shares. In some cases, they had sold all of their high reliability shares (e.g., MV\_1926, MV\_6251), while in others, they had retained a smaller amount of high reliability water shares (e.g., MV\_1872, MV\_3064).

The five farms represented by purple bars in Figure 17 had increased their water holdings by purchasing water rights/shares. In the case of MV\_2115, the farm was purchased “as unbundling was unbundling” (MV\_2115F). Aligned with their farm/business model, their objective was to hold 1,000 ML of high reliability and 1,000 ML of low reliability water shares, significantly more than the water rights originally allocated to their land holdings. In another of these cases (MV\_3016), the difference between the farm size and the volume of the water holdings reflected the fact that the farmers had both separately purchased water rights/shares over time and, more recently, having separately sold a sizeable land parcel (202 ha) but retained their entire water share.

Although these findings only present a snapshot of water ownership among these farmers, the small number who had actively pursued increasing their water shares (including pre- and post-unbundling) suggests that the farmers were either unable or unwilling to accumulate large quantities of water share. Some farmers, however, were willing to add to their land holdings. However, at the same time, this snapshot of asset ownership obscures important information. For example, it reveals little about the farm and household dynamics during each asset purchase or disposal. The principles underpinning the ways in which farmers manage their land and water assets will be explored in Chapters 6 and 7 of this thesis. In the following section, I consider to what extent the legal ownership of farmers’ water assets align with business and/or land ownership arrangements.

*Unbundling: Determining Water Ownership*

As already established in my discussion of land titling arrangements, land ownership within an individual farm deviated from being a simple reflection of farm business ownership. The land title data based on the farms in this study revealed that land ownership tends to embody the social relations of farming at the time of land purchase. In the pre-unbundling context when water rights were purchased with the land, the ownership of the water holdings typically reflected these same arrangements; thus, officially, water ownership would have varied (or not) in the same way as land ownership. In the context of water administration and farm operations, however, the water rights associated with a group of land parcels that constituted a single farm were often amalgamated. While this practice of amalgamating water rights benefited farmers because they were able to access water from any one of their on-farm water outlets, the practice obscured the legal ownership of the water rights. One accountant explained the issue these arrangements caused at the time of unbundling:

MV\_Accountant 2 ...what a lot of good farmers did if they had multiple holdings is they amalgamated all their water, which allowed it to be sort of dealt with in one pop, and you could throw water out, out of whatever [farm water] outlet you had linked [to your water rights]. The hassle was, when it unbundled, they referred to that amalgamated holding as to the ownership of the water. But that water might have come from land that was owned in one name, joint names, a trust, super fund, all that [the water rights] was amalgamated from an operational perspective, but not from an ownership perspective. And then when unbundling came along, they [the water authority] referred to the amalgamation [of the water rights] for the ownership perspective.

Financial institutions were particularly concerned about the implications of land and water separation for their lending arrangements with individual farmers (see, for example, Farmers, ACF back water reforms, 2004; Lobbying continues before COAG meeting, 2004). Their concern stemmed from the ways in which farms had previously been valued and, by extension, from the ways in which farm mortgages were structured. The separation of land and water resulted in new methods for farm valuations. Rural bank managers described the change from an approach in which farms were valued as a combined unit to a system in which farms were now valued according to their separate components (land, water, stock). An excerpt from an interview with one bank manager appears below:

MV\_Bank Manager 2: ...prior to unbundling ummm...obviously as a lender there are three major criteria. We look at cash flow, we look at our security cover, and we look at you the farmer in making our assessment. Ummm...so in that security side, we used to say 'you've got 160 megalitres of water right, that will irrigate x hectares of pasture ... and we would then put, attach a value to x hectares of permanent pasture, x hectares of annual pasture and x hectares of dry land, not irrigated land. ... and that was the only way we could sort of really do it. ... With unbundling obviously that was thrown out the window. ... we then attached ummm...a value to the high reliability water shares, and also low [reliability water shares]. We then had to change the



valuations of the land component and we put in a category sort of [land with] laid out irrigation with no water attached to it...and gave it a value.

The problem created by this process was that farmers' lending arrangements had been established under the old system of valuation in which finance was granted on the basis of the combined value of land, water and improvements. The separation of land and water opened up the possibility for a valuable asset – the water holdings – to be sold, leaving financial institutions over exposed. Consequently, the new farm valuation context required the untangling of the titling arrangements relevant to each farm in order to apportion debt and legal ownership. Apportioning ownership was determined by the relevant legislative amendments, specifically the legislative mechanisms set out in Schedule 15 of the Victorian *Water Act 1989* subject to land titling and mortgage arrangements. “The ownership of the persons' water share is deemed to be the same as the ownership of the land that comprised the holding unless – (a) parcels of land in the holding are owned by different persons or in a different manner; or (b) different mortgages apply to different parcels of land in the holding” (*Water Act 1989* (Victoria), Schedule 15, clause 17). One of the bank managers outlined this process and the complexity surrounding some farm titling and mortgage arrangements:

MV\_Bank Manager 2: ...we were actually very proactive ... we got the forms ummm...relating to the unbundling and we would actually go out on-farm fairly early on ummm...clarify ummm...what, what how much, 'cause quite often your parents might have bought land, had water, you came home, you bought a bit of land which had water, you amalgamated the whole lot of it, that water and in the unbundling process the water authority didn't have any idea how much was yours, how much was your parents. They just sent a letter to the three of you, your parents and you, saying 'you own x megalitres of water, ummm...and the mortgages are, they're all there, so you and your lenders then have to sort out who owns, who actually owns what water and what mortgages attach to each ownership of water'. So, we actually, very early on, worked out what the hell it all meant and we sort of got out there and talked to farmers and got a lot of that paper work done, signed off, sent it down to the water registry and ... the division of water [ownership] was made according to that plan.

The above excerpt highlights how the apportionment of water ownership was shaped by the farm mortgage arrangements in place at the time of unbundling, and the concurrent land titling, which, as discussed above, was influenced by the social relations of a farm enterprise. Although the *Water Act 1989* (Victoria) was a fundamental influence upon this process, as long as the legislative requirements were met, and all interested parties (farm owners and lending institutions) were legally recognised, the process in itself represented an opportunity for innovation in farm ownership arrangements. The administrative need to apportion land and water ownership meant that farmers' lending arrangements were revised; and, depending upon the health of their balance sheets, modifications could have been made. However, my research reveals that few farmers reorganised the ownership of their productive assets at this time. Two



of the Murray-Goulburn Valley accountants shed light on the practical realities of why water ownership was not altered. Their explanations aligned with those given regarding the absence of changes to land titles, capital gains tax.

MV\_Accountant 2: [T]he reality is you transfer that [water ownership], as soon as you transfer that, you have a potential capital gain. And that's where it wasn't just as easy to swap water names, 'cause it basically ummm...led to it, a disposal, you know, essentially the water was bought when Mum and Dad bought the water with the land. The minute you put that water into a trust in 2008, it's actually a disposal from, technically, from their own names to that trust and you have to use the value of water at 2008 against the [price] of water [at the time it was purchased].

Similarly, MV\_Accountant 1 detailed the advice he gave to clients who used a business partnership. He recommended that at the time of unbundling the water share should remain in the partnership:

MV\_Accountant 1: ...because of the Australian Taxation Office has a small business extension for capital gains tax in relation to assets held as active assets within the farming business and no capital gains tax is generally payable on the transfer of those assets out of the business to a third party or indeed out of the business on to sons and daughters and family members, alright, so there is a distinct benefit to remain small low key.

Both accountants stressed the ways in which taxation regulations impact upon their recommendations regarding how farmers should organise their businesses and ownership of their assets. These influences determined two outcomes for the ownership of farmers' water holdings. First, water ownership, like land ownership, tends to be very stable during the lifetime of a given farm enterprise because of the financial implications for transferring ownership. The second outcome is that the ownership of high and low reliability water shares that were held at the time of unbundling most likely aligns with the ownership arrangements of the land parcels to which the prior water rights were attached, arrangements that were very likely driven by tax implications. But, the purchase of water shares post-unbundling could, in theory, be organised in novel ways. In practice, none of the four farmers in the study sample who had purchased water shares since 2007 had deviated from the ownership arrangements already in place for their productive assets.

## Chapter Summary

In this chapter, I have begun to extend the current understanding of how and why Australian farm enterprises are organised in particular ways. This took the form of a detailed examination of the legal forms and asset ownership arrangements deployed by farmers in this study, which provides the necessary contextual foundations for more in-depth analysis. Returning to the iceberg analogy, what this chapter has not done is consider the social and economic dynamics

below the water's surface that give rise to particular ownership arrangements for land and water. In the following chapters, I explore the socio-cultural functions of land and water within farm enterprises. I argue that the predominance of individual ownership of land (*vis-à-vis* more flexible ways to enrol land in farming such as leasing) and the Murray-Goulburn Valley farmers' seeming reluctance to adopt many of the practices afforded by unbundling, are expressions of two motives: the creation of family wealth (Chapter 6) and the pursuit of autonomy (Chapter 7). 'The farm' can be positioned as a site in which these two objectives are pursued within a changing and largely uncertain world.

## Chapter 6

# The Farm as a Site for Wealth Creation

## Introduction

Although the broad question of how capitalism penetrates agriculture has held the attention of rural researchers for several decades, the dynamics of capital accumulation at the farm-level have received limited attention within this body of research. In this chapter, I explore these dynamics, drawing attention to the significance of the farm as a site for wealth creation.

Specifically, I address two questions which are superficially simple, but in practice quite complex. First, how do aspirations for wealth creation figure in farmer decision-making? And, second, how is the ownership of land and water assets situated within these rationalities? I achieve this by examining farmers' use of calculative practices to narrate the development of their farm enterprises.

The significance of calculative practices to social and economic life is not new; yet, for the most part, they have received limited attention from social researchers (Miller, 2001). Calculative practices, Miller (2001, p. 379) argues, help render the economy visible and should be considered as 'technologies of government' that "enable new ways of acting upon and influencing the actions of individuals" (see also Rose & Miller, 1992). Higgins applies these Foucauldian-inspired ideas to the Australian farming context arguing: "calculation has assumed major prominence in the constitution of farmers' agency, and ...in the governing of their managerial capacities (2005, p. 119). In turn, Higgins' work focuses upon how calculation and calculative practices are reflected in changes to agricultural drought policy (2001) and the delivery of agricultural extension programmes (2005) designed to improve efficiency and sustainability at the farm level. The analysis presented in this chapter extends these works by inspecting the broader prevalence of farmers' calculative practices, rendering visible the role of land and water ownership as a means to build family wealth.

By 'calculative practices' I mean the tendency for farmers to describe the acquisition, disposal and organisation of their primary productive assets in terms of expected capital gains and the expected return on their investments. The chapter reaches the conclusion that farmers have a highly refined sense of needing to calculate the economic returns on their land and water assets because they are embodied in their aspirations for creating wealth. The metrics used and conclusions reached with regard to land assets were similar throughout the sample. Apropos of water, the Murray-Goulburn Valley farmers used similar metrics to calculate the return on their

water assets; but, they interpreted the conclusions in different ways based on diversities in how water ownership aligned with their aspirations.

The chapter is organised into three main sections. The second and third sections examine the farmers' calculative practices involving land and water ownership respectively. In the first section, I substantiate the claim that the farm is a site for wealth creation by canvassing the ways that farmers positioned their farms as a form of asset-based welfare.

### **Asset-Based Welfare: Providing for Retirement**

By definition, farm life histories are grounded in past events, but my farmer informants frequently contextualised their farms in terms of their aspirations for the future. Notably, farmers from both study sites viewed their farms as a form of asset-based welfare that could be deployed in a wide range of ways to support them in retirement. Some farmers were already semi-retired and continued to live on their farms. COR\_6441M/COR\_6441F and COR\_0068M/COR\_0068F had converted from labour-intensive dairy enterprises to less intensive beef cattle enterprises; and, MV\_1765M maintained a dairy operation by employing share farmers. In all three cases, they were yet to make definite decisions about their futures. Farmers in an earlier stage of their farming careers (e.g., COR\_0342M/COR\_0342F) had no plans to leave their farms permanently. But they did not want to be always milking cows; so, they suggested options such as leasing out their land as a means to scale-back their own manual involvement in the farm. In contrast, another group of farmers, including MV\_6251M/MV\_6251F did not envisage staying on the farm forever. In the interim, they were focused on investing off-farm. Similarly, COR\_7370M/COR\_7370F, who did not want to be on the farm beyond the foreseeable future, contemplated employing share farmers to reduce their burdens. Other farmers, for example MV\_2014M/MV\_2014F were working towards making their original land acquisition freehold for the purposes of living there in retirement. But, they suggested, that this would only be made possible by reducing their land holdings. Finally, farmers, including COR\_3899M/COR\_3899F and COR\_0255M and his wife, were navigating the challenges of intergenerational succession while allowing for their own retirement.

In these varied ways, farms – underpinned by land ownership – were constructed as farmers' superannuation. COR\_0068M stated clearly that he viewed his land assets as his superannuation: COR\_0265M and COR\_0265F considered the money they invested in the farm to be akin to payments salaried or waged workers make to superannuation funds; and, MV\_1965M said that his land was his "primary asset to retire onto". MV\_7366M and MV\_7366F held slightly more complex perspectives. During many years of investing money in their farm to develop it to a stage with which they were happy, they considered their farm to be

‘their super’. But, more recently they had started contributing to off-farm superannuation. Crucial to understanding their decision to re-deploy finances in this way is an appreciation for farmers’ calculative practices concerning farm development which I examine later in this chapter.

Farmers of all ages discussed the close association between their farms and their retirement aspirations. MV\_3139M, one of the youngest farmers in the sample, spoke frankly about the purpose of owning his own farm, which he said was to build enough wealth to ensure that he and his wife were no longer reliant upon retaining the farm.

MV\_3139M: I’m not setting this [his farm] up for them [his children], I’m setting it up for me. Like, if they want to do it, it would be great, but I’m not giving them the farm. ... My theory on succession planning is, if you want a farm, buy it. ... my Mum and Dad they bought their own farm, they didn’t inherit it and I don’t want their farm. I want them to sell it and go on cruises forever, you know. I’m quite happy to work, you know, to build everything for myself and then when I get to a position, I will sell my farm and go on cruises forever (laughs).

In most cases, farmers discussed the influence of retirement and superannuation upon present-day farm organisation in informal ways. That is, although they considered their farms to be their superannuation, they did not necessarily organise their assets in superannuation-specific ways. A small number of farms, however, were formally organised as a form of asset-based welfare through the use of self-managed superannuation funds.

Self-managed superannuation funds (SMSFs) were introduced into Australia in 1999. Under Australian law, they are to be used for the sole purpose of providing retirement benefits to fund members who are typically the same people as the fund’s trustees. Generally, assets that are considered business real property (assets that are used wholly and exclusively for running a business) can be held in SMSFs (Australian Taxation Office, 2013). Accordingly, while farmland operated for business purposes is eligible for inclusion, there are constraints regarding the inclusion of land assets that are also used by fund members as primary residences. Land parcels held in an SMSF, however, are not immediately identifiable from the land title because the title is held in the name/s of the fund’s trustee/s. Thus, the prevalence of individual ownership among family-owned/operated farms, as demonstrated in Chapter 5, obscures instances in which land (and other assets) is organised according to the provisions of SMSFs. Crucially, SMSFs establish new relationships between farm owners and their land through the necessary (internal) lease arrangements between different legal entities within the same farm enterprise.<sup>128</sup>

Eight farmers in this study had established an SMSF; of whom five revealed that their funds included at least one of their land parcels. In each of these cases, professional advice from

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<sup>128</sup> There are strict rules appertaining to the way SMSFs can be structured and to the legal relationships with fund members.

accountants was highly influential in the formation of the farmers' funds; thus, by extension, farmers typically viewed SMSFs as a means to manage effectively their present-day tax obligations. COR\_2226M and COR2226F, who held two of their five land titles in their fund, summarised their use of an SMSF as follows:

COR\_2226M: The reason why we set up the superfund, though, was because we could put \$100,000<sup>129</sup> into the fund and only pay half the tax, so it just made sense ... so really, though, the main driver of that whole thing was really to help us with our tax liability and that's why, and through the accountant, we decided to put them into the super fund.

The legal arrangements required to maintain their SMSF meant that COR\_2226M and COR\_2226F's operating entity effectively made lease payments into their fund (for the two titles held in the fund). This helped them to minimise the amount of tax they paid,<sup>130</sup> an arrangement that they viewed as a "form of compulsory savings". Although they viewed their SMSF primarily as a means of managing their tax, COR\_2226M and COR\_2226F's most recent land purchase revealed how farmers can deploy these legal structures to align with their retirement plans. In 2011, they purchased 57 hectares in a neighbouring farming district. Although this acquisition provided several farm-related functions (e.g., the grazing of young stock), its most important role was to support their retirement. But because they eventually intend to live on the 57 hectares, they were unable to purchase the land via their SMSF. So, they used the SMSF as a means to mobilise capital by transferring one of their existing land titles into the fund, thus demonstrating how farmers may deploy legal frameworks to achieve their household and business aspirations. (I examine the significance of mobilising capital to farm organisation in Chapter 7.)

Although only a small number of farmers were using SMSFs, these examples reiterate the influential role of farm accountants in farm organisation, and the importance farmers placed upon protecting their incomes to build wealth. Further insights into farmers' aspirations for building wealth may be gained from inspecting the suite of calculative practices they used when discussing the configuration of their land and water assets. I closely examine these practices in the remaining sections of this chapter.

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<sup>129</sup> \$100,000 was originally the highest contribution permitted when SMSFs were first introduced. This threshold has since been reduced.

<sup>130</sup> Farmers who had not yet established an SMSF also viewed them as a means to manage their tax obligations. However, MV\_2115F suggested that an SMSF was of little use to them in their current circumstances because they were deploying most of their financial resources to develop their farm. So, currently they did not have a "tax problem... but once the [farm] business starts making its own way then we'll probably wish that [some assets] were in a self-managed super fund".

## The Calculative Practices of Land Ownership

Understanding present-day farm organisation and the possible future trajectories of agricultural change hinges upon identifying the trends and drivers underlying particular land ownership arrangements. In Chapter 5, I began to explore the land ownership arrangements among the 40 farms included in this study by presenting the data for how land was titled at the time the field work was undertaken (Figure 15 & Figure 16, p. 127). In sum, my data revealed that most land was held in individual title arrangements by one or more of the farm business owners, and that variation in titling arrangements reflected farmers' personal and intergenerational relationships, as well as the frequency with which farmers enter into leasehold arrangements. However, land titles data alone does not fully explain the social and economic functions of land in the broader context of farmers' enterprises.

Farmer informants indicated that the social and economic functions of land within farm enterprises centres upon the creation of wealth, an objective that is best achieved through directly owning, and over time, acquiring more, land. I explore this narrative by discussing three central calculative practices that my informants used when talking about their farms: 1) calculating the capital appreciation of land and return on investment; 2) calculating the advantages of owning land versus leasing land; and, 3) calculating the cost of developing farms. I draw on interview evidence from farmers in both study sites.

### Calculating the Capital Appreciation of Land and Return on Investment

A number of farmer informants expressed an unshakeable confidence in the inevitable appreciation of land values. Consistent with this perspective, farmers in this study embedded their narratives concerning their land holdings in notions of land as a financial asset, frequently referring to their farms as a means to accumulate land assets that would appreciate.

MV\_1750M, a farmer who also owned and operated a non-agricultural business, compared the investment benefits of owning land for his farm business to his non-land based business. He said that operating a farm business upon land that he owned was...

MV\_1750M: ...an investment, it's worth more at the end than a business, you've got something that is actually worth something. Like, I run a [non-agricultural] business, we have eighteen employees and turn over a million dollars, right. But it's really worth nothing. Who wants to buy it? That's my issue with, but if I've got a farm, I always have land to sell at the end. It's only been bought, not as a passion to farm, but as an investment ... we<sup>131</sup> just bought it as an investment only.

MV\_1750M was one of the more 'hard-edged' business oriented farmers in the sample; but, other farmers who held more traditional attachments to farming expressed similar sentiments.

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<sup>131</sup> MV\_1750M owns and operates his farm with his brother. Only MV\_1750M participated in this research.



COR\_6441M and COR\_6441F transitioned from share farming to farm ownership in the 1970s during the downturn in the Australian dairy industry. At this time, they purchased 59 hectares of land and established their own dairy herd. Reflecting upon his farming career, COR\_6441M said that being a dairy farmer was all he had ever done. But when queried about the aspects of dairy farming that he appreciated most, he immediately spoke about the way in which he has been able to build assets through farming. He said...

COR\_6441M: Probably as much as anything, you can build, build an asset [his land], never think about being a millionaire or anything else, but ahhh...it still has a growth factor about it, probably still in the long term, still have a growth factor about it. Yeah. Get in a situation where you can buy next door or a bit more land.

At the time of my fieldwork, the land markets in both study sites had been “in the doldrums” as COR\_2226M stated. Despite these circumstances, my research participants held firmly to the belief that land prices would eventually appreciate. One of the youngest farmers in the study considered future capital appreciation of land to be “inevitable” because, when compared to farming regions with higher land values, the agricultural economics in northern Victoria (e.g., a combination of lower land prices and easy access to cheaper feed sources) meant that he could “milk twice as many cows and make twice as much money, so eventually the price of land will go up to the point where it's basically the same again ... you know, it's inevitable” (MV\_3139M).

The ways in which farmers expressed confidence in the eventual appreciation of their land was broadly consistent across all farmers in this study, as demonstrated by the examples provided above and reinforced by the views of COR\_0342M and MV\_1965M below.

COR\_0342M: ...they're not making any more land, land won't go, it never really goes down in value, really it might plateau out a bit, but then milk prices and things go up, then all of a sudden land will go up again.

MV\_1965M: ...land will go through waves, but as a rule it continues to grow in value. You know maybe pretty slowly, but it always goes up.

Aligned with their preoccupation with land as a financial asset, farmers frequently positioned their decisions about land and agricultural production in the context of their desire to realise a positive return on their investment. Narratives that identified a desire to make money, and to generate a return from their farm enterprises emerged from interviews in both study sites. But, they were expressed most strongly by MV\_1926M who de-bunked any notion that he would continue farming for the lifestyle alone: “You farm to make money. Not just to, I mean some people might say, ‘Ohhh...it's a lifestyle’. That's a load of bulls\*\*t. Who wants to get up and work 100 hours, 110 hours a week and call it lifestyle?”

Testimonies from three respondents highlighted the ways in which farmers’ aspirations to run a profitable farm business and generate a return on their investment directly shaped their land use

decisions. In Corangamite, COR\_0350M and COR\_0350F spoke about their decision to run a low input, biodynamic farm in the context of being able to run a profitable dairy business. And, in the case of two Murray-Goulburn Valley farms, while neither farming couple (MV\_1868M/MV\_1868F and MV\_1872M/1872F) intended to milk cows when they purchased their land, in both cases, they had established dairy enterprises because any other form of land use would not have generated a comparable financial return.

By drawing attention to the economic rationalities against which farmers discussed their land holdings and enterprises, I am not suggesting that social characteristics such as a farmer's age were unimportant. Indeed, in the latter stages of their farming careers, two of the oldest farmers in the sample curtailed making any further land purchases (COR\_0490M and MV\_1765M, both age group: 70-79 years). The key point here is that farmers expressed a distinct preference for owning their farm land because of the way in which they viewed it as a capital appreciating asset, an asset from which they could generate a return. Their preferences for land ownership were often viewed in contrast to the financial implications of leasing land; specifically, calculative comparisons of the costs involved for acquiring land by each means and the deployment of financial resources to improve land. These calculative practices are the focus of the next section.

### Calculating the Advantages of Owning Land versus Leasing Land

The calculative practices of farmers concerning the capital appreciation of land are reinforced by their general reluctance to use leasehold arrangements for enrolling land in production. In the previous chapter, I presented data that showed the incidence of leasehold tenure among the 40 farms in this study (Figure 15 & Figure 16, p.127). These data showed that 12 farms comprised at least some land parcels under leasehold tenure: they also showed that leasing practices were more common in Corangamite than in the Murray-Goulburn Valley. In this section, I untangle these land ownership patterns by exploring the ways in which farmers' land tenure preferences are bound up in their wealth creation aspirations.

The low incidence of leasehold arrangements across the research sample is attributable to farmers' tendencies to calculate the economic benefits of making interest payments versus making lease or share farming payments. Two farm stories capture these rationalities. First, a farmer in the Murray-Goulburn Valley explained the transition he and his wife made from share farming to owning land in the context of their preference for using financial resources to build assets.

MV\_1926M: ...we spent however many years putting a plant together, putting a herd together, the amount of money we were paying in lease, or [in our] share farm arrangement was equivalent to paying off your own farm. So, we looked at it from the point of view, so we're only young and silly, but

we're paying all this money out and at the end of the day we've got no asset. So, yes everything's a risk. So, we're still paying that same sort of money, but hopefully at the end of the loan, you've got, it's [the land] worth something.

A farming couple who moved to Corangamite from another farming region provided the second account. COR\_2226M and COR\_2226F made their first land acquisition in the mid-1990s. COR\_2226M admitted that sometimes he pondered whether or not they should have lease-farmed prior to purchasing a farm. He later rationalised their decision on the basis of 'doing the sums'; that is, if purchasing land and leasing land required similar levels of financing, taking on a mortgage and owning the land seemed preferable.

COR\_2226M: I mean, I must admit, I do question and wonder whether, like would've we been better to come and lease a farm here because, but then you have to, I mean, you've got to sit down and do the sums, whether or not the lease could be just as high as your blimmin' mortgage, so you might as well own the thing.

Another Murray-Goulburn Valley farmer offered a slightly different explanation for his decision to purchase stock feed rather than expand his land holdings through leasing land in order to grow fodder himself. His account comprises an economic rationale in the context of the risks of farming in a region with a variable climate.

MV\_1750M: ...we've looked at that option [leasing land to grow fodder], but found that when hay is in plentiful supply, it's cheap anyway, so why grow your own? When it's not in plentiful supply, leased country is more than likely not going to grow it.<sup>132</sup>

The outcome of the farmers' adherence to these economic rationalities has been that most of them acquired land through formal purchase. These rationalities were further reinforced by the ways in which farmers calculated the best use of financial resources when investing in farm improvements.

All farmers made improvements to their farms: paddock subdivisions, planting shelter belts, fencing, pasture renovation, fertiliser application, building – or upgrading – dairy sheds, and, in the case of the Murray-Goulburn Valley farmers, improvements to irrigation infrastructure. While farmers frequently framed their willingness to make on-farm improvements in the context of the financial costs incurred (see next section), they were markedly more cautious about the economic merits of improving leased land. These concerns were articulated by farmers who were not leasing any land, as demonstrated by MV\_2014M.

MV\_2014M: ...you're either doing some improvements that you're not getting the benefit for, which is increasing fertility or getting rid of the weeds, or doing whatever, you know. You're thinking, ohhh...s\*\*t, I'm sort of doing this all for someone else.

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<sup>132</sup> MV\_1750M's comment was made in the context of the early stages of his farm's development, a time when his land holdings were smaller and he was purchasing larger quantities of feed. As noted in Chapter 7, this farmer purchased additional land holdings in order to increase his self-sufficiency in terms of his stock feed requirements.

Another Murray-Goulburn Valley farmer, who aligned his aversion to leasing land with his preference to pay interest instead, noted other disadvantages of improving land that one does not own.

MV\_1965M: Well, [with] leasing, you're actually pouring, normally a lease is sort of 6 or 8% of property value, so why not pay the bank that rather than paying someone else and improving their property? Unless you have a set purchase price at the end of it. Say, if you go into someone's property and its run down and they want 200 grand for it, unless you have that in writing, you do it up and it looks like a 250 grand property then. So, your 50, you've spent 10 or 15 grand to get the property going, [and] then they want 50 grand more than when you started.

Although he saw leasing land as undesirable, MV\_1965M implemented the type of lease agreement he suggested. The owner of a land parcel adjoining MV\_1965M's farm proposed a 12-month, lease-to-purchase arrangement that would allow the former time to organise his personal affairs before settlement. At the same time, MV\_1965M ensured he secured a purchase price before operating the land under a lease arrangement. In line with these conditions, he proceeded to fully integrate the additional land into his farm. Therefore, despite farmers' general reluctance to lease land, this example points to a potential role for leases in farm development. Leases may be used as an interim measure that facilitates a more desirable outcome; that is, land ownership, while accommodating the personal circumstances of multiple rural actors.

Farmers actually leasing land at the time of my fieldwork also expressed concerns over the economic merits of leasing land.<sup>133</sup> COR\_0331M made different levels of investment according to the tenure arrangements he had in place for land he used to grow fodder for his dairy operation. At the time of my fieldwork, he had recently completed limited pasture improvements on a leased block of land; but, he made more extensive improvements on one of the blocks of land that he and his wife owned.

COR\_0331M: I put a lot more money into that one [pointing on the land parcel map to an owned block of land]. Yeah, I've done that one up, spent a lot, we put new big cattle yards, watered it, troughs, shelter belts and done the pastures up and fertilized it, so it's had a lot of inputs put into it.

COR\_0265M and COR\_0265F were similarly deciding how best to deploy their financial resources. They were leasing all of the land that they operated; almost three-quarters of which was leased from COR\_0265M's mother, while the remainder was leased from non-family members. The lease from non-family members was, in part, a 'legacy lease' that his (now deceased) father had established many years earlier. Although the couple found this leased land "really annoying", they maintained the arrangement because it was inexpensive, and because it was "not really that practical" to keep the number of stock they considered adequate on their

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<sup>133</sup> Both examples provided here are from Corangamite because of the limited incidence of leasing land in the Murray-Goulburn Valley.

home farm. COR\_0265M described the condition of the leased land as follows:

COR\_0265M: ...it's only 10 grand a year for 130 acres [53 hectares], which is ridiculously cheap, but I mean there's no fences, and up until last year we had trouble with water and that sort of stuff. It seems to be fairly common with lease blocks ummm...on farms like that. ... and they don't put anything back into the farm, so the fences fall down and all that, so it's ummm...yeah it's kind of a shame that it's happened, so yeah, that seems to be the way lease blocks go.

Although they would have liked the land to have been maintained better, they were not prepared to spend a substantial amount of their own funds due to the large amount of capital that would be required: "Like, the amount of capital you have to put in, like the amount of capital fertiliser you have to put in just to get it to where the grass wants to grow is, ummm...yeah it'd cost us a lot" (COR\_0265M).<sup>134</sup>

The reverse of farmers leasing other people's land is farmers leasing out their own land. Two farmers in the sample had previously leased out land, and two were leasing out some or all of their land holdings at the time of my fieldwork. In one of these cases, leasing out the farm had been occurring for many years and was a means of reducing the farmer's own labour. In the other three cases, the decision to lease out land was based upon achieving a better return than the farmers could otherwise achieve at the time through other land uses. MV\_1872M and MV\_1872F opted to run agistment cattle after they sold their dairy herd during the drought years; but, it failed to bring in much money, so they offered to lease their land to their neighbour. MV\_3099M's situation was similar during the 1990s when he was running beef cattle, he said:

MV\_3099M: ...like bills would come in, so the usual thing is you'd sell off a few animals to make sure you had enough to meet your needs. And I started eating into what I call breeding animals, and I thought this is not a healthy thing, ummm...you know, the prices weren't great, and ummm... I thought there's got to be a better way... So we basically sold up, had a big sale in [name of local service town], sold up all our cows and calves and ummm...yeah, leasees took over.

In the above cases, farm owners used leasing out of their farms opportunistically. Other farmers expressed a strong reluctance to lease out their farms, citing risks associated with land degradation and devaluation. COR\_0068M commented during a discussion about the future of his farm that leasing out the farm was "another option you could do, but it might get run down by the people that's [sic] leasing it off you. They could knock it round and that would lose its value". In the Murray-Goulburn Valley, MV\_6327M was at a critical juncture in his farming career, thinking about ways in which he and his partner could reorganise their farm to reduce their labour requirement. While, he viewed leasing out the farm as one option, he commented

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<sup>134</sup> A second reason for their reluctance to invest in this land was the unreliability of the lease arrangement. I explore these issues in Chapter 7.

that there was something strikingly personal about not allowing someone else to operate the land that one owned as there was a risk of “undoing a lot of hard work, or time also. You can be set back in time fairly, things that take a long time to get, systems that are running and things like that”.

In sum, my farmer informants preferred to build wealth through the accumulation of land assets rather than paying out “dead money” (COR\_2273M) in lease payments or improving the value of another person’s land. The benefits of building wealth through land ownership were further entrenched in the Murray-Goulburn Valley due to place-specific characteristics that limited the opportunities for more diverse forms of land tenure. An experienced farm consultant in the region alluded to the lack of a “strong history of leasing”, a claim reinforced by the farm life histories of two of the older farmers in the Murray-Goulburn Valley. MV\_3064M (age group: 70-79 years), who had purchased his first block of land in the 1960s, spoke about the difficulties he experienced when attempting to lease land in the past: “Leasing in those days was very hard to find. ... so leasing a place was on the horizon all right but, you know, we never got onto one”. Instead, he established multiple and successive “permanent agistment” arrangements. But, maintaining them long-term became “too hard”. (I examine the reasons for this hardship in Chapter 7.) MV\_1765M (age group: 70-79 years), who had taken over his parents’ farm, recounted similar difficulties when discussing the absence of leased land within his enterprise.

MV\_1765M: ...well the fact is that there’s never been land available to lease within, you know, a reasonable radius of where, of here. So it’s really never something that I had to consider. If land handy was available to lease, I think probably I would have thought about it, you know, you go into the, what was the lease was going to cost and all that sort of stuff.

Consistent with the farmers’ views expressed above, even if suitable land had been available for lease, he suggested that his decision would have been a calculated one, based upon the economic merit of leasing.

