DAIRY FARM WOMEN IN THE WAIKATO 1946-1996: FIFTY YEARS OF SOCIAL AND STRUCTURAL CHANGE

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MARGARET MAY BEGG

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ABSTRACT

Research on dairy farm women in New Zealand is minimal. Women have long worked on dairy farms but their contribution remains largely invisible in the literature and documentation. Researchers have failed to duly record the changes and their implications affecting dairy farm women. This thesis examines the important position held by dairy farm women and the nature of the changes that have taken place in the Waikato Region 1946-1996. I investigate changes, including the household and farm strategies which have been brought about by technical, social, economic and political procedures experienced by dairy farm women over a 50 year period.

Structuration and feminist geographic theory provide a framework for the analysis. Methods employed to collect data included telephone conversations and a postal questionnaire. I examine the nature of farm family labour and analyse notions of work, in order to challenge the hegemony of male dominance prominent in dairy farming, and in agriculture more generally.

An assessment from the field work indicates the dairy farm 'community' is conservative. Any change as to the recognition and acknowledgement of the contribution that dairy farm women make towards the farm enterprise and the economy of the country, is slow in coming. This study was not planned to be exhaustive and offers suggestions for further studies in the geography of dairy farming.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

CHAPTER ONE

INTRODUCTION

What is the current position of women on dairy farms in relation to (1) economic, (2) social and (3) political status? Has this changed since World War II? If so, why, how and what has changed this situation? To what extent have gender relations for dairy farm women changed over the past fifty years?

In this thesis I examine and analyse the position that women have held and still hold on family-owned and family-run dairy farms. Specific concerns in the study are changes within the realms of their domesticity, their participation on the farm and in the workforce. An analysis of important changes and transformations in dairy farming which have affected the lives of women has been undertaken. Despite restructuring of agriculture in the post-war period, the family farm[1] remains the predominant unit of production in New Zealand (Fairweather, 1987a; 1987b; 1992). Fairweather and Gilmour (1993, 74) maintain that family farms have a remarkable capacity to adjust to the forces of economic change in a capitalist society. Whilst the family farm is held up as the basis of dairy production, this thesis is concerned with changes affecting women on such farms.

Little attention has been paid to the social geography of agriculture in New Zealand. Scientists of various sorts, economists, geographers and many others have written a great deal about farming in general such as, its production, economics and spatial organisation but very little has been

[1] Willis (1973, 11) states that according to an international classification, a family farm is one upon which not more than one third of the total labour requirements are by non-family labour.

researched or written about the rural[1] social scene, especially the lives of dairy farm women. The concept of rurality[1] and gender studies form a broad focus of this research.

REASONS FOR RESEARCH AND REVIEW OF LITERATURE

Both the process of change from the traditional family-based roles to contemporary agribusiness and the impact of the change on dairy farm women's roles are underdocumented. Research and literature specifically on dairy farm women in New Zealand is minimal. There are several reasons why research on women within agriculture requires documentation.

New Zealand is predominately an urban society, but 34.8% of the value of New Zealand's exports are derived from three main agricultural products, dairy, meat and wool (*New Zealand Official Yearbook,* 1998, 512). In 1999 the value of New Zealand's dairy exports was $4.6 billion, which made up 20.5% of the value of New Zealand's total exports (*New Zealand Official Yearbook,* 2000, 515). The place of women in this sector of the economy requires research especially on dairy farms where their work is of great importance but has not been fully documented.

Some New Zealand academics and commentators have engaged in studies of the social life of rural women but not many have concentrated on dairy farm women and there is still a strong assumption that the activities of men are of greater consequence (Fink, 1988, 283). A major contribution was made by the Canterbury University sociology staff in conjunction with the Women's Division of the Federated Farmers of New Zealand, who produced *The Rural Women of New Zealand: a national survey* (Gill, Koopman-Boyden, Parr,

[1] The New Zealand Census defines as urban all those living in settlements of 1000 or more. The definition of rural then becomes those who are not urban (Department of Statistics, 1992).

Wilmott, 1976). Other researchers in New Zealand have focussed on dairy farming, including dairy farm women, and produced appraisals drawing on empirical research (for example see Hey, 1996; Keating and Little, 1994; Little, M. H.,1979, 1983, 1997; Manning, 1989; Maunier, 1983; Parker, 1988, 1992; Pomeroy, 1986; Shaw, 1993; Walton, 1991 and Wilson, 1994). Whilst the research to date has provided much information on rural women in general, there has been little insight into the lives of dairy farm women.

Geographers, economists, and agriculturists have provided information on changes and problems related to the economic development of farming, but little has been written about the social aspects of rural life apart from Crawford Somerset's, *Littledene: a New Zealand Rural Community*, (1938) and W.T. Doig's, *A Survey of Standards in Rural Change*, (1940). The series *Studies in Rural Change* (the first volume was published in 1979 by the Department of Geography, University of Canterbury) reported on research into aspects of rural society. Recently Cant and Kirkpatrick (2001) edited a historical book on rural Canterbury which includes aspects on rural society. Other recent articles and reports, such as *The New Zealand Dairy Exporter*, *The New Zealand Farmer, Rural Management* and *Rural News.* incorporate issues of change concerning rural women, have been published and provide useful information. The Ministry of Agriculture and Fisheries (MAF) produce frequent Policy Technical Papers (1997/11; 1997/19; 1997/20; 1997/21; 1998/9) which incorporate issues concerning rural women including health, education, unpaid farm work and contribution to the rural economy. Academic publications, reports and assessments include articles on farming, for example, see *Journal of Rural Studies*, *Rural Sociology*, *Sociologia Ruralis*, *Antipode*, *Area*, *New Zealand Geographer*, *Journal of Agriculture* and *New Zealand Journal of Geography.* Turning to overseas literature

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[1] Rurality is a comprehensive term encompassing life-styles and life-patterns in the context of an environment that is outside major towns or cities.

several writers have produced helpful literature on farming women (see Alston, 1997; Boulding, 1979, 1980; Gasson, 1980, 1988, 1992; Haney and Knowles, 1988; Little, 1986, 1987, 1994; Sachs, 1988; Rosenfeld, 1985; Teather and Franklin, 1994; and Whatmore, 1991a, 1991b). The limited New Zealand literature available, however, does indicate a scarcity of research information of rural women and in particular dairy farm women and their part in the economy.

Social scientists have usually accepted family and work as separate spheres which means, among other things, that they do not study women's work because it has been assumed that women's major roles were within the family (Whatmore, 1991a). The home is seen as a site of consumption and reproduction, rather than a site of production. On family farms the work place and the family are often indistinguishable, both physically and psychologically. This meant that family farms did not fit the conceptions of a work place as seen by social scientists and thus were left out of studies of work, labour and business. It is the interdependent relationship between the household unit and the farm, which is the key to the way in which family farms operate, yet many social scientists overlook this in their analytical research (Moran *et al.,* 1993, 22-42).

The family farm is a site where reproduction, consumption and productive work are combined. The farm is a place of work, business and home. This contrasts with some other sites of family life where paid work and domestic duties are separated into different realms. Consequently, this proximity between work and home frequently involves the farm women in the work-world of men. Farming has been depicted as a man's occupation (Keating and Little, 1994; Sachs, 1983). While women do inherit property and in some instances operate dairy farms in New Zealand, they are not always considered farmers (Begg, 1990, 75).

Further, farm people live their lives among neighbours who are also farm people. At very much the same hour of the day, all farm people of the neighbourhood will be doing the same sort of tasks such as milking the cows twice daily most of the year. The similarity of activity is socially important because it gives the neighbourhood of farm people a homogeneity of interest in their occupation which is characteristic of few other groups. The social environment of home and work place become as one when husbands and wives both work and live on the family farm.

It is the fusion of family and farm which has consequences for women. The family farm depends upon the labour of its household members (Doig, 1940), that is, the nuclear family[4] and it can be argued that dairy farming women have always contributed significantly to the labour on the farm and thus to the economy of New Zealand. Furthermore, it can be argued that the work of dairy farm women has enabled the family dairy farm to survive and evolve in a capitalist system. Their labour has been undervalued and unrecognised (Begg, 1991).

I chose to study dairy farm women in the Waikato because, I was brought up on a dairy farm, and I have spent the last thirty years living in the Waikato area. The prospect of constructing knowledge about the lives of dairy farm women seemed to me to be of great importance in understanding a part of New Zealand life which is an essential component of a geographical perspective on rural society.

RESEARCH LOCATION

New Zealanders use the term 'the Waikato' as though it refers to a definite locality or area. Although people have an idea about which part of New Zealand they are referring to, few would agree on a boundary around the

Waikato despite the use of the definite article. Waikato was never part of provincial New Zealand as were Auckland, Hawkes Bay or Otago prior to the abolition of Provincial Government in 1876 (Dalziel, 1992, 104). The Waikato was part of the Auckland Province.

Identifying the Waikato

For Maori[5] the Waikato is the home of those tribes who trace their ancestry to the Tainui waka (canoe) which brought them to New Zealand when Polynesian people migrated southwards from a Pacific homeland known as Hawaiki. This was an area in New Zealand/Aotearoa that stretched 'from Mokau in the south to Tamaki in the north, Mangatoatoa in the centre, from the mouth of the Waikato River in the west to all of Hauraki' (Stokes, 1997, 5). To the Europeans who settled in the area in the nineteenth century, the Waikato referred to the area centred on Hamilton and its outlying areas. The valley of the Waikato River and its tributary the Waipa were central to both Maori and European identity in relation to the Waikato. At that time the rivers were essential transport routes prior to the coming of the railway (ibid, 3).

With the advent of dairying in the Waikato in the late nineteenth and early twentieth centuries it was those areas closely associated with dairy farms which became 'the Waikato'. That area which lay to the south of the Puniu River and to which the Waikato tribes withdrew following the Land Wars[6] in the 1860s, became known as the King Country and was looked on as being outside the Waikato. Then again the area to the east drained by the Piako and Waihou Rivers (the Hauraki Plains/Thames Valley) where dairying did not become fully established until after World War I was not considered part

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[4] Nuclear family is taken here to mean women living with their husbands (male partners) and/or children.

[5] Maori are the indigenous people of New Zealand.

[6] In the 1860s fighting took place in the Waikato between British troops and Waikato Maori who had selected their own king and opposed the sale of their lands to the government.

of 'the Waikato'. The area centred on Putaruru and Tokoroa, where the soils lacked a trace element (cobalt), were unable to be farmed effectively, although this area was part of the Waikato. Following the discovery of this trace element deficiency in the 1930s, and after the soils had been top-dressed with fertiliser containing cobalt, dairy farming became established in this area.