These accounts point to an important determinant of farm organisation: ways to enrol land in farm production are shaped by the wider landscape of land ownership. Whereas in the Murray-Goulburn Valley, there was simply no available land for lease, in Corangamite the wider landscape of land ownership had impacted differently upon land tenure arrangements, by extension, providing more opportunities for leasing. Hence, Corangamite respondents seemed to enter into leasing in ad hoc ways, whenever opportunities arose. For example, COR\_6402M’s farm comprised a large percentage of leased land (70%), a situation that evolved due to the way in which COR\_6402M and his farm were enrolled in the wider landscape of land ownership. Specifically, two neighbouring landowners within four kilometres of his home farm agreed to a long-term lease of their properties.<sup>135</sup> Although COR\_6402M had pursued land ownership

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<sup>135</sup> Formal, long-term lease agreements were extremely rare. Further implications of lease agreements are explored in Chapter 7.



earlier in his farming career, the price of land in the area – influenced by their proximity to a regional service centre (Warrnambool) – rendered him increasingly reluctant to purchase land and increase his debt loading. Below, in an excerpt from an interview, COR\_6402M espouses the calculative practices – he’d done all his sums – that contributed to his decision to maintain this leasehold arrangement. Notably, the location of his farm reverses the economic argument for owning land discussed above.

- Erin: Have you got an option to buy on the place over there?  
[pointing to the land parcels he leases on the map.]
- COR\_6402M: Ohhh...not at the moment, but I dunno if I really want to.  
Nah...I reckon, I’ve done all my sums, I’m doing it in my head all the time.
- ...
- Erin: [So] you said you’re not really interested in buying that place [again pointing to the land parcels on the map]...
- COR\_6402M: No, no, I just compare debt to leasing. ... the price of land, especially being so close to Warrnambool, like you got to, it’d make six [‘000 dollars an acre] no worries, so six at 8%, that’s \$480 a year per acre that you’ve got to service, that’s just interest. Well to lease, per acre its \$150, what’s that? It’s about, nearly 30%, 70% cheaper, just to lease, yeah. So, I can’t see any point in buying now. Not in our situation because we’ve got enough debt now, well if we take on another million dollars of debt, I might have to milk all the cows myself. That’d be no bloody good. I’m past that too.

Although his decision was grounded in calculative rationality, it was mediated by the implications of debt on his labour, and his current household situation. Later in the interview, he revealed how taking on the leased land improved the overall viability of his enterprise while he still had children at home. His lease agreement roughly aligned with when his children would be leaving home, and when he and his wife would be nearing preferred retirement. His retirement aspirations remained firmly embedded in the ownership of his home farm.

COR\_6402M’s account, as well as highlighting the influence of land prices upon calculating the benefits of leasing versus owning land, points to the final calculative practice farmers used when talking about their land holdings: calculating the costs of developing farms.

### Calculating the Costs of Developing Farms

As noted above, all farmers in the study had made a variety of improvements to their farms. Undoubtedly, many of these activities are part-and-parcel of operating a farm enterprise. But as explained in the previous section, farmers spoke about these activities in calculated ways when making decisions about investment in owned versus leased land.

Underlying the farmers’ investment decisions was concern for the impact that farm improvements could have on their land valuations. Their concerns were starkly highlighted by



COR\_0335M and COR\_0335F, who purchased their farm in 2005 for \$4,000/acre and estimated that they had made improvements to their land to the value of \$3,000/acre. Although their farm in Corangamite was valued at \$7,000/an acre during the peak of the land market, their current valuation was less than the combined cost of the land and improvements.<sup>136</sup> Thus, unlike the majority of farmers, they considered their land to be “no asset at all”, in part because “there’s no difference between a poorly set-up farm and a good set-up farm”.

Similar dynamics were also apparent in the Murray-Goulburn Valley. MV\_2115M and MV\_2115F, who had purchased a farm they considered to be a “renovator’s delight”, intended to establish a large dairy farm that required substantial investment. However, they were acutely aware that despite developing their farm, its land value would not increase to match the level of expenditure required. Thus, any on-farm improvements, especially the building of a new dairy, would need to “pay for itself” by increasing cash flow through increased farm efficiencies.

MV\_2115F: [The banks] do take a bit of it [farm improvements] into consideration, but not, not compared to what you may have put in to make, like to renovate the farm, for example, we might have to spend, we will have to spend another million dollars to put a dairy on the farm. It's not going to be valued at an extra million dollars. It's not. So, what we've got to hope with spending that extra million dollars that it will generate the cash flow to pay for itself through efficiencies in not walking the cows [as far], in being able to milk the cows better, [and] being able to increase cow numbers without increasing the labour on the farm.

The high number of dairy farmers in the sample meant that interview discussions concerning farm development often focused on the suitability of farmers’ dairy sheds. The size and functionality of dairy sheds pose a structural impediment to farm organisation; they directly influence the number of cows that can be milked at any time. Twelve farmers had built new dairies, all of which were built to accommodate a larger milking herd. COR\_3899M and COR\_3899F described their decision to build a new dairy as ‘biting the bullet’ because “there weren’t enough hours in the day” to put the numbers through their old dairy. In the case of MV\_1765M, the building of his new dairy coincided with the expansion of his land holdings upon which he wanted to run an increased number of cows.

It may be argued that in each of these cases, the farmers had little choice regarding whether or not they built new dairies because otherwise farm expansion would not have been possible. These developments, however, were influenced by idiosyncratic (and perhaps path dependent) factors such as prior land acquisitions that required a higher stocking rate in order to maintain borrowings, or the unavailability of suitable land with the desired infrastructure.

Further insight into farmers’ investment decisions may be obtained from cases in which farmers made a deliberate decision not to build a new dairy or were in the process of deciding whether

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<sup>136</sup> Here I use British Imperial measurements to reflect the ways in which my farmer informants discussed land valuations. All other area measurements have been converted to the respective metric equivalent.

or not to build a dairy. MV\_7366M and MV\_7366F, who had reduced financial investment in their farm, said that at that stage of their farming careers they had elected not to build another dairy (which was required if they wanted to expand their enterprise) because they did not want to overcapitalise their farm.

MV\_7366F: ...you can put a lot, a lot more things on your farm and into your farm, but it's not necessarily going to make you any more money at the end of the day.

MV\_7366M: ...  
 ...I don't want to go and build a rotary dairy and then when you go to sell the farm, you know, you're not going to get your money back, probably unless you're going to be on here for another 20 years or something.

MV\_7366F: You could understand if we did it at the start, like 20 years ago we would've got the benefit out of the, milking in it for the last 20 years sort of thing, but it's a bit late now.

Thus, although their decision included calculated ways of approaching farm development, their account points to the significance of the timing of farm investment for farm organisation. That is, farmers' decisions about on-farm investment both shape and constrain future opportunities for farm reorganisation. For example, when COR\_6441M and COR\_6441F decided to stop dairying, opening their farm to a share or lease farmer was not an option due to the size and quality of their dairy: "Nobody would want to milk in the dairy". Similarly, MV\_1750M recognised that without upgrading his dairy, he would be unable to increase his herd size; his decision, however, would be based on the 'figures', a calculated process that would also take into consideration the purchasing of another farm with better infrastructure.

## The Calculative Practices of Water Ownership

In Chapter 5, I began to explore the water ownership patterns among my Murray-Goulburn Valley farmer respondents (see Figure 17, p. 130; Table 11, p. 131). These data indicated that the majority of farmers ( $n = 15$ ) owned a volume of water share that differed from the expected volume in the context of the size of their land holdings. In eight of these cases, water holdings had been directly manipulated through the disposal or purchase of water shares. In the other seven cases, water holdings had been indirectly modified via the purchase or disposal of land without the concurrent purchase or disposal of water shares. Similar to the land titles data, further analysis of the water holdings data is required to reveal the social and economic functions of water assets within farm enterprises.

In this section, I untangle the complex, and at times, contradictory role of water assets in the context of farmers' aspirations for wealth creation. Farmers' narratives about water revealed an agenda of 1) calculating the benefits of water ownership and 2) calculating the impact of water charges and fees. I will discuss each of these practices in turn. First, I provide additional texture

to the Murray-Goulburn Valley farmers' narratives by presenting an overview of their experiences of climatic and regulatory induced water scarcity in the region since the mid-1990s.

### Farmers' Experiences of Climatic and Regulatory Induced Water Scarcity

The Murray-Goulburn Valley farmers' farm life histories illuminated dramatic changes to their operating contexts, which had implications not only for how they thought about their water holdings, but also for the meaning their water assets had for their enterprises. It is difficult to imagine that conversations with these same farmers ten years earlier would have been imbued with talk of buying and selling water, valuing water, and the impact of changes to water tariff systems. Although it is neither possible nor preferable to draw precise lines of causality between drivers and present-day impacts, the farmers' calculative practices with regard to their water holdings should be understood against this backdrop of fast-paced climatic and regulatory change.

In Victoria, water access rights first became tradable on a temporary basis in 1989, and subsequently on a permanent basis in 1991. Complete legal separation of land and water titles did not occur until the 2007-08 irrigation season, when the adverse impacts of the Millennium drought were most acute. That same season, farmers on the Murray irrigation system received 43% water allocations, and farmers on the Goulburn irrigation system received 57% water allocations (see Appendix 4). In both cases, the current generation of farmers had never experienced water scarcity of this magnitude. Water inflows to irrigation storages were at record lows (Murray-Darling Basin Authority, 2009; Productivity Commission, 2009); and, the policy changes implemented several years earlier meant that Victorian irrigators would no longer receive the same quantum of water they had been accustomed to receiving in the past, when (and if) water became more plentiful again (Murray-Darling Basin Authority, 2010, Appendix C).<sup>137</sup>

MV\_3016M, one of the older farmers in the Murray-Goulburn Valley (age group: 70-79 years), who had been farming in the region since the 1970s, explained his experience of being an irrigation farmer prior to these changes. He had developed a high input dairy farm system. And, to ensure access to the volume of water his system required, he had increased his water holdings once permanent trading was permitted: "It was the sensible thing to do". Because water was

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<sup>137</sup> These policy changes were made under the Living Murray initiative (the precursor to Water for the Future) to increase environmental flows. One lobby group, the Victorian Farmers Federation, negotiated a deal with the Victorian government which required irrigators to surrender 20% of their average annual volume of sales water – water that was allocated over and above farmers' water rights – for allocation to the environment. In return, farmers were given certainty over their ownership of the remaining 80%. In the case of the Murray Valley and Goulburn irrigation systems, this policy change meant that the maximum allocation farmers could receive was 148%. For example, the historical average of allocated sales water on 100 ML of water right was 60 ML, 20% (12 ML) of which was allocated to the environment. Thus, under the conversion rules at the time of unbundling, 100 ML of water right was converted into 100 ML of high reliability water shares, and 48 ML was converted into low reliability water shares.

abundant, the farm systems developed, including MV\_3016M's, relied in the main upon the provision of 200% of water entitlement due to additional water allocations made over and above an individual's water rights (i.e., sales water),<sup>138</sup> a situation that...

MV\_3016M: ...was normal. Twenty-one of the twenty-five years up to [the year] 2000, I used 200% of entitlement. So you had as much water right as you could and you knew that if you had 100 megalitres of water right, there was a fair chance that you would get 100 megalitres of sales [water] as well, which gave you 200%.

Water was readily available, and, in many respects, largely taken for granted. As one key informant said, prior to the limits on the availability of water, "people never used to 'water budget'<sup>139</sup> ... 'Cause there was always plenty of water". Thus, farmers were largely unconcerned about how much water they were using, to the point that when purchasing land, the volume of the associated water right was of little consequence. MV\_2098M, whose farm is connected to the Murray irrigation system, explained that when he negotiated the purchase of a newly subdivided land parcel in 1994, "people weren't that concerned about water entitlement". Farmers MV\_7366M and MV\_7366F, who were on the Goulburn irrigation system, described a similar experience when they expanded their land holdings in the late 1990s. At the time, they too gave little consideration to how much water was included in their 40-hectare land purchase. They did not specifically seek to increase their water holdings because at that time water was not valued as a separate asset (see Chapter 5). MV\_7366M and MV\_7366F's conversation below describes this transformation from their perspective.

MV\_7366M: [Water] just wasn't an issue back then because...  
 MV\_7366F: ...water was cheap.  
 MV\_7366M: ...this drain out here [pointing in the direction of a water drain near their house], that [sic] ran all the time, we just pumped [water out] and it wasn't metered and I just used as much as I wanted to and it [water] just came, just came with the block. And it wasn't, water wasn't valued, virtually at all. There was sort of a value, but not, not like today where people, there's a value of the water, 'I want that', there's the value of the land, 'I want that'. ... I was glad to get the water too like, it [the land] had to be able to be irrigated, but ummm...yeah it was just, it just wasn't thought of as much with the water. Like I wanted it [the water] but...  
 MV\_7366F: That was before, [Goulburn-Murray Water, the local water authority] really tightened their whole water up, like, you know, before electronic ummm...gates and doors and meters and it was, it's just changed completely now, like this is just a tiny bit of water usually in the bottom of the

<sup>138</sup> At the time of writing, in the most recent irrigation season (2013-14), farmers on both the Murray and the Goulburn irrigation systems received 100% of high reliability water share. No low reliability water share has been allocated since 2005-06 on the Murray system, and since 1997-98 on the Goulburn system (Appendix 4).

<sup>139</sup> 'To water budget', as used here, means to draft 'a water budget'; that is, a budget that accurately forecasts farm water requirements. Prior to the drought, farmers did not forecast as accurately the water volumes they required.

drain, but [back] then it used to run half full all the time.

These farmers identify three changes to the ‘waterscape’ in which they now operate: 1) the price paid for water (“water was cheap”); 2) land and water valuation practices (water “just came with the block”, rather than being separately valued); and, 3) changes in the water regulatory and management contexts as evidenced by less run-off water in the drain and infrastructure upgrades.

In some parts of the Goulburn Valley, sustained water scarcity started as early as 1996. However, the changes described by MV\_7366M and MV\_7366F occurred rapidly and more recently: “In the last six years” estimated MV\_7366F. Their account was substantiated by MV\_1926M, who reported a similar attitude toward the acquisition of water resources when he and his wife bought their farm in 2004.

MV\_1926M: ...back in that time before unbundling [it was], you know, 'Ohhh...it [a farm] comes with that much [water], ohhh...yeah.' You know, there was no, everything has changed so much in the last five years, ummm...now you'll be lucky to buy a farm with water.

Until the recent past, water simply came with land. There was almost a ‘recipe’ for farming; “we water, we grow grass, we get milk” (Murray-Goulburn Valley key informant). But, water scarcity has disrupted this recipe. The price of water started to matter; and, it certainly started to matter to my Murray-Goulburn Valley farmer informants. Their water narratives were embedded within a financial discourse, illustrating the way in which water assets have been transformed from a resource that was simply available and used in large quantities, into one that is priced and discussed in calculated ways. Close inspection of these calculative practices demonstrates the complexities and contradictions of farmers’ decision-making.

### Calculating the Benefits of Different Water Ownership Configurations

Unbundling water titles from land has created a range of theoretical opportunities for farmers to manage their water holdings alongside their land holdings. For example, they may choose not to own water shares and instead to rely on purchasing water allocations each year. Then again, they may choose to own as much water share as they require for their farm system and rely on seasonal allocations, or they may opt for a ‘middle ground’ strategy (i.e., owning some water share and purchasing extra allocations as required, Chapters 1 & 2). In this section, I explore the ways in which the Murray-Goulburn Valley farmers have deployed the buying and selling of high reliability water shares to adjust their water asset configuration.

The 21 Murray-Goulburn Valley farmers interviewed for this thesis can be organised into four groups according to their high reliability water share buying and selling behaviours since unbundling (Table 12 next page).

**Table 12: Murray-Goulburn Valley farms grouped according to farm owners' practices of buying and selling high reliability water share since unbundling ( $n=21$ )**

		Have not purchased HR water share		Have purchased HR water share
Have not sold HR water share	Q.1	1765, 1810, 1873, 1934, 2014, 2098, 3016, 3019, 3099, 3139, 6327	Q.2	1750, 2176
Have sold HR water share	Q.3	1868, 1872, 1926, 3064, 6251	Q.4	1965, 2115, 7366

Table 12 shows that 10 farmers had either bought or sold high reliability water shares (Q.2, Q.3 & Q.4). In five cases, there was a negative net effect on their water holdings (Q.3); in two cases, there was a positive net effect on their water holdings (Q.2), and, in the remaining three cases, there was no net impact on farmers' water holdings because in each of these cases, the farmers replaced the water holdings which they had previously sold (Q.4). The largest single group of farmers ( $n = 11$ ), however, includes those who had neither bought nor sold water shares since unbundling (Q.1). When this group of farmers is combined with the cases in which there was either no net change or an increase in farmers' water holdings (Q.2 & Q.4), the findings demonstrate a marked legacy effect with regard to the amount of high reliability water shares held across the sample. Put another way, the majority of farmers' water holdings, to a large extent, reflected the water rights they (or, in some cases, the previous generation) purchased when acquiring land prior to unbundling. Their decisions to retain water share can partly be explained by their expectations *vis-à-vis* the capital appreciation of their water share holdings. Some farmers explained their retention of water shares in terms of their confidence in the future capital appreciation of their water assets (paralleling their confidence in the future appreciation of land). MV\_2098M, a farmer who has never sold water share, said that "it [water] is an investment; [but] it's perhaps just not the best returning investment". Similarly, MV\_3016M when discussing his preference for selling the farm as a 'land and water package', commented that he was coming to the realisation that selling the farm as a package might not be possible in an 'unbundled' world. So, if he were only to sell the land, he said:

MV\_3016M: I would still keep the water, because I'm absolutely convinced that over the next 10, 20 years, water will be worth a lot, so yeah, I wouldn't feel bad at all having a gigalitre of water in the filing cabinet and just selling it each year.

However, another farming couple's perspective revealed some of the contradictions between farmers concerning the ways in which they interpreted water as an investment. While MV\_2176M and MV2176F were less confident regarding the capital appreciation of water, this did not stop them from purchasing water shares altogether. Instead, they opted not to purchase large volumes because they were more confident in land as a capital appreciating asset:



MV\_2176M: ...why would I go and buy water today not knowing what it's going to be worth tomorrow? I think that land, at least if I buy land today, I'm pretty sure that's not going to devalue. I'm not so sure about water.

Although the farmers' retention of water share is partly explained by their expectation of capital gains, since unbundling, none of the farmers has deliberately increased the size of his/her water holdings beyond what would be expected for the size of their land holdings.<sup>140</sup> This suggests that while farmers discuss water as a financialised asset, it remains tightly knitted to their enterprises for on-farm use. For example, MV\_2098M (quoted above) later commented that the only reason he owns water shares is because he can add value to the resource through farm production.

If expected capital gain on water assets partly explains farmers' retention of their water share,<sup>141</sup> what then of the cases in which water shares have been bought and/or sold? The discussion now turns to the use of calculative practices by farmers in Q.2-4 (Table 12 previous page).

None of the farmers in this study sold his/her water share via the permanent trading rules in place prior to unbundling.<sup>142</sup> Since unbundling, eight Murray-Goulburn Valley farmers have disposed of some or all of their water holdings, seven of whom sold independently of their land assets.<sup>143</sup> These seven farmers can be separated into two groups: 1) farmers who sold their water share to rectify an impending financial problem (Q.3: 1872, 1926, 3064, 6251); and, 2) farmers who sold their water share anticipating that they would re-purchase water share (Q.4: 1965, 2115, 7366).

Among the four farmers who sold their water share to rectify impending financial problems, MV\_6251M and MV\_6251F made a "purely financial" decision to dispose of all high reliability water share in order to clear their land debt; in fact, they maintained that had the income from their water sale proven insufficient to clear their land debt, they would not have sold their water. Similarly, MV\_1926M stated that he and his wife "weren't pushed", when explaining their decision to sell most of their high reliability water share in terms of reducing their borrowings and cumulative interest costs.

MV\_1926M: ...[Do] you turn it [water shares] into cash and utilise that, you know, reduce your interest payments, get rid of some of your overheads?  
Ummm...and make it work for you. I mean, 250, or \$300,000, it's not a lot in

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<sup>140</sup> Farm MV\_2115 was an exception here. MV\_2115M and MV\_2115F arrived in the region with substantial water holdings having negotiated settlement when they left their family farm in a neighbouring farming district. Now, they actively manage their water assets as they develop their own farm.

<sup>141</sup> In the next chapter, I explore further reasons for farmers electing to retain their water share.

<sup>142</sup> Recall from Chapters 1, 2 and 3 that the implementation of Victoria's water market was incremental. Post-1991, farmers were permitted to sell their water rights independently of land, but only to other landowners because land and water were still tied. However, all of the water sales made separately from land revealed in this study took place post-unbundling.

<sup>143</sup> Farm MV\_1868 is an exception. MV\_1868M and MV\_1868F sold their land and water assets in 2008 when they received a 'knock on the door' from a buyer who purchased both land and water assets. Also, despite MV\_3016M and MV\_3016F appearing to have increased their water holdings, the high volume of high reliability water share they own relative to their land holdings is a consequence of the sale of land, rather than of the purchase of water share.



the scheme of things, but you wipe that and don't have to pay interest on it, it adds up over the next 20-odd years doesn't it?

MV\_3064M's situation was slightly different in that he chose to sell only a portion of the farm's high reliability water share, a decision which was, to some extent, forced upon them. They needed to raise a couple of million dollars to "keep the banks away". Thus, while on the one hand, the volume of water share sold was determined by their debt level, on the other, MV\_3064M explained that he and his wife made the decision on the basis of calculating the amount of water share they deemed sufficient for an 'economic unit' dairy farm.<sup>144</sup> (The final case in Q.3 is MV\_1872, which is discussed in the next section.)

The second group of farms in which the owners had actively manipulated their water holdings included MV\_1965, MV\_2115 and MV\_7366. In each case, these farmers maintained a stable quantum of water share by repurchasing water in such a way that they reaped the financial benefit. Their water disposals, however, were premised upon government programmes designed to acquire water for the environment (through buy-backs and more efficient technologies) and irrigation infrastructure upgrades. Farm MV\_7366 represents the starkest example whereby a deliberate, calculated decision was made to profit from the high prices paid through the government buy-back scheme (~\$2,375) and from the lower price of water shares when purchasing from within an irrigation district (~\$1,500). These transactions took place within a matter of weeks. And, the profit gained was used against their line of credit to be deployed at a later time.

In contrast to these three examples, the two farmers in Q.2 deliberately increased their water holdings while acquiring extra land holdings. In both cases, the farmers restricted the amount of water share they purchased. MV\_2176M and MV\_2176F, who were less confident in the appreciation of water versus land (see above), purchased 40 megalitres of water at the same time as they purchased 130 hectares. In doing so, they reduced their ratio of land to water holdings. But, more importantly, the land purchase was not predicated on having to irrigate. "The sums were done on the assumption that we grew three, three and a half to four tonne [of] dry matter per hectare and on that basis it would pay for itself" (MV\_2176M). Thus, while the land transaction was a calculated decision based on the return they could expect from not irrigating, the concurrent purchase of water was an attempt to have "a foot in both camps" (MV\_2176F).

In the case of MV\_1750M, he and his business partner only purchased the quantum of water share that they could afford, a decision that was shaped partly by their attitudes toward

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<sup>144</sup> A story that I was repeatedly told in the Murray-Goulburn Valley was the way in which some farmers were forced by their financial institutions to sell their water share in order to increase equity levels eroded by increased borrowings to finance operations during the drought. However, these stories were always about other farmers (i.e., not the personal experiences of my farmer informants). The first-hand experiences of the farmers in Q.3 made these stories difficult to reconcile because in each case, the farmers concerned seemed to have made deliberate and calculated decisions when disposing of their water assets.

borrowing money, and partly by the regulatory framework with regard to water use on land. His 2008 land purchase had an annual use limit of 153 megalitres. This meant that he was limited to applying no more than this amount of water in a single irrigation season. Thus, MV\_1750M was reluctant to increase his water share holdings above the amount he was able to use according to water use regulations. His thought processes showed that his decisions regarding water were not only calculated within the bounds of financial resources, but also took into consideration the broader regulatory framework created at different stages of the water reform process.

Finally, there are the farmers who had not purchased additional water shares. At the time of the study, using water for agricultural production generated a larger return than if farmers accumulated water shares or purchased water allocations for speculation. As an investment strategy outside of agricultural production, purchasing water shares simply was not economically attractive. MV\_2176M explained his position on the basis of “basic economics”.

MV\_2176M: ...let's say water is worth well, I don't know, today [at the time of the interview, May 2012] I can probably buy water for 20 bucks a meg[alitre], but even if I used \$40 a megalitre as a, as a gauge, you know, dams are going to fill, the year after that, god knows what? So let's say you use \$40, as an investment ummm...I want to go and ummm...get a, you know, I dunno a return on investment at the moment, maybe 5% if you're lucky, but let's use 10 'cause it's easy to round, means water shouldn't be worth any more than \$400 a megalitre, permanent.

Another farmer applying these same calculative practices to the way in which he approached water assets described his current position of not purchasing additional water share as “common sense” given the poor returns at the time. However, he also suggested that if the economics of the water market were to change in the future, his position could change accordingly.

Erin: Do you see yourself ever being a non-land owner, [just] being a water owner?

MV\_2098M: At this point in time, no. But I'm not saying never. But I mean ... irrigation water is worth ummm...\$2,000 a megalitre. If I had \$2,000 in the bank what return would I get? At 5% its \$100, that ummm...one megalitre on the temporary market is, at the moment, returning me \$8, and it's actually costing me because I've actually got the costs incurred to store it as well, so it's actually costing money, So, that's common sense isn't it? (laughs).

MV\_2098M's narrative provides a lead into the next calculative practice used by farmers, which is how the limited return on investment in water was positioned alongside the system of fees and charges for water ownership and water use.

## Calculating the Influence of Water Charges and Fees

The unbundling of land and water titles required a concurrent reassessment of the system of water charges and fees.<sup>145</sup> Under the pre-unbundling environment, the costs of water access, delivery and use were combined, meaning that when water rights were sold under permanent trade to land owners outside of the irrigation district, the revenue from those water access rights was lost. Thus, the tariff system needed to be similarly unbundled. The rationale for an unbundled tariff system included cost recovery for the maintenance of irrigation distribution systems and the creation of a more equitable system whereby all landowners who had access to the distribution system contributed to its cost. These changes should ultimately lower prices for all customers (Goulburn-Murray Water, 2006).

One of the major changes was the creation of delivery shares that were attached to land titles, in the process maintaining a stable revenue base within irrigation districts, irrespective of water trading activity. Delivery shares are “an entitlement to have water delivered to land in an irrigation area. It gives [holders] access to a share of the available capacity in the channel or piped network that supplies water to [a holder’s] property” (Department of Environment and Primary Industries, 2014e, paras. 1-2). The cost of each delivery share differed between irrigation districts. For the 2011-12 season, delivery share charges were \$2,735 per share in the Murray Valley, and \$3,001 in the Goulburn Valley.

Delivery shares are a fixed cost and typically constitute the major portion of irrigators’ total water charges.<sup>146</sup> MV\_1965M showed me his latest water bill. He held five delivery shares, the charges for which comprised 67% of his fixed water charges, equivalent to 56% of his total water bill. Delivery shares can be altered independently of water shares to align with on-farm production systems in one of three ways: 1) they may be transferred to/from another landowner; 2) a landowner may apply to their local water authority requesting their delivery share be increased (providing there is sufficient channel capacity); or, 3) if a landowner no longer wants access to the distribution system or to reduce their delivery shares, a termination fee can be paid to the water authority. At the time of this study, the termination fee was ten times the cost of the delivery share cancelled.

The farmers’ obligations to pay fixed charges for water, irrespective of their water holdings, were used to justify the retention of water assets. MV\_1934M, one of the farmers who articulated this position, said:

MV\_1934M: ...'Cause a lot of people say, ‘You're mad, sell your water’, but, and as it turns out now that you get charged for a ummm...infrastructure

<sup>145</sup> The local water authority in northern Victoria – Goulburn-Murray Water – began to phase in the new tariff system on 1 July 2006.

<sup>146</sup> It should be noted here that delivery shares are only one component of total water costs, part of the fixed costs. Water charges also include variable charges associated with water use, property service charges and the costs of the water resource itself.

access fee and delivery share fees and all that sort of thing, the water is valueless, apart from the capital value it's worth if you sold it. So, you know, you're up for nearly all your water bill anyway, even if you have no water and a lot of people when they're saying about, you know, temporary [water allocation] is cheap, they're forgetting to add on the bloody other charges that go with it. 'Cause like I said to you, the people we know, one of them, their bill is \$9,000 a year and they got no water.

Yet, the use of other calculative practices provided different conclusions. An experienced farm consultant confirmed the 'smart economic' position.

MV\_Farm Consultant: ...if you actually look at the economics of it, owning permanent water is not a smart thing to do. You know, whereas in the past it was a way of guaranteeing a supply of water, and relatively cheap water, that has turned right around and it's not, it doesn't actually provide reliability of supply and it's certainly not cheap. So, if you look at the opportunity costs and the interest [payments], for those who have debt in particular, it's actually a smart economic decision not to own water, and simply to trade.

This perspective aligns with MV\_1926M's decision to sell his high reliability water share (see previous section). So, how might one make sense of the position described by MV\_1934M? Unlike MV\_1965M, who also retained his water holdings because "you're going to pay for that water anyway", MV\_1934M had significant levels of debt. So, from an economic perspective, it may have been better if he had sold his water. Thus, while debt levels clearly contributed to farmers' decisions about water assets, they only offered a partial explanation. When viewed alongside the accounts given below, MV\_1934M's position highlights the way in which fixed charges are incorporated into an economic discourse, justifying one's management of his/her water holdings.

Other farmers who discussed the financial implications of delivery shares for farm organisation did so in similarly calculated ways. MV\_1873M and MV\_1873F outlined the influence of their delivery share obligations upon farm production. They continued to maintain a small dairy herd for the purposes of generating sufficient income to pay their water bill. For them, other land uses, such as running beef cattle, would simply not be profitable. The following interview extract demonstrates their thought processes about ensuring that the farm 'pays its way'.

MV\_1873M: That's why we've got to still milk our few cows, we've bought some beefies [beef cattle] that we've got on a block out there that we lease. But, see we could sell the [dairy] cows here [on the home farm] and just run beef [cattle], but you're not going to make enough money to pay the water bill and run the farm. You see, you can probably run, what, we'll say 50 head [of beef cattle] at the most, and you wouldn't even run that because you're going to double it with the calves. Well if you had say 40 head and then you've got 40 calves a year and you averaged \$600 a calf, well what's that?

MV\_1873F: Six fours are 24.

MV\_1873M: \$24,000, you've got a \$10,000 water bill, then you've got your rates and your insurances, and then your maintenance

on the farm, you've got nothing left. You've got to milk cows to pay, to make it pay.

Other farmers, who for various reasons had stopped milking cows, also found themselves having to finance increased water charges. Within such situations, while farmers generated income to pay their water charges in ways different from MV\_1873M and MV\_1873F, they articulated their reasoning in similarly calculated ways.

MV\_1872M and MV\_1872F ceased milking cows during the drought years. Although they considered dairying the only form of land use that would generate sufficient income for them to pay their water charges, they decided not to re-establish their dairy herd. Subsequently, they sold the majority of their high reliability water shares to the Commonwealth government, a decision that they considered to be “just so wrong” and “not what a farmer would do”. Their main trigger for selling was the new water tariff system. Their account of their decision demonstrated considerable economic rationality; in effect they capitalised on high water share prices for the purposes of paying their water bill.

- MV\_1872F: Then we started [thinking] ‘Well there’s only going to be really one or two more [water buy-backs]’ and that’s when we said, ‘Somehow, we can't afford to keep paying [\$]5,000 for this water, we just can't afford to do it’.
- MV\_1872M: [\$]8,000.
- MV\_1872F: Well, 8,000. We’re not, we’re not making the money. How can we make the money unless we go back into dairying? And that's when we said ‘Well okay, we’ll sell, if we can sell for [\$]1,850, we’ll just invest it, and that will, we know that we’ve got so much of it there...’
- MV\_1872M: Ohhh...everyone’s got to pay the bill, it's just that if you've got money sitting in the bank and investing a bit, that takes the pressure off, so we get [\$]3,000 for that [pointing to the land parcel map to show the part of their land holding that they lease out to their neighbour], for the lease, and we make 4 or 5,000 [dollars in interest] on the investment, well we’ve paid for our water bill.

In neither case outlined above (as well as throughout the wider sample) had the farmers considered reducing their water charges through the disposal of delivery shares. This may well have reflected the limited demand for delivery shares at the time of my fieldwork, and the farmers’ aversion to paying the large termination fee. Instead, the farmers opted to utilise other opportunities afforded by water trading as evident in MV\_1872’s sale of their water share to the government. Another mechanism employed by farmers was selling water allocations; but, it was not common practice among this group of Murray-Goulburn Valley farmers because of the economic argument outlined in the previous section. But, there was one small group of farmers who used the temporary market as a means to recoup some of their water fees and charges. For example, just prior to their interview, MV\_1868M and MV\_1868F sold 70 ML of water allocation for \$20/ML, a trade that incurred a loss of almost \$30 because their water charges

were \$48/ML. Although they had one of the smallest land holdings in the sample, the common characteristic of farmers who sold water allocations was that they were in the latter stages of their farming careers and were generally operating their farms less intensively than in the past. MV\_3016M and MV\_3016F, who owned the fourth largest farm in the Murray-Goulburn Valley sample (364 ha), also described ways of managing water in calculated ways. According to MV\_3016M, his “rather constricted view on life” meant that he considered many of the consequences of people being able to sell their water share to be negative. Consistent with this perspective, he had retained all of his high reliability water shares (1,176 ML), despite having reduced his land holdings by one third and farming less intensively.<sup>147</sup> These changes reduced his on-farm water requirements, which, when combined with good summer rainfall during the past two seasons meant that he found it difficult to use all of his allocated water. Consequently, they accumulated substantial volumes of water that they managed via carryover provisions.

Carryover provides water users with “greater flexibility to manage their own water availability between seasons” by allowing allocations that are unused at the end of an irrigation season to be retained for use in the following season (Department of Environment and Primary Industries, 2014d, para. 1). At the time of my fieldwork, the rules allowed for allocations to be carried over against the volume of high and low reliability water shares held. Any additional allocations were moved into a spillable water account. Spillable water is a less secure method of carrying over water resources from one season to the next because it is the first water to be ‘spilled’ from water storage if management decisions require the release of water.<sup>148</sup> MV\_3016M and MV\_3016F were using their spillable water account, a situation that was causing them some anxiety for should there be a spill from the dam they would lose their water. For several of the Murray-Goulburn Valley farmers, the very idea that allocated water could ‘go over the spillway’ and ‘down the river’ was unthinkable. MV\_3016M’s solution to this problem involved the selling of 1,100 ML of his water allocation “at bottom prices, like \$9 a megalitre.” But, MV\_3016F added, “at least it helps to pay for some of the [water] bill”.

I began this section about the calculative practices of water ownership by contextualising irrigators’ experiences within the rapid climatic and regulatory changes that took place at the start of the 21<sup>st</sup> century. These changes altered both the range of opportunities available to farmers for managing their water holdings, and the ways in which the farmers discussed them. Thus, farmer decision-making about water ownership has undergone something of a transformation, both in terms of the opportunities available to manipulate water holdings and

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<sup>147</sup> The land area of MV\_3016’s farm was larger only a short time prior to my fieldwork being undertaken. They sold 202 hectares at the end of 2011.

<sup>148</sup> In 2012, The Victorian Minister for Water (Peter Walsh, MP) requested a review of the carryover rules. This review suggested that carryover water be limited to the maximum volume of water share owned. This change was implemented during the 2012-13 season for the Goulburn irrigation system and during the 2013-14 season for the Murray irrigation system.



the need to do so. Through this transformation, an alternative way of discussing water ownership has emerged, one that is situated within a series of financial logics.

## Chapter Summary

This chapter has detailed and explored the ways in which farmers discuss the land and the water asset configurations of their farms using a suite of calculative practices directed towards achieving their aspirations for wealth creation. This includes farmers' desire to build assets through land ownership based on their confidence in the future capital appreciation of land, their reluctance to invest financial resources in land that is not owned, and their concerns *vis-à-vis* overcapitalising their farms. I have also canvassed the ways in which the Murray-Goulburn Valley farmers made calculated decisions with regard to their water assets. Although there were differences and contradictions between and within the farmers' explanations for the decisions they made concerning their water holdings, as in the case of land ownership, their accounts were presented in calculated ways according to their expectations for capital gain and financial return on their water holdings. Other economic considerations, namely the costs of water access and delivery, also influenced some farmers' use of the mechanisms afforded by water trading.

As may be expected, farmers quite rationally view their farms as assets and investments; but, my research found that their calculative practices were not always strictly profit maximising and economically rational. Their calculative practices were situated in a broader context in which their aspirations for capital accumulation and wealth creation were mediated by their desire for autonomy and control. In the next chapter, I examine these dynamics by considering the farm as a site for autonomy.



## Chapter 7

# The Farm as a Site for Autonomy

## Introduction

The ‘autonomous farmer’ is an enduring idea within popular notions of agrarian life, as well as within agricultural social science research. In rural studies, farmer autonomy (and agency) is understood as one of the primary objectives of farm business owners (often to the detriment of profit maximisation. See Gasson *et al.*, 1998), and as a vital component of farmers’ identity (Stock & Forney, 2014). The concept also features in the two eras of farm organisation research discussed in Chapter 2. From the political economy perspective that dominates the first era of farm organisation research, farmers’ autonomy is often viewed as under threat from external capitals as farmers negotiate their desire to remain farming alongside the demands of multinational agribusiness (see, for example, Marsden *et al.* 1992; Lawrence, Share & Campbell, 1992). While in the second era of farm organisation research, farmers are understood as agents who actively negotiate the demands of agricultural restructuring (Johnsen, 2003), and deliberately recombine the different aspects of their farms to achieve their work, lifestyle, and economic aspirations (de Raymond, 2013). The analysis presented in this chapter builds on these perspectives by exploring the ways my farmer informants articulated ideas of autonomy and control when they discussed the asset configurations and historical development of their farms, with particular reference to their land and water acquisitions. In doing so, it sets the foundation for reframing the significance of autonomy to farm organisation which I attend to in Chapter 8.

Autonomy is the deliberate creation of sets of circumstances within which other rural actors have limited influence. It is the freedom to be able to decide how one responds to circumstances that are unpredictable, both in terms of the type of event as well as the timing at which such circumstances occur. To this end, this chapter addresses two primary questions: 1) In what ways are farmers’ aspirations for autonomy shaping the organisation of Australian family farms in the 21<sup>st</sup> century? And, 2) In what ways do farmers’ management of their water holdings as a separate asset reflect their aspirations for autonomy and control?

My utilisation of a farm life history approach revealed 144 separate land acquisitions across the 40 farms. When intergenerational land is taken into consideration, the earliest acquisition occurred in the 1920s. However, the majority ( $n = 119$ , 83%) of acquisitions were made post-

1980.<sup>149</sup> Importantly, only 27 (19%) of these were no longer incorporated within their respective farms.<sup>150</sup> In other words, the vast bulk of acquisitions made by interviewees were durable to their farms' ongoing existence. (See Appendix 18 & Appendix 19 for comprehensive lists of the land acquisitions.)

However, a slightly different pattern emerged with regards to the acquisition of water. In the case of the Murray-Goulburn Valley farmers' high reliability water share holdings, 56 water acquisitions were made and 15 disposals. That is, for water, there was a relatively higher incidence of disposal *vis-à-vis* acquisition. (See Appendix 20 & Appendix 21 for a comprehensive list of these acquisitions/disposals.)<sup>151</sup> Analysing farm organisation via land and water acquisitions enabled inspection of farmers' circumstances and aspirations at specific points in time when a significant change was made to either the land area or water volume of a given farm. As a way of introducing these arguments, the four farming couples described in Box 2 (below) display the high significance that farmers place upon establishing and maintaining control over their social and economic circumstances.

## **Box 2**

### **Establishing and maintaining control**

MV\_2115M and MV\_2115F had part ownership of the family farm (MV\_2115M's parents and brother) but were not able to continue growing their enterprise because their business partners did share the same aspiration. Due to these circumstances, they left the family business and moved to the Murray Valley to establish an independent enterprise on non-family land. Similarly, COR\_2226M and COR\_2226F established their own enterprise in 1996. Prior to this, COR\_2226M and his brother had sought to make arrangements for formal ownership of their father's farm, but, their father was uninterested. COR\_2226M later realised that without formal ownership, his family would never fully benefit from the work invested into developing it into a profitable enterprise. In their case, the proceeds they expected to receive from the eventual sale of the farm at some unknown time in the future would be split between both farming and non-farming family members. Thus, "everyone else was going to get a slice of the pie" (COR\_2226M).

MV\_2098M and his wife's circumstances were slightly different. Rather than leave their family farm, MV\_2098M and his wife established an independent farm enterprise by purchasing MV\_2098M's parents' farm in which MV\_2098M was a formal business partner (*vis-à-vis* farm inheritance upon the deaths of the previous generation), a decision that MV\_2098M described as the best decision he and his wife had ever made. As a member of an intergenerational family partnership, he felt that he and his wife "were held back quite a bit" because having to consider multiple people's perspectives concerning appropriate debt levels and stocking rates meant that they were unable to expand farm operations as they desired. Since purchasing the family farm, MV\_2098M and his wife had established their own business partnership, purchased an

<sup>149</sup> The term 'land acquisition' is used to refer to all land that was brought into farm operations at a single point in time, irrespective of either the land area involved or the land tenure arrangements.

<sup>150</sup> Fifteen land disposals were owned land and thirteen were land operated under leasehold tenure arrangements.

<sup>151</sup> Although the Murray-Goulburn Valley farmers traded water allocations, accurately recording these activities was virtually impossible because allocation trading was more opportunistic and haphazard than entitlement trading. Thus, given the limitations of people's memories, no attempt was made to catalogue these instances. However, farmers easily responded to questions about their total water share holdings and the volumes of water that accompanied their various land acquisitions. The terms 'water acquisition' and 'water disposal' are used to refer to all water brought into or removed from farm operations at a single point in time, irrespective of the volume involved.

additional 121 hectares, increased their dairy herd size, and employed extra labour in pursuit of MV\_2098M's "dream" of owning a 1,000 cow dairy farm.

The fourth and final case (COR\_2273M) more clearly details the complexities and difficulties of farming with family in the context of individuals' aspirations for control over their futures, in this case, their needs for retirement. He and his wife were in the midst of dis-establishing their long running family farm partnership that involved four separate dairies owned/operated by six brothers and their parents. Although the break-up of their intergenerational business was, in part, catalysed by the passing of their father, COR\_2273M explained the broader rationale, which was deeply embedded in the siblings' different life stages, and their need to manage separately their own individual family circumstances, debt loads and trajectories towards retirement.

COR\_2273M: [The dis-establishment was] just [a] progression of lives and whatever, ummm... and, you know, some of my brothers, in that case, [eldest brother's name (points to brother's farm on the land parcel map)] would be 56, 7, 8 [years old] I think. What am I now? He'd be 58 [years old] I think, or 9, [59 years old] this year and [second eldest brother's name] only 12 months younger than him. Well, they've got to start looking at their retirement and what they can plan for themselves. And I'm not saying they're going to sell it off, but they've got to work out how they can go about it, so that [dis-establishing the partnership] was the easiest way around doing it all. Ummm...and then, you know, all the way down to [name of youngest brother], [he] would be ohhh...38, 40 [years old], you know, and you sort of got to look at that, he's got to plan, he's got three young kids and he's still got to plan for himself so, and he's the one that, not the major debt, but he's got a sizeable debt for what he's, the land he's got, but he's got the time to pay it off.

These examples underpin some of the reasons for the low rates of intergenerational farm business and land ownership among this group of farmers.<sup>152</sup> Acquiring land via formal purchase was the most obvious mechanism employed by farmers to create circumstances that increased their autonomy. However, the ways in which owning water contributed to the farmers' autonomy were more varied. The separate themes of land and water ownership are now discussed.

### **Pursuing Autonomy through Land Ownership**

Among the Murray-Goulburn Valley and Corangamite farmers, owning land was almost invariably positioned as a more stable means of enrolling land in their farms than other forms of land tenure (e.g., leasehold arrangements) or models of farming (e.g., share farming). Thus, understanding farmers' perspectives concerning the implications for their enterprises of different ways to enrol land in farm production is critical to exploring the farm as a site for autonomy.

<sup>152</sup> It should be noted here that issues of autonomy and control likely underpinned the decisions of other farmers in the sample to establish enterprises independent of farms owned/operated by their parents. For example, MV\_1750M and his brother found it difficult to secure finance for their first land purchase because they had only worked as employees on their parents' farm; thus, did not have a 'track record' of farm business management. However, in these cases, interviewees' did not mention explicitly their motivation for establishing independent enterprises.

The critical significance of land tenure to farmers' autonomy can be demonstrated by the aspirations of one farming couple who were yet to purchase their own farm. First generation farmers COR\_0107M and COR\_0107F had acquired all of the land upon which they operated their dairy farm via a two-year lease arrangement, with an option to renew the lease or purchase the farm at the end of the term. After 17 years of successive share and lease farming agreements, they remain committed to buying a farm.

COR\_0107M: We want to have our own [farm], that dirt is ours and we can do what we like with it. Ummm...And if we want to farm it organically, we can farm it organically. If you don't want to, you don't have to. You know, you can do what you like. Ummm...You can put up plantations, you can fence it how you want it and you can, you know, it's a big difference when it's your own place. ... If it's your own farm, then, you can gradually work your way around, do the whole lot how, exactly how you want it.

Owning land would afford these farmers greater control over their farm system (e.g., organic or conventional farming) and the physical space of their farm (e.g., plantations and field/paddock subdivisions).<sup>153, 154</sup> COR\_0107M's comment is understandable when viewed in the broader context of the life history of their business. He and his wife recounted numerous examples of how their farming preferences and operational decisions were either constrained or undermined by the decisions and actions of landowners with whom they had share farmed. Because they were still unable to purchase a farm, COR\_0107M and COR\_0107F had opted for lease farming which afforded them a higher degree of stability than share farming.

The implications for farm organisation of different, less stable ways to enrol land in farming – when compared to individual ownership – were reinforced by a sub-group of twelve farmers across both study sites who, in contrast to COR\_0107M and COR\_0107F, had already transitioned from either share or lease farming to farm ownership. These farmers rationalised their decisions to buy a farm in ways similar to those expressed by COR\_0107M; that is, land ownership enhanced their ability to control their enterprises.

One of these farming couples, COR\_0350M and COR\_0350F, initially positioned their motive for purchasing their farm within a narrative of wanting to own land like one's parents had.<sup>155</sup> Eventually, they articulated a strong desire for security in their farming career and the maintenance of stability in their operating environment to protect milk production and farm profits.

<sup>153</sup> Consistent with my analysis in Chapter 6, COR\_0107M also mentioned his reluctance to make substantial on-farm improvements because he may not reap the monetary benefits if the owner terminated the lease.

<sup>154</sup> COR\_0107M and COR\_0107F acknowledged that other forms of farm organisation not requiring land ownership were available to them. Immediately prior to his comments about desiring control of their farm, COR\_0107M said: "Yeah, I mean you could've always, you could always have just said 10 years ago, just, 'Well, this is it, we're not going to be able to buy our own farm, we'll just work harder on someone else's farm and invest, buy houses or whatever', which you could have done, but like I said, it's just not what we want to do".

<sup>155</sup> As noted in Chapter 4, there were 19 cases in which there was a family history of farming. But, the farmers to whom I spoke had not inherited/purchased any land owned by the previous generation. COR\_0350M and COR\_0350F one such couple.

COR\_0350M: ‘Cause being a share farmer, there’s no security because the boss could say, ‘Sorry, it’s changed, I don't want you anymore’. Then you’ve got to look for another one [another share farm] and every time you shift that’s a reduction in your profit or money because cows need years to adapt to a property. They don't just come full milk straightaway, unless they’ve gone into, from a really bad farm to a really, a lot better one. But, on average, it takes them years to adapt to that [new] property, and ahhh...yeah, [the cows] will milk better being born and staying on the one property.

Here, COR\_0350M stressed the potentially detrimental impact upon his dairy herd if they were moved between farms, a situation that could arise, in part, by their lack of control over decisions made by farm owners to whom they had to answer while share farming.

The inherent nature of share farming means that farm owners can have a high degree of influence regarding how farms are operated. In contrast, lease agreements are typically structured so that tenants by-and-large have control over farm operations, subject to the terms of the lease regarding maintenance of the farm property. COR\_0702M who viewed lease farming in these terms, explained his decision to look for a lease farm after he terminated his prior share farming arrangement.

COR\_0702M: I didn't look at share farming [again] ... I just felt that I needed to be in a position to ahhh...make decisions without having to worry about someone else chipping in. So, if we [he and his wife] made a decision it was on us. So, a lease arrangement was an ideal situation where the owner, they had a set amount of money that they knew was coming in on a regular basis and we had to sort of work around that and ahhh...make decisions of our own and we suffered or benefited from the consequences of those [decisions].

The three cases used to illustrate the above points were entire farm enterprises under share or lease farming arrangements. The discussion now considers farm enterprises in which land had been acquired under multiple forms of land titling.

Across both regions, 104 (72%) land acquisitions were titled to at least one of the farm business owners (see Chapter 5). But I want to stress that the high incidence of land titled to farm business owners should not be interpreted as the farmers’ lack of appreciation for the theoretical benefits of leasing land. One Corangamite farmer (COR\_0255M) considered “proper commercial leases ... a far better model to farm under than owning land” because farmers could grow their businesses more quickly while building assets in stock instead of land. His rationale was based upon the logic pertaining to the difficulties associated with servicing high levels of debt and how farm capital may best be used. He demonstrated his perspective using the example of a newspaper advertisement he had recently read.

COR\_0255M: In fact, the other day, I read an article in the paper about a block of land for lease locally, a state of the art farm with an on-going 5 x 5 [year] lease and I thought, ‘Right, if those people knew what they were doing, and you could talk to them, and they were prepared to put capital back into it [the farm], to improve the infrastructure’ – which is something

you've got to do – 'I should sell all this up [referring to his own farm] and lease that, free up all me [sic] capital, and do other things with the capital'.

Similarly, a farmer in the Murray-Goulburn Valley, MV\_3099M, spoke about the potential for expanding his farm by acquiring a neighbouring property. However, he was reluctant to purchase the land because he did not think he had sufficient financial resources. This situation made a lease agreement an attractive option because it would give him a “taste” to see if he could successfully integrate the land into his existing operation.

In a somewhat contradictory way, however, neither COR\_0255M nor MV\_3099M had pursued leasehold agreements. Instead, COR\_0255M had recently purchased an out paddock<sup>156</sup> for the purposes of growing fodder. And, MV\_3099M, despite his desire to increase the size of his beef cattle herd for which extra land was required, had not pursued the acquisition of the adjoining land by either purchase or lease. Both of these farmers cited issues of unpredictability and the lack of security associated with leasing land to justify their decisions. COR\_0255M mentioned that his land purchase had, in part, been precipitated by the fact that an earlier leasehold arrangement he had for another land parcel had become “a bit unpredictable” and had “no real security”. MV\_3099M was concerned about the security of a lease agreement because of the personal circumstances of the landowner.

MV\_3099M: [He is] getting old, and ... it becomes ahhh...I think it's just straight down to security, you know, he might, his kids, you know, if [name of farm owner] dropped off the perch, his kids might say, 'No, we're selling up, that's it'. And all of a sudden, 'Darn, where am I going to put these cows?' or, you know, we're left in the lurch. So, I think it's straight out security.

Despite their concerns, COR\_0255M and MV\_3099M's statements were largely conjecture: neither farmer had directly experienced any adverse circumstances with the leasing of land.<sup>157</sup>

The life histories of other farms, however, provided greater context to these narratives.

MV\_1934 and COR\_0265 provided specific examples of the potentially unstable circumstances and adverse situations that farmers like COR\_0255M and MV\_3099M were actively trying to avoid.

MV\_1934M reported that since taking over the farm from his father in the mid-1980s, he had leased land on at least four separate occasions, primarily to grow fodder for his dairy operation. In at least two of these instances, MV\_1934M attributed the ending of the lease to the landowner unexpectedly deciding to sell the land. For example, at the time of the farm tour, his most recent lease agreement had been in place for 12 months; but, by the time of the in-depth

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<sup>156</sup> See footnote 113, p. 98.

<sup>157</sup> Although COR\_0255M mentioned that other land he previously leased had “become a bit unpredictable”, at the time of the interview, he was yet to experience any tangible negative impacts such as those described by COR\_0265M/COR\_0265F and MV\_1934M.



interview (five months later), he was no longer leasing this land because the owner had unexpectedly sold it.

Uncertainty and instability were also features of COR\_0265M and COR\_0265F's lease situation (see Chapter 6). Further exploration of their story revealed that the portion of land they leased from non-family members had unexpectedly changed because, at one time, the personal circumstances of the owners required division of their land assets. The way in which the land assets were divided resulted in COR\_0265M and COR\_0265F being able to continue leasing the land, but not the same land parcel that they (and COR\_0265M's parents) had been leasing for many years, land into which they and COR\_0265M's parents had invested financial resources. In sum, the business and farm organisation arrangements inherent in leasing land and share farming disrupt the stability of farmers' personal and business life worlds. Put another way, leasing land or share farming exposes a farm enterprise – both its production system and the farm household – to the unpredictable aspects of other rural actors' lives. Owning land enables farmers to limit their exposure to other landowners' life worlds, over which they have little (if any) control.

### **Pursuing Autonomy through Water Ownership**

The Murray-Goulburn Valley farmers' narratives concerning water ownership and autonomy were more varied than their narratives about land. Ownership of water shares was constructed as both contributing to and undermining their efforts to achieve high levels of autonomy over their businesses and households. In Chapter 5, the Murray-Goulburn Valley farmers were categorised into five groups on the basis of whether or not their water holdings in 2011-12 reflected the volume of water that would be expected on the basis of the land area of their farms. This categorisation revealed that only a minority of farmers ( $n = 8$ ) had deliberately altered their water holdings. In Chapter 6, I extended this analysis to include farmers' buying and selling of water shares throughout the development of their enterprises. While my analysis in Chapter 6 revealed a more complex picture concerning farmers' approaches to the configuration of their water assets, in general, among the Murray-Goulburn Valley farmers there was a propensity to retain water holdings.

Farmers justified their retention of water shares upon the basis of ensuring secure or reliable access to water resources for on-farm use.<sup>158</sup> For example, MV\_1765M did not want the worry of having to buy water temporarily every time he irrigated; MV\_1750M said that another reason

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<sup>158</sup> Farm MV\_3139 is the exception here. MV\_3139M and MV\_3139F have never owned high reliability water shares, having purchased their farm after unbundling. Thus, they used the water allocation market to meet their farm water requirements. In this respect, they differ from farmers who have never sold water shares. So, this statement should not be interpreted as referring to farm MV\_3139.



– in addition to his confidence in the capital appreciation of water (see Chapter 6) – why he had not sold water shares was because he wanted the “reliability of owning the water”. MV\_1934M explained that as a dairy farmer he needed “assurety [sic] of supply”; and MV\_3099M, while recognising the advantages of buying water on a “temporary basis, year-by-year” – as he knew a fellow farmer was doing at the time – commented that “the security of having the water right is pretty good too”.<sup>159</sup>

These perspectives concerning the benefits of continuing to own water shares were shaped by farmers’ direct and indirect experiences of using the water allocation market during the Millennium drought. For this group of irrigators, the allocation market did not represent an opportunity for more flexible management of farm water requirements. Rather, it represented a risk that was best managed using defensive water ownership practices. When describing their reasoning for retaining water shares, farmers frequently referred to the high prices that were paid for water allocations during the drought years: “It has a tendency to get very expensive” (MV\_1810M).

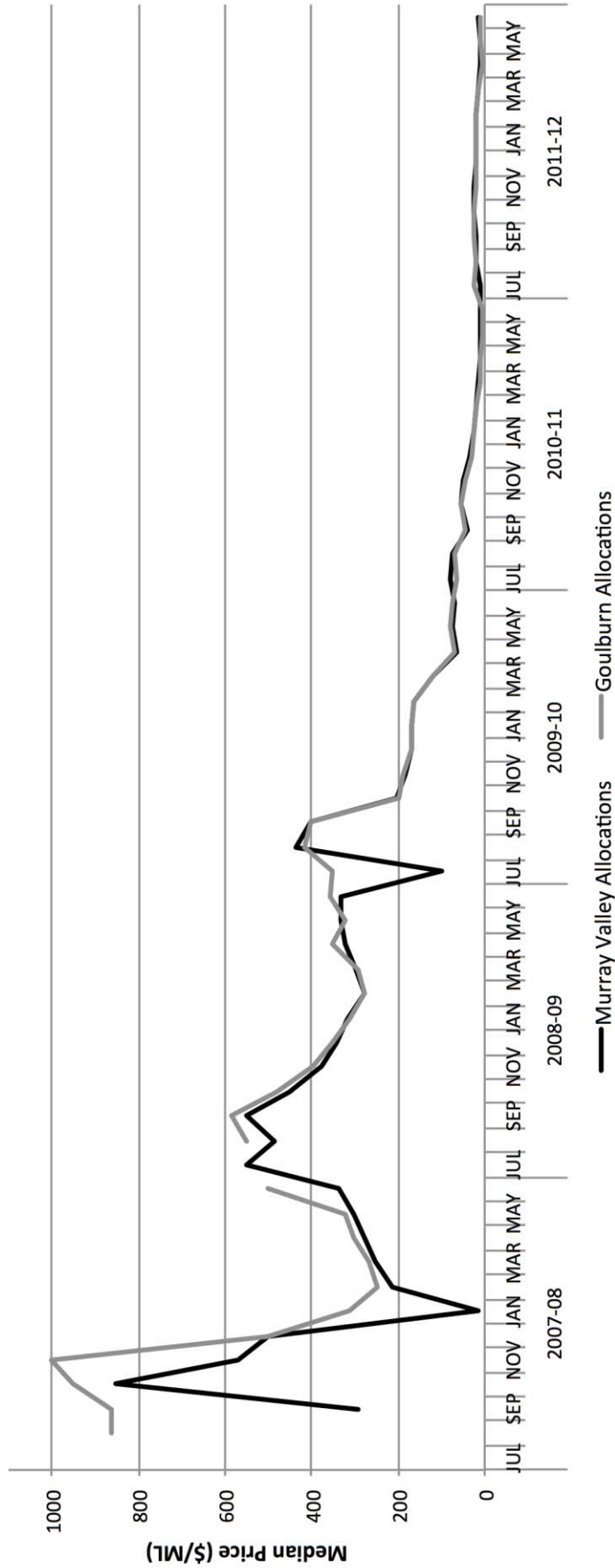
MV\_2014M said that one of the reasons he did not sell any water shares was “the actual physical security, so if you get a drought you’ve got your own water and you don’t get hit with exorbitant prices. So, it’s a security thing”. Many of the farmers had personally purchased water allocations at these high prices. MV\_3016M and MV\_3016F, for example, had been forced to purchase water at “stupid prices” in order to maintain their production system when water allocations were low. Other farmers, including MV\_1810M/MV\_1810F and MV\_1926M, had deliberately purchased water at high prices in order to ‘finish off’ a crop or pasture, calculating that they were better off incurring the financial cost than losing their crop.

MV\_1810M: ...when I bought 14 megalitres for, I think, 400 and something odd dollars a megalitre, I had a reason behind it because 14 megalitres was enough, with the bit I had [allocated against his water shares] to keep this top country [an area of pasture on his farm] going, ... like I bought the 14 megalitres then, at an exorbitant price ... so I could keep those [pastures] going.

Although MV\_1810M’s response demonstrated a calculated decision, the point here is that farmers’ past experiences of dramatically increased costs for water construct their present perceptions of risk attached to the sale of water shares and the use of the water allocation market (Figure 18 next page). During the drought years, in the case of the Goulburn irrigation system, allocation prices peaked at \$1,000/ML, while on the Murray irrigation system, allocations peaked at \$850/ML. At the time of my in-depth interviews, allocation prices on both systems were less than \$20/ML.

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<sup>159</sup> The same notion of securing access to water resources was also mentioned among farmers who had sold and repurchased water shares. MV\_7366F commented that she thought it was “hard to run a business without that bit of security too... It’s sort of like a safety net I reckon”. And MV\_1965M queried: “What happens when things get tough?” for farmers who had sold their water share.



**Figure 18: Median price paid for water allocations in the Murray Valley (trading zone 6) and Goulburn irrigation systems (trading zone 1A)**

NOTES: “Median price is the median price of trades within and into the selected trading zone. Some transactions [either] do not involve change of allocation ownership or are otherwise non-monetary - these zero priced trades have been excluded from the calculation of the median price. Pricing data is based on data supplied by applicants on their trade applications and is only as good as the data” (Department of Environment and Primary Industries, 2014b, notes & disclaimers).

Source: (Department of Environment and Primary Industries, 2014b).

These experiences created a concern among farmers about their ability to maintain control over their production systems, if and when such conditions return. Ownership of water shares enhances farmers' autonomy because it guarantees access to some water resources, without being exposed to the vagaries of the water market. For example, MV\_3064M referred to the strategy of selling one's water share and only buying temporary water as a...

MV\_3064M: ...dangerous set up because if you have, you're on say milking to your capacity, in number of cows and grass you need, well then in a dry year the water price is going to go up, you know, a hell of a lot. And, so then ummm...you got, got your farm at risk again, production becomes at risk.

Although, MV\_3064M sold a substantial proportion of his water share (see Chapter 6), he managed this 'danger' by retaining enough water to maintain an economic dairy farm.

MV\_1765M articulated a similar strategy. Despite being able to understand that selling one's water shares and buying water allocations was "good business" on the basis that one could sell water shares for "about \$1,500 a megalitre and buy temporary [for] about \$7", he remained hesitant to act accordingly because he expected the price of water allocations to increase substantially "when it starts getting dry again".

In a somewhat contradictory way, farmers who had sold all of their water share and not replenished their water holdings viewed their decision as a means to both stabilise their farm businesses and enhance their autonomy. The two farms of most relevance here were MV\_1926 and MV\_6251,<sup>160</sup> both of whom had sold all their high reliability water share in the Commonwealth government's buy-back programme (see Chapter 3). Recall from Chapter 6 that in neither of these cases were the farmers forced to sell their water holdings in the sense that their financial institutions required the sales to be made; rather, these farmers had evaluated their financial circumstances and concluded that the capital generated would be better used to reduce their borrowings. Crucially, both of these farmers (and MV\_3064M) had sold their water share with the intention of continuing to operate a dairy enterprise under a set of circumstances that they believed would afford them greater levels of security and control. As MV\_6251M explained, "we didn't sell it [their water] 'cause we don't want to water [continue irrigating], we sold it 'cause of the drought, that was to sec(ure), you know, we paid off our land debt and that secured us, you know". The implications of achieving a higher level of security were that their fiscal freedom and flexibility to reorganise their enterprises increased. (I explore these dynamics in the next section.)

Although the cases in which water shares were sold were few compared to cases in which water shares were retained, the point here is that seemingly contradictory water trading practices were

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<sup>160</sup> Farming couples MV\_1868M/MV\_1868F and MV\_1872M/MV\_1872F had also sold a substantial proportion of their water share. In the case of MV\_1868, they were getting out of dairy farming. They sold their land and water to the one buyer. Similarly, MV\_1872 were also no longer dairying. But, as discussed in Chapter 6, their situation was different in that they were seeking a means of meeting their water bill obligations. Thus, MV\_1926 and MV\_6251's water sales differed because they intended to remain in dairy farming.

rationalised in the same way. Both practices were viewed as a means to develop surety in one's farming enterprise. From the perspectives of the Murray-Goulburn Valley farmers in this study, this was defined in terms of two forms of uncertainty: 1) the potentially high price for temporary water that may need to be paid in the future (discussed above); and, 2) further regulatory change and government intervention. With regard to the latter, the Murray-Goulburn Valley farmers were acutely aware that they had little control over the water policy rules under which they operated.

Consistent with the farmers' views recorded at the beginning of this section, MV\_2098M justified his decision not to sell any of his water holdings because "once farmers don't own water they lose control of their enterprises". Later, he identified government legislation as the biggest threat to his water security: "At the moment we just don't know what's going to happen in the next 10 years". Farmers expressed the uncertainty they attributed to future government action in the following ways.

MV\_1750M: I want the reliability of having the water, to own it. 'Cause we don't know what is going to happen in the future, that's me [sic] aim. I just don't know what's going to happen in the future. What government policies are going to do or what's going to change in the future? Whether, I, yeah, we just don't know what is going to happen in the future.

MV\_2115M: ...that's the risk, like they [the government] say, well you know, they're not going to buy water, then they go and buy it. ... things change that quickly, you know, the market changes that quickly because of the government, you know, ... you've got to be really careful because they can just change things, nothing's for certain.

Consequently, farmers' decisions about their water holdings were often made in response to this uncertainty, irrespective of its legitimacy. MV\_6327M felt that "you can't own too much water" in order "to build a bit of certainty" and to be able to operate profitably in the context of current water policies that they expected to change "further down the track". Thus, farmers in this study tended to respond either by retaining their entire water share or selling their entire water share. There seemed little room for a middle ground strategy of selling only a portion of their water share due to uncertainty regarding what the government may do next.

Despite these risks and uncertainties, simply owning water and land – or selling water – did not necessarily ensure high levels of farmer autonomy. In tandem with their preferences for land and water ownership, farmers used other farm and financial management practices to create circumstances over which they exerted high levels of control. These practices constitute the subject of the next section.

## Pursuing Autonomy through Farm and Financial Management Practices

Notions of autonomy and control shaped the farm and financial management practices that farmers employed. These practices included: 1) creating self-sufficient farm systems; 2) maintaining flexible farm enterprises; and, 3) fiscal freedoms and mobilising capital.

### Creating Self-Sufficient Farm Systems

Farmers from both study regions actively pursued farm systems that were by-and-large, self-sufficient with regard to the provision of stock feed. They frequently mentioned that they attempted to produce as much fodder as possible on-farm, attempts that were grounded in two interrelated reasons: controlling costs and reducing reliance on rural actors external to the farm. On-farm fodder production afforded farmers' increased control over the costs of feeding stock *vis-à-vis* purchasing feed from external sources. In particular, farmers were cautious about the unpredictable costs of buying-in feed and the potential impact upon their profitability, an eventuation demonstrated by COR\_0135M. In 1998, when he and his wife were still operating their dairy enterprise, they purchased an 80-hectare out paddock. This acquisition enabled them to graze extra stock away from their home farm, by extension reducing the amount and cost of inputs because they were able to grow more fodder upon their own land. COR\_0135M explained his reasoning as follows:

COR\_0135M: ...well that [the extra land] was just to take care of the extra [stock] numbers. Well, this [dairy operation] had grown from 80 cows originally, to 200 (cows). ... One cow takes one acre, two cows take two acres. Well, actually it's more than that, but that's the ratio sort of thing. So if you want 200 cows, you need 400 acres, otherwise you're bringing in a heap of inputs and it's just money going out the gate and you're not making anything. So you've either got to do the extra land, or don't do it [increase your herd size]. Or you'll bring in your hay, you'll bring in your feed in ya [sic] dairy or whatever, and it's all going out the gate. And you're not getting any of it left, so why are you doing it? It's no good being the biggest producer and not making anything. ... They're [input costs are] out of your control, but by doing it the other way [acquiring land and growing fodder] well you've got control over it. Where the other [buying feed], if wheat's short on the world scene, it goes from \$200 to \$350 a tonne and you're left with \$150 a tonne extra that you weren't paying out the year before, so by the time that comes out of your or income, what have you made for the year?