THE WAIKATO REGION

For the purposes of this thesis the Waikato is taken to include the area covered by the present Waikato Regional Council which is based on the Waikato, Waipa, Piako and Waihou river systems and their catchment areas. This region extends beyond what was traditionally called the Waikato. The southern boundary extends beyond Lake Taupo and into Northern King Country and eastward to include the Hauraki Plains/Thames Valley and the Coromandel Peninsula (Figure 1.1). Hamilton with an urban/rural population of 131,331 (Statistics New Zealand, 1996, Table 19) is the major administrative centre for the region.

The Waikato, with its extensive swamps and areas of gentle relief, is suited to dairying (Plate 1.1 and 1.2). Coupled to these relief features is a climate which gives a year-round rainfall, with a slight winter maximum, high sunshine hours and mild winter temperatures allowing grass growth throughout most of the year (Figure 1.2). The extensively drained swamps and other low-lying areas with their gley soils derived from alluvium or peat have responded to top-dressing with superphosphate and lime, as has the yellow-brown loam of volcanic derivation found on the rolling hill country (Selby, 1972, 11). It is on the basis of these physical characteristics along with top-dressing that this intensive system of grassland dairy farming has evolved (Begg and Begg, 1997, 161).

The Waikato has long been New Zealand's major dairying region and contains 39% of New Zealand's three and a half million cows (Agriculture Statistics, 1993). Dairy farms make up 80.4% of the economic properties in the region (MAF Monitoring Report, North Region, Summer, 1994). The milk processed in the Waikato Region by the New Zealand Dairy Group (NZDG), which now operates in the South Island, makes up about 40% of New Zealand's milk (NZDG Annual Report, 1995, 47).

In recent years dairying has extended in the Waikato Region from the older core areas, such as those covered today by the Matamata-Piako, Waikato and Waipa District Councils, into areas further south and of steeper terrain such as those found in the areas covered by the Waitomo and Taupo District Councils (Figure 1.3).

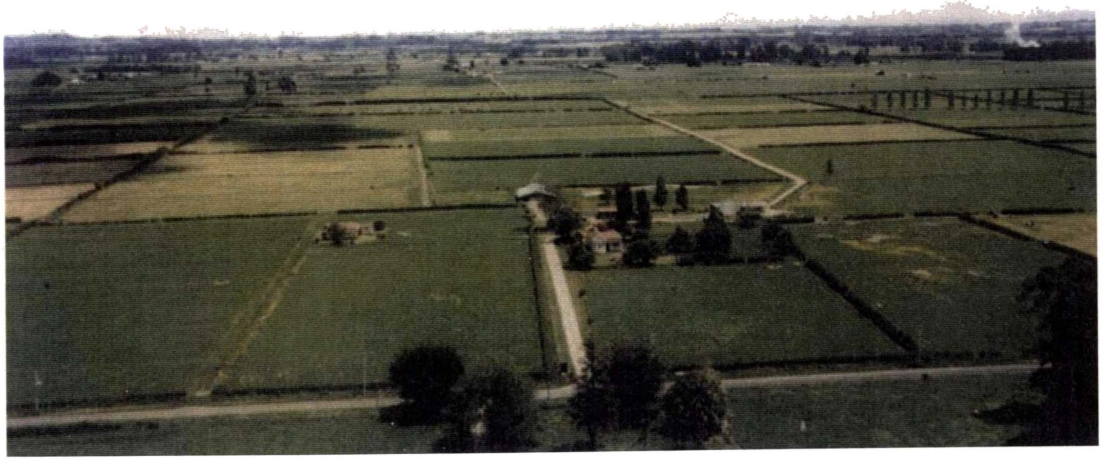

Figure 1.1: Dairy farm land in the Waikato.
Source: Unknown

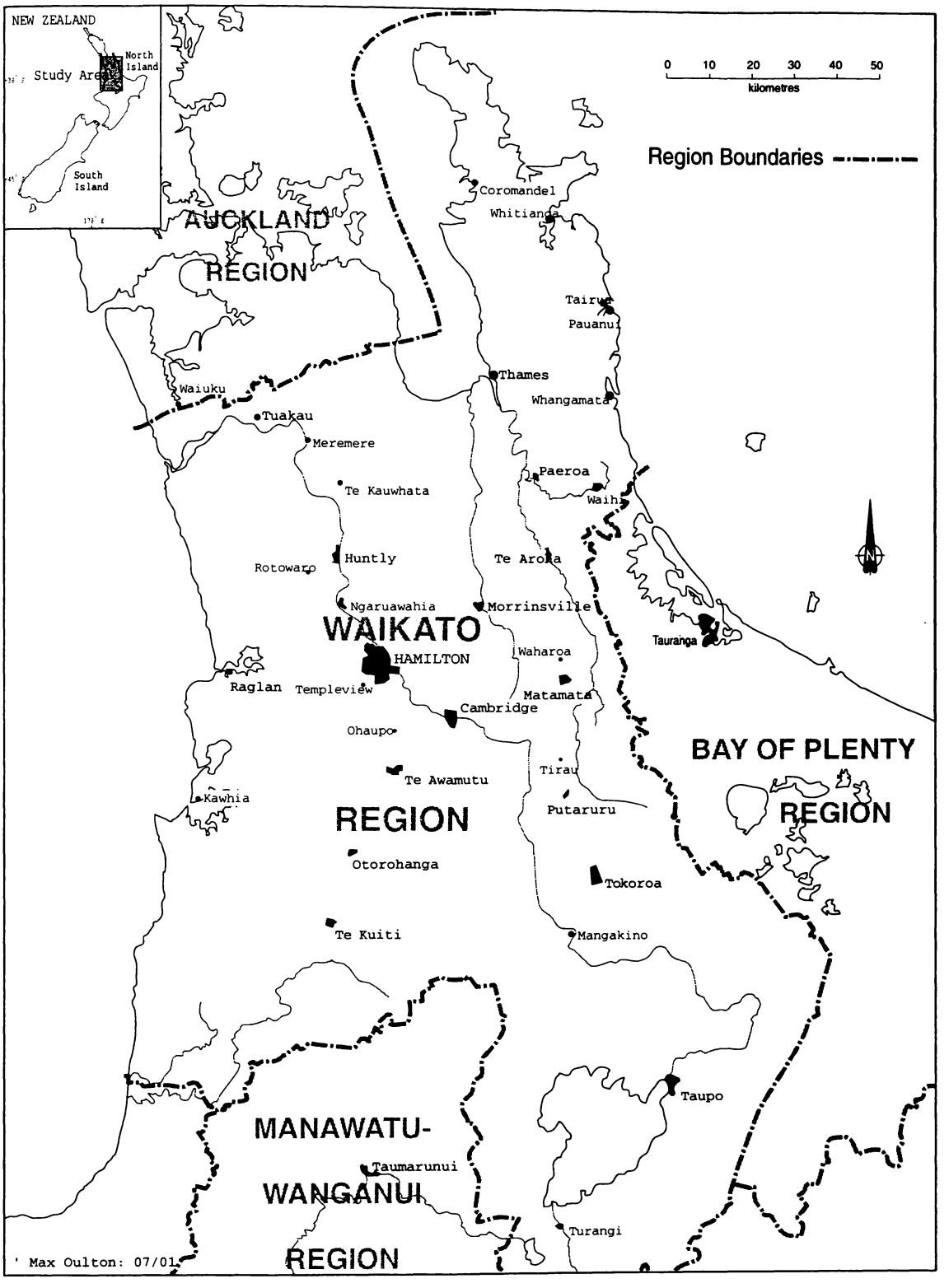

Figure 1.1: The Waikato Region showing local authority areas, and towns.
Source: Max Oulton, 2001

Plate 1.2: Dairy farm land in the Waikato.
Source: Unknown.

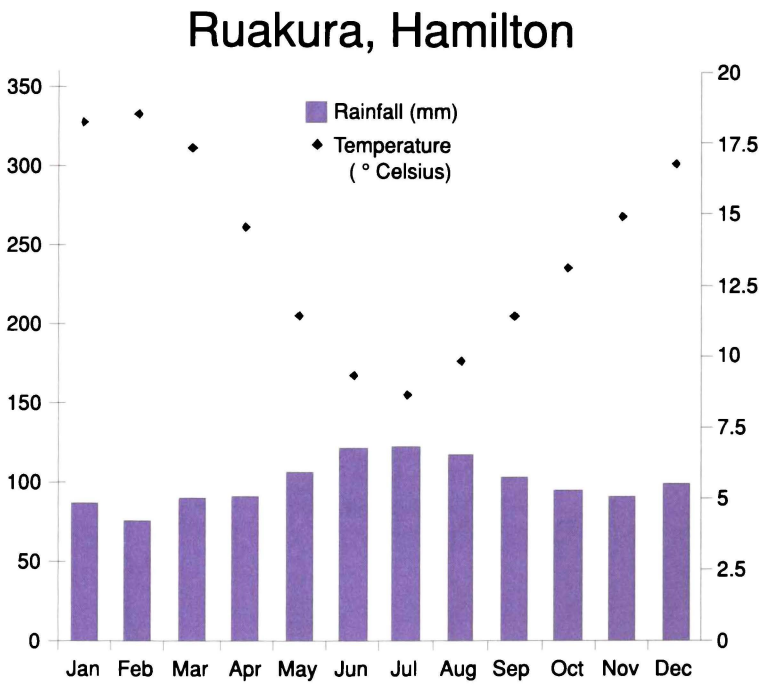

Figure 1.2: Rainfall and temperature normals for Ruakura, Hamilton for the period 1961-1990.

Sources: NIWA Science and Technology Series (Rainfall Normals No. 3 and Temperature Normals No. 4). A.I. Tomlinson and John Sansom, National Institute of Water and Atmospheric Research Ltd. 1994. Wellington, New Zealand.

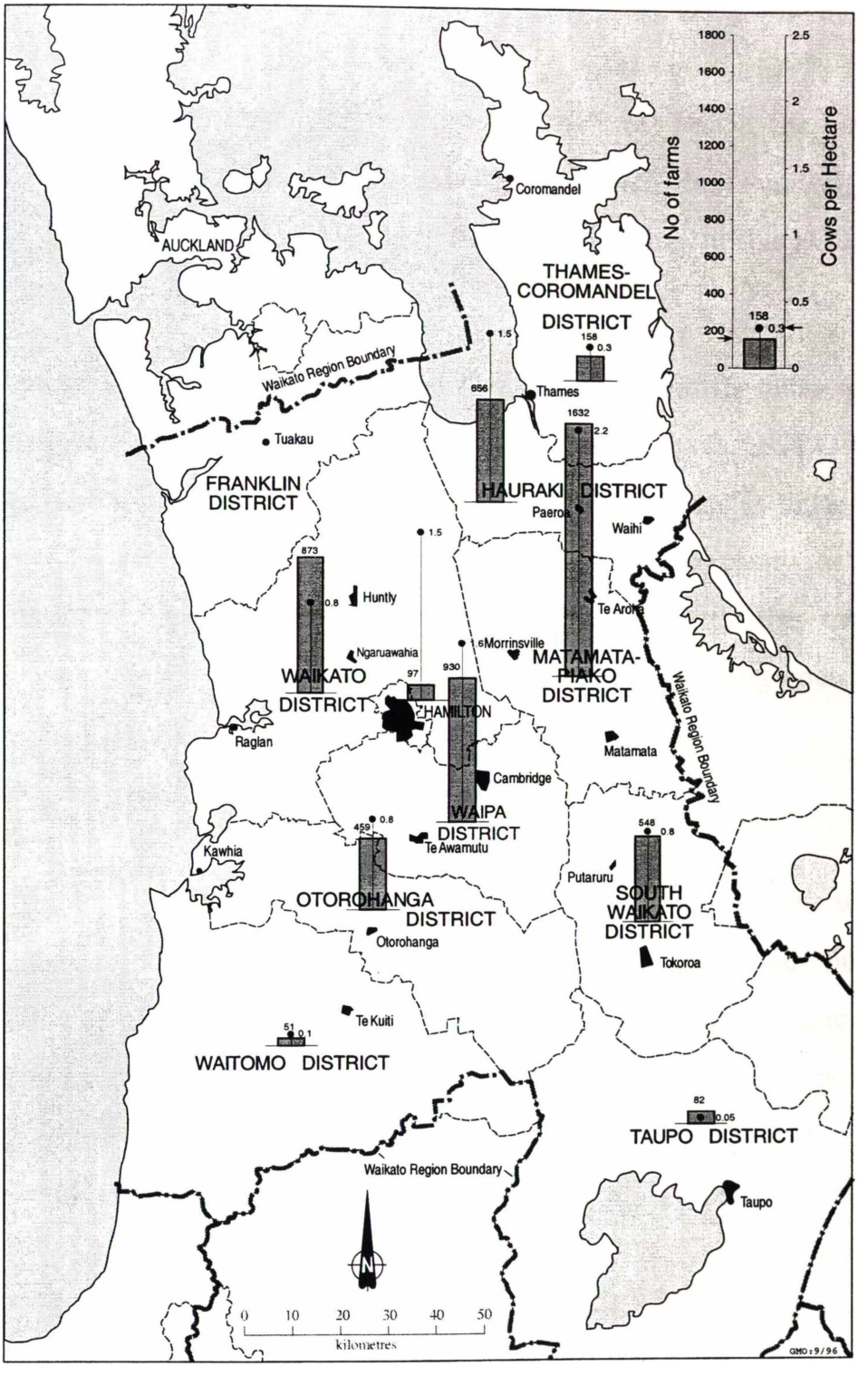

Figure 1.3: Total number of dairy farms and cows per hectare in each District Council area within the Waikato Region (as at June 1993) excluding those parts of Franklin and Rotorua District Council areas within the Waikato Region.

Source: Phil Journeaux, MAF Policy Manager, Hamilton.

As dairying has been more profitable than sheep and beef farming, many of the farms in these Districts have converted to dairying. Dairy cow numbers in the Waitomo District increased from 21,061 to 31,328 between 1990-1995, a 49.6% increase, while in the Taupo District for the same period, the increase was from 22,659 to 31,328, a 38.2% increase (Statistics New Zealand, 1990, Table 13; 1995, Table 2.9). Today milk tankers belonging to the NZDG ply most of the roads in the Waikato Region.

What essentially unites the region together for dairy farmers today is that they now all supply milk to the processing plants run by the NZDG which has its headquarters in Hamilton. The only exception to this is those dairy farmers who supply the Tatua Co-operative Dairy Company, a small independent dairy company at Tatuanui which lies to the east of Morrinsville. Thus the Waikato Region as far as dairy farming goes is an interlinked region.

PARTICIPANTS

There is nothing unusual or distinctive about the 62 dairy farm women participants in this study. They are typical of many farm wives but not necessarily of all rural women residents in the Waikato. All the participants with their husbands/partners and children are, or were dairy farmers in the Waikato Region (Figure 1.4). Thus the concern is very much with nuclear families living in separate households on their farms. The women differ in terms of age, number of children, length of residence in the Waikato, employment status both on and off the farm, and in the way they conduct their lives. I shall pay some attention to these differences but it is the similarities in their experiences of, and coping with change, which I have chosen to emphasise in this study.

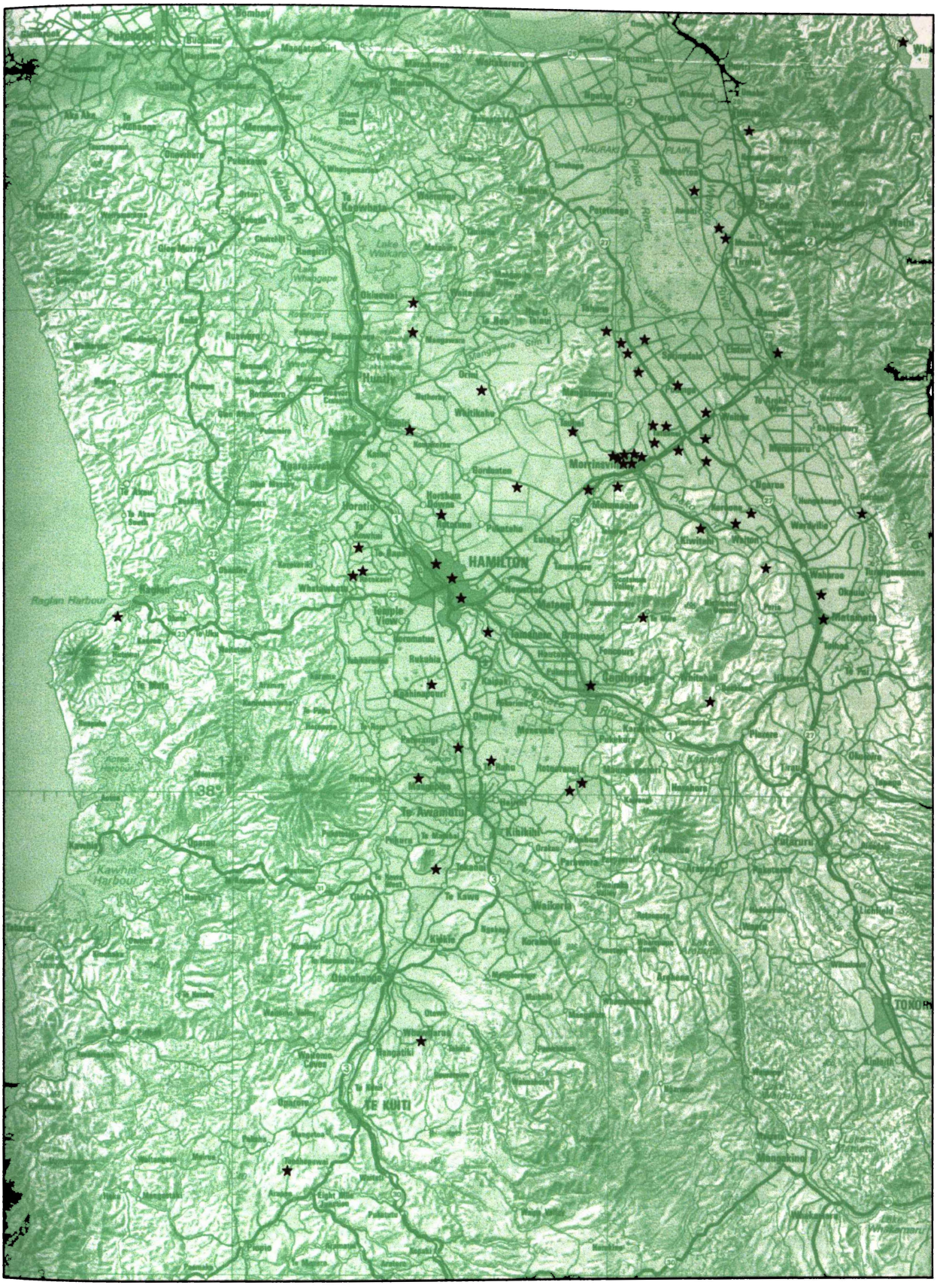

Figure 1.4: Location of participants in the Waikato Region.

THESIS STRUCTURE

This thesis is organised through three parts and nine chapters. Part one covers and sets out the context for the project. Part two deals with the development of the dairy farm system in New Zealand up to 1946 and the role of women on dairy farms since that time. Part three analyses and examines major changes that have occurred to the farming system and farming communities brought about by technical, social, political and economic changes that have impacted on the lives of dairy farm women. A concluding chapter brings together the changes discussed in Chapters Five, Six, Seven and Eight and shows how they have affected the lives of dairy farm women.

Part One. This introductory chapter outlines the reasons for the research and briefly reviews some of the literature written about dairy farm women. It also identifies the Waikato and the Waikato region and the location of the participants. In Chapter Two I discuss the theoretical considerations in developing an epistemological framework for the thesis. Chapter Three outlines, in general terms, the research methodology and methods used to collect and analyse data. The methods for data collection included telephone conversations and a survey questionnaire. Chapter Three concludes with a statement of my personal involvement and position in the research process.

Part Two. Chapter Four provides a historical section on the development of the dairy farming system in New Zealand up to 1946 as well as providing a background to the evolution of the modern dairy farm. Chapter Five conceptualises and analyses the different types of work women carry out on dairy farms.

Part Three. Chapter Six presents an analysis and examination of technological changes. I draw on direct quotes from the farm women in an attempt to understand the changes, and their effects, as the women saw them. The use of direct quotes facilitated a subjective understanding of the farm women's experiences and feelings about changes in their every day work. In other words, this was an attempt to approach the study through the eyes and experience of the farm women who were involved in the changes. Similarly Chapter Seven focuses on the social changes and their effects while in Chapter Eight I discuss the political and economic changes and their consequences. Chapter Nine sets out my conclusions which draw together the phenomena of change and how the dairy farm women responded to these changes. In this chapter I propose further research into the role of women in the field of dairy farm services such as veterinarians, consulting officers and research scientists. I also offer suggestions as to what might happen to dairy farm women in the future in the light of increasing farm and herd sizes as well as changing ownership structures. The time frame for this research project was 50 years that is, 1946 – 1996.