COR\_0135M's conclusion points to the way in which creating a farm system that was as self-sufficient as possible not only enabled him to control the cost of production in the present, but also enabled him to insulate his enterprise from unfavourable markets and circumstances in the future.

Cost minimisation was not the only reason why farmers grew their own stock feed; they were also concerned about controlling feed quality. COR\_0702M discussed how he rationalised

keeping a lower stocking rate against his farm's capacity to grow more silage so that he was not "at the whim of the markets and supply quality". He contextualised his position within "a scary situation" he had experienced several years earlier when limited feed supplies forced him to purchase poor quality hay at high prices.

COR\_0702M: I bought in a load of ummm...wheaten hay, cereal hay and ahhh...you know, it rolled up on the truck here and it looked like it had, but the colour of it was such and such quality and it looked like it had been out in the weather and I was paying \$400 dollars a tonne and I sat here for about an hour, just looking at it and wondering whether I should off load it

Thus, rather than relying upon external supplies, he developed a farm system in which he produced a "core amount" of fodder that he knew would meet the bulk of his farm's requirements.

The dairy farmers in the research sample provided more depth to this self-sufficiency narrative. Their concern for self-sufficiency was motivated by two other reasons: 1) to avoid difficulty finding agistment; and, 2) to minimise the risk of losing stock through poor health or injury during transportation. For example, when operating his dairy enterprise, COR\_0175M tried to keep all of his stock on his land because it was easier and more convenient than organising agistment and transportation. COR\_0350M, who provided further detail about these practices, said that prior to creating a farm that was self-sufficient in terms of the land area required to keep all of their stock, they agisted young stock in three different places. But, they were dissatisfied with the quality and milk performance of their cows: "The young stock never done as well as what they have done since I have had 'em [on the] home [farm]". Among the Murray-Goulburn Valley farmers, MV\_2115M and MV\_2115F were yet to fully develop their farm, but agisted stock off-farm. However, this was a temporary arrangement because they viewed retaining all of their stock on their land as cheaper and more convenient. MV\_2176M and MV\_2176F expressed a similar aversion to agisting stock off-farm.

MV\_2176F: Well, the reality is we would prefer to keep the young stock under our control because invariably ummm...when you head down the agistment path ummm...at some point you end up being massively disappointed.

MV\_2176M: Financially out of pocket.

MV\_2176F: And financially out of pocket, that's right.

The high significance that farmers placed upon these objectives may be illustrated through consideration of farmers' subsequent land acquisitions; that is, all of the acquisitions that farmers made following their initial acquisitions at the time of enterprise establishment. Expanding one's land area to produce more fodder and retain all stock on-farm was an



explanatory factor in, at least, 37% of subsequent land acquisitions.<sup>161</sup> For example, in the case of COR\_0350 cited above, their second land acquisition increased their land area by 50%, enabling them to discontinue off-farm agistment. Similarly, when 58 hectares adjoining his home farm became available, MV\_1750M purchased it to avoid using agistment because he was “finding it rather difficult to obtain”.

Thus, expanding the land area of one’s farm was typically emphasised as altering the dynamics of operational control, more so than altering farm production. Farmers often compared the way in which their farm system was more self-sufficient following land acquisitions than at earlier stages of farm development. In the case of MV\_2176M and MV\_2176F cited above, they recalled a time when they were using off-farm agistment that caused noticeable long-term deficits in the condition of some of their stock.

MV\_2176F: ...we had nineteen [cows] that we left on agistment purely ‘cause of arranging trucks, they wouldn't fit on the truck and those nineteen you can, you could walk into them [their herd] and not know and you could pick every one of them out, you know. And, you know you never get it back, that's the frustrating thing. So, ummm...and the one's that we pulled out before those nineteen weren't quite so disastrous, but likewise we did hold over joining them because we felt that they were too small.

This experience, however, was positioned alongside the integration into their dairy operation of a recent land purchase (142 hectares) upon which they intended to run young stock and produce fodder.

Similarly, the influence of earlier undesirable circumstances initiated a dramatic change in the size of MV\_3064M’s land holdings. A single land acquisition in 2003 increased the land area of his farm by almost two-thirds. His narrative about this acquisition revealed that he was attempting to redress the difficulties with stock management and fodder production that he had experienced throughout the 47-year history of his enterprise.

MV\_3064M: ...we’d been through some dry, couple of dry years, and over the whole history we'd always been looking for agistment, buying in hay, all this sort of stuff, so the overall plan was to have self, self-contained [operation] and that was my basic idea of getting all this land [302 hectares]... we wanted to have a unit which could be self-sustaining and you don't have to rely on anyone else, so that was the theory.

Although the majority of farmers had organised their farms in such a way as to produce as much feed on-farm as possible and keep stock on their home farms, there were, however, exceptions

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<sup>161</sup> The percentage of subsequent land acquisitions quoted here is likely to be highly conservative because it only includes acquisitions that farmers explained in terms of their desire to increase fodder production and/or accommodate all stock on-farm. Although other land acquisitions were clearly used for these purposes, they are not included in the figure quoted here because the farmers concerned did not explicitly refer to self-sufficiency principles when explaining their acquisition decisions. It also does not include larger farms comprising a single acquisition that were clearly organized according to self-sufficiency principles.



which were generally farms on smaller-sized land holdings.<sup>162</sup> For example, MV\_1810M and MV\_1810F did not have sufficient land area (56 hectares) to run their 130 cow dairy herd and replacement stock without incurring substantial bought-in feed costs. So, they used an off-farm weight-gain contract which, in their circumstances, was cheaper than feeding their stock at home. Somewhat crucially, though, despite the weight-gain contract exposing them to factors external to the farm, it afforded them greater control over the quality of their returned stock than off-farm agistment because improved animals were guaranteed: “[The contractors] don’t get any money unless they put the weight on them” (MV\_1810M).

In terms of fodder production, farm MV\_1926 offered the starkest example of an alternative means to meet the feed requirements for his farm. MV\_1926M was not self-sufficient in fodder production (108 hectares): he was reliant upon several hay-growing contracts with nearby dry land grain farmers. This decision, however, needs to be understood in the context of MV\_1926M’s decision to sell his entire high reliability water share.<sup>163</sup> For this farmer, the water policy context was so uncertain that he decided to reduce his exposure to the vagaries of water policy changes and the water market.

MV\_1926M: What if you only get 20% water and you've got to buy a heap of feed in? Then what? So, it's all ifs and what's and buts. Ummm...So we're trying to get rid of some of those ifs and what's by having feed up our sleeve.

The point here is that the organisation of MV\_1926M’s farm was motivated by the pursuit of control over his current farm operating context as well as his future operating context. Put another way, clearly wherever possible the majority of farmers preferred to operate their farms within their own bounds.

### Maintaining Flexible Farm Enterprises

In the context of the preceding discussion about how farmers met their stock feed requirements, MV\_2176F summarised their objective as follows: “to be as self-sufficient as possible, but not, you know, with a ‘we are not going to buy feed mentality’”. Farmers consistently narrated the development of their farms in the context of their efforts to create and maintain flexible forms of farm organisation. This is not to suggest that all farms in my sample were flexible; rather, it emphasises a critical way in which farmers think about their enterprises.

Although few farmers were considering leaving their farms or ending their farming careers in the immediate future, their discussions of farm organisational flexibility were often positioned within the suite of future options available to them. Some farmers specifically conceded that

<sup>162</sup> The examples given here are from the Murray-Goulburn Valley because the seven smallest farms in the sample were all located in this study site (see Chapter 5, Figure 14, p. 112).

<sup>163</sup> Recall from Chapter 6 that MV\_1926M sold his water shares and used the proceeds to reduce his debt.

they were likely to sell their land and relocate elsewhere. Others said that they hoped to downsize and remain living on the farm. And, others suggested that they might either employ share farmers, or lease out their farms to enable them to retire (see Chapter 6). Many of these options were deliberately created for deployment when necessary.

Two examples, one from each study site, illustrate the ways in which farmers orchestrated circumstances to achieve flexibility in farm organisation. Farms COR\_0068 and MV\_1872 highlighted the wide variety of options the farmers created; but, they also demonstrated the ways in which the farmers manipulate their enterprises for their own means.

COR\_0068M and COR\_0068F, who were in the latter stages of their farming careers, planned their transition from dairy to beef cattle farming.

COR\_0068F: 'Cause we didn't just decide to sell our cows overnight, we planned it for three or four years beforehand and we reared a lot more calves, so that we didn't have to buy replacements [for our] beef herd when we sold the farm, we had the cattle to stock it to get us going.

In order to have sufficient land area for their dairy herd and developing beef herd, they leased several blocks of land, thereby establishing a set of circumstances that enabled them to exit dairying at a time of their choosing. These preparations provided them with the opportunity to sell their dairy herd even when “dairying was on a bit of a downer” because COR\_0068M wanted to ‘get out’ before he began to dislike milking cows. Their aspirations for retirement – which entailed remaining on their home farm – dovetailed with their most recent land purchase. Six years prior to transitioning to beef farming, they purchased 81 hectares of land adjoining their home farm. Thus, at the time of the interview, they owned two contiguous titles and one non-contiguous land parcel. In COR\_0068M’s words, these arrangements meant that if they “wanted to [they] could sort of even sell [their non-contiguous land parcel] and [they’d] have, sort of something, as we move on through life, here in one nice little block”.

In the Murray-Goulburn Valley, MV\_1872M and MV\_1872F were also making arrangements to downsize their land holdings. Recall from Chapter 6 that this couple had sold most of their high reliability water share because they were no longer dairying, the only land use they considered to give a sufficient return. At the time of the interview, they were undecided about their long-term future; so, in the interim, they were deliberately creating circumstances that provided them with the option of either selling their entire holding, or remaining on the farm, albeit with a smaller holding. The latter option was shaped both by the size of their holding (28 hectares) and by local subdivision regulations. At the time, their understanding was that they could only subdivide their holding providing the resultant land parcel without their dwelling was purchased and consolidated by an adjoining land owner. With this in mind, they approached their farming neighbour and established a lease arrangement for most of their property; and, perhaps, they added, their neighbour might be able to purchase it.

Farmers' options for reorganisation were embodied not only in land ownership itself, but also in the maintenance of multiple land titles. In cases where multiple land titles comprised a single farm, farmers considered owning multiple land titles advantageous for future reorganisation of their enterprises. First, multiple land titles provided instruments for managing adverse risks. In the Murray-Goulburn Valley, MV\_2014M and MV\_2014F have been forced to expand their farm through non-contiguous land purchases because the land adjoining their home farm was unlikely to come up for sale. In the past, they had considered re-locating in order to purchase a consolidated land holding. They decided not to because in the words of

MV\_2014M: ...if you got pushed into a corner, you've got nothing to sell and we always said, 'Well shit, if we've got this, this, this and this' [pointing to their separate land holdings on the map], at least if you get pushed into a corner, you can say, 'Ohhh...righto, we'll sell that [pointing to one of their land holdings] and get ourselves out of trouble'.

Second, multiple land titles enhanced the suite of options available to farmers for their exit from farming. In Corangamite, COR\_0255M was careful to ensure that the subdivision of one of his land parcels would not compromise his future land disposal options. In this situation, he had two land titles. He subdivided a small house section from one title, then realigned the boundary between the original titles to ensure that they were both at least 40 hectares in size. He did this for two reasons: 1) under local government regulations, if he later decided that he wanted to build on these titles, he would only require a building permit and not a planning permit, thus reducing bureaucracy and compliance costs; and, 2) maintaining two 40-hectare titles rather than one 80-hectare title offered more flexible disposal options; "cause it's easier to sell parts of a pie, than it is to sell a whole pie" (COR\_0255M).

The significance of multiple land titles as a mechanism for generating options for reorganisation was reinforced by three cases from the Murray-Goulburn Valley in which the farmers were involved in negotiations with the NVIRP.<sup>164</sup> These negotiations included suggestions to amalgamate some land titles. Amalgamation was desirable from the perspective of the modernisation project because it meant that fewer water outlets (i.e., reduced costs due to less infrastructure) were required to deliver water to the same area of land.<sup>165</sup> But the prospect of amalgamating land titles was unattractive to farmers because it reduced their future capacity for farm reorganisation. During their negotiations with the NVIRP, one of the re-configuration options available to MV\_2014M and MV\_2014F required the amalgamation of two land titles. They declined this proposal because in their minds it would limit their options if they decided to sell these titles in the future. The couple said:

MV\_2014M: ...we bought these [pointing to the land parcels on the

<sup>164</sup> Northern Victorian Irrigation Project: see footnote 114, p.103.

<sup>165</sup> Each land title in the irrigation district has to be serviced by irrigation infrastructure. One of the potential outcomes of the NVIRP is that negotiations may result in some titles no longer being serviced because an agreement to discontinue supply has been reached and the landowner appropriately compensated.

- map] so we can sell 'em off and they're more saleable in two lots than one lot.
- MV\_2014F: Yeah.
- MV\_2014M: So we would rather two lots. So that's part of the negotiation.
- Erin: So you're not interested in amalgamating those titles at all?
- MV\_2014F: No. Well, they're like 'Get out of jail cards', particularly the front block which has the main road frontage, sealed road frontage, you could sell that as a lifestyle block quite easily.

So, what of the role of separated water titles in the context of flexible farm organisation? While on the one hand, some farmers retained their water holdings in order to protect themselves from further climatic and regulatory-induced water scarcity (see previous section), on the other, those farmers who had disposed of their water assets considered their decision critical to creating flexibility for their enterprises.

MV\_625M and MV\_6251F described the impact of paying off their land debt as 'securing them' (see earlier in this chapter). Further exploration revealed that what they meant by this was that their lender no longer posed a threat to the future of their enterprise because of declining equity levels. Subsequently, they had higher levels of operational flexibility. As MV\_6251M explained:

MV\_6251M: ...we just realised if you got rid of the land debt you had flexibility, 'cause mainly now all we have is ummm...we've got a little bit of debt left, but we've got a big overdraft and we're working on keeping that as clear as we can all the time, so that when the next drought comes we have 130,000 [dollars] to go towards water or fodder at the right price early on in the season. 'Cause when we had debt, 'cause you had the land debt, you had a \$30,000 overdraft and even though you could afford it over the whole year, when you saw a good deal you couldn't meet them.

Later in the interview, and consistent with the argument in the previous section, MV\_6251M suggested that he would be interested in expanding their land holdings, not to increase their herd size, but to increase their fodder growing capacity. MV\_6251F held a slightly different view of how they should achieve self-sufficiency, a view underpinned by their increased level of flexibility. They were no longer encumbered by debt, so they could radically alter their herd size if necessary.

MV\_6251F: ...we are aiming with the herd to get it to the point that you've got 100 really good cows, so sure milk 140, 150 really good cows and get the benefit from it. But, if it does turn to crap then offload 50 of them, go down to 100 cows, and you are self-sufficient because it's a hell of a lot easier to look after 100 cows in the drought than what we were having to look [after], 200, plus young stock, plus everything else.

The farmers' options for farm reorganisation were, of course, both shaped and constrained by the size of each farm. Two of the larger Murray-Goulburn Valley farms are illustrative here. MV\_2716M and MV\_2176F (40-49 years age group) had no intention of either selling their

farm or leaving farming. They were, however, focused upon establishing what they termed ‘out options’. Each significant change they made to their enterprise initiated a reappraisal of their options to either downsize, transition to an alternate farm system, or cease farming altogether. At the time of the interview, they owned 675 hectares. Crucially, with the acquisition of their most recent land purchase, their out options were enhanced because “swapping out to cropping had become an option” (MV\_2176F).

MV\_2098M (40-49 years age group; 316 hectares) explained a similar logic behind the acquisition of his most recent land purchase, which was geographically separate from his main dairy farm:

MV\_2098M: The main purpose we bought this property [their most recent purchase], two reasons, one [was] to grow grass to take back to the dairy farm, the other reason was, it's to expand the farm, but without having a farm that's tied in with the dairying property. This [the most recent land purchase] will be, is a standalone farm. If anything happened to me – and the issue we have in the future is who's going to buy these farms – if this is 1,000 or 1,200 acres in one parcel, it's a lot harder to sell. But two individual parcels or separate properties, with the capital through the large herd of cows brought back to this farm, we'll upgrade this farm and it will be quite a saleable asset. So it's just about diversifying our asset base.

Thus, under the current circumstances, the new land supported their dairy operation. And, this configuration was flexible enough to allow reorganisation in the future if required. In the final section of this chapter, I consider the ways in which farmers' financial management practices and their capacity to mobilise capital shaped the organisation of their farms.

### Fiscal Freedoms and Mobilising Capital

Farmers from both study sites regularly referred to their approach to debt and the ways that the pursuit of fiscal freedom shaped their enterprises. COR\_0342M and COR\_0342F spoke about the significance of having fiscal freedom over the day-to-day operations of their farms. In 1984, they began share farming on land owned by COR\_0342M's parents. Several years after establishing their dairy herd, the opportunity presented for them to purchase the adjoining land, an opportunity they were able to take and, in the process, achieve farm ownership. But, owning their own farm was not the highlight of their farming careers due to the financial pressure they were under to service their loan. As they explain below:

- COR\_0342F: ...for me the highlight was that easing of financial pressure.
- COR\_0342M: Once the interest rates dropped and we actually got to pay a bit off [the mortgage] it just, it just made it, yeah, you weren't on that edge.
- COR\_0342F: The highlight isn't buying the farm, this farm, it was...
- COR\_0342M: You're on that edge, you could either fall that way down there [points to the floor from the kitchen table], or fall the

other way and land on cushions. Ummm...it was the realisation that you were actually on the right side of the line I think. ... I mean, that was probably it I think. You'd made it, you didn't know which way you were going to go for a while.

COR\_0342F: You've got the power. ... you're in control. Whereas pre-...

COR\_0342M: We were probably, I'm not saying we were going to go bankrupt, but you go that way you're leaning on [your] parents. Whereas it was nice to fall the other way and think, well we don't, we're not reliant on them anymore.

COR\_0342F: So it wouldn't be any material positions, no purchase of anything, but it would be just that, as [COR\_0342M] explained.

COR\_0342M concluded this part of the conversation by saying: "We're probably in no rush to go out and buy a heap of land. You know, we just don't want to go through that [the financial pressure] again". The lessening of financial pressure for this couple also meant that at the time of the interview they were negotiating how many cows they wanted to milk in accordance with their life-stage and lifestyle aspirations, rather than having to milk the number of cows required to service a high level of debt.

The farmers' attitudes towards debt shaped and constrained the long-term capital development of their farms. In general, they were hesitant to expose their households and businesses to high levels of debt. For example, farming couples COR\_0350M/COR\_0350F and COR\_6441M/COR\_6441F had both made smaller land acquisitions than the land available at the time because they did not wish to overexpose themselves financially. Similarly, MV\_1750M limited his purchase of water share to maintain debt levels with which he felt comfortable. More important than their attitudes toward debt, however, was the farmers' capacity to mobilise capital.

Mobilising capital was a key aspect underpinning the organisation of farms in this study, and of farmers' decisions about how they retained control of their enterprises. Farmers mobilised capital in a variety of ways to fund long-term asset purchases and farm operational expenses. As would be expected, traditional sources such as borrowing money from mainstream financial institutions were often used. Other less obvious but more opportunistic sources of capital were also utilised. COR\_0255M and COR\_3899M/COR\_3899F, for example, used their dairy deregulation payments<sup>166</sup> to acquire a new land holding and upgrade their dairy shed, respectively. COR\_0702M and MV\_3139M/MV\_3139F sold extra stock, either to meet debt repayments or to fund farm improvements.

At times, in order to ensure that land was successfully acquired, farmers mobilised their family networks. In the early 1990s, 67 hectares adjoining COR\_0342M and COR\_342F's share farm became available, land that "just never comes up [for sale], you would just move heaven and

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<sup>166</sup> The dairy deregulation payment was part of the Dairy Industry Adjustment Programme implemented in Australia between 2000 and 2008. The programme provided monetary support to dairy farmers to assist their transition from a heavily regulated industry to free market competition.



earth to, to ummm...purchase it" (COR\_0342F). They acquired this land by combining vendor's finance and listing COR\_0342M's parents as guarantors against their mortgage. Without COR\_0342M's parents as guarantors, they would not have been able to secure for themselves all of the finance required. These circumstances emphasise the high significance of other family members to farm organisation beyond farms in which the involvement of multiple generations is obvious (e.g., intergenerational farms such as MV\_2098 and COR\_7370). In addition to COR\_0342, there were at least 5 cases in which farm establishment was made possible by farmers' parents' financial involvement; but, they were neither involved in the ownership of the farm business, nor in farm operations. For example, in COR\_0068's case, the first land acquisition was made possible by COR\_0068M's parents' financing of the purchase of 71 hectares. MV\_1926M said that he and his wife "wouldn't be farming today, period" had his parents not gone mortgage guarantors for their 100-hectare farm (247 ML). And, when COR\_0255M and his wife began dairying in 1994, they purchased 20 hectares and his father purchased 20 hectares because the couple "couldn't afford to buy it all" (COR\_0255M).

In other cases, farmers' non-family networks were crucial to their capacity to mobilise capital for the establishment and ongoing development of their enterprises. MV\_7366M and MV\_7366F organised a lease-to-purchase agreement for their first acquisition (162 hectares, 320 ML) with a specified purchase price. After the initial three-year term, the capital appreciation of their farm provided them with their deposit. MV\_2176M and MV\_2176F had similarly low levels of equity when they finished share farming. They acquired their first land holding on the basis of a three-year term contract. Each of these examples reinforces the point made in the previous chapter; that is, that leasing land, while undesirable as a permanent means of enrolling land in production, may prove advantageous as an interim form of tenure.

In Corangamite, COR\_6402M and his wife were unexpectedly given the opportunity to purchase the farm upon which they had been share farming (83 hectares); but, at the time, they were not in a financial position to buy. The only reason they were able to purchase the farm eventually was because they negotiated the subdivision of one of the farm's houses, thereby reducing the purchase price, and by organising a vendor's finance agreement.

In each of the above three cases (and also COR\_0342), land vendors were involved in the farmers' land acquisitions. In three cases, however, the farmers were able to acquire land together with other buyers. For example, MV\_6251M and MV\_6251F were not able to purchase their own farm; but, together with an equity partner, they made their first land acquisition (131 hectares, 327 ML). Five years later, they were able to mobilise sufficient funds to purchase their equity partner's shares in the farm.

While the dynamics of acquisitions made by MV\_1868M/MV\_1868F and COR\_0331M were somewhat different, they further reinforced the influential role that non-family members may



play in the development of farm enterprises. Rather than non-family members becoming formally involved in business ownership (as was the case with MV\_6251), MV\_1868M/ MV\_1868F and COR\_0331M organised other buyers to ensure successful land acquisition, thus circumventing their own financial limitations. COR\_0331M's farm was characterised by a set of non-contiguous land holdings, in part a reflection of he and his wife having had few opportunities to consolidate a larger holding around his home farm. His most recent acquisition of 82 hectares – located 6 kilometres from his home farm – was part of a 160-hectare land parcel available for purchase. At the time, he knew another potential buyer; so, instead of both “missing out”, they negotiated a separate agreement between themselves to purchase the full holding, subdivide it, and buy half each.

Integral to each of the above land acquisitions was the farmers' capacity to respond at the time when opportunities arose to establish their farms or expand their land holdings. The significance of the farmers' capacity to mobilise capital at the required time – often through non-traditional sources – was starkly demonstrated when the evidence presented above was juxtaposed against situations in which farmers lacked the capacity to mobilise capital. Two Murray-Goulburn Valley farms (MV\_1934 and MV\_2014) are illustrative here.

In both cases, the farm owners had limited opportunities to expand their land holdings through the purchase of adjoining land parcels: both had experienced difficulty accessing capital from traditional sources. In the case of MV\_2014M and MV\_2014F, a land parcel within ‘tractor-driving’ distance of their home farm became available. However, at the time they were unable to raise the finance for the full purchase through mainstream sources. Describing the situation they said: “We were lucky, we were really lucky” to be able to negotiate a two-year lease-to-purchase agreement with the vendor which enabled them to get in. Similarly, MV\_1934M was also unable to raise full finance through mainstream sources for a block of land that he wanted to purchase; but, unlike MV\_2014, MV\_1934M was unable to raise funds through other means. The vendor, a widow, simply wanted “to be free and clear of everything and not have anything owing, so [MV\_1934M] didn't get it”. In sum, present-day farm organisation is contingent to farmers matching their capacity to mobilise capital with specific, unpredictable opportunities for asset acquisition.

## **Chapter Summary**

In this chapter, I have demonstrated how farmers' desires to remain autonomous shape the wider socio-economic organisation of their farm enterprises. However, positioning the farm as a site for autonomy encapsulates more than farmers simply desiring control and actively responding to particular circumstances. It also encapsulates the ways in which farmers actively

organise and reorganise their farms. Thus, the farm as a site for autonomy is about creating space in which farmers can exercise their autonomy. The significance of these practices for the character of the Australian farming sector becomes apparent when contextualised against the circumstances and life events considered by farmers as unpredictable and beyond their control. This unpredictability is fundamental to ‘structuring for serendipity’, the concept I develop in the next chapter to explain farmers’ aspirations for wealth creation and autonomy.



## Chapter 8

# Structuring for Serendipity

## Introduction

In the preceding chapters, I have highlighted drivers of family farm organisation that were elucidated using a novel research technique based upon Riley's (2010) 'farm life history', an approach which generated in-depth narratives pertinent to the historical development of 40 Victorian farms (Chapter 4). My analyses of these narratives has revealed the enduring nature of owner-occupier family farms and the significance of farmers' business and financial advisors (Chapter 5), the importance of farmers' preferences for capital accumulation (Chapter 6), and the role of farmers' desire for control (Chapter 7). These farm-level dynamics are embedded within wider macro socio-economic, political and environmental circumstances, which in the context of this thesis have shaped Australia's water reform process (Chapter 3).

In this chapter, I synthesise these earlier insights into a reframing of the extant conceptual models of farmer aspirations, focusing primarily upon the processes and functions of farm organisation (see Chapter 2). A prevailing assumption of much farm-based research is that one of the primary objectives of many farmers is to ensure that a stable farm business will be available for the next generation (Gasson & Errington, 1993). In this chapter, I not only decentre this assumption, but also argue that there is room for alternative positions regarding farmers' business and household aspirations, while retaining any aspirations for intergenerational succession and inheritance as one possibility among many farm futures.

The position I advance here is that farmers 'structure for serendipity', a concept that captures the joint articulation of farmers' aspirations for wealth creation (Chapter 6) and autonomy (Chapter 7). Structuring for serendipity is the enactment of particular decisions that farmers believe will create spaces in which they are able to exercise their autonomy to control and determine the course of action to pursue when unexpected future events and opportunities arise, while at the same time minimising harm to their social and economic worlds. I argue that the tendencies for human actors to structure for serendipity are fundamental to how rural places are being remade in the 21<sup>st</sup> century.

Conceptualising farm organisation according to the logics of structuring for serendipity invites the application of macro-sociological theories that contend with the ways in which risk, uncertainty and security shape everyday life. To this end, I draw on the works of Ulrich Beck, Anthony Giddens and Pat O'Malley. Applying the ideas of these authors demonstrates that uncertainty and insecurity need to be viewed as key dynamics affecting farm-level responses to

the contemporary conditions of Australia's farming sector. These macro-sociological themes provide the entry point for the discussion.

## **Risk Society and the Consequences of Modernity**

Despite the presence of a vast social scientific literature that examines the implications of risk, security and uncertainty for social life, specific application of these notions to rural and agricultural research problems remains limited. Within this literature, the works of Higgins (2001) and Lockie, Lyons, and Lawrence (2000) could be considered exceptions; but their work does not dig down into the social significance of risk and uncertainty at the farm-level.<sup>167</sup>

Invariably, rural researchers have attributed the significance of these concepts to the agricultural sector as consequences of the 'biological character and rhythms' of the sector (see Watts, 1996) or "the totalizing failure of productivism" (Halfacree, 2006, p. 55). With reference to the latter, Halfacree (2006, p. 55) writes that the lives of primary producers are increasingly "characterized by insecurity and uncertainty, expressed most acutely through high levels of debt and depression [for example]". Here, I seek to move beyond Halfacree's inference that farmers' lives are merely characterised by insecurity and uncertainty, arguing that these concepts provide a useful analytical lens through which a broader conceptualisation of farm-level dynamics can be developed.

In the wider social sciences, scholars have identified the dynamics of risk and uncertainty as the distinctive cultural character of the current late-modern (Giddens, 1990) or second-modern (Beck, 1992) stage of modern society. Beck's (1992) theorisation of these dynamics is captured in the *Risk Society* thesis which, in many ways, parallels Giddens' (1990) *The Consequences of Modernity*.<sup>168</sup>

Risk Society refers to the ways in which non-quantifiable uncertainties govern social and economic life: "there is nothing certain but uncertainty" (Beck, 2003, p. 96). These circumstances emerged from two fundamental transformations that differentiate the modern world from the pre-modern world: the 'end of nature' and the 'end of tradition' (Giddens & Pierson, 1998). The 'end of nature' suggests that society today is more concerned with the detrimental impact that humans have had (and are having) upon nature, than with the detrimental impact that nature can have upon humans. The 'end of tradition' signals a world in which people no longer live their lives according to fate imposed by social institutions. That is, previously stable social institutions (e.g., class, gender, work and family) are no longer reliable

<sup>167</sup> Similarly, Almas (1999) discusses consumer choices and genetically modified foods in the context of debates about the social significance of risk. Again, this work is not focused on the farm-level.

<sup>168</sup> I primarily draw upon the work of Beck and Giddens, who offer one of three major theoretical perspectives with regards to the social significance of risk. The other two perspectives are: 1) the 'cultural/symbolic' perspective; and, 2) the governmentality inspired perspective (Lupton, 1999; see also Wilkinson, 2009).

yardsticks with which individuals may govern their lives (Giddens, 1998; Giddens & Pierson, 1998). According to Beck, the end of these traditions, together with the development of the welfare state, has increased individual freedoms. Public goods (e.g., education and social support services), as well as travel and globalised employment opportunities, enable social mobility rendering the modernist institutions of marriage and family less central from the perspective of individuals. Freedom from traditions, however, projects individuals into “the turbulence of the global risk society” (Beck, 1994, p. 7). This process, which Beck calls ‘individualisation’, is a combination of “the disintegration of the certainties of industrial society as well as the compulsion to find and invent new certainties for oneself and others without them” (Beck, 1994, p. 14). But within this counteractive milieu, due to the absence of social guidelines, individuals are forced to search for and deploy new self-oriented certainties. These searches are indeterminate, not routinised, and full of risk (Lash, 2002). Hence, out of the declining influence of traditional certainties emerges an increasing need for societies and individuals to negotiate newly emerging uncertainties and risks (Beck, 1992, 1998; Giddens, 1990).

Each individual must learn to navigate the resultant ‘climate of risk’. Due to the peculiarities of late-modernity, this climate is characterised by high consequence, global risks – many of which are difficult to precisely calculate – as well as regular shifts in knowledge claims about them (Giddens, 2006). Thus, “living in a ‘risk society’ means living with a calculative attitude to[wards] the open possibilities of action, positive and negative, with which, as individuals and globally, we are confronted in a continuous way in our contemporary social existence” (Giddens, 1991, p. 28). According to Giddens, trust is foundational to living in this risk society due to the ways in which ‘disembedding mechanisms’ have reconfigured time and space under modernity.<sup>169</sup> Disembedding mechanisms include expert systems of knowledge, globalised standardised time zones and objects of exchange (e.g., money). Their influence lies in the fact that they separate social relations from their immediate contexts (Giddens, 1990). Apropos of expert knowledge systems, individuals place their confidence in these systems and, by extension, their lives are directly affected by the actions of distant others. Engagement in these expert systems, however, requires an attitude of trust which is required for people to take the ‘leap of faith’ when dealing with these systems because they neither possess detailed understanding nor technical knowledge about them (Giddens, 1990). Herein lies the relationship between risk and trust: trust serves “to reduce or minimize the dangers to which particular types

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<sup>169</sup> Giddens’ inclusion and treatment of the concept of trust is one way that his work differs from Beck.

of activity are subject” (Giddens, 1990, p. 35). In the process, the experience of security is created.<sup>170</sup> Security is:

...[a] situation in which a specific set of dangers is counteracted or minimized. The experience of security usually rests upon a balance of trust and acceptable risk. In both its factual and its experiential sense, security may refer to large aggregates or collectivities of people – up to and including global security – or to individuals (Giddens, 1990, p. 36).