CHAPTER TWO

THEORETICAL CONSIDERATIONS

INTRODUCTION

In its simplest form theory may be defined as a set of connected statements used in the process of explanation (Johnston, *et al.,* 1994, 622). The nature and status of theories differs among philosophies of social science, for example, the theory of epistemology[1] and the theory of realism.[2] I begin this chapter by broadly examining human geography and some of the associated theoretical concepts which form a matrix for this thesis. Following this is a fuller explanation of the main theoretical constructs (structuration theory and feminist perspectives) which guide the research investigation on dairy farm women.

HUMAN GEOGRAPHY

Human geography is concerned with spatial differential and human activity and with human use of the physical environment (Johnston, *et al.*, 1994, 259). The separation of human from physical geography as a major division of the discipline, is relatively recent. It was not until after the Second World War that human geography came to equal physical geography in its standing

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[1] The theory of epistemology seeks to determine the correspondences between a *realm of knowledge*, such as concepts and propositions, and a *realm of objects*, for example experiences and things (Hindess, 1977). However, Thompson (1984) argues that epistemology is not so much a defence of a particular version of 'knowledge as representation' but rather an attempt to elucidate what is presupposed by *claims to know*. Such claims, Thompson continues, are embedded in structures of language and social action and their elucidation is vital for social theory in general and for the analysis of *ideology* in particular.

[2]*Realism* is a means of conceptualising reality and thus provides a mental framework for its apprehension: the test of a theory is not its validation against empirical evidence but, rather, its coherence and, especially, its practical adequacy. In feminist geography a realist approach was used by Foord and Gregson (1986) to attempt a reconceptualisation of patriarchy. Realists argue that societies are open systems in which the same conditions are rarely reproduced, theories cannot, as positivists contend, predict the future; they can only illuminate the past and the present, and provide guidance to an appreciation of the future (Johnston, *et al.*, 1994, 623). Realist approaches, drawing on the work of

within the discipline in the United Kingdom as regional geography decreased in importance.

In modern human geography, epistemology 'has been used in both a general sense to examine all geographical knowledge, scientific and other; how it is acquired, transmitted, altered and integrated into conceptual systems; and how the horizon of geography varies among individuals and groups' (Lowenthal, 1961). Further epistemology has been used in a more particular sense to interrogate the 'claims to know' made by positivism and other non-positivistic philosophies (Gregory, 1978). Within positivism, a theory is assumed to be universal in its application, but on the other hand, within *idealism* there are no universals. In other words only the individual theories resident in each individual's mind, are used to guide action and which may be refined, and even changed, according to the outcome of the action. Thus, human action is directed by personal theories not external ones.

By the 1980s, human geography has widened to become a term describing all sorts of geography, which are not solely concerned with the physical environment or with the technical issues dealt with under such geographical sub-fields as cartography. Specialist sub-groups were established within the main professional societies to cater for particular interests, and to some extent operate as separate organisations for example, urban and economic geography (Johnston and Gregory, 1984). Other sub-fields grew from these, with a growing emphasis on social geography, revived and revised political geography and cultural geography (Johnston, 1990, 1991b). The terms space (flows or relations) and place (locations) are what define geography (Massey and Jess, 1995). Social production and meaning of space (spatiality) draws

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Bhasker (1975, 1986) see the world as composed of complex events and phenomena which exist within open systems.

attention to the fact that social life necessarily happens in certain spaces and places. Space is not a reflection of society, it is society (Castells, 1983).

Social geography

The study of social relations in space and the spatial structures that underpin those social structures may be perceived as a form of social geography. Social geography, the product of the 1960s radicalism, expanded dramatically in the 1970s until it was practically identical with the whole field of human geography (Johnston *et al.*, 1994, 562).

The radical social movements of the 1960s such as the anti-Vietnam war movement saw the development of several new perspectives in social geography, stressing human welfare, and social justice. Pahl in the 1960s stated that social geography was concerned with the location of social groups and social characteristics (Massey, 1985; Pahl, 1985). By the late 1970s social geography encompassed a wide range of ideas, theories and empirical research including several different approaches to knowledge and understanding (Knox, 1982).

Since the 1980s social geography has been transformed by its encounter with social theory including Anthony Giddens' concept of structuration, theories of modernism and postmodernism. Also social inequality began to be supplemented by studies of the geography of gender and a wide variety of feminist perspectives. Throughout this period social geography has retained its emphasis of mapping and interpreting the spatial incidents of social problems, including geographies of crime, housing, health and education (Herbert and Smith, 1989). Geography 'was to become central to social theory as the importance of space as the setting for social interaction was elaborated: space was the medium of social process as well as their outcome' (Rose, 1993, 19). Thus 'spatial structure was seen not merely as an

arena in which social life unfolds but as a medium through which social life is produced and reproduced' (Gregory, 1986, 451).

Humanism, human agency and humanistic geography

Humanism is not in itself a social theory but rather a diverse set of ideas which have in common an emphasis on the humanity of individuals. People are capable of being creative (or destructive), reflective (or not) and, above all, they are moral beings, which is to say that there is a moral dimension to their actions. Humanists argue that any social theory, which denies these characteristics of what it is to be human must be flawed because it fails to recognise the fundamental nature of its subject matter (Flowerdew and Martin, 1997, 23).

Human agency, described as the capabilities of human beings, is an important focus in this study. It is the central concern of humanistic geography (Ley and Samuels, 1978), which is an approach to human geography. Humanistic geography is distinguished by the central and active role that it gives to human awareness and human agency, human consciousness and human creativity. Humanistic geography according to Buttimer (1990) 'is an attempt at understanding the meaning, value and the human significance of life events'. Tuan (1976) claims that it is an expansive view of what a human being is and can do. According to Eyles (1988, 2) humanistic geography involves hermeneutics (interpretation and meaning) which, 'attempts to uncover the nature of the social work through an understanding of how people act in and give meaning to their lives'.

This hermeneutic attribute may involve the social scientist, 'entering and grasping the frames of meanings in the production of social life by lay actors, and reconstituting these within the new frames of meaning' (Giddens, 1976, 79).

Contemporary debates

Interpretations of society are evolving and these interpretations have promoted many debates for example, structuralism versus poststructuralism; structure versus structuraction or action; modernity versus postmodernity; feminism versus postfeminism (Churton, 2000, 93-155). Many theorists have sought new ways of analysing the world.

The influence of postmodernism has received much attention. Postmodernism is a recent movement in philosophy, the arts and social sciences, characterised by scepticism towards the grand claims and grand theory of the modern era and their privileged vantage point, stressing in its place an openness to a range of voices in social enquiry, artistic experimentation and political empowerment (Johnston, *et al.,* 1994, 466. See also Hassan, 1985 and Jencks, 1987). Postmodern theories is a desire to subvert or dismantle the boundaries between disciplines and sub-disciplines and create a multidisciplinary, multidimensional perspective that synthesises ideas from a range of fields and perspectives within a given discipline (Ritzer, 1992, cited in Churton, 2000). Similarly, in the study of social life postmodernists advocate removal of the boundaries that segment society. In other words postmodernism could be expressed as a broad trend in social thinking that rejects the ideas that there is one superior way of understanding the world. Postmodernism is closely linked to a type of analysis known as deconstruction – a form of analysis that examines the various forms of representation (Pinch, 1997, 146).

The late 1980s and 1990s have seen an explosion of attempts to apply postmodern ideas to various aspects of social life. Most effort has been directed at developing an understanding of popular culture (see Strinati 1992; Sugrue and Taylor 1996). There have also been efforts to develop understanding of women and marginalised social groups (see Bondi, 1990b;

Bondi and Domosh, 1992; McDowell and Sharp, 1997; and Massey, 1991). According to Churton (2000) some attempts have been made to apply postmodern ideas in other fields such as health (Senior, 1996), the work place (Ward, 1989), relationships (Giddens, 1990), organisations (Clegg, 1992), and new technology (Tattersall, 1997) have taken place. In addition Churton (2000) also notes the influence that postmoderism has had on the study of economics, business, education and the state.

THEORETICAL CONSTRUCTS

The theoretical constructs that I found most appropriate for interpreting my research are those of structuration theory and feminist geographies. Structuration theory was appropriate because the dairy system works within a structure with rules, norms and resources that dairy farmers and their partners draw upon to carry out their lives. By using feminist geographies, I am able to give dairy farm women a voice within the structure in which they operate. The analyses, used by feminist geographies, expose the different attitudes and changes, which have taken place since the end of World War II. Analysis enables the unpaid and unacknowledged contribution of dairy farm women to an important section of the national economy to be made visible.

STRUCTURATION THEORY

The structuration approach is concerned with the intersections between knowledgeable and capable *human agents* and the wider *social systems* and *social structures* in which they are implicated. The structuration approach put forward by Anthony Giddens, the British sociologist, and the concept of spatiality share some features in common. Since the 1970s Giddens' writings (1976; 1977; 1979; 1981; 1982; 1983; 1984; 1985; 1987; 1990; 1991; 1993; 1994; 1995; 1996; 1998; 2000; 2001) have had a profound impact on debates within

social theory and social sciences generally. His proposals are what he calls 'theory of structuration' (Giddens, 1984, 170).

This theory focuses on the ways in which actions and structures are interwoven in the ongoing activity of social life. In other words this theory is an attempt to overcome the major rift that has divided social theory. There is, on the one hand, an extensive body of literature that concentrates upon the influence of material conditions on social outcomes thereby playing down the importance of individuals. These analysts concentrate on objective social relations, which are characteristic of social theories as diverse as functionalism, Marxism (in some forms), and structuralism. The common ground of each of these explanations is a disavowal of the importance of individuals, concentrating instead on those conditions that determine social outcomes (Moos and Dear, 1986, 233).

On the other hand, there is an extensive body of literature that focuses primarily upon individuals and their consciousness as the key to understanding social outcomes. This type of analysis reflects the work of phenomenologists and existentialists, authors who accord primacy to how individuals attach meaning to their life world (Moos and Dear, 1986, 233).