At this point, I deem it necessary to define what Beck and Giddens mean by the term ‘risk’. The term has semantic currency, having different meanings in different contexts. From the perspective of social theory, risk does not refer to the efficacy of people’s probabilistic thinking capabilities; rather, it is concerned with analysing and explaining the social and cultural constitution of everyday life (Wilkinson, 2009). However, a further distinction is also required. Giddens and Beck distinguish between the concept of risk, on the one hand, and threatening circumstances or events on the other (Beck, 2009a; Giddens & Pierson, 1998). Herein lies the social significance of risk. Threatening circumstances<sup>171</sup> are events that are spatially, temporally and socially determined; they are always past or present. In contrast, “risk is the *anticipation* of the catastrophe [or threatening event]” (Beck, 2009a, p. 9; original emphasis). Put another way, risks are:

... ‘becoming real’. At the moment in which risks become real – for example in the shape of a terrorist attack – they cease to be risks and become catastrophes [or threatening events]. Risk has already moved elsewhere: to the anticipation of further attacks, inflation, new markets, wars or the restriction of civil liberties. Risks are always events that are not yet real (Beck, 2009b, p. 293).

The anticipatory nature of risk renders the relationship between past, present and future critical to any interpretation of risk and its implications for social and economic life.

The concept of risk reverses the relationship of the past, present and future. The past loses its power to determine the present. Its place as the cause of present-day experience and action is taken by the future, that is to say, something non-existent, constructed and fictitious. We are discussing and

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<sup>170</sup> Trust is also foundational to Giddens’ notion of *ontological security*: the “confidence that most human beings have in the continuity of their self-identity and in the constancy of the surrounding social and material environments of action. A sense of reliability of persons and things, so central to the notion of trust, is basic to feelings of ontological security; hence the two are psychologically related” (Giddens, 1990, p. 92).

<sup>171</sup> Whereas Giddens uses the terms ‘dangers’ and ‘hazards’ (Giddens & Pierson, 1998), Beck (2009a, 2009b) uses the term ‘catastrophe’. Here, for the purposes of consistency and to avoid semantic confusion, I use the terms ‘threatening circumstances’ or ‘threatening events’.



arguing about something which is *not* the case, but *could* happen if we were not to change course (Beck, 2006, p. 65; original emphasis).

Thus, in tandem with the proliferation of risk as a means to govern social and economic life, society becomes increasingly preoccupied with the future, or, more specifically, with controlling the future (Giddens & Pierson, 1998). In this way, risk is described as ‘colonising the future’ (Ewald, 1987; cited in Beck, 1998).

...[the] future becomes a new terrain – a territory of counterfactual possibility. Once thus established, that terrain lends itself to colonial invasion through counterfactual thought and risk calculation. ...some sort of overall assessment of likely risks can be made for virtually all habits and activities, in respect of specific outcomes (Giddens, 2006, p. 31).

Giddens’ concept of the future as ‘a territory of counterfactual possibility’ is crucial to understanding the influence of the future upon present circumstances. Contemporary life is not simply characterised by an ‘orientation to the future’, rather than by an ‘orientation to the past’. The future influences the present through the contemplation of many “possible worlds”; at any given moment, there is “an indefinite range of potential courses of action (with their attendant risks) ... open to individuals and collectivities” (Giddens, 1991, p. 29).

Positioning the concepts of risk and security as sociologically important raises the following question: With whom does the responsibility lie for the management of contemporary risks faced by individuals? Here, insights from governmentality perspectives are useful. Similar to Beck and Giddens, theorists drawing upon Michel Foucault’s writings view the social preoccupation with risk as a consequence of modernisation; however, they differ *vis-à-vis* the nature of risk. From the governmentality perspective, expert systems (e.g., medical researchers, statisticians, demographers, environmental scientists and bankers) construct risks as phenomena; they bring risks into being (Lupton, 1999). Accompanying these expert systems are wider networks of institutions, apparatuses and discourses directed towards the co-ordination of society; that is, the exercise of ‘government’ in the Foucauldian sense: “to structure the possible field of action of others” (Foucault, 1982, p. 790). In turn, the construction, reproduction and dissemination of risk encourage individuals to practise an increasing number of strategies to avoid risk (Lupton, 1999). Thus, actuarial responsibility becomes increasingly privatised, a fundamental (but not the only) characteristic of what is termed ‘prudentialism’ as opposed to ‘welfarism’ which collectivises risk management (O’Malley, 1996).

Placing the responsibility for risk firmly at the feet of individuals is claimed to be a more efficient means of governing because individuals will become increasingly intent upon personally insuring themselves against adverse circumstances. Once responsibility is devolved to individuals, they must decide which risks are significant and which are insignificant, and opt

to participate in self-imposed strategies to protect themselves (O'Malley, 1996). Thus, risk avoidance not only becomes a form of rational self-government, but may be viewed as a moral enterprise. Rational (i.e., calculating) and responsible (i.e., moral) individuals will engage in behaviours that provide for their security against risk (O'Malley, 1996; see also Lupton (1999)). Critical to the suite of risk minimising behaviours in which individuals are expected to engage is the use of expertise and expert systems. The “prudent subjects of neo-liberalism” should assemble necessary information and enrol expert advice to responsibly exercise control over the many possible future harms inherent to living in a risk society (O'Malley, 2000, p. 465).

Up until this point, the discussion has primarily focused upon the pervasiveness of risk. However, there is a crucial distinction between the concepts of risk and uncertainty – they represent distinctive ways of governing through the future (O'Malley, 2000). Risk is understood in terms of statistical calculations and probabilities, which render the future, in part, predictable. Regarding uncertainty, the future is not statistically predictable. Distinct from risk, uncertainty provides a base “for governing through the future that – while ‘rational’ – [is] less formal and calculable, perhaps more lay or commonsensical” (O'Malley, 2000, p. 466).

It is not my intention to enter into macro-theoretical debate about the nature and significance of risk and uncertainty in a totalising sense. Rather, I examine the ways in which farmers' aspirations for wealth creation and autonomy over their enterprises contribute to their pursuit of security in an uncertain countryside. In this way, structuring for serendipity represents farmers' responses to the proliferation of risk discourses and practices that dominate late-modernity. That is, structuring for serendipity enables rural researchers to recognise risk and uncertainty as specific ways of “governing the self, economic activity and social relations” among Australian family farmers (O'Malley, 2000, p. 461). In the next section, I canvass the ways in which my farmer informants expressed concepts of risk and uncertainty.

### **Farming in an Uncertain Countryside**

Premised upon the concepts discussed above, patterns of land and water ownership can be understood as tangible expressions of farmers' attempts to create stability and continuity for their lives in an uncertain countryside. To substantiate this claim, in this section I provide the necessary backdrop against which farmers' aspirations for wealth creation and autonomy must be interpreted; that is, how threatening events, risk and uncertainty figured in farmers' narratives of farm development.

## Threatening Events and Risks in the Countryside

Agriculture is inherently uncertain: “the classic problem of agriculture” (MV\_3016M). Farmers are required to manage production risks in the contexts of climatic change and the biological rhythms of crops and livestock, over much of which they have little control. The environmental uncertainties to which they are exposed are compounded by economic, political and social uncertainties. Although the inherently uncertain context of agriculture needs to be recognised in all studies of farming, the particular operating circumstances that confronted the Murray-Goulburn Valley and Corangamite farmers immediately prior to this study need to be clearly understood.

The Millennium drought was a key driver of Australian agriculture during the first decade of the 21<sup>st</sup> century. Towards the end of this period, the Global Financial Crisis (GFC), and the subsequent acute drop in milk prices (2008-09), combined with the challenges of drought to create what one Murray-Goulburn Valley key informant described as the “perfect storm”. It was after this that “the rules [of agriculture] were re-written”. The prolonged dry period, together with record low milk prices during the GFC, and, in the case of irrigation farmers, severe water scarcity and high water market prices, combined to create situations never before experienced by the current generation of farmers. In many ways, this ‘perfect storm’ gave rise to a set of circumstances that undermined many different farm production systems.<sup>172</sup> This broader operating context, the timing with which each of these events impacted on individual farms, and the ways in which individual farmers were able to respond have undoubtedly shaped the narratives generated in this research and, by extension, influenced my analysis. But, it is precisely such events that constitute the uncertain and unpredictable character of the Australian farming sector in the 21<sup>st</sup> century; events that not only challenge, but also shape farm organisation. It is within this context of change that an examination of Australian family farms needs to be located.

At the farm-level, my farmer informants regularly reported a wide range of experiences that had detrimentally impacted upon their enterprises and, by extension, upon their sense of control over their circumstances. Many of these experiences concerned the wider macro-context of agriculture. These include the account provided by COR\_0702M about the time he was forced to purchase poor quality stock feed at high prices; MV\_3016M’s experience of having to pay very high prices for water to maintain his production system; fluctuating commodity prices (MV\_1926M: “As we found out a few years ago you can have half your milk cheque cut in half just like that”); increasing input costs (COR\_6402M: “It was just the input costs got out of

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<sup>172</sup> While these impacts may have been more severe in irrigation areas, during this time all farmers were dealing with drought conditions. In 2006-07, for the first time since records began, almost the entire state of Victoria was declared under the ‘exceptional circumstances provisions’, which initiate government assistance for drought-affected farmers (National Rural Advisory Council, 2007). Similarly, the GFC and reduction in milk price had implications for irrigation and dry land dairy farmers alike.

control, that's how the drought affected us was the input costs, not necessarily the growing season"); and, changing climatic conditions (MV\_2014M: "And then the floods came along and gave us another kick"; COR\_0335F: "We've only been in Australia for 7 years and, unfortunately, mother nature has not been very kind in that 7 years"). Other rural actors, namely landowners upon whose land farmers may have been operating, also posed challenges for farmers and their farm enterprises; for example, the instability and problems associated with MV\_1934M's leasing of land; and, COR\_0265M and COR\_0265F's lease agreement.

My farmer informants also spoke about threatening events with reference to adverse circumstances that they either perceived to be a feature of their wider farming communities or had witnessed in the lives of other farmers. Recall from Chapter 6 COR\_0068M's concern about how the value of his land might be diminished if he were to lease his farm to another farmer. He was similarly concerned about his own capacity to continue maintaining the value of his land assets as he aged having witnessed older farmers in his community allowing the condition of their farms to deteriorate. In another example, MV\_6251M and MV\_6251F juxtaposed their decision to sell their water shares to secure their financial position (Chapter 7) against reports of the difficult financial situations of other irrigators in their district. And, MV\_2115M and MV\_2115F, who were making significant improvements to their farm (Chapter 6), stressed their need to protect their equity levels because they had witnessed the sale of other farms after the owners had invested substantial amounts of money in them and no longer had sufficient equity to remain in business.

Farmers also transposed threatening events into risks, speaking about them in terms of adverse circumstances they wished to avoid, and outlining their avoidance practices. Elaborating upon two of the examples provided above demonstrates these dynamics. MV\_2115M and MV\_2115F were actively managing their equity levels, including making decisions about which assets they were prepared to use as security for financial loans. And, COR\_0068M and COR\_0068F were not yet in a position where they felt their land assets were at risk of devaluation because they still had the capacity to maintain them. However, in their telling of their farm life history they explained because they risked beginning to dislike milking cows, they adopted a proactive approach to the transition of their farm system from dairying to beef cattle farming (Chapter 7). The fact that they did so at a time when there was a downturn in the dairy sector (*circa.* 2003) suggests that they may adopt a similarly proactive approach by downsizing their land holdings in the future to minimise the risk of devaluing their land assets through unintended neglect. Recall also the case of COR\_0255M, who had not directly experienced negative consequences from leasing land, notwithstanding discontinued a leasehold arrangement to minimise the risk of detrimental outcomes. He saw leasing as risk prone compared to the higher degree of security offered by owning land (Chapter 7).

Similarly, farmers' attempts to create self-sufficient farm systems were predicated upon their anticipation of challenges caused by future increases in input costs and other unpredictable events that threatened their operating systems and enterprises more generally (Chapter 7). COR\_0342M and COR\_0342F, who grew the bulk of their own stock fodder, rationalised their recent purchase of new machinery in terms of how it enabled them to navigate future climatic changes more successfully.

COR\_0342M: ...for the money that we spent [on new machinery], you know, maybe we could've bought a heap of hay or a bit of silage, but then, but then what happens next year and the year after that, you know, and you have a drought year, everything is very expensive.

Farmers also rationalised their conservative approach to debt in terms of what may occur in the future. The small size of MV\_1810M and MV\_1810F's farm (56 hectares) was in part a reflection of their efforts to operate a cash business. Although they mortgaged the farm at the time of its purchase, they quickly cleared their land debt, and have opted not to aggressively pursue other land acquisitions which would require new mortgages. Their debt-averse position was entangled with their oppositional perspective regarding farming on higher levels of credit and the negative repercussions that may result. MV\_1810M said that farming on credit is "all right in theory, in practice, not so good sometimes. It's all right if things go good, but things don't always go good, as you probably well know".

By positioning farmers' narratives regarding wealth creation and autonomy against this backdrop of potentially threatening events and risks, I am not suggesting that farmers' lives have become inherently more risky. Instead, consistent with the Risk Society thesis, I am drawing attention to the pervasiveness of risk and its fundamental impact on farm life. The concept of structuring for serendipity also requires appreciation of another element of uncertainty in the countryside: the ways in which unexpected opportunities have impacted on the development of the 40 farms in this study.

### Opportunities in the Countryside

Inherent in the concept of structuring for serendipity is a sense of optimism that may seem at odds with the current discussion regarding the significance of risk and risk assessment to farm organisation. My use of the term 'serendipity' suggests beneficial outcomes when compared to the adverse outcomes that are typically associated with the notion of risk. Serendipity, however, enables the inclusion of a second element associated with the way in which uncertainty is a fundamental driver of farm organisation: the notion of opportunity.

My attention was drawn to the significance of unexpected opportunities by two discursive features that farmers used. First, farmers described a wide range of events that occurred during the development of their farms in terms of simply 'working out'. Examples of how farmers

expressed this sentiment included: “That's how it all worked out” (COR\_0068M); “It's just the way things have unfolded” (MV\_2098M); and, “...most things in our life just fell into place, just sort of dropped in our lap” (COR\_0255M). The second discursive feature farmers used to describe events during the development of their farms was ‘luck’. Events to which farmers ascribed a degree of ‘luck’ included: having good employers (if they had once been share milkers); having good land owners (if they were leasing their farms); owning a good quality milking herd; and, even the close proximity of their farm to areas from which they could access alternative feed sources. Both of these discursive features suggest that prior planning for many events had either not taken place or was difficult (perhaps impossible) to implement because, for the most part, each opportunity could not be anticipated. These dynamics of the availability of opportunities, and the uncertainty associated with the precise timing of opportunities, underpin the expansion of the farms in this study.

Focusing on these issues in the context of land, farmers’ acquisitions may be categorised into two groups: initial acquisitions and subsequent acquisitions.<sup>173</sup> Across both study sites, there were 98 subsequent land acquisitions, 72 of which were sufficiently described to allow assessment of the significance of opportunity amidst the events that led to the acquisition.<sup>174</sup> Two-thirds (67%) of these subsequent land acquisitions were attributable to farmers responding to unanticipated opportunities as opposed to deliberately seeking to expand their land holdings at that particular time. A good example here is the time when the land operated by COR\_6402M more than doubled. In Chapter 6, I detailed how COR\_6402M established a second milking herd when he responded to an opportunity to take over the lease of the farm that his brother was operating prior to the latter quitting dairy farming. Similarly, MV\_7366M and MV\_7366F, who purchased 81 hectares in 2006 (i.e., during the drought) stated, “It was just too good to refuse. ...you’ve just got to get 'em when you can too”. And, in Corangamite, COR\_7370M and COR\_7370F described their decision to lease 67 hectares across the road from their home farm as “too good an opportunity to let go and close by”. Conversely, the farm development narratives of those who had not expanded their land holdings cited lack of suitable opportunities to do so. For example, MV\_1873M and MV\_1873F observed how adjoining land only came up for sale at a time when they considered themselves too old to invest time and resources into expanding their land holdings.

To summarise, farmers’ dual narratives pertinent to the anticipation of risk and the reality of opportunities in the countryside reinforce the significance of the dynamic and uncertain contexts in which farmers pursue security of their economic and social lives. The role of opportunities in shaping the character of farm enterprises is not new. Indeed, exploration of the dynamic and

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<sup>173</sup> The term ‘acquisition’ is used here in the same way that it was used in Chapter 7. That is, an acquisition refers to all land bought into farm operations at a particular point in time, irrespective of the land area involved.

<sup>174</sup> Owing to time constraints, in some interviews not all land acquisitions could be explored in detail.



continual nature of farm organisation – rather than of farm types – during the first era of farm organisation research (see Chapter 2), revealed the ways in which the persistence of family farms in Britain derived in part from the opportunities that certain farm businesses had at their disposal (Marsden et al., 1986; Marsden et al., 1989; Munton & Marsden, 1991). The role of risk, however, is new. Taken together, risk and opportunity shape the countryside as a space of uncertainty. In response, farmers must organise their social and economic lives, certain only in the knowledge that unexpected adverse situations will arise and opportunities, which for the most part are unpredictable, will occur. In the next section, I examine the implications of this claim for theorisations of family farming.

### **Implications for Theorisations of Family Farming**

Structuring for serendipity positions the dynamics of risk and opportunity as fundamental parameters shaping the character of Australia's farm sector. This perspective encapsulates the dynamic, continual and heterogeneous nature of agricultural organisation at the farm-level and, by extension, builds upon the theoretical developments initiated in the 1980s (see Marsden et al., 1992; Marsden et al., 1986; Marsden et al., 1989). The scholarly proclivity to focus upon the transformation of family farms under capitalism during the first era of farm organisation research limited theoretical insights to those derived from investigations of labour-capital relations in the agricultural sector. Nevertheless, Marsden and colleagues' comments provide a useful entry point for the argument made here:

The persistence of the family labour farm... derives less from the inherent resilience or survival of this ideal 'type' of farm organization, or its labour relations, than it does from the *constraints* and *opportunities* the transformation of the labour process provides. ... Family members of a farm business can be used in a multitude of ways according to the opportunities and constraints certain farm businesses have at their disposal, opportunities and constraints rooted in the particular historical conditions that such businesses have experienced (Marsden et al., 1986, pp. 510-511; emphasis added).

Put another way, the specific configurations of labour and capital in family farms are a reflection of past circumstances shaped by opportunities and constraints peculiar to individual farm enterprises. In contrast, the dynamics created by focusing upon risks and opportunities, rather than focusing upon constraints and opportunities, alert one to the influence that the future has on shaping farm organisation.



### The Dialectic between Farm Futures and Farm Histories

Farmers' aspirations to minimise risks – while also preparing to take advantage of unpredictable opportunities – construct the future as a “territory of counterfactual possibility”, to use Giddens' phrase (2006, p. 31). In turn, farmers are acutely aware of the degree to which their present-day decisions may impinge upon their capacity to protect their businesses and households in the future. This line of thinking is evident in their preoccupation with the specific, clearly-defined risks discussed in the previous section (e.g., fluctuating commodity prices and exposure to high water prices or input costs), and in their references to generic, ambiguous risks. By the latter I mean farmers' overall awareness that the future is unknown: a space in which adverse circumstances may, or perhaps are even expected to, occur. Examples from my farmer informants include: “If a spanner gets thrown in the spokes...” (COR\_2226M); “If dairy turns to s\*\*t tomorrow...” (MV\_3139M); “What happens when things get tough?” (MV\_1965M), “And when it comes to the crunch...” (MV\_1810M). While there was no evidence that farmers made precise calculations of risk probabilities, the above statements convey a process of risk assessment that continues to guide Australian farmers' thought and actions.

Similar to the influence of risks, the influence of opportunities on farm organisation is based upon the anticipation of future events rather than on historical circumstances. This represents an important distinction between the significance of opportunities to farm organisation as proposed here, and the argument made by Marsden et al. (above). Such a conceptualisation has important implications for the role of farmer agency in theorisations of family farming. (I discuss these dynamics later in this chapter.)

By focusing upon the risks and opportunities peculiar to individual farm enterprises that, in turn, highlight the significance of the future to the character of the farming sector, I am not, of course, suggesting that past circumstances are unimportant. Instead, the insights provided by the application of sociological debate *vis-à-vis* risk and uncertainty in this study reveal a dialectic between farmers' past circumstances and their imagined futures that is yet to be recognised in the extant family farming literature. I argue that this dialectic is irresolvable: both the future and the past configure the various ways in which farm enterprises are organised.

The complex set of interactions between the internal and external relations of family farming are invariably located within specific historical and geographical conditions (Marsden et al., 1986; Munton & Marsden, 1991). Although the preceding discussion has illuminated the significance of farmers' focus upon the futures of their businesses and households, the organisation of the farm enterprises in this study has also been influenced by historical specificities. As demonstrated in Chapter 5, I observed a high degree of stability with regards to the ownership of farm businesses and assets. In cases where changes to the ownership of the farm business had been made, there were no clearly discernible patterns. Although changed

social relations within farm households were the most common events to trigger changes in legal forms (e.g., changes to a farmer's relationship status or the departure/death of a business partner who was typically also a family member), the timing and specific circumstances of these changes were highly idiosyncratic. When combined with the knowledge that the legal forms used by farmers are relatively enduring, farmers' circumstances at the time when decisions are made become highly significant.

Of equal significance, however, are farmers' financial advisors. While farmers' changed circumstances may initiate a re-evaluation of how farm enterprises are organised, they rely heavily upon their accountants to make decisions that are in the best interests of their businesses and households. For this reason, farmers' accountants are crucial intermediaries, negotiating the needs of individual farmer clients alongside their professional interpretations of legal and business frameworks (i.e., the jurisdiction of relevance) which, in turn, determine the range of options available.

The same historical dynamics influence ownership structures for land and water. In the context of farmers' preferences for accumulating personal/family wealth via the appreciation of land and for maintaining high levels of control over their enterprises, they quite rationally opt for individual ownership. Where individual ownership of land is not uniform within a given farm enterprise, the variability typically reflects social relations internal to the farm enterprise and/or the use of family members to mobilise sufficient capital. As a consequence, the prevalence of owner-occupation in Australian farming becomes further entrenched.

Herein lies a crucial element of structuring for serendipity. The future expansion and configuration of farmers' land holdings is forged at the time of farm establishment that, in the case of most farmers in this study, coincided with either their initial land acquisition or their decision to return home to their parents' farm. Farmers' decisions to purchase a particular land parcel or group of land parcels embeds and enmeshes their enterprise into a particular set of present and future networks of land ownership. This landscape of land ownership is simultaneously a place of opportunity and risk for individual farm enterprises.

Implied in the discussion so far is the importance of freedom of agency as farmers respond to risks, uncertainties and unpredictable opportunities. However, agency needs to be more than implied within theorisations of family farming, a phenomenon I explore in the next section.

### Farmer Agency (Still) Matters

Farmers deliberately organise their enterprises to retain as much choice as possible over the future circumstances and security of their enterprises. In the context of structuring for serendipity, building wealth and sustaining autonomy are not the by-products of passive processes: they are the products of farmers' deliberate attempts to create what other authors

have termed ‘farmers’ room for manoeuvre’ (Johnsen, 2003). That is, farmers’ capacity to adapt to myriad changed circumstances.

The primary mechanism used by farmers in this study to create room for manoeuvre was individual ownership of land and water assets. Secondary mechanisms included growing large quantities of stock feed on-farm, employing conservative debt practices, and maintaining flexible farm enterprises. While the combination of these factors varied between farmers, their use was typically articulated as a means to maintain their control over future circumstances. The outcome of these practices has been that farmers remain cautious of changes to the organisation of their farms that may compromise their future autonomy, such as contract farming, machinery sharing, conservation management agreements (Gasson & Errington, 1993). And, I would add, leasing.

This interpretation differs from Johnsen’s (2003) actor- and context-sensitive model of family farming, in which she highlights how the structural attributes of farms – and the local biophysical, economic and cultural conditions – all play a role in shaping “farm families’ experiences [of macro-economic change] and [their] room for manoeuvre” (Johnsen, 2003, p. 146). Johnsen acknowledges that farmers’ room for manoeuvre intersects with their willingness to act. In effect, two farmers with similar sets of conditions may respond quite differently, resulting in diverse farm-level outcomes that are a combination of farmers’ actions and their structural conditions. Put another way, while differing responses between farmers account for variance in farm organisation, the space in which they are able to act – their room for manoeuvre – is determined by structural attributes (e.g., equity levels that are, in part, determined by the stage at which a farm is in its enterprise lifecycle).

Although there are obvious associations between farmers’ equity levels and the stage of their respective enterprises, this study has revealed how farmers themselves actively shape their room for manoeuvre. Good examples are COR\_0350M and COR\_0350F’s reluctance to purchase all of the land that was available when they made their second acquisition in the interests of maintaining manageable debt levels at an early stage of the development of their enterprise (Chapter 7), and MV\_6251M and MV\_6251F’s decision to sell their high reliability water shares in order to increase their equity (Chapter 6). In both cases, these farmers explained how their decisions were motivated by their desire for a more secure or flexible operating context.

This perspective extends Johnsen’s actor-sensitive model. Neither the scope of the farmers’ room for manoeuvre at a given point in time, nor the structural attributes that delineate this space are of central concern: what really matters is that from the outset farmers actively seek and create circumstances in which they are able to adapt to changed conditions. However, it is important not to confuse this perspective of farmer’s agency with strategic action (Evans, 2009). In both of the examples cited above, the farming couples did not necessarily set out to purchase

extra land or to sell their water shares. Rather, buying land and selling water shares aligned with their motivation to minimise risk and enhance the flexibility of their enterprises. What appears to be strategic action on the part of farmers – e.g., expanding farm operations – “plausibly implemented under prevailing conditions is predominantly one of a set of steps” (Evans, 2009, p. 228). These steps are not taken to maintain “a (culturally ingrained) fixed vision of the farm business”, as Evans (2009, p. 228) argues; rather, they are taken to increase stability and continuity in farmers’ lives under prevailing conditions. At the same time they cater for the likely emergence of serendipitous opportunities that may benefit the farm business and/or household. The farmers’ chief mechanism for achieving these ends was land ownership: herein lies the significance of conceptualising property as a facilitative device (Voyce, 2007), which returns us to core themes addressed earlier in this thesis.

## Land

Farmers use individual land ownership as a facilitative device to achieve their aspirations for wealth creation and autonomy which, in turn, contribute to farmers’ experiences of security (Giddens, 1990, see above). As discussed in Chapter 2, ‘facilitative devices’ are derived from ‘facilitative laws’ “which do not impose duties or obligations [upon individuals], [but] instead provide individuals with the facilities to achieve their goals” (Voyce, 2007, p. 137). When viewed in this way, land ownership can no longer be regarded as simply synonymous with family farming. The ways in which farmers elect to enrol land in farm operations must, at least in part, be viewed as deliberate decisions reflecting their business and personal aspirations. Farmers consciously eschewed the theoretical benefits of financial flexibility associated with leasehold arrangements in favour of investing large amounts of capital in the ownership and improvement of their land holdings. But, here I want to stress that these preferences do not suggest that all lease-farming situations are risk-prone and are doomed to have detrimental outcomes. Rather, viewing one’s farm as a means of securing one’s future asset-based welfare ‘relies upon a balance of risk and trust’ (Giddens, 1990). By investing in land, farmers demonstrate a willingness to expose themselves to the financial risks associated with high levels of debt, rather than to the risks they perceive to be associated with the leasing of land. Put another way, farmers consider themselves able to exert a higher degree of control over their financial affairs using conservative borrowing practices when compared to the unpredictability of linking the future of their businesses and households with the lives of other landowners. Thus, despite the ways in which finance capitals have been reported to increase the vulnerability of family farmers (Marsden et al., 1989), in the broader context of risk and uncertainty in the countryside, owning land becomes one of the best mechanisms for farmers to minimise risks and, by extension, control their social and economic worlds. Similarly, without the ownership of

land, farmers' capacity to respond to unpredictable opportunities for farm expansion is curtailed due to lack of equity (i.e., capacity to mobilise capital).

The influence of trust emerges when the land market is considered an abstract system (Giddens, 1990). In order to achieve their goals of building wealth and creating autonomy, farmers must trust the stability of property as a social institution, (i.e., that they have a secure occupation until such time as they wish to dispose of their land) and they must trust in the likely capital appreciation of land. In this way, farmers are "active... participants in the speculative rise in land prices, rather than the passive victims of outside speculators or of a land market with a mind of its own" (Whatmore, 1986, p. 114). They are 'citizen-speculators' (Allon, 2010) and their farms are their primary vehicles for investment. Viewed from this perspective, land ownership is less about the past and family (or individual) attachment to land than it is about securing one's future. Theorising the role of land as solely reflecting farmer attachments to 'a piece of dirt' diminishes a vital aspect of contemporary family farming in Australia. While tangible expression of farmers' discourses of risk and uncertainty with regard to land was broadly consistent across the research sample (i.e., land ownership is preferred and subsequently pursued), the ways in which these discourses manifested with regard to water were more complex.

## Water

The separation of land and water has generated a series of heterogeneous practices deployed by farmers for managing their water holdings. This heterogeneity emerges from the different approaches farmers employ to assess the risks and uncertainties associated with water ownership. Farmers will own and not own water based upon the same discourses of risk and uncertainty. For example, retaining all of one's water holdings was viewed as a means to secure one's enterprise in the future because water ownership always guarantees access to (at least) some water to maintain farm operations (e.g., Farm MV\_6327, Chapter 7). Selling all of one's water was similarly viewed as a means of securing one's enterprise because using the proceeds to reduce debt ensured that the financial circumstances of the farm would be less precarious (e.g., Farm MV\_6251, Chapters 6 & 7). Thus, farmers deploy both practices as a means to protect their farm businesses and their farm households. In this way, the separation of land and water may be considered an enabling device allowing irrigators to create a set of circumstances – as diverse as they may be – that counteract the specific risks associated with irrigated farming in 21<sup>st</sup> century Australia; that is, to create the experience of security for themselves and their families (Giddens, 1990, see above).

But, this line of argument gives rise to the following question: What specific risks and uncertainties are irrigators seeking to counteract when making decisions regarding the

configuration of their land and water holdings? Before addressing this question, I briefly return to the guiding principles for the separation of land and water titles contained in the National Water Initiative (NWI), Australia's blueprint for water management (see Chapter 3). The NWI outlines 10 objectives that, when achieved, will demonstrate the full implementation of the agreement: two of these objectives are relevant to the present discussion. The first objective of the NWI concerns the development of "clear and nationally-compatible characteristics for *secure* water access entitlements" (Intergovernmental Agreement on a National Water Initiative, 2004, para. 23; emphasis added). To achieve this objective, legislative change is required at the state level to clearly specify the statutory nature of water access entitlements which, in turn, would "enhance the *security* and *commercial certainty*" of them (Intergovernmental Agreement on a National Water Initiative, 2004, para. 25; emphasis added). In Victoria, the relevant legislative changes were made in the various amendments to the *Water Act 1989* (Victoria).<sup>175</sup> The intent of the sixth objective of the NWI is to achieve "clarity around the *assignment of risk* arising from future changes in the availability of water from the consumptive pool"<sup>176</sup> (Intergovernmental Agreement on a National Water Initiative, 2004, para. 23; emphasis added). Thus, the NWI specifically pre-empted changes to water availability in the future resulting from: 1) "seasonal or long-term changes in climate"; 2) "periodic natural events such as bushfires and drought"; 3) "bona fide improvements in the knowledge of water systems' capacity to sustain particular extraction levels"; and, 4) changes in government policy (Intergovernmental Agreement on a National Water Initiative, 2004, paras. 48-50). Each of these factors has the potential to reduce either the availability or the reliability of water allocations made against entitlements. Both of these possible scenarios are framed as risks. In turn, the NWI outlines a framework for determining how these risks are shared between the water users and the Commonwealth and state governments depending upon which of the above factors contributes to any loss in the availability or reliability of water allocations. Holders of water access entitlements (i.e., irrigators and other water users) are to bear in perpetuity the risks of water reductions arising from seasonal or long-term changes in climate and/or periodic natural events. Similarly, water entitlement holders will assume the risks associated with improvements in the knowledge of water systems up until 2014, after which time any reductions will be shared in various ways between entitlement holders and governments. The state and/or national governments are responsible for 100 per cent of any reductions arising from any other changes in policy.

In both objectives, the language of risk and security is obvious. This research demonstrates that preoccupations with risk and security are also evident at the farm-level; but, they manifest in

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<sup>175</sup> These amendments include the orders declaring water systems in northern (2007) and southern Victoria (2008), as well as the respective rules to convert prior water rights to water shares (see Chapter 1 & footnote 124, p. 129).

<sup>176</sup> See footnote 30, p. 16.



different ways. Rather than discussing their water holdings in terms of increased commercial certainty resulting from legislative and policy reform, irrigators in this study situated their water ownership decisions within a broader narrative of uncertainty constituted by the melange of changes made to the ownership of water, its use, and its administration systems. Farmers' experiences of these changes, and the intensity with which they have occurred, are translated into one of the most significant risks farmers must negotiate to maintain stability and continuity in their lives. Thus, it is not the separation of land and water *per se* to which farmers are responding; rather, they are negotiating the risks and uncertainties associated with the complex network of factors that contribute to the practice of water management in Australia's irrigation districts.

In the context of these risks, the water market as an abstract system does not engender widespread trust among all farmers. As in the case of land, the advanced liberal rationality of the water market has rendered water resources calculable. As was demonstrated in Chapter 6, calculative practices have been incorporated into farmers' discourses about their water holdings. But, these practices do not translate into consistent land and water configurations. While some farmers consider the financial appreciation of their water holdings to be inevitable, for others the theoretical possibility of farming without owning water shares challenges their ingrained assumptions about what it means to be an irrigator in the Murray-Goulburn Valley. In other cases, farmers have incorporated new ownership models for water into their enterprises. The resultant configurations of land and water ownership are expressions of a social rationality wielded by farmers; that is, a reflection of their pursuit of a sense of security in an agricultural sector wherein "nothing seems certain anymore" (MV\_2098M).