It is the division between these two perspectives that has to be resolved. Thus the main aim of 'structuration theory' is to remove what has typified social theory for so long, namely the dichotomy between individual behaviour and the structure of society. Giddens views social structures and human agency as being inseparable, each interacting with the other in a mutually transformative process (Johnston, *et al.*, 1994, 464). Theories that focus on cultural forces, for example, Parsonian functionalism and/or economic forces, or Althusserian-Marxism which determine social outcomes, lack understanding of the individual as an active, knowledgeable, reflexively,

monitoring agent (Giddens, 1979, 54). Giddens (1979, 53) overcomes this dualism by developing a position where:

> The notion of action and structure presuppose one another; [the] recognition of this dependence, which is a dialectical relation, necessitates a reworking both of a series of concepts linked to each of these terms, and of these terms themselves.

The reworking of these concepts results in a social theory, which may give greater insight into the analysis of society. In other words with this approach Giddens envisages the fusion of society and the individual in the 'duality of structure'. The theory focuses on the ways in which actions and structures are interwoven in the ongoing activity of social life (Figure 2.1).

Concepts of structuration

The key concepts of structuration theory are; system, structure, agency, the duality of structure and social reproduction, and time-space relations (Moos and Dear, 1986, 233). Walmsley and Lewis (1993, 64) have postulated that the structuration of society involves essentially three main concepts incorporating the above concepts.

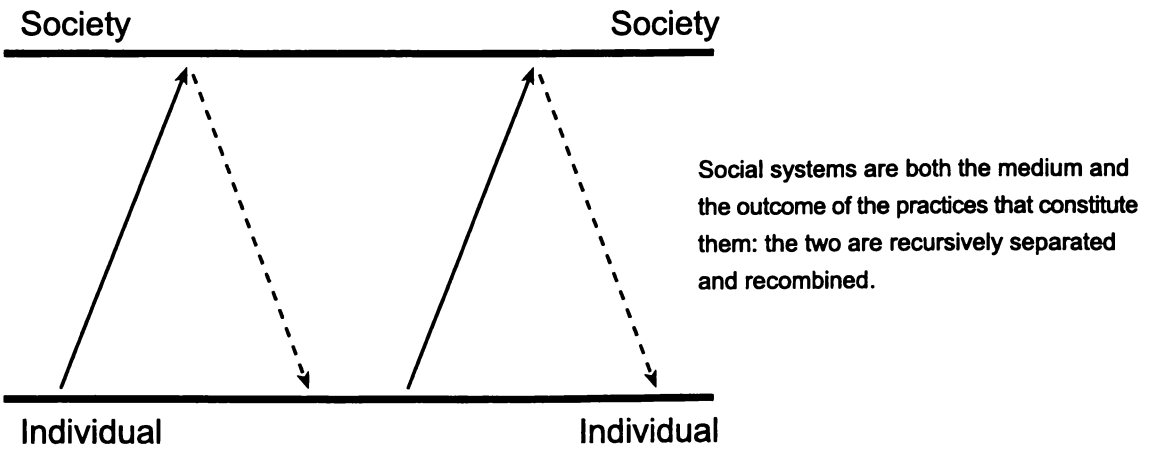

Figure 2.1: The nature of structuration as typified in social theory by Jürgen Habermas and Anthony Giddens.
Source: Gregory, 1981, 9.

First, the activities of agents are reproduced relations, which stretch across time and space and are connected with past activities and ones yet to be realised. These activities in time and space of the agents that comprise society, form the *system*. Social systems are reproduced social practices or 'reproduced relations between actors or collectivities organised as regular social practices' (Giddens, 1984).

Secondly, the recursive rules[3] and resources[4] form the *structure* and these guide human agents in the context of their daily lives and which are reproduced at the moment they are drawn upon. In this way:

> structure is the medium whereby the social system affects individual action and the medium whereby individual action affects the social system. The outcome of these individual-system interactions always (in varying degrees) affects the structural rules governing the next interaction. Thus, the theoretical separation of structure and system enables Giddens to capture both agency and structure in the production and reproduction of social life without according primacy to either (Moos and Dear, 1986, 234).

Thirdly, the structuring of social relations in time and space within the context of the dual relationship between agency and structure, portrays *structuration*. In other words 'structuration refers to the means by which human agents govern the continuity and/or transformation of structures, and thereby influence the reproduction of the system obtaining in any given case' (Walmsley and Lewis, 1993, 64).

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[3] Giddens uses the term 'rules' to refer to the procedures or routines that underlie everyday interaction. These rules are not static but dynamic, that is, open to revision through new patterns of interaction. Rules can either be reproduced (maintained) or altered (transformed), depending on whether the patterns of interaction remain the same or change (Churton, 2000, 126).

[4] Resources are the means which the material and social structures of society are defined. The material aspects of society are converted by human action into resources, for example, land becomes a resource through farming. Similarly, social relations become resources when individuals use them to attain dominance over others, for example, authority becomes a resource only when one person exerts influence over another (Churton, 2000, 126).

Social systems

Giddens (1984) in other words, envisaged structures as social systems, which enable humans to live their daily lives. For this to occur, these systems have rules so that everyday living becomes a routine. Individuals in this way can merge into the local system. The rules are numerous and varied in advanced societies and so institutions, for example, state, local government, trade unions, and families are formed in order to enforce rules. Along with these can be included the structure (which forms a vertically integrated dairy industry) in dairy farming (Figure 2.2). These rules apply in particular places and their integration at these places requires that individuals be seen to exist in particular times and spaces. Thus, Giddens argues that the organising units of societies are local systems, or *locales*. Giddens' approach recognises that social interaction takes place in distinct geographical and temporal settings, many of which involve highly routine interactions. However, as critics point out, lives are influenced by others outside of these settings.

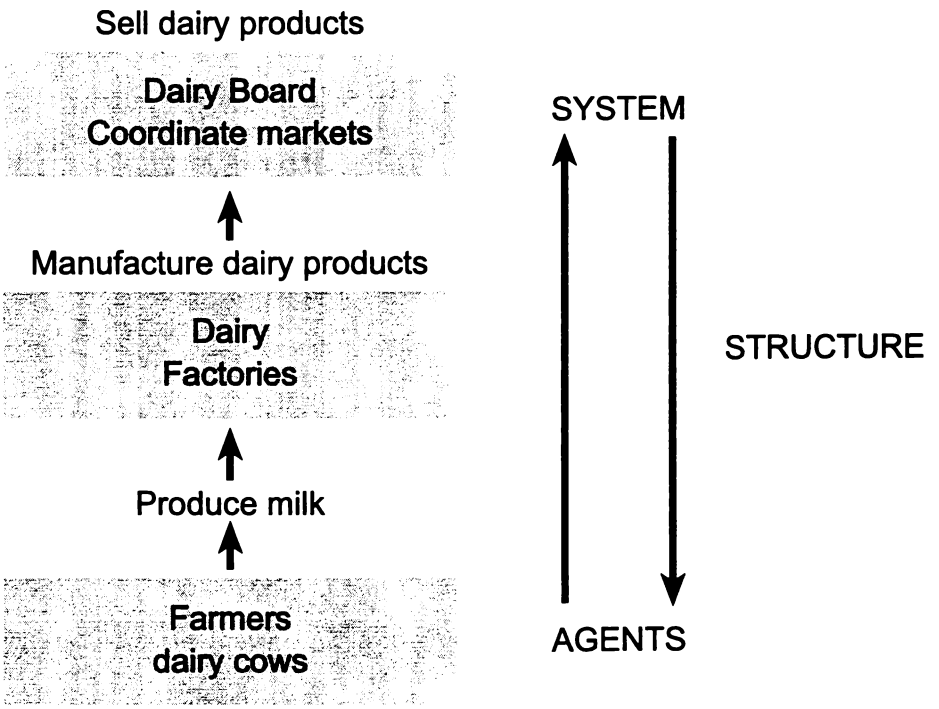

Figure 2.2: Diagrammatic model of structuration. A structure of the vertically integrated dairy industry.

Until the last few centuries, people had to be present together to transact many aspects of life, but increasingly social processes became stretched over time and space. This stretching is referred to by Giddens as *space-time distanciation.*[5] Various factors such as changes in transportation technology, and electronic information storage and retrieval systems have contributed to distanciation (Pinch, 1997, 98). However, some geographers have argued that Giddens never fully integrates these levels of locale (see Johnston *et al.,* 1994, 335-336).

Space and place

The nature and form of space and place is an issue of concern in the structuration process. Social space, time and human agency are all involved in the continuous process of establishing and transforming human societies. Both broad social changes and local personal development and activity are involved as part of the spatiality process (Gregory and Urry, 1985). Giddens (1984) argues that spatial configurations of social life (spatialities) are just as much a matter of basic importance to social theory as are the dimensions of temporality. Soja (1989, 129-130) wants social scientists to look at spatiality. In his view there is a need to recognise that social processes are differently constituted in different places. Predictably, there have been many criticisms of this approach for example, Massey (1991) has criticised Soja for overlooking women, ethnic minorities and non-western societies.

After decrying the significance of space, contemporary structuralists, particularly those influenced by Giddens, have become aware of its potential in providing a fuller understanding of economic restructuring and social recomposition (Walmsley and Lewis, 1993, 65). Giddens (1984, 118), for instance has clearly argued that the structuration process can only be

[5] Distanciation is the tendency for interactions and communications between people to be stretched across time and space through the use of books, newspapers, telephones, faxes and the like (Pinch, 1997, 140).

understood within a time-space framework and, in particular in the context of a locale. 'Locales refer to the use of space to provide the settings for interaction, the settings of interaction in turn being essential to specifying its contexuality'.

Essentially, locales refer to the way in which space is part of the interaction between humans and structures. Thrift (1983) has added to the roles of locales by conceptualising them as the site of the determinate working of an objective social structure. According to Thrift (1983, 40), locales structure individual life paths in time and space, influence life paths, provide a means for interaction, provide the activity structure of daily life, and are the principal sites in the process of socialisation. Harvey (1985a) also emphasises the significance of locales through the concept of *structured coherence*. In his view:

> The standard of living, the qualities and styles of life, work satisfaction (or lack thereof), social hierarchies, and a whole set of sociological and psychological attitudes towards working, living, enjoying, entertaining and the like (Harvey, 1985a, 140).

Harvey continued that such coherence may vary in time and space, sometimes in such a way as to render the coherence temporary and often partial.

For Gregory, the spatial structure in an area is not merely the container within which social forces, for example, conflicts are played out. It is also a means by which those social forces are actually constituted. Conflict often finds expression through spatial structures, for example, the segregation of land uses within the physical environment. Therefore 'spatial structures cannot be *theorised* without social structures, *and vice versa*, and... social structures cannot be *practised* without spatial structures, *and vice versa*' (Gregory, 1978, 121).

Debates

Structuration theory has generated enormous debate (for example, Bryant and Jary, 1991; Craib, 1992; Gregory, 1978; Gregson, 1986; 1987; Held and Thompson, 1989; Storper, 1988; Thrift, 1985). It is impossible to cover these controversies in detail but Giddens often replies to his critics. One important source of debate has centred around the difficulty of applying structuration theory empirically. How do researchers break into a continually reflexive process? And how can the concept of a locale be made operative? The first of these two issues has been a focus of some debate in the literature (Gregson, 1986). Since all structures may be conceived of as being socially reproduced, Gregory (1981) is adamant that agency must be the starting point of any research. If this is the case, a deep understanding of structuration can only be achieved by means of an historical perspective. The trouble with this argument is that according to Harvey (1987b), 'any such understanding needs to adopt a valid theoretical framework'. In Harvey's view, 'this is to be found in Marx's writings on historical materialism giving a clear means of understanding the origins of capitalism and its uneven spread in time and space'. But, as has been shown, Marxism 'tends to ignore human agency, that is, one half of what the theory of structuration is concerned with' (Walmsley and Lewis, 1993, 65).

Empirical studies: application of structuration theory

Giddens (1983, 77) warned against the haphazard use of structuration theory as the 'magical key that unlocks the mysteries of empirical research'. He argues instead:

> that structuration theory is best employed as a means of sensitising social analysis by paying particular attention to three themes of structuration theory: the hermeneutic nature of social investigation, stressing the importance of 'mutual knowledge'; the need to treat the individual as knowledgeable in the reproduction of social practices; and understanding the major role of unintended outcomes that result

from intention activity (Giddens, 1983, cited in Moos and Dear, 1986, 232).

Dear and Moos (1986) demonstrate a use of structuration theory sympathetic to the above themes. Their investigation into the empirical viability of the theory is a necessary part in the entire development of the structuration project. This investigation into the utility of structuration theory through an empirical analysis involved an examination of the ghettoisation of ex-psychiatric patients in Hamilton, Ontario (Dear and Moos, 1986, 351-73).

In their understanding of structuralism Moos and Dear (1986, 240-241) portray an infrastructure, which characterises the relationship between agency and system (Figure, 2.3). The structure acts as the mediating device, which provides the rules that characterise the social system and thereby enable various forms of action. In performing these acts, agents reproduce these structures and the social system (reproduction implies change). They further feel a clarification of the concept of structure in structuration theory, 'is fundamental because it is these differing conceptions of structure that lie at the heart of the problem of determinism[6] in structuration theory'. The implications of this infrastructure conception is that it abandons the notion of determination that has characterised previous work (Moos and Dear, 1986, 240).

Structuration theory is a broad, influential theory, which has an appeal to geographers (see Cohen 1989; Held and Thompson, 1989). Dyck (1990), for instance has used it to advantage to study the development of the notion of

[6] Determinism refers to theories that attempt to relate social changes directly to underlying economic changes in society and that play down the ability of people to make decisions that affect their destinies (Pinch, 1997, 141). The opposite term, voluntarism refers to a type of social analysis that envisages people as capable of making decisions thus playing down the constraints upon people (Pinch, 1997, 150).

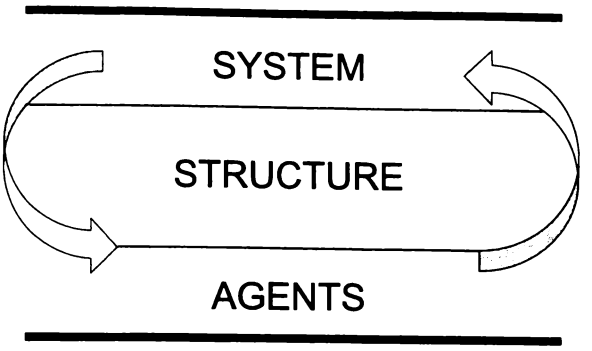

Figure 2.3: Diagrammatic representation of structuration.
Source: Moos and Dear, 1986

motherhood in a Canadian suburb and to show how the practices of motherhood were built up, interpreted, and negotiated in response to economic and social change. Dyck (1990) argues that in a fundamental sense, structuration theory is concerned with the interplay of structure and agency. 'Structuration theory suggests an inherent spatiality to social life and permits context... to be placed at the centre of analysis' (Dyck, 1990, 461). She also argues that the context of social construction is important and to understand that construction, researchers therefore need to adopt a hermeneutic approach so as to see the world through the eyes of those whose behaviour is under study. In the words of Dyck (1990, 461):

> Structure, rather than a model constructed by observers, is understood as consisting of rules and resources, which only exist temporally when 'presented' by actors; that is, when drawn upon as stocks of knowledge in day-to-day activity. Thus structure only exists through concrete practices of human agents, who reproduce social life through their routinised day-to-day encounters.

In other words, it is human agency that influences how the meaning of the environment and of social structures generally is built up, how it is challenged, and how it is negotiated (Walmsley and Lewis, 1993, 136). Individual actors may be able to make a difference in the world, the existence

of social structures, and the meaning given to those structures, constrains the actors, not just as individuals but as totalities (Dyck, 1990, 462).

The work of Giddens and the debates that have surrounded it suggest a number of key principles that should underpin social enquiry. According to Pinch (1997, 160), there is first, and perhaps most important of all, a need to be aware of the *double-hermeneutic*: not only is there a need to take account of the ways in which individuals being studied reflect and monitor their everyday actions but there is also a need for researchers to be aware of their own understandings of these situations (see Giddens, 1976, 79).

In later works on modernity Giddens (1990, 38-39) regards what he calls 'reflexivity,' that is, the constant examination and modification of social practices, as focal to the configuration of modernity. He is also interested in the ways in which the processes of monitoring and modification contribute to the volatility of the modern world. 'New knowledge (concepts, theories, findings) does not simply render the social world more transparent, but alters its nature, spinning it off in novel directions' (Giddens, 1990, 153).

As Giddens (1991, 219) notes 'all research in my view, no matter how mathematical or quantitative, presumes ethnography. Secondly, and related to the above is the need to take into account the social settings in which action occurs. Thirdly, there is the need to avoid the many limitations of functionalism'.

FEMINIST GEOGRAPHIES

Whilst Giddens (1984) refined the concepts of action and structure and linked them to a wide range of issues, the issue of gender has not been at the centre of his structuration theory. Linda Murgatroyd (1989, 148) shows how Giddens has failed to deal seriously with either the gender dimension of social relations or any of the social activity in which women typically

participate. The ways in which gender relations not only differ from place to place but also reflect, and partly determine local economic changes, have been a concern for feminist geographers.

Although the emphases of feminist geographers has changed over the years, it is possible to identify a constant aim or focus of feminist geography. The specific aim is to investigate, make visible and challenge the relationships between gender divisions and spatial divisions, to uncover their mutual constitution and problematise their apparent naturalness (McDowell and Sharp, 1999, 91). McDowell and Sharp (1997, 4) state the focus of feminist geography is 'to demonstrate the ways in which hierarchical gender relations are both affected by and reflected in the spatial structures of societies, as well as in theories that purport to explain the relationships and methods used to investigate them'. Other comprehensive definitions of feminist geography and a history of changing perspectives have been published (see Bondi, 1990a, 1991; McDowell, 1992; Massey, 1994; Pratt, 1993; Rose, 1993; Women and Geography Study Group, 1984, 1997).

Early writings

Early feminist writings of the late 1960s and 1970s drew inspiration from the women's movements of the 1960s and continue to exercise an important influence upon contemporary feminist thought. The writings have developed as critical discourses, critical not only of women's oppression in society, but also of the various ways that this is produced (Johnston, *et al.*, 1994, 193). Some common concerns which cut across feminist geographies, have distinctive strands, and form a comprehensive varied collection of critiques and writings such as, *Political Geography* (Kofman and Peake, 1990); *Historical Geography* (Kay, 1990); *Social Area Analysis* and *Factoral Ecology* (Pratt and Hanson, 1988); *Gentrification Studies* inspired

by Weberian and Marxist theory (Rose, 1984); and *Postmodern Geographies* (Deutsche, 1991; Massey, 1991).

Gender

Despite the common themes there is a great deal of variation among feminist geographers. Bowlby, *et al.*, (1989) acknowledges the growing reference to gender in geographical analysis. However, in the case of rural geography, research has consistently failed to recognise the importance of gender in the organisation of society. There have been very few attempts at documenting the experiences of women in rural areas, and still fewer devoted to any theoretical analysis of gender relations within rural society with some exceptions (see Cloke and Little, 1997; Liepins, 1996; Little, 1986, 1987, 1994; Rosenfeld, 1985; Sachs, 1983; Watkins, 1997; Whatmore, 1991 and Whatmore, Lowe and Marsden, 1994). Thus rural geographers have done very little to further the development of feminist perspectives nor added to a general understanding of the subordination of women.

The first task of feminist geographers was to make women visible, by developing a geography of women. Women's experiences and perceptions often differ from those of men and women and have restricted access to a range of opportunities, from paid employment to services. Research has tended to focus on individuals, documenting how women's roles as 'caregivers' and 'housewives', and in other services such as childcare, conspire to constrain women's access to paid employment and other resources.

This geography of women approach has been criticised, because gender inequality is typically explained in terms of gender relations, especially women's roles as housewives and mothers, in conjunction with some notion of spatial constraint. Bowlby, (1992, 328) states that emphasis has shifted

from simply describing what women do, to attempting to explain their subordination in terms of 'the social process of gender relations through which male power over women is established and maintained'. Whilst role theory serves to make women visible, 'it tells us nothing, in itself, about the origins of roles, how they are perpetuated or why they result in unequal gender relations' (Little, 1987, 336).

Feminist geography in the 1980s brought questions of gender relations, women's experience and patriarchy to the fore. As McDowell (1988, 155) noted, 'feminism is on the agenda in geography in a way that cannot be ignored'. Furthermore, feminists seek to transform the very nature of the discipline, including its philosophical and methodological bases, in the light of its traditional male-centredness (McDowell, 1988, 156-157). Feminist research accepts women's experiences, ideas and needs as valid in their own right. It seeks to uncover not only the oppression and exploitation of women but also to emphasise that women are active and creative agents, not just 'victims'. Feminism aims to contribute to the improvement of women's lives by developing non-sexist and women-centred alternatives (McDowell, 1988, 158 and 171).