In sum, the farmers' management of their water holdings was more about the risks they perceived to be involved in conducting agricultural business in a highly variable and unpredictable water policy context than about taking advantage of the theoretical opportunities for unique configurations of farming assets afforded by the separation of land and water titles. Before concluding this chapter, I return to the claim that I made in the introduction regarding the position of intergenerational farm transfer in theorisations of family farming.

### Decentering Intergenerational Farm Transfer

Discourses of risk and uncertainty, as they pertain to the ownership of land and water, highlight the need to reconsider the place of intergenerational farm transfer in the current theorisations of family farming. The argument laid out in this chapter suggests that the organisation of farm enterprises is simultaneously a reflection of wider societal structures and human action. The dynamics between these two processes, as well as those between the past circumstances of family farms and farmers' preoccupations with the future, may be represented by the concept of



‘structuring for serendipity’. State action, whether in the form of changed water policies, the available legal forms within which economic activity may be conducted, or land tenure instruments set the structural conditions for differential responses by individual farmers. Within these conditions, farmers seek to build wealth and to sustain their autonomy as they actively negotiate risks, uncertainties and opportunities in their attempts to construct their social and economic worlds in ways that will minimise their exposure to harm.

This interpretation allows for the decentring of intergenerational farm transfer as one of farmers’ primary aspirations. This decentring is required for two reasons. First, farm-based research demonstrates considerable diversity regarding the significance of intergenerational succession and inheritance among Australian farmers. While, on the one hand, the results of a large-scale survey undertaken in Australia in 2004 showed a high rate of intergenerational land transfer (64% of respondents were working land that had been worked by an earlier generation/s) and a high proportion of respondents (51.6%) nominating a farm successor (Barclay et al., 2007). On the other, the results of smaller-scale studies suggest that among some groups of Australian farmers there were high levels of uncertainty about whether intergenerational farm transfer would take place (Crockett, 2004; Reeve, 2001; Wheeler, Bjornlund, et al., 2012). Furthermore, Nalson and Craig (1987), citing studies dating back to the 1960s, claimed that inheritance patterns in Australian agriculture had more to do with farming as an occupation than with intergenerational ownership of particular land parcels. The implications of these seemingly conflicting results are that there is likely to be considerable variation regarding the significance of farm succession and inheritance among a nation’s farming population. Thus, it should not be assumed that present-day farm organisation is heavily influenced by farmers’ desire to pass on a sound agricultural business.<sup>177</sup> The knowledge that some farmers inherited their land and that some have identified a successor does not directly lead to the conclusion that intergenerational transfer is one of the primary motivations of the current generation of farmers.

The second and more important reason for not assuming that all farmers want their offspring to take over the farm was the low rate of intergenerational land ownership among my farmer informants. For the majority, intergenerational transfer was not an option because their children were not interested in farming. In addition, the nine farming couples who were yet to make a definitive decision because their children were too young showed no indication that they were actively preparing for their children to take over their farms (see Chapter 4). Unarguably, there are obvious associations between farmers’ lifecycle stages, the ages of their children, and, the precise time when the need for farm continuity or otherwise becomes clear. But, rather than

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<sup>177</sup> It should also be noted that the survey reported by Barclay et al. (2007) was conducted in 2004. The Millennium drought continued until 2009-10. The degree to which farm succession and inheritance patterns have been impacted by these difficult farming conditions remains unknown.

assuming that “a significant dynamic of family farming is ... to prepare for [family] continuity *despite* the problems of maintaining family income levels and the costs of production” (Marsden et al., 1989, p. 10; original emphasis), one may assume that a significant dynamic of family farming is to maintain family income levels and create sufficient wealth for retirement in the context of *uncertain* continuity requirements. I concur with de Raymond (2013), who concludes that alternative interpretations of the reproduction and transformation of family farming are required; that is, interpretations that are not wedded to rural ideology and intergenerational farm transfer. Structuring for serendipity provides one such interpretation.

## Chapter Summary

In this penultimate chapter, I have sought to explain contemporary farm organisation in social scientific terms. I have developed the concept of ‘structuring for serendipity’ to account for the diversity of ownership models for farm businesses and the primary productive assets of farming. I began the chapter by drawing attention to the Risk Society thesis advanced by Beck and Giddens, who posit that the dominant structural conditions of modernity are shaped by notions of risk and uncertainty which reconfigure the relationship between past, present and future. I then canvassed the ways in which these concepts were apparent in my farmer informants’ narratives.

I pointed out that during the first era of farm organisation research, efforts to move static typologies of family farms within capitalist agriculture towards more dynamic theorisations revealed the pivotal role of historical constraints and opportunities peculiar to individual farm enterprises. From a Risk Society perspective, a framework of risks and opportunities expatiates the degree to which farmers’ preoccupation with the future influence their present-day thought and actions. Taken together, the extant literature and my interpretation reveal a hitherto under-reported dialectic between historical circumstances and farmers’ imagined futures.

The dynamics between the past and the future and risks and opportunities give rise to a range of ownership models for farm businesses and the primary productive assets of farming that simultaneously reflect traditional forms of agrarian organisation (i.e., owner-occupation) as well as forms of organisation suited to modern conditions of risk and uncertainty. While the specific activities that farmers engage in vary widely, they are similar in that they are all expressions of a desire to create a sense of security in their lives.

## Chapter 9

# Conclusion

### Returning to the Beginning

At the beginning of this thesis, I set out to respond to Brookfield's (2008) claim that it is time to invert the old agrarian question; that is, to examine the organisation of family farms from a perspective that considers them an enduring and adaptable form of agricultural production. Drawing upon this perspective, I sought to reinvigorate farm-based research that focuses upon the underlying dynamics and processes of the farm unit.

In Chapter 2, I outlined the key arguments substantiating the research gap to which this study contributes. I canvassed the development of macro-structural accounts of rural change. Many of these accounts focus upon the significance of shifts away from traditional productivist usage of rural space towards non-agricultural (post-productivist) usage, and the resultant reconfiguring of relationships between farming, policy, food and nature. In recent years, researchers have paid increasing attention to 1) the co-existence of productivist and post-productivist values, and, 2) the resultant spatial heterogeneity arising from differences in the degree to which multiple rural values and uses are expressed (multifunctionality, multi-functional rural transitions). Notwithstanding this multiplicity, researchers are also reconsidering theorisations of productivist values within macro-structural accounts (neo-productivism). In light of this latter trajectory, I deemed it timely to complement these macro-scale accounts with up-to-date micro-scale studies of agricultural change at the point of production (Evans, 2009).

Many of the micro-scale studies reporting agrarian change at the farm-level emerged in the 1980s and early 1990s (the first era of farm organisation research). These efforts, which in the main aimed to understand the economic centrality of agriculturally-derived income and the processes of subsumption at the farm-level, were curtailed by the emerging post-productivist research agenda at the time. Development of this particular research trajectory spawned the now widely-accepted concept of the 'farm adjustment strategy', which formed a conceptual bridge to the second era of farm organisation research. This more recent albeit smaller body of literature has been characterised by an unshackling of farm-based research from the concept of farm adjustment strategies. Instead, focus has centred on the socio-cultural dynamics underlying the organisation of farms and their transformations within the conditions of 21<sup>st</sup> century agriculture. Despite these developments, critical actor-oriented studies conducted at the farm-level, which are nested in the broader context, remain limited, a literature gap especially marked in the Australian context. It is into this research space that this thesis makes a unique contribution.

Johnsen's (2003) approach to family farms as three-way coalitions between the farm business, the farm household and the farm property provides a framework through which to address this knowledge gap in a way that is eminently suited to the contemporary Australian agricultural sector. The farm property is not merely a physical space in which its material aspects shape the ways in which farms are organised (Johnsen, 2003). It is also a facilitative device that farmers may deploy to meet their business and household aspirations. As this thesis has demonstrated, farmers deploy their primary productive assets of land and water according to a series of logics that represent their aspirations for building wealth and pursuing autonomy to protect themselves, their families and businesses from harm. While these aspirations entrench owner-occupation of land among Australian family farmers, they engender diversity *vis-à-vis* farmers' ownership of water.

With Evans, I conclude that there is renewed need to study farm enterprises and their internal logics. According to Evans (2009, p. 229), this perspective provides "a fundamental level of detail not established by research which is more topic focused". In this study, I have sought to provide an enhanced understanding of farmers' responses to the separation of land and water titles, and, in the process, have made three important conceptual contributions to the study of family farming more generally. First, the socio-economic organisation of farms has been positioned to reflect the ways farmers negotiate risks and opportunities rather than constraints and opportunities (c.f., Marsden et al., 1986). Risks and opportunities are the key parameters of what I term 'structuring for serendipity', a concept that elevates uncertainty and insecurity to critical drivers shaping farm-level responses to contemporary conditions. Consistent with the Risk Society thesis, structuring for serendipity highlights the influence of the future as a 'territory of counterfactual possibility' upon farmers' present-day actions and thought. When positioned within the extant farm organisation literature, the concept reveals a dialectic between farmers' past circumstances and their imagined futures between which the current organisation of farms is forged. Recognition of this dialectic is crucial to understanding change and stability at the farm-level. The tendency for farmers to 'structure for serendipity' is a fundamental element of "how rural places are [being] remade under globalization" in the 21<sup>st</sup> century. It also accounts "for the differential geographies... across rural space" (Woods, 2007, p. 493) because the concept of serendipity encapsulates the ways in which rural actors respond to unique combinations of unexpected events across time and space through which differentiated outcomes are created.

The second conceptual contribution is the decentring of intergenerational farm transfer as one of the fundamental drivers of family farm organisation. Once decentred, alternative aspirations may be considered, namely building family wealth and pursuing of autonomy, jointly articulated through the concept of structuring for serendipity. Neither aspiration is inconsistent

with some farmers' objectives to build and maintain viable farm businesses for one or more of their children. Instead, up until the time when the need for family continuity of the farm is determined, intergenerational farm succession and inheritance may be positioned as one of many possible albeit uncertain, farm futures.

Third, this study has brought to the fore the structural influences of farmers' broader business and legal contexts in determining the organisational features of the farming sector. In concert with their financial advisors, farmers' deploy the legal forms and means to own property in ways that protect their incomes and best prepare them for self-funded retirement. Although there may well be associations between the legal forms used by farmers and the characteristics of their businesses and households, the legal forms available in a given jurisdiction frame the ways in which farm businesses are organised, which in turn, are shaped by the professional opinions and preferences of farm accountants. To date, these factors are virtually unrecognised in social scientific accounts of the unique characteristics of the Australian farm sector. Farm accountants' interpretations of the benefits of specific taxation regulations at a given point in time, and the efficacy of the regulations to minimise farmers' tax obligations may be the strongest determinants of the legal forms used among farmers.

## **Limitations and Future Research**

My thesis documents one interpretation of what was going on in the Murray-Goulburn Valley and the Corangamite farming regions in 2011-12 based upon intensive fieldwork practices conducted using a contemporary application of traditional qualitative research methods (i.e., in-depth interviews) suited to farm-based research (i.e., farm life history). As with all qualitative (perhaps social) research, however, it is, at best, a partial explanation given that it is impossible to generate a universal account of what is really going on in any social domain (Law, 1994). Many other potential stories explaining the data that I have generated are no doubt possible. The story I have chosen to tell concerns the ways in which the dynamics of risk, uncertainty and opportunity shape farm organisation. This came about inductively after I was sensitised to the significance of the concept of security during my fieldwork when farmers used the term to describe their aversion to leasing land and, in the case of the Murray-Goulburn Valley farmers, in the context of managing their water holdings. Similarly, my attention was drawn to the significance of serendipity while developing my analysis through farmers' use of the term 'luck' and the largely unplanned nature of many land acquisitions. But, it could have been otherwise. At this point in the thesis, it is important to acknowledge the methodological limitations of this study: the first relates to the interviewee selection process. Although the sample was randomly selected from a wider group of farmers who responded to an earlier postal survey, the

respondents' farming experiences, and their attitudes towards farm organisation may well differ from those who did not respond to the survey. Second, this study focuses upon Victorian farmers, primarily dairy farmers. As noted at several points in this thesis, Australian water reform is a highly spatialised process, the impacts of which not only differ between jurisdictions, but also between irrigation districts. Thus, the questions arise: How might farmers in other irrigation districts and in other Australian states express their farming aspirations? How might their experiences of Australia's water reforms be reflected differently in the organisation of their farms?

The third limitation arises from the lack of a gendered analysis of farmers' aspirations. This is attributable to the following reasons: first, although the data generated from the farm tours, and the interviews with farming couples include responses from both partners, the data was not analysed accordingly. The dynamics arising within multi-participant interviews may suppress the articulation of gendered accounts of farm development; thus, the results of a gender analysis using the data generated here may prove unsatisfactory. Arguably, this deficiency could have been overcome by conducting separate farm tours and separate interviews with male and female farmers. Herein lies the second reason for the absence of a gendered analysis. In light of the two-stage nature of the project, I opted to reduce the research pressure upon farmers in the interests of better maximising their cooperation. Apropos of the time factor, requesting separate farm tours and interviews in the case of farming couples – effectively doubling their commitment to the project – may have reduced their willingness to participate. Nevertheless, in their everyday management, family farms are highly gendered spaces (Alston, 1993; Argent, 1999; Whatmore, 1991). Investigation of the gendered dynamics of farm business, land and water ownership is a worthy topic for future research, particularly when the insights from this study are positioned alongside those from studies that reveal the gendered dimensions of farmers' retirement more generally (Riley, 2012).

Another promising research agenda arises from recent interest in evolutionary economic geography (see Tonts et al., 2012). The farm life history approach used here seems to inherently lend itself well to this emerging theoretical perspective. As elucidated by the concept of 'structuring for serendipity', possible trajectories for the development of an individual farm enterprise are likely forged at the time of farm establishment. Farmers' initial land acquisition embeds and enmeshes their enterprise into a particular set of present and future networks of land ownership which, by extension, shape opportunities for farm development. Thus, application of theoretical developments surrounding the notion of path dependence, and the existence of multiple possible paths created and reconfigured by the structural aspects of farms – together with the agency of farm actors – offer fruitful lines of enquiry.

## Reflections on Methods

This thesis makes a unique contribution to the literature reporting rural research practice by responding to Woods' (2012) observation that there is scope for greater critique of the practice of rural research and the means by which rural researchers generate knowledge. Rural researchers have made separate calls for greater theoretical attention to be directed towards the spatial aspects of farms (Johnsen, 2003, 2004) and for the physical space of farms to be more explicitly incorporated into research methods (Riley, 2010; Riley & Harvey, 2007a).

My engagement with – and extension of – the farm life history approach represents an attempt to integrate these two perspectives. This integration has been achieved by extending Johnsen's (2003) property domain of family farms to include the proprietary arrangements that farmers use to enrol land in agricultural production. In addition, it recognises the likely interrelationships that obtain between farmers' landholdings, their businesses and households. "The simple fact that land stays put while people move and form new relationships underlies the dynamic relation of landholding to social [and, in this case, farm] organization" (Brookfield & Parsons, 2007, p. 29). Consistent with the epistemological underpinnings upon which the farm life history approach is based, of most significance are the farmers' recollections of changes to their landholdings throughout the development of their farms and any concomitant changes to business and household. Put another way, changed farm boundaries reflect the altered social and economic domains of family farms.

This was the theoretical rationale I employed for adapting the farm life history approach and incorporating farm tours into an Australian-based study. By doing so, I have provided for future applications in other more diverse farming contexts. Importantly, my application of farm life history does not rely upon farmers' deep attachments to land, their farms or their communities (Riley, 2010). Undoubtedly these characteristics of farming culture remain highly significant drivers of farm organisation in some places (see Gray, 1998), but not necessarily all. In the context of emerging research that demonstrates the ways these drivers differ across time and space (Cheshire et al., 2013; Johnsen, 2004), grounding farm life history in the significance of property relations – which are arguably integral to many farming systems – rather than grounding it in the formation of farmers' identities makes the approach widely applicable to a range of farming contexts.

Notwithstanding these opportunities for broader application, in concurrence with Riley (2010) I conclude that the use of farm life history and farm tours is best viewed as a template rather than as a set of prescribed procedures. Integral to the approach, however, is the way in which the farm – *vis-à-vis* farm actors or certain farm practices – is positioned as the subject of enquiry. This important methodological shift offers a promising means of reinserting the "traditional agrarian heartland" back into the Australian rural research agenda (Tonts et al., 2012, p. 295). It



will enable researchers to bring farm business change (or continuity) to the fore, rather than focusing on farmers' adoption of certain activities (e.g., agri-environmental schemes, organic farming systems) which may or may not have a bearing upon farm organisation and agrarian change more generally.

From a practical perspective, this opens up possibilities for the physical space of the farm to be incorporated into research encounters, enabling rural/agricultural geographers to engage with two contemporary methodological developments in the wider social sciences. The first development concerns the ways in which different places alter the socio-spatial relations created during research encounters resulting in different kinds of information being generated (Anderson et al., 2010; Elwood & Martin, 2000; Sin, 2003); that is, “the relationship between what people say and where they say it” (Evans & Jones, 2011, p. 849). The second development is the emergence of “mobile methods” (Sheller & Urry, 2006, p. 217), in particular the practical advantages gained from using mobile (movement) interviewing (Anderson, 2004; Brown & Durrheim, 2009; Evans & Jones, 2011; Holton & Riley, 2014).

My experience of using farm tours also shed light on previously unreported issues that warrant researchers' attention. Specifically, the practical and ethical implications of different modes of transportation need to be carefully evaluated, including the cumulative effects of who decides how the researcher and participant will travel. Although the dominant use of motorised transport for my farm tours was a serendipitous development, it was advantageous from a practical perspective because it enabled me to visit the full extent of very large properties and, in some cases, to visit non-contiguous land parcels that required access via public roads. If all farm tours had been walked, my understanding of how multiple land parcels were organised as a single enterprise would likely have been inhibited.

From an ethical perspective, using motorised transport reflected my decision to delegate the choice of transportation mode to my farmer informants. In doing so, control of each farm tour significantly shifted towards participants. Unlike tours that were walked, as the passenger, I was unable to influence the pace with which the tour proceeded. This, in turn, impacted upon how the landscape triggered conversations during some tours because moving through the landscape more quickly curtailed in-depth discussions. Often we had literally moved on to another part of the farm that provided new visual triggers. Similarly, my inclusion of two study sites reveals how the material aspects of landscapes with differing topographies prompt research conversations to lesser or greater extents.

These experiences demonstrate how the efficacy of mobile interviewing can vary between research encounters within a research sample. Despite these differentiated experiences, the sequencing of motorised tours and the implementation of follow-up traditional interviews alleviated these shortcomings, crucially enhancing the potential scalability of mobile

interviewing for use in rural research sites larger than relatively small-scale individual farms (Smith, forthcoming).

## Concluding Remarks

Throughout my PhD research, I have come to know more about my parents' early years on the farm. Recall from Chapter 1 that two years after they acquired their own farm, the New Zealand government implemented radical agricultural reforms, which adversely impacted upon their financial situation. These unexpected reforms deviated sharply from the social democratic traditions of the New Zealand Labour Government in office at the time (Boston, 1987).

While the neoliberal rationalities underpinning these reforms paralleled concurrent political and economic changes in other western nations, the speed and comprehensiveness with which the New Zealand reforms were implemented were to say the least unique (Boston & Douglas, 2011). The 'New Zealand Experiment' (Kelsey, 1995) recast the future of New Zealand agriculture, a future that was altogether uncertain. How could New Zealand's farmers continue to farm without subsidies? Although the separation of Australian land and water titles has distinct differences to New Zealand's economic reforms, the implications for farming in an unbundled world have equally recast the future of irrigated agriculture within already uncertain agricultural conditions shaped by commodity markets, the government and the climate.

In light of current climate change projections, and the increasing importance of sustainable water management for social, economic and environmental prosperity, the Australian water reform agenda is unlikely to ever be complete. Changing climatic conditions will continue to test water management regulations, which will likely be revised and modified in the future, as will the costs of water delivery and access. Similarly, precisely how the federal and state governments will manage the water assets that they accumulated through the buy-back and infrastructure modernisation programmes via water market mechanisms is still unfolding. While the passage of time will see these processes create and reproduce continual change in myriad ways, the question remains: To what extent will irrigators continue to view these changes as risks that threaten the current and future stability of their social and economic lives? The central conclusion of this thesis is that farmers will not simply respond to specific economic and environmental policy changes: they will actively respond to and manage the uncertainty and insecurity that such policies engender, rendering risk and uncertainty key drivers shaping contemporary rural change at the farm-level. Pivotal to my argument is the dictum that farms are not simply places of work and places to live, albeit these remain crucial aspects. They are also sites in and on which farmers seek to build wealth, create autonomy, and ultimately, to pursue a sense of security in a constantly changing world.



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# Appendices

## Appendix 1: Extended Justification for Study Site Selection

The four study sites included in the wider ARC Project through which this work was supported were selected using the following process. First, a short-list was compiled of potential regions in Victoria that would meet the aims of the project. The short-list was determined by taking into consideration the size of the farming population in each region, their degree of drought and water-related stress (based on applications for state government drought assistance), homogeneity of the region and proximity to townships (radius from larger- and medium-sized towns). The outcome of this process provided ‘general’ areas that should be targeted. These general areas were the Mildura irrigation districts, Campaspe around Kyabram or Numurkah, Yarriambiack around Dimboola, Warracknabeal or Hopetoun, and Corangamite around Camperdown or Ararat.

The specific regions to be targeted were refined using information in the Australian Business Register (as at July 2010) from which the final research sample was drawn.<sup>178</sup> The Australian Business Register is organised according to postal addresses associated with a given Australian Business Number. On this basis, postcode boundaries were used to define the areas in order to achieve target populations that ensured populations of sufficient size were included, so that statistically robust samples could be expected for the purposes of the survey methodology used in the wider ARC project. After filtering by postcode, the register was further filtered in terms of agricultural industry resulting in four areas with particular agricultural industry specialisations. The final step in the process involved cleaning the register for duplicate businesses. These processes resulted in four study sites: 1) Wimmera (cropping, mixed-farming); 2) Sunraysia (grapes); 3) Murray-Goulburn Valley (irrigated dairy); and, 4) Corangamite (dry land dairy).

The Murray-Goulburn Valley and Corangamite were selected for inclusion in this study because general characteristics about each site met the needs of the project. The most important of these characteristics were outlined in the introduction, several other characteristics of the study sites that enabled the necessary data to be generated warrant mention though.

1. The rural economies of both districts are highly dependent upon agriculture, in particular dairy farming. In 2011, the agriculture, forestry and fisheries industries employed the highest percentage of people in the workforce in both study sites: Corangamite (30%) and

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<sup>178</sup> Access to the Australian Business Register was obtained by the wider project’s partner organisation, the Victorian Government’s Department of Treasury and Finance. A ‘Memorandum of Understanding’ with the Australia Taxation Office was entered into for the use of this database.

Murray-Goulburn Valley (16%) (Table 13 below). Manufacturing (15%) employed the second highest percentage of the labour force in the Murray-Goulburn Valley, although the major manufacturing industries are agricultural processing plants of dairy products (Murray Goulburn Co-operative's head office is in Cobram) and fruit (SPC-Ardmona near Shepparton).

**Table 13: Employment statistics for the Murray-Goulburn Valley and Corangamite study sites**

	Murray-Goulburn Valley		Corangamite	
	2006	2011	2006	2011
Total labour force	12,273	12,782	8,358	8,254
No. of persons employed in agriculture, forestry & fisheries	2,229	2,029	2,772	2,511
No. of persons employed in dairy farming	1,222	885	2,175	1,873
No. of persons employed in sheep, beef, & grain farming	349	483	374	417
No. of persons employed in fruit & tree nut growing	382	340	17	3
No. of persons employed in manufacturing	1,989	1,911	679	709

Source: (Australian Bureau of Statistics, 2006, 2011a)

NOTES: Postcode 3629 has been removed from the above figures because it includes the townships of Ardmona and Mooroopna, inclusion of which introduces an adverse distortion.

2. Victoria has typically led changes and innovation in Australian water management more broadly.
3. As two of the three dairy regions in Victoria, dairy products (milk) remained the biggest contributor to the value of agricultural production in Corangamite (64%) at the last agricultural census (2010-11). In the Murray-Goulburn Valley, during the 2000-01 (47%) and 2005-06 (45%) censuses milk products were the biggest contributor, but in the 2010-11 census, milk products fell to 39% of the value of agricultural commodities produced, the second highest contributing agricultural commodity (Australian Bureau of Statistics, 2012c; see Figure 19 & Figure 20 next page). The dairy industry was not specifically targeted, rather the dominance of the dairy industry is a consequence of the issue at hand – the separation of land and water access titles – which only applies in irrigation districts and, therefore, is only relevant to farming systems that utilise irrigation water.

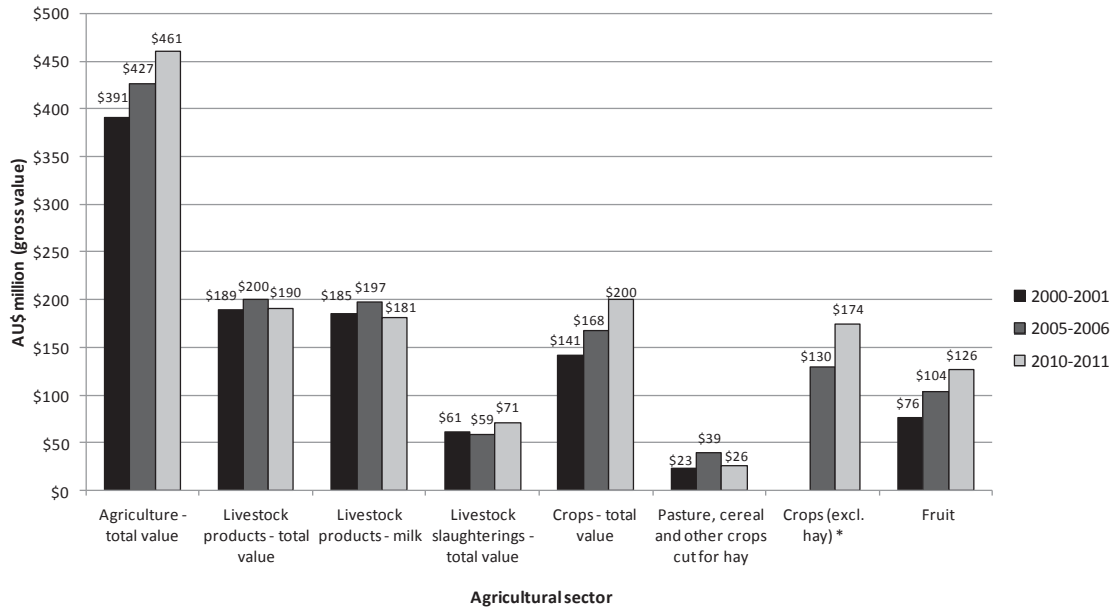


Figure 19: Gross value of agricultural production in the Murray-Goulburn Valley study site across three census years (Australian Bureau of Statistics, 2012c)

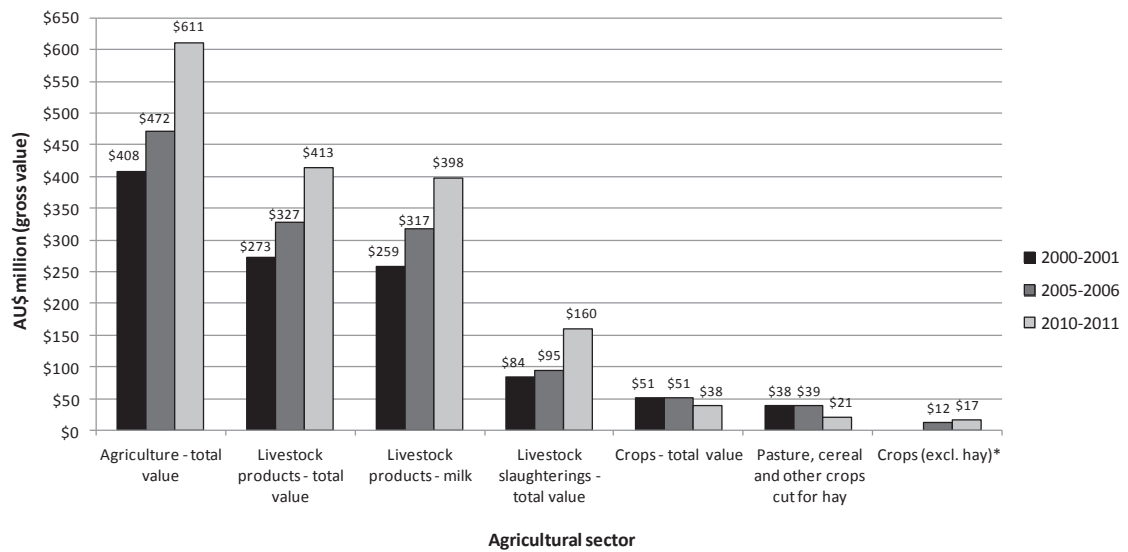


Figure 20: Gross value of agricultural production in the Corangamite study site across three census years (Australian Bureau of Statistics, 2012c)



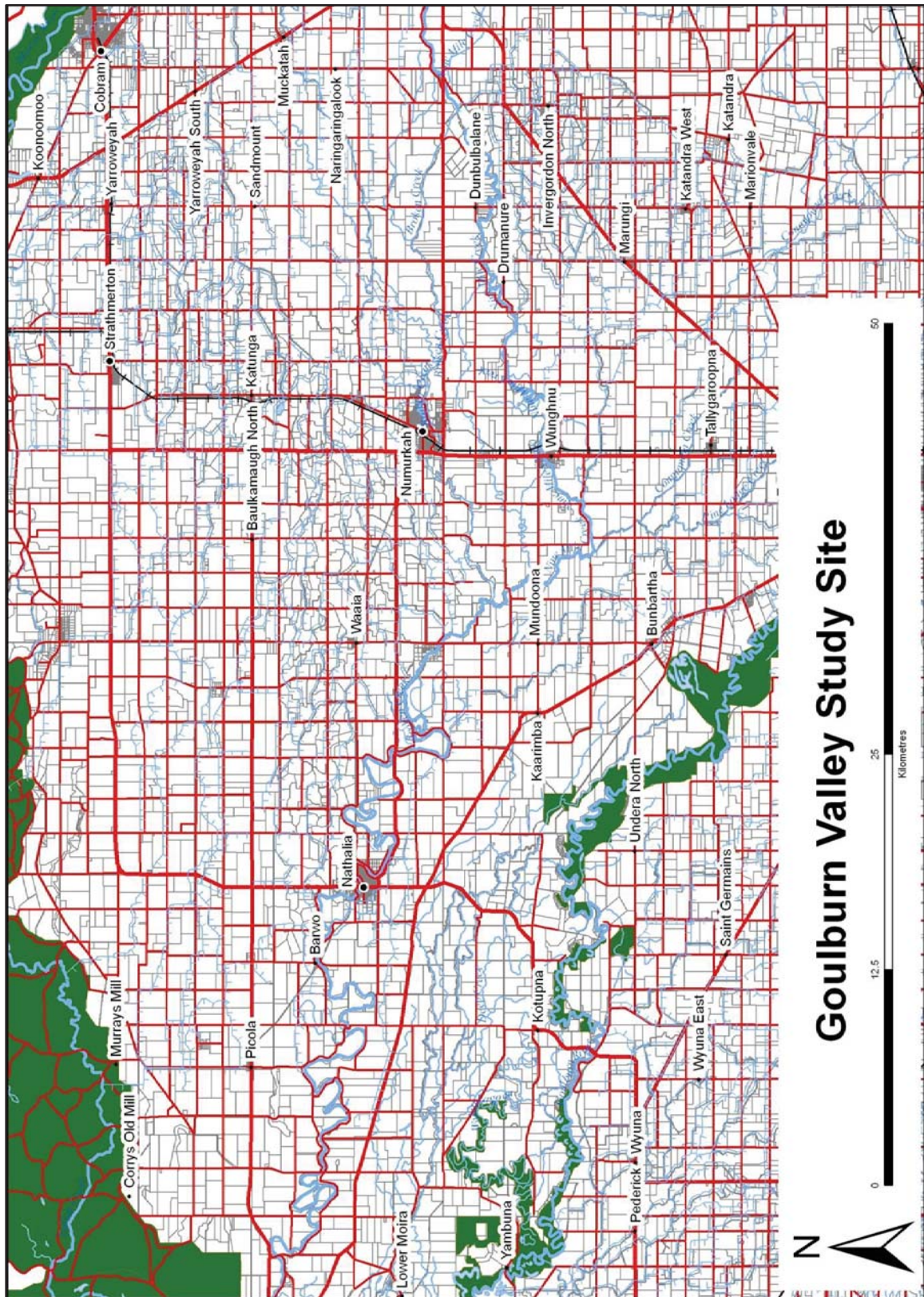
## Appendix 2: Agricultural and Land Use Characteristics of the Study Sites

**Table 14: Key agricultural and land use statistics of the Murray-Goulburn Valley and Corangamite study sites (2010-11)**

	Murray-Goulburn Valley	Corangamite
Land area – total (ha)	210,000	325,000
Land area mainly used for agriculture (ha)	196,000	310,000
Land area mainly used for agriculture – grazing on improved pastures (ha)	95,000	246,000
Land area mainly used for agriculture - crops (ha)	80,000	33,000
Land area – orchard fruit and nut trees (ha)	4,400	0
Value of agricultural commodities produced (2010-11)	\$461 million	\$611 million
Value of livestock products – milk	\$181 million	\$398 million
<i>Milk as a % of VACP</i>	39%	65%
Number of dairy cattle	113,376	252,855
Number of dairy cattle agricultural businesses	374	662