Socialist feminists

Socialist feminists in attempting to resolve these questions of gender relations began to conceptualise women's subordination and sought explanations for gender inequality. 'Instead of seeing gender roles themselves as the *sole* cause, socialist feminist geographers explained women's inequality in terms of the social and spatial *separation* of production and reproduction, home and work, domestic and wage labour, and men's and women's lives under capitalism' (Foord and Gregson, 1986, 190). Their strict division between categories of production and reproduction has meant however, that the discussion of gender relations has

tended to be set within an economic framework. Thus gender has been added into a materialist analysis and social relations considered only in terms of economics. Little, (1987, 366) argues that the domestic sphere has continued to be examined purely in its relationship with wage labour, and as a sphere of secondary importance as compared to that of the workplace. Thus, we may conclude from this that insufficient attention has been given to a full range of women's non-economic activities, nor to the interconnection of production and reproduction. Attempts to break away from strictly economistic and functionalist explanations have led some socialist feminists to explore links to *humanistic geography* and *structuration theory* (MacKenzie, 1989).

Patriarchy

Central to feminism has been the notion that Western society is patriarchal in structure and is characterised by the oppression and exploitation of women. The Women and Geography Study Group of the Institute of British Geography (WIBG) (1984, 26) defined patriarchy after Hartmann (1981), as a set of social relations between men which, although hierarchical, establishes an interdependence and solidarity between them, which allows them to dominate women.

The nature of the relationship between patriarchy and capitalism has been a matter of considerable debate within feminism. Socialist feminists argued that the exploitation of women was intrinsic to the capitalist mode of production within the social division of labour, women have been given the task of maintaining and reproducing the working class.

Some writers see patriarchy as the primary form of inequality from which other forms such as racism and capitalism derive. Patriarchal structures based on the biology of reproduction are to be found everywhere and are

not just confined to particular aspects of life. Others however, argue that patriarchy alone cannot be used to explain a general system of gender inequality and that 'capitalism, and patriarchal relations are so intertwined and interdependent that they form a mutually interdependent system' (Walby, 1986, 31; cited in Little, 1987, 336).

More recently, however, new areas, some of which entail different conceptions of geography and space are receiving attention. This new phase can be identified as *post colonial* feminist geography which is a movement among artists and intellectuals that challenge the impact of *imperialism*. This encourages feminists to draw on a broader range of social, cultural, theory, including for example poststructuralism, postmodernism, subjectivity and psychoanalysis (Blunt and Rose, 1994; Rose, 1993; Ryan, 1997).

In feminist geography the debates serve to illustrate the dominant directions of contemporary theoretical developments. The debate concerning the relationship between patriarchy and capitalism shows that capitalism and patriarchy are contingently related in capitalist society and can thus be explained separately (Foord and Gregson, 1986, 98). McDowell (1986, 314) however, maintains that the theoretical relation between capital and waged labour is central to the analysis of patriarchy and that 'gender relations can only be analysed as part of the capital-wage relation'. She argues that interpretations of patriarchy based on their independence from capitalism do not explain the fundamental reason *why* women are dominated by men. Patriarchal attitudes and the over-riding influence of capitalist philosophy become accepted as normal by society. Because the research for this project has particular emphasis on dairy farm women, an understanding of gender ideologies are critical to give a feminist perspective to this study. Normative gender roles may mask the exploitative nature of the family, especially in

everyday work and practice. Michele Barrett (1988, 254) suggests that 'the development of capitalism brought on an exacerbation' of gender divisions and 'greater dependence of women on men' in all social classes. Sachs (1983) argues that to understand the position of women on farms requires an understanding of the social and economic forces operating upon the structure of dairy farming.

Recent feminist research

A great variety of feminist perspectives have been expressed within recent times also. Some feminist geographers have set out to reclaim women's activities within the home. They have attempted to recover the invisible and undervalued side of their lives. Their aim has been to bring home space into bounds (Women and Geography Study Group, 1984, 120). Many feminist researchers, (for example, Dyck, 1990; England, 1997; Gregson and Lowe, 1993, Hayden, 1981, 1984, 1995; Pratt, 1997; Tivers, 1985; and others) have investigated and written about the 'home'. In their research on the middle classes in Britain in the 1990s, Nicky Gregson and Michelle Lowe extend the concept of spatiality into home space. They maintain that childcare both reaffirms and reinscribes certain meanings of 'home' (Gregson and Lowe, 1995). In short it helps make home space 'home'. The word 'home' has many meanings, for example, shelter, security, love and stress and although the home may be a more or less private place 'for the family' it doesn't necessarily guarantee privacy or freedom for women from other household members.

By the beginning of the 1990s a new wave of younger women became engaged in contemporary debates on feminism. They moved from discussing the concept of patriarchy to discussing other concepts such as masculinism, subjectivity, essentialism and identity politics. Masculinist knowledge is criticised for claiming to be exhaustive or universal, while actually ignoring

women's existences. Rose (1993, 4) argues that academic geography is socially and ideologically structured by various forms of male dominance, a set of processes she cohered under the term 'masculinism'. Her definition further suggests that masculinism works within geography, not only in geographical knowledge but also the discipline's career structure and the arrangement and conduct of geographical teaching and learning.

The concept of subjectivity requires an understanding of space because it is where subjectivity is preformed as this influences the outcome and meaning of the performance and so, the meaning and effect of a subject's identity. The spatiality of subjectivity offers a key issue for geography (Sharp, 1999, 269). In different ways feminist geographers consider space to be central to subjectivity, most importantly in resisting the human image of the master subject as offering 'a view of everywhere from nowhere which hopes to construct a transparent space in which the whole world is visible and knowable' (Rose, 1995c, 335).

In recent years essentialism[7] has been criticised for not recognising that definitions and explanation theories are social practices reflecting both contingent conditions, and complicated relations of social interests and power. As a result, anti-essentialist approaches are now increasingly found throughout geography. They are especially marked in feminist geographies where essentialist definitions of gender are criticised.

Two key words of the 1990s, 'identity' and 'identity politics' are complex and highly contested terms, central to the recognition and articulation of difference. Notions of identity are invoked in defining our sense of 'self' and in marking ourselves off from various 'others' (Pile and Thrift, 1995).

[7] Essentialism is the notion that there are basic and unvarying elements that determine or strongly affect the behaviour of people and social systems. Essentialists subscribe to the view that there are inherent differences in the behaviour of men and women and that there are basic immutable laws of economics that govern capitalist societies (Pinch, 1997, 141).

According to Massey (1994b), places are not bounded areas but are porous networks of social relations. These ideas are consistent with recent feminist theories of identity, which seek to repudiate the false certainties of essentialism. Feminists argue that all social identities are culturally constructed changing from time to time and from place to place and are thus not dependent on gender alone.

SUMMATION

It is against the background of these geographical perspectives and theoretical concepts that the analysis of structural change for this study was constructed. A framework for this analysis is undertaken in Chapters 5, 6, 7, and 8, by tracing the technical, social, political and economic changes that have affected women's work during the time span of the study.

Dear (1988, 270) argues that three divisions (economic, political and social) reflect 'the three *primary processes* which structure the time-space fabric'. For the purpose of this thesis I have added a fourth division, technological changes. Further Giddens (1984) has clearly argued that the structural process can only be understood within a time-space framework. Therefore, this thesis will include relevant, historical evidence relating to dairy farming. Few, if any, social and economic changes can be described, let alone understood in isolation from their historical antecedents.

This enables comparisons to be made between the reactions, attitudes and situations of dairy farming women at different times. Understanding their activities involves 'understanding their lives within the context of social formation over a considerable period of time' (Sachs, 1983). In this study the time span is 50 years, that is, from the end of World War II to 1996, the year in which I began this project

Structuration theory and feminist perspectives have guided the research for this study. I have used related concepts, theories and empirical examples to explain contrasts and patterns that exist within themes of this thesis. The following chapter explains methodology, methods and techniques employed for an empirical investigation into changes that have affected dairy farm women.

CHAPTER THREE

METHODOLOGY, METHODS AND TECHNIQUES

INTRODUCTION

In this chapter I explain the research methodology[1], methods[2] and techniques used in the development and collection of fieldwork data for this thesis. I identify my position as a researcher and provide a critique of the methodology. My goal was to collect the richest possible data about changes in dairy farming and how these changes affected the lives of dairy farm women over the past 50 years. Rich data means, ideally, a wide and diverse range of information collected over a relatively prolonged period of time. My research involved a variety of qualitative methods based on feminist research perspectives. Prior to explaining the techniques used in the thesis I shall discuss characteristic features of qualitative and feminist research.

Qualitative Methods

Until the 1960s social science research was largely positivistic in theory as well as methodology. This included survey methods being directed towards quantification and the use of statistics. Since the 1960s quantitative methods have been challenged by a number of schools of thought especially in theory and methodology and the perception of reality. Examples of such schools of thought are symbolic interactionism,[3] phenomenology,[4]

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[1] Methodology can be defined in at least two ways (a) when it is identical to a research model employed by a researcher in a particular project or (b) when it relates the nature of methodology to a theoretical and more abstract context. Here it is determined not by the research model but rather by the principles of research entailed in a paradigm (Sarantakos, 1998, 34).

[2] Methods are the tools of data generation and analysis. Practically methods have the tools of the trade for social scientists and are chosen by the elements of the methodology in which they are embedded, such as perception of reality, purpose of research etc. (Sarantakos, 1998, 34).

[3] Symbolic interactionism regards the social worlds as a social product – the meanings of which are constituted in and through social interaction such as conversation (Johnston, *et al.*, 1994, 611).

philosophical hermeneutics[5] and ethnomethodology[6] which question especially positivistic methodology and its perception of social reality.

As social sciences and humanities have drawn closer together there is a blurring of the old disciplinary boundaries. Their mutual focus is enriched by an interpretive qualitative approach to research and theory. This approach seeks the 'human meaning of social phenomena' (Bainbridge, 1992, 4). Where once only statistics, experimental designs, and survey research stood, researchers have now embraced ethnography, unstructured interviewing, textual analysis, and historical studies. In the past decade, such terms have shifted to a more qualitative paradigm and have become practically synonymous (Miles and Huberman, 1994, 1).

The various research methodologies and statistics procedures are tools to accomplish practical tasks (Bainbridge, 1992, xiv). Quantitative studies emphasise the measurement and analysis of causal relationships between variables. 'Inquiry is purported to be within a value free framework' (Denzin and Lincoln, 1994, 4). On the other hand, researchers employing qualitative methods seek answers to questions that stress how social experience is created and given meaning. Thus qualitative research may be defined as being:

> geared toward gaining an increased *understanding* of the ideas, feelings, motives, and beliefs behind people's actions...[it] is oriented toward... the interpretation and meanings people give to events, objects, other people and situations of their environment (Stainback and Stainback, 1988, 4-5, italics in original).