Source: Australian Bureau of Statistics

### Appendix 3: Murray-Goulburn Valley Study Site



## Appendix 4: Historical Water Allocations in the Murray-Goulburn Valley

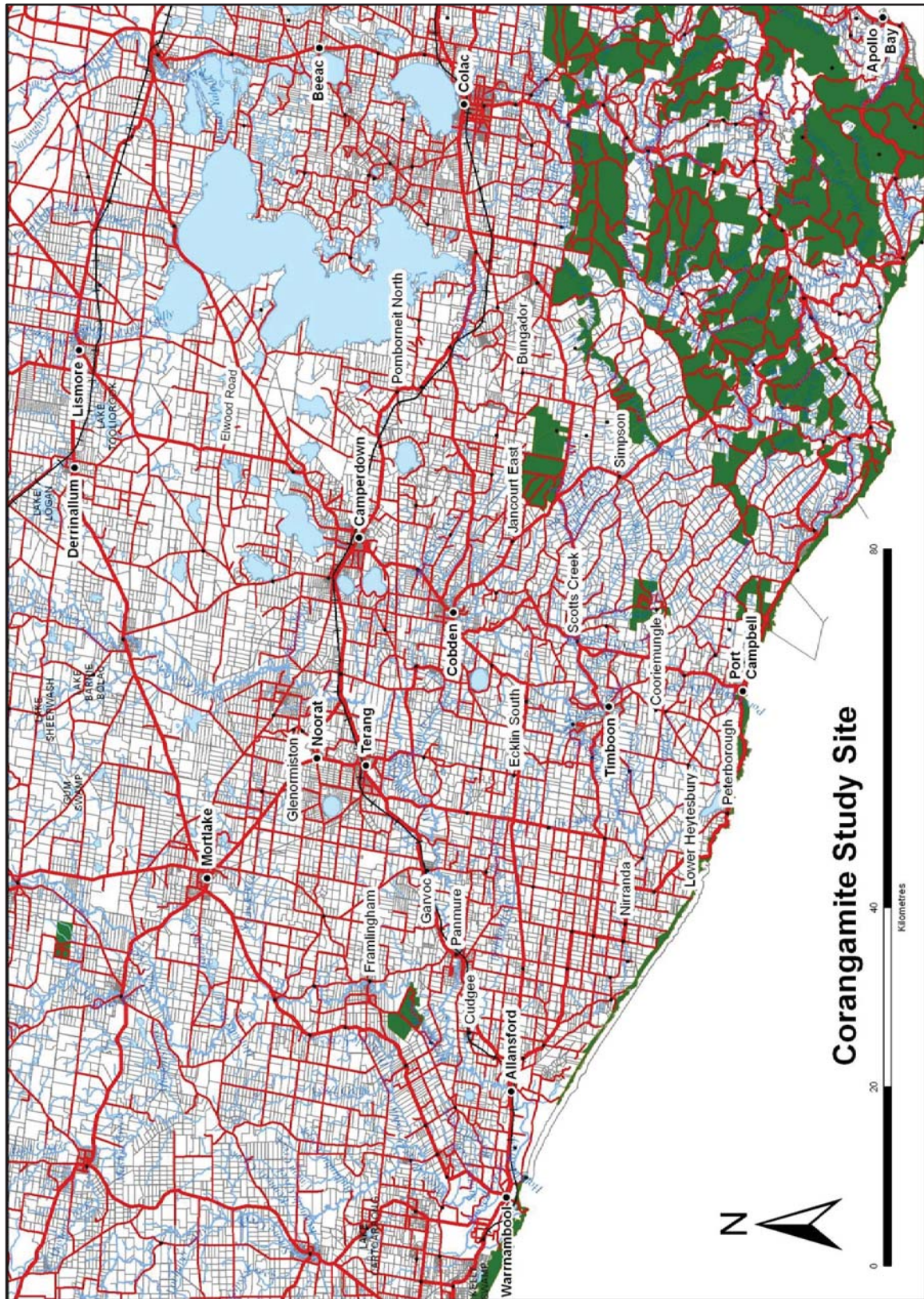
Table 15: Historical irrigation allocation data by system (end of season allocations)

Season	Murray System		Goulburn System	
	High Reliability Water Share	Low Reliability Water Share	High Reliability Water Share	Low Reliability Water Share
1994/1995	100	120	100	100
1995/1996	100	100	100	50
1996/1997	100	100	100	100
1997/1998	100	30	100	20
1998/1999	100	100	100	0
1999/2000	100	90	100	0
2000/2001	100	100	100	0
2001/2002	100	100	100	0
2002/2003	100	29	57	0
2003/2004	100	0	100	0
2004/2005	100	0	100	0
2005/2006	100	44	100	0
2006/2007	95	0	29	0
2007/2008	43	0	57	0
2008/2009	35	0	33	0
2009/2010	100	0	71	0
2010/2011	100	0	100	0
2011/2012	100	0	100	0
2012/2013	100	0	100	0
2013/2014	100	0	100	0

Source: (Goulburn-Murray Water, 2014b)



### Appendix 5: Corangamite Study Site



## Appendix 6: Four Types of Neo-Productivism

Table 16 (next page) presents the definitions of each type of neo-productivism in Burton and Wilson's (2012) typology. 'Market productivism', which was first reported by Tilzey (2000) in the European context, is one part of a "bifurcated agricultural industry" in which productivist and post-productivist sectors co-exist (Potter & Tilzey, 2005, p. 593). This co-existence, Potter and Tilzey (2005, p. 592) argue, is a result of a contested, bimodal policy arena that simultaneously attempts to "reconcile neoliberal imperatives with a continued commitment to state assistance in various forms". Market productivism differs from the earlier era of productivism because it is not driven by the political objectives of the Common Agricultural Policy (CAP); rather, under an increasingly neoliberal arm of European agricultural policy, productivism is perpetuated by market forces (Tilzey, 2000).<sup>179</sup>

'Competitive productivism', coined by Dibden and Cocklin (2005), describes a continuation of the post-World War II productive agricultural regime in Australia. Rather than being directly facilitated by government intervention, this type of neo-productivism is shaped by a new policy commitment to neo-liberalism which realigns political and economic actors through market liberalisation and an export-oriented economy. In a later paper, Dibden and colleagues (Dibden et al., 2009) suggest that competitive productivism is akin to the market productivism observed in Europe. Other researchers, however, argue that these two types are indeed distinct "as competitive productivism is actively facilitated by government whereas... market productivism is driven by corporate agriculture while the state promotes alternative approaches" (Burton & Wilson, 2012, p. 57).

Burton and Wilson (2012) developed the concept of 'cooperative productivism' during their study of the New Zealand dairy industry. In New Zealand, this form of neo-productivism is characterised by a productivist ideology harboured both by the farmers and the corporate objectives of the country's dominant dairy cooperative (Fonterra). Strong support from the central government was noted in the forms of funding and promoting of industry-led research, influence exercised upon local government processes, and the removal of trade barriers. However, these forms of intervention were qualitatively different from those of the productivist era because "there is no particular drive for productivism emanating from the government...but rather, it is [the government] facilitating the development direction chosen by the [agricultural] industries themselves" (Burton & Wilson, 2012, pp. 63-64).

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<sup>179</sup> Potter and Tilzey (2005, p. 595) note that in European agricultural policy the encouragement of market productivism, alongside a commitment to multifunctionality, enforces a segregation of rural space. That is, "producers in agricultural zones which have the potential to be economically viable at world market prices are to be given the 'freedom to farm' while operators in other, more marginal locations are to be subsidized and enabled to supply the amenity, nature conservation, leisure and quality products which come to define a residual, consumption countryside".



Burton and Wilson consider the above three types of neo-productivism as different expressions of Halfacree's (1999, p. 72) concept of 'super productivism' in which "land is treated solely as a productive resource linked to profit maximisation". The final type of neo-productivism is 'repositioned productivism', a re-labelling of Evans et al's (2002) concept of neo-productivism discussed in Chapter 2. Rather than being super productivist, repositioned productivism incorporates more sustainable practices within multifunctional systems (Burton & Wilson, 2012).

**Table 16: Definitions of the four types of neo-productivism provided by Burton and Wilson (2012, p. 67)**

	<b>Label</b>	<b>Description</b>
Type 1	Repositioned productivism	"Neo-productivism within multifunctional systems where the productivist element is moderated to fit in with multifunctional and/or sustainability objectives – or is at least made to appear to do so".
Type 2	Market productivism	"Neo-productivism driven by market forces that also coexists territorially with multifunctionality but, in this case, has not been moderated. This productivism, promoted by corporate food interests, is associated with the neoliberalism of governance – i.e., market productivism will strengthen if neo-liberal ideologies become more dominant or rigorously enforced".
Type 3	Competitive productivism	"Neo-productivism facilitated by neo-liberal governance and market driven. Unlike market productivism, in this case the productivist ideology comes from the State which strongly pushes commodity production while facilitating growth by allowing the consumption of environmental capital and clearing trade barriers. It is distinguished from 'old style' productivism by a lack of direct interference with market mechanisms".
Type 4	Cooperative productivism	"Neo-productivism driven by an alliance of cooperative governance, corporate objectives and state facilitation, again operating under neoliberal governance. Unlike competitive productivism, while the state provides a facilitating environment, it is the grassroots productivist ideology of the farmers themselves that ultimately drives the industry down this path".

## Appendix 7: Whatmore et al.'s Subsumption Thesis

**Table 17: Descriptions of the four 'ideal types' of farm businesses (Whatmore, Munton, Little, et al., 1987, pp. 32-34)**

Ideal Type	Description
Marginal, closed enterprises	<p>“...where individual family capitals own and manage the business and the land. The internal relations of production are controlled within the nuclear family with the ownership and management rights vested in the head of household or jointly with spouse, son or daughter. Labour is performed very largely, if not wholly, by family household members. The business carries few if any debts and these do not compromise more than temporarily the nuclear family's control of the family business. Enterprises in this category are usually small-scale, surviving on the margins of commercial agriculture as a result of either constrained consumption among family members and/or through the receipt of minor off farm sources of income such as pensions or yields on life savings”.</p>
Transitional, dependent enterprises	<p>“...where businesses remain owned and managed by individual family capitals, although some formal family partnership or company may have been set up for tax purposes or for reasons of succession. Land rights may be owned or part owned and the labour force may include some hired workers. These businesses are perhaps the most volatile in that they are at the point where they need to expand in order to remain viable but require increased capital and perhaps land to achieve this. They have limited links with external capitals, most commonly through technological inputs and credit, but often must choose between extending these links further or becoming marginalised in the longer term. How this decision is resolved is often crucially influenced by the presence or absence of one or more potential successors within the family household. Such businesses are suffering certain of the effects of the technological treadmill and may actively seek to supplement their household income and business capital through the development of non-agricultural sources of income and business interests. This latter approach represents a strategy of growing importance for those families who wish to retain their 'names on the land', especially where land is highly priced or simply difficult to acquire in the local area”.</p>
Integrated enterprises	<p>“...where the internal business structure of the farm is considerably more complex than in the two previous categories, either as a consequence of the development of corporate ownership and management structures involving family and unrelated individuals or through the development of multi-farm and possibly multi-sector businesses owned by the family or family-related companies. The pattern of land ownership is more diversified. As expansion comes to assume a dominating perspective in all business decisions more land is taken on, the business often renting it from a diversity of landlords, reducing internal control over the long term management of the land. Links with external capitals are extensive and actively pursued, reflecting high levels of capital investment in business development. High input-high output systems of farming are implemented, dependent upon large quantities of technological inputs even to the extent that expert skills and advice are bought in to apply them. Credit relations are extensive and contract marketing arrangements with the private sector are quite common. In these cases, the distinct relationship between an individual family household or capital and an individual farm business has been broken. The internal relations of production are no longer based on a family household. Labour is commonly hired with family labour often adopting a management orientated role and farm managers and contract labour may be employed. Such businesses are firmly set upon the technological treadmill and must continue to be dynamic and expansionist in order to remain viable”.</p>
Subsumed enterprises	<p>“...where the internal structure of the business has been taken over directly by corporate, non-family capitals, often non-farming (e.g. food processing or retailing companies) or even non-agricultural (e.g. property development or mineral extraction companies) in origin. The business becomes a subsidiary interest, run through a management company or by a manager and labour relations have been transformed in the sense that there is no 'family labour', only waged labour often hired on contract. In some cases these farm businesses are not run on strict commercial lines but act merely as means of meeting other corporate ends, such as providing future mineral reserves or sites for urban development. Where commercially orientated, however, links with external capitals are commonly extensive, particularly with regard to technological inputs and food processing and marketing. Credit relations may also be substantial but more complex in the sense of internal company 'lending' or the subsidisation of farming interests by other sectors or vice versa”.</p>



## Appendix 8: Further Information Regarding Selection of Farms and Recruitment of Farm Owners/Operators

**Table 18: Filtering criteria before study site populations were randomly ordered for sample selection**

	Murray-Goulburn Valley	Corangamite
Total responses	128	106
Insufficient information – not useable	2	5
No. self-identified as a farm no longer operating	17	8
No. self-identified as a farm ‘winding up’	2	1
No. who did not answer ‘farm status’ question	1	2
No. of respondents who did not wish to be contacted in the future or elected to remain anonymous	4	6
No. who did not provide an affirmative answer to the question “Is this farm able to trade its water allocation/entitlement?”	4	n/a
No. who cannot trade their water entitlement/allocation	2	n/a
Non-irrigated properties	1	n/a
Insufficient information provided	0	1
Other reasons <sup>180</sup>	3	0
<b>Total population from which sample was drawn</b>	<b>92</b>	<b>83</b>

<sup>180</sup> These reasons were 1) “To whom it concerns, this address is a residential address not a farm in [Murray-Goulburn Valley]”; 2) “We have received 2 copies of your survey. As there are only 2 people here I am returning these. We have sent our original questionnaire back”; 3) “Sorry we have retired from farming”.

## Appendix 9: Participant Invitation Letter – Farmer Respondents



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<Title> <First name> <Surname>

<Postal address>

<Suburb> <State> <Postcode>

<Date>

Dear <Title> <Surname>

In 2010, you completed a questionnaire for the *Farm and Household Intentions Survey*, which is part of a major research project into the restructuring of farming in rural Victoria, funded by the Australian Research Council and the Victorian Government's Department of Treasury and Finance. In the course of completing your questionnaire, you provided your contact details under the understanding that you were happy for the researchers to contact you in the future about subsequent stages of the project. I am writing to you to invite you to participate in another part of the research.

I am a member of the research team and studying for a PhD. My research will use data collected in the *Farm and Household Intentions Survey* to examine the ways that farmers organise their businesses and landholdings. However, to gain additional insights into these issues, I am also hoping to visit a sample of farmers to conduct interviews with them. No doubt, you would appreciate the need for researchers to understand the lives of farmers firsthand, if findings and interpretations are to be reported correctly.

The full details of these interviews are provided in the attached Participant Information Statement. In brief, I am asking that you meet with me on two occasions at times convenient to you.

- Once, during November 2011 when I'd like you to give me a tour of your farm so I can better understand the nature of your farm system and the local context in which you operate.
- The second meeting would take place during <month> 2012 where we would discuss changes you have made to your farm business since you took over the management and/or ownership of the property, in the context of changing environmental policies. Each meeting would take approximately one to two hours, depending on the time you have available.

Your involvement in this research is completely voluntary. If you are willing to participate in this research, please contact me using the contact details on the top of this letter.

Thank you for your consideration of this request to be interviewed. If you require any further information, please don't hesitate to contact me either by phone on 0410 207 852 or by email [erin.smith@sydney.edu.au](mailto:erin.smith@sydney.edu.au)

Yours sincerely


Erin Smith

## Appendix 10: Response Rates for the Murray-Goulburn Valley and Corangamite Samples

Table 19: Response rate after invitation to participate in the research

	Murray-Goulburn Valley	Corangamite
No. invitations sent	33	35
Hobby farmers – so not included	1	2
No. of eligible cases	32	33
Could not be contacted by phone to confirm acceptance or otherwise	5	3
No. of eligible cases where contact established	27	30
Declined	6	10
Accepted	21	20
<b>Response rate (eligible invitations)</b>	66%	61%
<b>Response rate (phone contact made)</b>	78%	67%
No. of cases not interviewed in Phase Two	0	1

### Appendix 11: Template for Farm Life History Timelines

Farm No.		
Land Holdings	Land acquisitions (owned and leased), including when they were first incorporated into the farm enterprise and date of disposal if land was no longer part of the enterprise.	
Entity	Who holds title to each land acquisition?	
Water Shares	Acquisition and disposal of water shares – only relevant in the case of the Murray-Goulburn Valley farms.	
Business	Legal forms used to organise the farm business (e.g., partnership, trust, sole proprietorship).	
Farm System	E.g., Changes in dairy herd size, major on-farm developments/improvements.	
Household	Changes to household (e.g., birth of children, off-farm work, passing of previous generation).	
Local Context	E.g., Flood events, drought and Exceptional Circumstances declarations.	
National Context	E.g., Introduction of Goods and Services Tax (GST), dairy deregulation.	
International Context	E.g., Global Financial Crisis (GFC).	

## Appendix 12: Participant Information Statement – Farmer Respondents



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### The introduction of environmental markets: A study of the socio-economic organisation of Australian farm businesses

#### PARTICIPANT INFORMATION STATEMENT

**(1) What is the study about?**

This study is about the ways in which Australian farmers organise their farm enterprises in the context of changing water policies and the introduction of markets for environmental assets (e.g., water, carbon, biodiversity).

**(2) Who is carrying out the study?**

The study is being conducted by Erin Smith and will form the basis for the degree of Doctor of Philosophy at The University of Sydney under the supervision of Dr Bill Pritchard (Associate Professor, School of Geosciences). Erin grew up on a farm in New Zealand and her research is associated with the *Australian Research Council* Project: Rural Adjustment or Structural Transformation?: Tracking the Destinations of Exiting Farmers.

**(3) What does the study involve?**

Participation in this study involves meeting with Erin on two occasions.

- A farm visit during Oct/Nov 2011.
- A face-to-face interview, in which you will be asked to discuss the history of your farm business and the factors influencing changes you have made to land holdings, labour requirements, farm systems etc. This interview will be held at a time and place convenient to you. With your permission, interviews will be recorded to aid transcription at a later date. Should you wish to see a transcript of your interview, a transcript will be provided. Ideally, this interview will take place in either March or May 2012.
- Other members of the farm business or farm household are welcome to attend the interviews (e.g., partners or farm managers).

**(4) How much time will the study take?**

The interviews are part open-ended and part structured. A range of themes will be explored. As a general rule, each interview will take between 1 to 2 hours, but duration will depend on the individual, the depth of answers and the time that they have available.

**(5) Can I withdraw from the study?**

Being in this study is completely voluntary - you are not under any obligation to consent and - if you do consent - you can withdraw at any time and any information you may have provided up until 30 June 2012 by which time final analysis of the results will be underway. To do this, please contact Erin Smith on 0410 207 852 or [erin.smith@sydney.edu.au](mailto:erin.smith@sydney.edu.au)). Withdrawal from the project, will not affect your relationship with The University of Sydney.

You may stop the interview at any time if you do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

**(6) Where did you obtain my name and details?**

Names and details of potential participants were obtained from returned questionnaires to the *Farm and Household Intentions Survey 2010* conducted during August/September 2010.

**(7) Will anyone else know the results?**

All aspects of the study, including results, will be strictly confidential and only the researchers will have access to information on participants. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report, unless you give permission for your name to be used.

**(8) Will the study benefit me?**

The study will benefit you indirectly by generating information that policy-makers can use to better understand the issues faced by Australian farmers.

**(9) Can I tell other people about the study?**

Yes, you are free to talk about this study.

**(10) What if I require further information?**

When you have read this information, Erin Smith will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Erin Smith on 0410 207 852 or [erin.smith@sydney.edu.au](mailto:erin.smith@sydney.edu.au), or her supervisor Bill Pritchard by phone on (02) 9351 3309 or by email at [bill.pritchard@sydney.edu.au](mailto:bill.pritchard@sydney.edu.au)

**(11) What if I have a complaint or concerns?**

**Any person with concerns or complaints about the conduct of a research study can contact The Manager, Human Ethics Administration, University of Sydney on +61 2 8627 8176 (Telephone); +61 2 8627 8177 (Facsimile) or [ro.humanethics@sydney.edu.au](mailto:ro.humanethics@sydney.edu.au) (Email).**

*This information sheet is for you to keep*



## Appendix 13: Participant Consent Form – Farmer Respondents



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Web: <http://www.usyd.edu.au/>

### PARTICIPANT CONSENT FORM

I, ....., give consent to my participation in the research project:

#### **The introduction of environmental markets: A study of the socio-economic organisation of Australian farm businesses**

In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.
2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.
3. I understand that I can withdraw from the study at any time and any information I may have provided, without affecting my relationship with the researcher(s), the University of Sydney or Victoria University now or up until the 30 June 2012, by which time final analysis of the results will be underway.
4. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity without my consent.
5. I understand that being in this study is completely voluntary – I am not under any obligation to consent.
6. I understand that I can stop the interview at any time if I do not wish to continue and the information provided will not be included in the study.

**Signed:** .....  
**Name:** .....  
**Date:** .....

## Appendix 14: Indicative Interview Topics for Key Informants

The interview topics/questions listed below should only be considered indicative. The issues explored during each interview varied depending upon the informants' area of expertise, time in the regions, the answers given to initial questions, and the time available for the interview.

### Land agents – both study sites

1. What trends in land values have you observed since the 1980s (or since you've been working in the region)?
2. Key influences on these trends (e.g., wider economic processes, changes in the agricultural sector)
3. Trends in corporate/overseas interest in purchasing farms in the region
4. Regional history of leasing

### Land agents – Murray-Goulburn Valley only

1. What trends in water values have you observed?
2. How did the separation of land and water titles impact on land values?
3. Changes to the ways farms are bought/sold following the separation of land and water

### Accountants – both study sites

1. A brief overview of the composition of their farming client base (e.g., farm systems represented)
2. Discussion of the range of business structures available to farming clients
3. Among the informants' farming client base, what proportion use each business structure?
4. The rationale advantages/disadvantages of each business structure
5. The role of self-managed superannuation funds, any observations about trends/patterns of use among farming clients
6. Farm management deposits, implications for each business structure

### Accountants/Financial Planner – Murray-Goulburn Valley only

1. How did the separation of land and water titles impact on patterns of farm business and asset ownership?
2. To what extent did the ownership of water assets reflect the ownership of land assets?

**Bank Managers – Murray-Goulburn Valley only**

1. How did the separation of land and water titles impact on farm valuations, farmers' equity positions, banks' lending practices etc?
2. Has the separation of land and water enabled innovative asset configurations?
3. What are the implications for banks of volatility in water prices?
4. What are the issues for banks surrounding farmers' decisions to sell water?

**Milk Company Representatives – Murray-Goulburn Valley only**

1. Trends in the milk supply of the region, absolute volume, seasonal fluctuations, implications at the farm level
2. Trends in supplier numbers over time (particularly the drought period)
  - a. Observations about the circumstances of farm exits
3. Typical milk supply arrangements and milk supply options available to farmers (e.g., contracts)
4. Opinions and observations about the influence of the separation of land and water

**Farm Consultants – both study sites**

Discussion of any of the issues listed above as they related to the farm consultants' experience/knowledge.

## Appendix 15: Participant Information Statement – Key Informants



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### PARTICIPANT INFORMATION STATEMENT

**(1) What is the study about?**

This study is about the ways in which Australian farmers organise their farm enterprises in the context of changing water policies and the introduction of markets for environmental assets (e.g., water, carbon, biodiversity).

**(2) Who is carrying out the study?**

The study is being conducted by Erin Smith and will form the basis for the degree of Doctor of Philosophy at The University of Sydney under the supervision of Dr Bill Pritchard (Associate Professor, School of Geosciences). Erin grew up on a farm in New Zealand and her research is associated with the Australian Research Council Project: Rural Adjustment or Structural Transformation?: Tracking the Destinations of Exiting Farmers.

**(3) What does the study involve?**

Participation in this study involves meeting with Erin for a face-to-face interview in which you will be asked to discuss general trends about the ways in which farmers are structuring their businesses and broader trends affecting the agricultural industry. Please note, that no confidential client information is being sought. Interviews will focus on the more generic patterns of farm business ownership that you will have gleaned through your experience working with farmer clients. With your permission, interviews will be recorded to aid transcription at a later date. Should you wish to see a transcript of your interview, a transcript will be provided.

**(4) How much time will the study take?**

The interviews are open-ended. A range of themes will be explored. As a general rule, each interview will take approximately 30 minutes but duration will depend on the individual, the depth of answers and the time that they have available.

**(5) Can I withdraw from the study?**

Being in this study is completely voluntary - you are not under any obligation to consent and - if you do consent - you can withdraw at any time and any information you may have provided up until 30 June 2012 by which time final analysis of the results will be underway. To do this, please contact Erin Smith on 0410 207 852 or [erin.smith@sydney.edu.au](mailto:erin.smith@sydney.edu.au)). Withdrawal from the project, will not affect your relationship with The University of Sydney.

You may stop the interview at any time if you do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

**(6) Where did you obtain my name and details?**

Names and details of potential participants were obtained from an internet search of agricultural businesses in your local area.

**(7) Will anyone else know the results?**

All aspects of the study, including results, will be strictly confidential and only the researchers will have access to information on participants. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report, unless you give permission for your name to be used.

**(8) Will the study benefit me?**

The study will benefit you indirectly by generating information that policy-makers can use to better understand the issues faced by Australian farmers.

**(9) Can I tell other people about the study?**

Yes, you are free to talk about this study.

**(10) What if I require further information?**

When you have read this information, Erin Smith will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Erin Smith on 0410 207 852 or [erin.smith@sydney.edu.au](mailto:erin.smith@sydney.edu.au), or her supervisor Bill Pritchard by phone on (02) 9351 3309 or by email at [bill.pritchard@sydney.edu.au](mailto:bill.pritchard@sydney.edu.au)

**(11) What if I have a complaint or concerns?**

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*This information sheet is for you to keep*

## Appendix 16: Consent Form – Key Informants



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### PARTICIPANT CONSENT FORM

I, ....., give consent to my participation in the research project:

**The introduction of environmental markets: A study of the socio-economic organisation of Australian farm businesses**

In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.
2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.
3. *I understand that I can withdraw from the study at any time and any information I may have provided, without affecting my relationship with the researcher(s), the University of Sydney or Victoria University now or up until the 30 June 2012, by which time final analysis of the results will be underway.*
4. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity without my consent.
5. I understand that being in this study is completely voluntary – I am not under any obligation to consent.
6. I understand that I can stop the interview at any time if I do not wish to continue and the information provided will not be included in the study.
7. I consent to the interview being audio recorded.  Yes  No

**Signed:** .....  
**Name:** .....  
**Date:** .....

## Appendix 17: Legal Forms Used in the Australian Agricultural Sector and Wider Economy

**Table 20: Australian Taxation Office data concerning legal forms used in agricultural enterprises as compared to the total population of Australian businesses**

		Total	Individuals		Companies		Partnerships		Trusts	
			No.	%	No.	%	No.	%	No.	%
<b>Agriculture<sup>1</sup></b>	2005-06	237,420	101,115	42.6%	12,320	5.2%	102,350	43.1%	21,635	9.1%
	2006-07	238,524	102,055	42.8%	12,255	5.1%	101,974	42.8%	22,240	9.3%
	2007-08	243,110	106,665	43.9%	12,130	5.0%	101,185	41.6%	23,130	9.5%
	2008-09	236,150	104,095	44.1%	11,910	5.0%	96,915	41.0%	23,230	9.8%
	2009-10	233,900	104,025	44.5%	11,770	5.0%	94,315	40.3%	23,790	10.2%
<b>Australia<sup>2</sup></b>	2005-06	6,059,038	4,348,534	71.8%	728,196	12.0%	415,261	6.9%	567,047	9.4%
	2006-07	6,293,657	4,516,587	71.8%	750,277	11.9%	419,230	6.7%	607,563	9.7%
	2007-08	6,756,905	4,906,960	72.6%	772,435	11.4%	419,315	6.2%	660,324	9.7%
	2008-09	6,660,059	4,840,498	72.7%	762,442	11.4%	393,727	5.9%	663,392	10.0%
	2009-10	6,814,540	4,952,857	72.7%	777,207	11.4%	382,398	5.6%	702,078	10.3%

Source: (Australian Taxation Office, 2008, 2009, 2010, 2011, 2012)

First published in Weller et al. (2013)

### NOTES

<sup>1</sup> Figures for agriculture have been calculated by removing the categories aquaculture, forestry and logging, fishing, hunting and trapping, forestry support services, and agriculture and fishing support services.

<sup>2</sup> Figures for Australia have been calculated by removing the categories 'salary and wage earners' and 'investment income recipients'. Therefore, the numbers reported reflect all tax returns reporting business income with respect to industry.



### Appendix 18: List of Land Acquisitions made by the Murray-Goulburn Valley Farmers

NOTES:

1. Unless otherwise stated, the term 'home farm' refers to the land upon which the interviewee's primary residential home is located.
2. The year listed refers to the year in which the respective land parcel/s came into operation for the farmer or farming couple interviewed. Thus, in the case of farms comprising intergenerational land, the year/decade listed corresponds to when the acquisition/s was/were made by the previous generation/s. All acquisitions made prior to the involvement of the respective interviewees are grouped into a single acquisition.
3. The use of ~ indicates that the precise date/area is an estimate; but, the order of acquisitions is accurate.
4. The use of ---- indicates that the information was not obtained. The complexity of some farms and time constraints during interviews meant that not all acquisitions could be discussed in-depth.

Table 21: List of land acquisitions among the Murray-Goulburn Valley farms

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
1.	1750_a	85	1996	Company (SMSF)	Still held	Home farm. Established dairy farm operation after working as employees on their parents' dairy farm in a neighbouring district, and working in non-agricultural employment. Technical lease of land between business and SMSF.	Initial acquisition
2.	1750_b	58	2008	Company (SMSF)	Still held	Land adjoining home farm. Farm expansion to avoid sending stock away on agistment and for on-farm fodder production. Enabled herd expansion by 50 cows. Technical lease of land between business and SMSF.	Contiguous
3.	1765_a	119	1930-40s	Individual title	Still held	Land accumulated by his parents. MV_176M started working on the farm during his teenage years. 91 hectares remains the main dairy platform. Title transitioned to MV_1765M in 2005 when he inherited the land from his father's estate. Paid out non-farming siblings. (Two titles separated by highway).	Initial acquisition
4.	1765_b	73	1950s	Individual title	Sold (1993)	Out paddock. Sold when 1765_d was acquired.	Non-contiguous (long distance)
5.	1765_c	20	1990	Individual title	Still held	Out paddock. Used for running dry/young/extra stock and fodder production.	Contiguous with part of 1765_a
6.	1765_d	98	1993	Individual title (male owner and his brother)	Still held	Farm expansion. Converted from previous farm system of prime lambs to dairy operation. Amalgamated with 1765_a as main dairy platform.	Contiguous with 1765_a
7.	1810_a	~20	----	----	Sold	Home farm. Established dairy operation after share farming.	Initial acquisition (farm 1)

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?
8.	56	1995	Individual title (male partner)	Still held	Home farm. Established dairy operation on a larger land holding with a view to it being sufficient until he retired.	Initial acquisition (farm 2)
9.	-----	1980s	Individual title (both business owners)	Sold (late 1980s)	Dry land sheep property; both partners remained employed in non-agricultural jobs; purchased to get a start in farming.	Initial acquisition (farm 1)
10.	83	1992	Individual title (both business owners)	Sold (2008)	Home farm. Intended to start prime lamb farm; economics and return on investment drove their decision to establish a dairy farm.	Initial acquisition (farm 2)
11.	41	2004	Individual title (both business owners)	Still held	Out paddock (short distance). Used for grazing young/dry/extra stock when they were operating the dairy, rather than paying external agistment. Couple currently live here after selling 1868_b.	Non-contiguous (short distance)
12.	-----	early 1990s	Individual title (both business owners)	Sold (1991)	Home farm. Established a dairy operation after working in non-agricultural employment.	Initial acquisition (farm 1)
13.	28	1991	Individual title (both business owners)	Still held	Home farm. Established a small dairy herd after they calculated the return on investment from different land uses. Ceased dairying mid-2000s. Currently leasing 20 hectares to neighbour.	Initial acquisition (farm 2)
14.	28	1970	Individual title (male partner)	Still held	Home farm. Established dairy farm operation (and pigs) after male partner worked on his family farm.	Initial acquisition
15.	-----	~1970s	Lease (family)	Ceased ~mid-1990s	Family land located a short distance from home farm. Used as an out paddock for dry/young/extra stock. Land was sold by family.	Non-contiguous (short distance)
16.	57	~1999	Individual title	Still held	Located a short distance from the home farm. Replaced 1873_b. Used as an out paddock for dry/young/extra stock when they had a larger milking herd. Currently operated by a share farmer.	Non-contiguous (short distance)
17.	87	~2003	Lease (non-family)	Still held	Owned by the widow of a close family friend. Gentleman's agreement, informal lease. Grows a small amount of fodder and run a small number of beef cattle.	Non-contiguous (short distance)
18.	100	2004	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation after share and lease farming.	Initial acquisition
19.	8	2008	Lease (non-family)	Still held	Provides access to a better dairy shed. Informal agreement, terms are open-ended.	Contiguous (separated by road)
20.	40	~1960s	Individual title (male partner)	Still held	Home farm. Male partner's parents acquired through soldier settlement. MV_1934M and his wife took over in the 1980s. Title formally transferred in 1997.	Initial acquisition
21.	16	late 1980s	Lease (non-family)	Ceased early 1990s	Growing fodder.	Non-contiguous (short distance)

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
22.	1934_c	16	~1992	Lease (non-family)	Ceased ~1997	Used for milking while irrigation improvements were done on the home farm.	Contiguous (separated by road)
23.	1934_d	51	~2000	Lease (non-family)	Ceased ~2005	Growing fodder. Lease ended because the owner sold.	Non-contiguous (short distance)
24.	1934_e	65	2006	Individual title (both business owners)	Still held	Growing fodder.	Contiguous (separated by road)
25.	1934_f	51	2010	Lease (non-family)	Ceased 2011	Growing fodder and agistment. Lease ended because the owner sold.	Non-contiguous (short distance)
26.	1965_a	-----	1990s	Individual title	Sold	Home farm. Established dairy farm operation.	Initial acquisition (farm 1)
27.	1965_b	154	2006	Individual title	Still held	Home farm. Established second dairy farm operation after disposing of 1965_a. Two titles (119 hectares) purchased in 2006, 35 hectares originally acquired in 2006 via a 12-month lease arrangement, titled in 2007.	Initial acquisition (farm 2)
28.	2014_a	26	1986	Individual title (male partner)	Still held	Home farm. Originally purchased as a lifestyle block. Established dairy operation 1993.	Initial acquisition
29.	2014_b	76	2000	Individual title (both business owners)	Still held	Grazing of dry/young stock; fodder production	Non-contiguous (short distance)
30.	2014_c	26	2006	Individual title (both business owners)	Still held	Grazing of dry/young stock; fodder production	Non-contiguous (short distance)
31.	2014_d	40	2009	Individual title (both business owners)	Still held	Grazing of dry/young stock; fodder production	Non-contiguous (short distance from home farm; contiguous with 26 ha.)
32.	2098_a	~121	Prior to 1980s	Individual title (both business owners)	Still held	Land accumulated by male partner's grandfather and parents. Remains the main dairy platform. Purchased from male partner's parents in 2005. MV_2098M returned to work on the farm in the early 1990s.	Initial acquisition
33.	2098_b	34	1994	Individual title (male partner)	Still held	Land adjoining 2098_a. MV_2098M purchased in his own name when he returned to the family farm. Incorporated into the dairy platform.	Contiguous
34.	2098_c	40	2002	Individual title (both business owners)	Still held	Land immediately across the road 2098_a. MV_2098M and his wife purchased when he was in partnership with his parents. Incorporated in to the dairy platform.	Contiguous (separated by road)
35.	2098_d	121	2011	Individual title (both business owners) (One title in SMSF)	Still held	Land located a short distance from the main dairy platform. Used to grow fodder to offset imported feed costs. Grazing for young/dry/extra stock. Now the home farm.	Non-contiguous (short distance)

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
36.	2115_a	316	2007	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation after leaving family farm (male partner's parents and brother) in neighbouring farming district. Farm comprises one main block (259 hectares), and two smaller blocks (20 and 36 hectares), contiguous, but separated by road. Formally titled in 2008.	Initial acquisition
37.	2176_a	182 + ~40	1994	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation after share farming. Titled to the business owners in 1997 because of three-year terms contract. With regards to the ~40 hectares, ~12 titles located a short distance from the 182 ha. Used for fodder production and grazing non-milking cows. Approximately, half of these titles were sold in the early years of the drought.	Initial acquisition
38.	2176_b	~162	~1998-2002	Lease (non-family)	Ceased ~2002	Land immediately across the road from their home farm; farm expansion; incorporated into their main dairy platform.	Contiguous (separated by road)
39.	2176_c	405	~1998-2004	Lease (non-family)	Ceased ~2005	Located in neighbouring farming region. Used for fodder production, grazing their extra/dry/young stock, as well as taking in other farmers' agisted stock.	Non-contiguous (long distance)
40.	2176_d	142	~2009	Individual title (both business owners)	Still held	Located in another farming district. Land was part of a large corporate dairy farm the male partner managed during the most severe years of the drought. Looking to employ a manager to run their young stock and grow fodder for their home dairy farm.	Non-contiguous (long distance)
41.	2176_e	129	~2009	Individual title (both business owners)	Still held	Land immediately across the road from their home farm. Produce more home grown feed to reduce exposure to high fodder prices.	Contiguous (separated by road)
42.	2176_f	182	2010	Not yet titled: Three-year terms contract	Still held	Land adjoining their home dairy farm. Intend to establish a second dairy herd.	Contiguous
43.	3016_a	41	1963	Individual title (both business owners)	Still held	Female partner's parents' home dairy farm. Took over in the 1970s, but continued working off-farm as well.	Initial acquisition
44.	3016_b	202	1982	Individual title (both business owners)	Sold (2011)	Land immediately across the road from 3016_a. Used for fodder production prior to acquiring 3016_f and 3016_g.	Contiguous (separated by road)
45.	3016_c	-----	1980s	Lease (non-family)	Ceased 1980s	Land in a neighbouring farming district. Used for replacement stock when they only held 3016_a.	Non-contiguous (long distance)
46.	3016_d	101	-----	-----	Sold (1980)	Land in another farming district with higher rainfall. Used for replacements and fodder production when they only held 3016_a.	Non-contiguous (long distance)
47.	3016_e	148	1989	Individual title (both business owners)	Still held	Became full-time farmers after working off-farm. Established larger dairy farm; short distance from 3016_a. Remains their home farm.	Non-contiguous (short distance)

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
48.	3016_f	53	1998	Individual title (both business owners) (SMSF)	Still held	Adjoining 3016_e. Used for fodder production to conserve winter feed because they pursued winter milk production.	Contiguous with 3016_e
49.	3016_g	123	2003	Individual title (both business owners) (SMSF)	Still held	Land immediately across the road from their main dairy platform. Used for fodder production to conserve winter feed because they pursued winter milk production. Acquired in the early drought years to avoid/minimise paying high prices for bought in feed.	Contiguous with 3016_e & 3016_f (separated by road)
50.	3019_a	129	~1920s	Individual title (both business owners)	Still held	Home farm. Original farm acquired by male partner's father through closer settlement. MV_3019M and MV_3019F moved to this holding in 1985 following the passing of MV_3016M's parents (titled in their names 1986).	Initial acquisition
51.	3019_b	141	1955	Individual title (both business owners)	Still held	Original land acquisition for MV_3019M and MV_3019F, their home farm until 1985 when they moved to 3019_d. Male partner worked on father's sheep and cropping farm. Titled to MV_3019M and MV_3019F in 1987.	Contiguous
52.	3019_c	-----	late 1960s	Individual title (both business owners)	Still held	-----	Contiguous
53.	3019_d	129	1974	Individual title (both business owners)	Still held	-----	Contiguous
54.	3064_a	40	1965	Individual title (male partner)	Still held	Home farm. Established dairy farm operation after share farming in another farming district.	Initial acquisition
55.	3064_b	53	~1974	Four titles: Individual title (both business owners); One title: Company (SMSF)	Still held	One title was placed into SMSF in 2002.	Contiguous
56.	3064_c	-----	early 1970s	N/A	Sold (~1980)	Out-paddock purchased.	Non-contiguous (long distance)
57.	3064_d	40	~1980	Company (SMSF)	Still held	Titled to SMSF in 1999.	Contiguous
58.	3064_e	107	-----	Son's company	Still held	Titled to son in 2001.	Contiguous
59.	3064_f	177	2001	Individual title (both business owners)	Still held	Fodder production for dairy farm. Leased to lease farmer operating the dairy farm.	Non-contiguous (long distance)
60.	3064_g	302	2004	Individual title (both business owners)	Still held	Fodder production for dairy farm. Acquired to make farm as self-sufficient as possible. Leased to lease farmer operating the dairy farm.	Contiguous with first four acquisitions
61.	3099_a	324	1989	Individual title (male partner)	243 ha sold; 81 ha still held	Home farm. Established beef cattle enterprise. Leased out 243 hectares for ~10 years, then sold to settle his divorce.	Initial acquisition

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?
62. 3139_a	89	2008	Individual title (both business owners)	Still held	Home farm. Established dairy operation after share farming.	Initial acquisition
63. 3139_b	20	2011	Individual title (both business owners)	Still held	Acquired through an NVIRP (Northern Victoria Irrigation Renewal Project) deal.	Contiguous
64. 6251_a	131	1997	Company	Still held	Home farm. Established dairy farm operation after share farming. Initially purchased with non-family equity partner who was the major partner, bought-out equity partner in 2002. Effectively, they 're-purchased' their farm at the start of the drought.	Initial acquisition
65. 6327_a	40	1996	Individual title (male partner)	Still held	Home farm. Established dairy farm operation after leaving his parents' dairy farm where he worked as an employee.	Initial acquisition
66. 6327_b	45	2003	Individual title (male partner and parents)	Still held	Land adjoining home farm.	Contiguous
67. 6327_c	118	2007	Individual title (male partner's parents' names)	Still held	Farm business amalgamation with male partner's parents' business. This was done to avoid them having to build two smaller dairy sheds; instead, they amalgamated their dairy herds and built a rotary dairy on MV_6327M's land.	Contiguous (separated by road) = two titles; Non-contiguous (short distance) = 1 title
68. 7366_a	162	~1991	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation after working in non-agricultural industries. Initially acquired on lease-to-purchase agreement.	Initial acquisition
69. 7366_b	40	~1996	Individual title (both business owners)	Still held	Land two titles from home farm.	Non-contiguous when purchased (short distance). Made contiguous when 7366_c was acquired.
70. 7366_c	40	~2000	Individual title (both business owners)	Still held	Land immediately across the road from the home farm, between 7366_b. They wanted better access to 7366_b.	Contiguous (separated by road from home farm). Contiguous with 7366_b.
71. 7366_d	81	2006	Individual title (both business owners)	Still held	Land immediately across the road from the home farm. Did not purchase water. Enabled them to increase their herd to 300 cows.	Contiguous with 7366_a (separated by road)



### Appendix 19: List of Land Acquisitions made by the Corangamite Farmers

#### NOTES:

1. Unless otherwise stated, the term 'home farm' refers to the land upon which the interviewee's primary residential home is located.
2. The year listed refers to the year in which the respective land parcel/s came into operation for the farmer or farming couple interviewed. Thus, in the case of farms comprising intergenerational land, the year/decade listed corresponds to when the acquisition/s was/were made by the previous generation/s. All acquisitions made prior to the involvement of the respective interviewees are grouped into a single acquisition.
3. The use of ~ indicates that the precise date/area is an estimate; but, the order of acquisitions is accurate.
4. The use of ---- indicates that the information was not obtained. The complexity of some farms and time constraints during interviews meant that not all acquisitions could be discussed in-depth.

**Table 22: List of land acquisitions among the Corangamite farms**

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?
1.	71	1966	Individual title (male partner)	Still held	Home farm. Established dairy operation after farming with his brother in a nearby farming district.	Initial acquisition
2.	~61	1975	Individual title (both business owners)	Still held	Desire to own more land. Used to start small beef cattle herd.	Non-contiguous (short distance)
3.	64	1993	Individual title (both business owners)	Sold	Attempted to connect this land with 0068_a by purchasing laneway from land owned between the two titles. Was unsuccessful. Sold when 00068_d came available.	Non-contiguous (short distance)
4.	81	1997	Individual title (both business owners)	Still held	Land immediately adjoining 0068_a. Wanted to consolidate land holdings. Subdivided off and subsequently sold the house in 2006.	Contiguous
5.	-----	~2000	Lease (non-family)	Ceased ~2003	Used to breed beef cattle for herd establishment after closing dairy enterprise in 2003.	Non-contiguous (short distance)
6.	40	1997	Lease (non-family)	Ceased ~2011	Used to breed beef cattle for herd establishment after closing dairy enterprise in 2003. Fodder production.	Contiguous (separated by road)
7.	219	2009	Lease (non-family)	Still held	Home farm. Established dairy operation after being badly affected by Black Saturday fires when lease farming across the road. Have been share or lease farming in the region since 1995.	Initial acquisition



Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
8.	0135_a	77	1982	Individual title (male partner)	Still held	Home farm. Establish dairy operation after working on parents' farm a short distance away.	Initial acquisition
9.	0135_b	53	1960s	Individual title (male partners parents)	Still held	Land immediately across the road from the home farm. Incorporated into COR_0135M's farm operation ~1980s as he expanded his enterprise.	Contiguous (separated by road)
10.	0135_c	56	1992	Individual title (both business owners)	Still held	Land adjoining 0135_a.	Contiguous
11.	0135_d	81	1996	Individual title (female partner)	Still held	Fodder production; grazing of beef cattle.	Non-contiguous (long distance)
12.	0175_a	203	2000	Individual title (male partners parents)	Sold (2007)	Home farm. Established dairy enterprise in partnership with male partner's parents after having share farmed on his parents' first farm in a neighbouring farming district. Move was prompted by needing a larger farm in order to support two households.	Initial acquisition (farm 1)
13.	0175_b	121	~2003	Lease (non-family)	Ceased ~2007	Land had different soil types, increased operational flexibility during different seasons.	Contiguous (separated by road)
14.	0175_c	53	2006	Individual title (male partners parents)	Sold (2007)	Land adjoining their main milking platform.	Contiguous with 0175_a
15.	0175_d	162	2008	Individual title (female partner)	Still held	Cropping farm located 70 km from urban residence. Purchased after dis-establishing dairy farm enterprise operated with male partner's parents. Works off-farm.	Initial acquisition (farm 2)
16.	0255_a	40	1994	Individual title (both business owners)	Still held	Home farm. Established dairy operation after moving from inter-state. Comprised two 20 hectare titles. Male partner's father purchased one title because they could not afford both at the time. Purchased his father's 20 hectares from his mother after his father passed away (~2004)	Initial acquisition
17.	0255_b	81	~1996	Individual title (both business owners)	Still held	Originally leased this land from his grandmother's estate. Purchased ~2000.	Contiguous
18.	0255_c	39	2000	Lease (non-family)	Still held	Used to run young stock.	Non-contiguous (short distance)
19.	0255_d	42	~2003	Individual title (both business owners)	Still held	Farm expansion.	Contiguous

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
20.	0255_e	98	2009	Individual title (both business owners)	Still held	Out paddock. Used for young stock. To secure land tenure for fodder production; potential location for retirement.	Non-contiguous (long distance)
21.	0265_a	136 + 53	2005	Lease (male partner's mother) & lease (non-family)	Still held	Home farm. Took over male partner's dairy operation after his father unexpectedly passed away. Land accumulated by parents in two acquisitions ~1978 and early 1990s. Informal lease established with non-family members by male partner's parents (non-contiguous – long distance).	Initial acquisition
22.	0323_a	147	-----	Individual title (male partner's father)	Still held	Land accumulated by male partner's grandfather and father during the first half of the 20 <sup>th</sup> century. Male partner began working on the farm as a teenager ~1968. (Two major holdings. 93 hectares = the dairy platform, 53 hectares = out paddock (short distance)).	Initial acquisition
23.	0323_b	40	1988	Individual title (male partner's father & brother)	Still held		Contiguous
24.	0323_c	37	~2000	Individual title (male partner & father)	Still held		Contiguous
25.	0331_a	101	1970s	Family friends	Still held	Home farm. Male partner returned to work on his father's farm in the 1980s when he was 17 years old. Father stepped out of farm operations ~1999.	Initial acquisition
26.	0331_b	51	early 1980s	Individual title (male partner's father)	Still held	-----	Contiguous (separated by road)
27.	0331_c	8	1995	Individual title (male partner's father)	Still held	-----	Contiguous (separated by road)
28.	0331_d	63	1999	Individual title (both business owners)	Still held	Used for fodder production; grazing young/dry/extra stock.	Non-contiguous (short distance)
29.	0331_e	162	2002	Lease (non-family)	Ceased ~2005	Fodder production. Lease unexpectedly cancelled by owner.	Contiguous (separated by road)
30.	0331_f	68	2005	Lease (non-family)	Still held	Short-term lease arrangement: 12 months. Renewable.	Non-contiguous (short distance)

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?
31. 0331_g	82	2006	Individual title (both business owners)	Still held	Used for fodder production; grazing young/dry/extra stock.	Non-contiguous (short distance)
32. 0335_a	121 & 51	2005	Individual title (both business partners) & lease from non-family	Still held	Home farm. Established dairy farm operation after share farming. 121 hectares is owned. 51 hectares is leased; formal agreement.	Initial acquisition
33. 0335_b	81	2012	Lease (non-family)	Still held	Non-contiguous (short distance). Used for grazing extra stock to build numbers. Lease terms are open-ended; owners have to give 60 days notice.	Non-contiguous (short distance)
34. 0342_a	80	~1979	Individual title (both business owners)	Still held	Male partner's parents' purchased ~1979. Farming couple took over as share farmers in 1984. Main dairy platform 1984-2003. One title (21 hectares) non-contiguous. Title shifted to their names 2003 for finance purposes. Currently used for grazing young/dry/extra stock and fodder production.	Initial acquisition
35. 0342_b	67	1994	Individual title (both business owners)	Still held	Land adjoining 0342_a. Made all land holdings contiguous. Incorporated into main dairy platform. Became home farm. Fodder production and grazing of extra/young/dry stock all on-farm.	Contiguous
36. 0342_c	113	2004	Lease (Parents' purchased ~1984)	Still held	Non-contiguous 80-hectare dairy farm. Previously operated by male partner's brother who unexpectedly died ~2002. Began to lease as well as a 32-hectare out paddock from male partners' father. Dairy farm became main dairy platform. Primary residence of male partner's father. Landholdings in 0342_a and 0342_b used for grazing stock and fodder production. Male partner to inherit.	Non-contiguous (short distance)
37. 0350_a	85	1994	Individual title (both business owners)	Still held	Home farm. Established dairy farm after share farming.	Initial acquisition
38. 0350_b	40	2002	Individual title (both business owners)	Still held	Land adjoining 0350_a. Ceased agisting stock, brought all stock back to the home farm, on-farm fodder production.	Contiguous
39. 0490_a	99	~1940s	Individual title (male partner)	Still held	Male partner's parents' home dairy farm. Father died in 1959. (Acquired in two separate purchases). Male partner and his mother took over the farm. Title transferred from his mother to COR_0490M in 1995.	Initial acquisition

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
40.	0490_b	42	1960s	Individual title (male partner)	Still held	Land adjoining home dairy farm.	Contiguous
41.	0490_c	48	1978	Individual title (male partner)	Still held	Land adjoining home dairy farm; purchased by male partner alone.	Contiguous
42.	0490_d	32	~1978	Individual title (male partner)	Still held	Became home farm for interviewee.	Contiguous
43.	0490_e	34	2002	Individual title (male partner)	Still held	Land immediately across the road from 0490_d, title stitched to 0490_d because of local subdivision regulations.	Contiguous (separated by road)
44.	0490_f	~40	2003	Share farmers	Still held	Land adjoining all other land holdings. Share farmers purchased.	Contiguous
45.	0490_g	40	2005	Individual title (both business owners)	Still held	Land adjoining home dairy farm.	Contiguous
46.	0490_h	81	~2006	Lease (non-family)	Still held	Non-contiguous (short distance from home farm). Suggested that he would have purchased this land if he were younger. Informal lease, reasonable rate. Used for grazing young stock.	Non-contiguous (short distance)
47.	0490_i	~20-24	-----	Lease (share farmer's father)	Still held	Used to run young stock.	Non-contiguous (short distance)
48.	0702_a	214 + 97	2006	Lease (non-family) & lease (male partner's father)	Still held	Home farm. Established dairy operation as a lease farmer after share farming on his grandfather's property. Lease terms were for three years, they renewed for three years in 2009 and at the time of the interview were in the process of deciding whether they were going to renew again. Lease from male partner's father used for fodder production.	Initial acquisition
49.	2226_a	107 + 20	1996	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation after share farming. Started milking 120 cows. Initially, 50 acres (contiguous with 2226_c) across the road was leased, purchased ~2006.	Initial acquisition
50.	2226_b	20	2002	Individual title (both business owners) (SMSF)	Still held	Land adjoining 2226_a. Leased it for 12-18 months prior to purchase; owner was no longer using it. Enabled them to increase herd size to what they considered viable (140-150 cows).	Contiguous
51.	2226_c	36	2003	Individual title (male partner) (SMSF)	Still held	Land immediately across the road from 2226_a.	Contiguous (separated by road)
52.	2226_d	57	2011	Individual title (both business owners)	Still held	Land in a neighbouring farming district. Used for wintering cows and they intend to retire to this land. Also enables further increase in herd size to help pay for additional labour unit when their son-in-law starts working on the farm.	Non-contiguous (long distance)

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?	
53.	2273_a	243	1992	Individual title (both business owners and male partner's parents)	Still held	Home farm. Established dairy operation after leaving a farm that the male partner operated with his brother.	Initial acquisition
54.	2273_b	81	1999	Lease (non-family)	Still held	Land adjoining 2273_a. Originally, terms were for two years. Changed this to a three-year lease so he was more confident doing improvements. Offered to purchase it ~2006, offer was rejected.	Contiguous
55.	2273_c	117	2003	Individual title (both business owners and male partner's parents)	Still held	Farm expansion. Originally purchased by male partner's father, incorporated into their enterprise. In 2012, title will transfer to COR_2273M and his wife.	Contiguous
56.	3899_a	103	1984	Individual title (male partner)	Still held	Home farm. Land accumulated by male partner's father (late 1960s/early 1970s), male partner inherited this land. Established dairy farm operation. Started operating in 1984, titled in 1985.	Initial acquisition
57.	3899_b	21	1988	Individual title (both business owners)	Still held	Land adjoining 3899_a. 3899_c was available at the same time, but elected to only purchase one title (half the land available).	Contiguous
58.	3899_c	21	1996	Individual title (both business owners)	Still held	Land adjoining 3899_b. The second title that was available in 1988 came on the market again.	Contiguous
59.	3899_d	104	2004	Individual title (both business owners)	Still held	Land located 13km north of the home farm. Purchased as an out paddock for dry/young/extra stock and fodder production. Enabled herd expansion on the home farm.	Non-contiguous (long distance)
60.	6402_a	83	1990	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation as 50/50 share milkers, then lease farmed, then purchased in 1997. Also, ~81 hectares of land immediately across the road from home dairy farm was part of operations when they arrived as share farmers. When they purchased 83 hectares in 1997, established lease for this extra land. Several years later, economic difficulties forced them to retreat to 180-cow farm on the land that they owned (i.e., 83 hectares).	Initial acquisition
61.	6402_b	20	~1995	Individual title (both business owners)	Sold (~1998)	Land immediately across the road from home dairy farm. Economic difficulties forced the sale of this land when they retreated to the home farm.	Contiguous with 6402_b

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?
62.	127	2009	Lease (non-family)	Still held	Non-contiguous land (short distance). Brother was leasing this farm, but gave it up when the milk price dropped 2008-09. COR 6402M and his wife began leasing, established an independent herd and employed a full-time manager. Herd purchased from northern Victoria. Formal lease, five years, with five-year renewal.	Non-contiguous (short distance)
63.	35	2011	Lease (non-family)	Still held	Contiguous with 6402_c. Short-term (12 months), informal lease. Used for running extra stock and growing silage.	Contiguous with 6402_d
64.	59	1974	Individual title (both business owners)	Still held	Home farm. Established dairy farm operation after share farming. Started with 80 cows. Converted to beef cattle ~2006.	Initial acquisition
65.	73	1980	Individual title (both business owners)	Still held	Land immediately across the road from the home farm. Expanded the herd from natural increase. Had the opportunity to acquire this land (and an adjoining title) 18 months earlier, but did not have the money to do so.	Contiguous (separated by road)
66.	49	~1987	Individual title (both business owners)	Still held	Paid agistment for several years (3-5 years) prior to purchase. Informal agreement. Titled in 1992.	Contiguous with 6441_a
67.	69	~1970s	Father's name	Still held	Male partner's father's home dairy farm. Remains father's home farm. MV_7370M and MV_7370F returned to the farm early 1980s.	Initial acquisition
68.	69	1985/86	Individual title (3 business partners)	Still held	Land immediately across the road from father's dairy farm. Originally purchased in three-way partnership. Land title changed to farming couple's and father's names when brother left the business in 2008.	Contiguous (separated by road)
69.	-----	1980s	Lease (non-family)	Ceased ~1993	Farm/herd expansion. Used for grazing extra/dry/young stock.	Non-contiguous (long distance)
70.	83	1993	Individual title (3 business partners)	Still held	Land adjoining 7370_b. Became the home farm for interviewees. Ended leased land, brought all stock back to owned land. Originally purchased in three-way partnership. Land title changed to farming couple's and father's names when brother left the business in 2008.	Contiguous with 7370_b
71.	-----	~1995	Lease & agistment (non-family)	Still held	Farm/herd expansion. Used for grazing extra/dry/young stock and fodder production.	Non-contiguous (long distance)
72.	49	1997	Individual title (3 business partners)	Still held	Land adjoining their 7370_b and 7370_d acquisitions. Built new rotary dairy. Originally purchased in three-way partnership. Land title changed to farming couple's and father's names when brother left the business in 2008.	Contiguous with 7370_b and 7370_6

Case No.	Size (ha)	Year	Title	Still held/Sold	Description and rationale	Contiguous/Non-contiguous?
73. 7370_g	67	2010	Lease (non-family)	Still held	Land immediately across the road from home dairy farm. Used for fodder production and grazing young/dry/extra stock. Formal lease, three years. Ended previously held weight-gain contracts.	Non-contiguous (separated by road)

NOTES

Just prior to my interview with COR\_0323M, all land was sold as part of his father's estate.

In a telephone discussion approximately seven months after my interview, COR\_0265M told me that he and his wife had ceased dairy farming due to a poor economic outlook for their enterprise.



## Appendix 20: List of Water Share Acquisitions made by the Murray-Goulburn Valley Farmers

NOTES:

1. The use of ~ indicates that the volume listed is an estimate.
2. The use of ---- indicates that the information was not obtained. The complexity of some farms and time constraints during interviews meant that not all acquisitions could be discussed in-depth.
3. \* The On-farm Irrigation Efficiency Programme is an Australian Commonwealth government programme aimed at assisting irrigators in the sMDB to modernise their on-farm irrigation infrastructure while returning water savings to the environment (Department of the Environment, 2014b).

**Table 23: List of acquisitions of water rights (pre-unbundling) and water shares (post-unbundling) among the Murray-Goulburn Valley farms**

Case No.	Volume	Circumstances of acquisition	Still held?
<b>Post-Unbundling Water Acquisitions (High Reliability only)</b>			
1. 1750_a	30 ML	Purchased concurrently with 58 hectares.	Still held
2. 1965_a	232 ML	Purchased in district after selling through On-farm Irrigation Efficiency Programme.*	Still held
3. 7366_a	~400 ML	Purchased in-district after selling water holdings previously acquired with land acquisitions.	Still held
4. 2115_a	630 ML	Year of unbundling. Purchased concurrently with 316 hectares.	Still held, but have been regular water traders. Intend to keep ~1,000 ML in their ownership
5. 2176_a	40 ML	Purchased concurrently with 130 hectares.	Still held
6. 6327_a	~460 ML	Year of unbundling. Acquired through business amalgamation with parents, including 118 hectares. NB: ~200 ML was traded-in by male partner's parents via permanent trade provisions pre-unbundling.	Still held
<b>Pre-Unbundling Water Acquisitions</b>			
1. 1750_a	246 ML	Purchased with land: 85 hectares.	Still held
2. 1765_a	----	Purchased with land: 73 hectares.	Sold with land
3. 1765_b	~322 ML	Parents accumulated with land acquisitions: 126 hectares.	Still held
4. 1765_c	~30 ML	Purchased with land: 20 hectares.	Still held
5. 1765_d	315 ML	Purchased with land: 100 hectares.	Still held
6. 1765_e	100 ML	Traded-in via permanent trade provisions.	Still held
7. 1810	273 ML	Purchased with land: 56 hectares.	Still held
8. 1868_a	169 ML	Purchased with land: 83 hectares.	Sold with land
9. 1868_b	~150 ML	Traded-in via permanent trade provisions.	Sold with land
10. 1868_c	63.5 ML	Purchased with land: 41 hectares.	Still held
11. 1872_a	----	Purchased with land: First farm.	Sold with land
12. 1872_b	132 ML	Purchased with land: 28 hectares.	Sold: 100 ML
13. 1873	132 ML	Purchased with land: 28 hectares.	Still held
14. 1926	247 ML	Purchased with land: 100 hectares.	Sold
15. 1934_a	168 ML	Father acquired with 40 hectares.	Still held
16. 1934_b	12 ML	Traded-in via permanent trade provisions.	Still held
17. 1934_c	252 ML	Purchased with land: 65 hectares.	Still held
18. 1965_a	----	Purchased with land: First farm.	Sold with land

Case No.	Volume	Circumstances of acquisition	Still held?
19. 1965_b	489 ML	Purchased with land: 343 ML with 119 hectares; acquired 146 ML with 12-month lease of 34 hectares. At the end of lease, purchased land and water.	Sold: 232 ML
20. 2014_a	165 ML	Purchased with land: 26 hectares.	Still held
21. 2014_b	53 ML	Purchased with land: 76 hectares.	Still held
22. 2014_c	53 ML	Purchased with land: 26 hectares.	Still held
23. 2098_a	~440 ML	Grandfather and parents accumulated with land acquisitions: 121 hectares total.	Still held
24. 2098_b	100 ML	Purchased with land: 32 hectares.	Still held
25. 2098_c	100 ML	Purchased with land: 40 hectares.	Still held
26. 2115_a	500 ML	Purchased with land acquisitions when in family farm, acquired as part of family farm settlement.	Sold: 150 ML at establishment of independent farm
27. 2176_a	-----	Purchased with land: 182 hectares.	Still held
28. 2176_b	745 ML	Purchased with land: 142 hectares in another irrigation district.	Still held
29. 3099	553 ML	Purchased with land: 324 hectares.	Sold: 300 ML
30. 3016_a	153 ML	Parents accumulated with land acquisition: 28 hectares.	Still held
31. 3016_b	161 ML	Purchased with land: 202 hectares.	Still held
32. 3016_c	488 ML	Purchased with land: 148 hectares.	Still held
33. 3016_d		Purchased with land: 53 hectares.	Still held
34. 3016_e	~150 ML	Traded-in via permanent trade provisions.	Still held
35. 3016_f	~150 ML	Traded-in via permanent trade provisions.	Still held
36. 3016_g	255 ML	Purchased with land: 123 hectares.	Still held
37. 3019	120 ML	Father acquired with 142 hectares. (NB: mostly a dry land farm, ~526 hectares).	Still held
38. 3064_a	250 ML	Purchased with land: 40 hectares.	
39. 3064_b	200 ML	Purchased with land: 40 hectares.	
40. 3064_c	350 ML	Purchased with land: 53 hectares.	Sold: ~1,000 ML
41. 3064_d	170 ML	Purchased with land: 107 hectares.	2007; Retained:
42. 3064_e	170 ML	Purchased with land: 177 hectares.	~300 ML
43. 3064_f	243 ML	Purchased with land: 302 hectares.	
44. 3139		Does not own high reliability water. Purchased farm without water after unbundling.	-----
45. 6251_a	327 ML	Purchased with land: 131 hectares.	Sold
46. 6327_a	160 ML	Purchased with land: 40 hectares.	Still held
47. 6327_b	160 ML	Purchased with land: 45 hectares.	Still held
48. 7366_a	320 ML	Purchased with land: 162 hectares.	Sold
49. 7366_b	80 ML	Purchased with land: 40 hectares.	Sold
50. 7366_c	90 ML	Purchased with land: 40 hectares.	Sold

## Appendix 21: List of Water Share Disposals made by the Murray-Goulburn Valley Farmers

### NOTES:

1. The use of ~ indicates that the volume listed is an estimate.
2. The use of ---- indicates that the information was not obtained. The complexity of some farms and time constraints during interviews meant that not all acquisitions could be discussed in-depth.
3. \* The On-farm Irrigation Efficiency Programme is an Australian Commonwealth government programme aimed at assisting irrigators in the sMDB to modernise their on-farm irrigation infrastructure while returning water savings to the environment (Department of the Environment, 2014b).

**Table 24: List of disposals of water rights (pre-unbundling) and water shares (post-unbundling) among the Murray-Goulburn Valley farms**

Case No.	Volume	Reliability	Circumstances of disposal
<b>Post-Unbundling Water Disposals</b>			
1. 1868	331 ML	High	Sold together with 83 hectares.
2. 1872	100 ML	High	Sold to Commonwealth government, proceeds invested, used to pay water charges.
3. 1926_a	50 ML	High	Sold to generate cash flow during the drought.
4. 1926_b	118 ML	High	Sold to Commonwealth government, proceeds used to pay down land debt.
5. 1965_a	232 ML	High	Sold as part of the On-farm Irrigation Efficiency Programme.* Re-purchased water in-district.
6. 2115	Multiple different volumes	High	Have traded water shares as required to generate capital to develop their farm (to both private irrigator and the Commonwealth government), and have also sold water as part of the On-Farm Irrigation Efficiency Programme.* They have virtually always replaced any water that they sold. Intend to remain water owners.
7. 3064_a	~700 ML	High	Sold to Private Irrigator, proceeds used to pay down land debt.
8. 3064_b	180 ML	High	Sold as part of the On-farm Irrigation Efficiency Programme.*
9. 6251	300 ML	High	Sold to Commonwealth government, proceeds used to pay down land debt.
10. 7366_a	320 ML	High	Sold to Commonwealth government, proceeds used to re-purchase water in-district (this water had an exemption to go through above the 4% cap).
11. 7366_b	80 ML	High	Sold to Commonwealth government, proceeds used to re-purchase water in-district (this water was not exempt from the 4% cap).
<b>Pre-Unbundling Water Disposals</b>			
1. 1765	----	Water right	Sold together with 73 hectares in 1993.
2. 1965_b	----	Water right	Sold together with his first farm in 2006.
3. 3099	~300 ML	Water right	Sold together with 243 hectares to settle his divorce in 2006.

**END**