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[4] Phenomenology is a philosophy founded on the importance of reflecting on the ways the world is made available for intellectual inquiry, that is reality (Johnston, *et al.*, 1994, 438).
[5] Hermeneutics is the study of interpretation and meaning (Johnston, *et al.*, 1994, 244).
[6] Ethnomethodology is procedures taken to discover the general and universal methods by which people make sense of, and give order to, the world (Johnston, *et al.*, 1994, 175).

Johnston *et al.*, (1994, 491) state that, 'qualitative methods are a set of tools which range from passive observation and personal reflection through routine participation to active intervention'. They further state that, 'to this end qualitative research is organised in a variety of ways, from semi-structured interview schedules to the open-ended attempt to absorb the entirety of a life-world' (ibid, 491). Successful qualitative approaches often depend on intensive empirical research. Basically, the purpose of collecting qualitative data is to help understand the point of view and experiences of other people, in this study the dairy farm women.

Berg (1995, 7) concluded that qualitative researchers, 'are most interested in how humans arrange themselves and their settings and how inhabitants of these settings make sense of their surroundings through symbols, rituals, social structures, social roles and so forth'. Qualitative data can include direct quotations from people, both of what they speak and what they write down. 'The commitment to get close to respondents, to be descriptive, factual and quotive, constitutes a significant commitment to represent the participants in their own terms. A consequence of these commitments is of necessity a process of discovery and a process of what is happening' (Lofland and Lofland, 1984, 4). A major part of what is happening is provided by people in their own terms, rather than imposed upon them, a preconceived or outsider's scheme of what they are about. It is the researcher's task to find out what is fundamental or central to the people or world under observation (Patton, 1990, 32-33). Many others have written in defence of qualitative methods (see Berg, 1989; Denzin and Lincoln, 1994; Eyles and Smith, 1988; Lofland and Lofland, 1984, 1995; Miles and Huberman, 1994).

Feminist features

Within feminist literature and within feminist geographic literature, there has been much debate on feminist methods, methodologies and epistemologies (see Duelli Klein, 1983; Dyck, 1993; England, 1994; Gibson-Graham, 1994; Gilbert, 1994; Harding, 1987; Maynard, 1994; McDowell, 1992; Mies, 1983; Moss, 1993; Nielson, 1990; Reinharz, 1992; Stacey, 1988; Stanley and Wise, 1990; and Weedon, 1987). There is no single favoured method, though various forms of qualitative approach have been popular in feminist research, which has encouraged dialogue and interaction between the researcher and the people being studied. There is no one way of undertaking, interpreting and understanding feminist research methods and methodologies (see Gilbert, 1994; Harding, 1987; Kelly, Burton and Regan, 1994; and Reinharz, 1992).

Feminist researchers employ research methods, which vary with the aims and location of the project and alter according to the researcher's own interests, beliefs and position. Thus, feminist geographical research practice is both multi-stranded and complex (Women and Geography Study Group) [WGSG], 1997, 90). WGSG (1997, 109-10) suggests that there are four main features, which characterise the methodologies used by feminist geographers. These are 'ways of knowing, ways of asking, ways of interpreting and ways of writing'. Not all feminist research projects contain all of these features, but feminists have generally sought to achieve these characteristics through a research process, which is actively reflected upon. This involves careful consideration of the social and power relations established during the research project, a clear understanding of its feminist aims and how these may be achieved, 'a commitment to challenging oppressive aspects of socially constructed gender relations, inequality, an awareness of the

limitations of the research and the important role of subjectivity' (Robinson, 1998, 459).

There has been some attempt to develop a theoretically informed analysis of gender inequalities in a variety of spheres, with the use of techniques deemed more suitable for recovering them (for example, Bondi, 1991; Momsen and Townsend, 1987). One of the key reasons why feminists have favoured qualitative methods is because they have felt that these more readily enable the personal experiences of women to be researched. Intensive studies by women have been seen to be more appropriate partly because they drew upon women's (purported) ability to listen, to empathise, and to validate personal experiences as part of the research process (McDowell, 1992; Oakley, 1990; Robinson, 1998). Many feminist researchers use quotes from their case studies as a means of letting the women respondents speak for themselves, for example Whatmore (1991, 91).

Feminist writers document the capacity of feminist research to utilise a variety of research methods (see Gilbert, 1994; Hanson, 1993; Jayaratne, 1983; Maynard, 1994; Maynard and Purvis, 1994; and Reinharz, 1992). Feminists work with multiple methods for utilitarian reasons but also for:

> particular feminist concerns that reflect intellectual, emotional and political commitments. Feminist descriptions of multi-method research express the commitment to thoroughness, the desire to be open-ended, and to take risks (Reinharz, 1992, 197).

Gilbert (1994, 95) recognises that all methods have their weaknesses. She argues that by examining the weaknesses and strengths of research methods and by the use of a multiple method approach, sometimes called triangulation, the problems that arise from weaknesses in methods may be overcome.

Patton (1990, 13) writing about methods states that 'approaching fieldwork without being constrained by predetermined categories of analysis contributes to the depth, openness, and detail of qualitative inquiry'. I focussed my fieldwork on qualitative methods as suggested by Denzin and Lincoln (1994) as these were most appropriate for my investigation into the changes and lives of dairy farm women. The use of these methods reflects an attempt to secure an in-depth understanding through examination and analysis of the phenomena, that have brought about structural changes in work, society, technology, politics and economics. The findings of the study are constructed from the standpoint of the women researched, in an attempt to locate the farm women firmly in their own spatial and social worlds (Dyck, 1990).

In this study the task is to uncover the nature and changes of the farm women's world through an interpretative and empathetic understanding of how they act in and give meaning to their lives. Therefore, as a researcher, I must be able to see the world as the actors (farm women) see it. Because of this emphasis, qualitative methods of research based on feminist perspectives were applied.

THE RESEARCH PROCESS

In the context of human geography the postal questionnaire is an indispensable tool for the collection of primary data about people, their behaviour, attitudes and opinions and their awareness of specific issues. Sarantakos (1998, 224) considers that an advantage of the postal questionnaire is that respondents complete the interview at their own pace and thus have more time to consider their responses, especially if they are recalling events which took place some time ago. They are also not unduly influenced by the presence, personality and intonation of an interviewer. For this study each participant was asked to fill in a questionnaire by post.

As part of a section in the questionnaire the dairy farm women were asked to record a daily diary. In its ideal form the diary is unsurpassed as a continuous record of the subjective side of a woman's life. Diaries give a more accurate and detailed account of previous activities because people often have difficulty in recalling recent past events. Women not only record their daily happenings, but also may express in written words their feelings, thus giving a fuller overall picture of their daily lives. An example of the use of time diaries is reported in Whatmore's book, *Farming Women* (Whatmore, 1991, 63).

One of my main reasons justifying a postal survey questionnaire for this research was to enable the immediate post-war respondents time to recall and write material for their answers. I felt that recalling the past may be a problem but those participants I spoke to assured me that it was not a problem for them. As Mary, a participant, who was going to answer questions about the immediate post war decade, said in a telephone conversation:

> *Look, I've been doing this farm work for over 30 years and I remember exactly what had to be done and what happened each month and each season of the year. I well remember the ups and downs of post-war years.*

Postal surveys further permit a wide geographical coverage at a reasonable cost especially if the participants are scattered across a wide area as was the case with the Waikato dairy farm women respondents. Whilst survey questionnaires are relatively cheap and less time consuming in comparison with face-to-face interviews these advantages must be weighed against disadvantages. Unless some sort of incentive is provided or the topic is addressed to a highly motivated target population, such as the dairy farm women respondents, response rates tend to be low (Flowerdew and Martin, 1997, 100).

Particpant recruiment

The dairy farm women participants were not selected specifically or formally as a 'sample' for this research project. My initial contact with the prospective participants was by telephone. I briefly explained to each the aims and objects of my research and asked if they would be willing to help. It was stressed that their contribution would be treated as confidential unless they requested otherwise. Many of the women I contacted by phone were friends of mine and others I had had some previous contact. When I spoke of doing research on dairy farm women they in turn involved their friends or neighbours. I knew the location of most of their farms.

Gaining participants by this method is known as 'snowballing' and is a most successful way of recruiting additional participants. Lofland and Lofland, (1984, 25) and Glucksmann, (1994, 161) recommend that whenever there is an opening, researchers should try to gain access to research participants through friends, peers and acquaintances and hence have an existing relationship on which to build their research.

Another fruitful source of recruitment for participants was through the *Dairy Exporter* (New Zealand's leading dairy farming journal). Waikato dairy farm women who featured in the journal from time to time were contacted and asked to participate. All of these women indicated a willingness to take part.

After a day or two I again rang those women who were participating in the project to discuss in more detail the instructions given and the procedures to be followed. I found that the participants were enthusiastic and motivated and they expressed their willingness to talk to a woman and their appreciation that someone was interested in their lives as dairy farm women. I felt that this relationship was enhanced by the fact that I was brought up on a dairy farm and was still interested in dairy farming. This built up a reciprocal empathy with the participants. Sometimes an informal

'unstructured' approach is more likely to produce data of the type required and in some ways our discussions could be identified as 'telephone unstructured' interviews.

Records

I kept a ruled up exercise book into which were entered details about the participants. On the left hand side of the page I entered the participant's name, address, telephone number as well as an identification number for each participant. On the right hand side of the page alongside each participant's name I recorded details, such as dates on which telephone contacts were made, the dates on which surveys were posted, and the date on which the completed survey was returned. Also recorded was the date on which a letter of thanks was sent to each participant. In order to preserve confidentiality each participant was given a pseudonym recorded alongside her name and these were used if the participant was directly quoted in the thesis. A total of seventy-two participants stated that they were willing to take part in this research project.

THE SURVEY QUESTIONNAIRE

Extra care was taken with the design and layout of the survey questionnaire for the research section of this thesis (see Figure 3.1). The questionnaire was divided into the following sections each with questions attached:

A — Background Information

B — Work Experiences (farm, domestic and off-farm work and included a one day diary from the participant's chosen time period)

C — Finances and decision making

D — Farm Interaction (marriage and legal partnership)

E — Children (child rearing, schooling)

F — Off-farm communication (amenities and services, visit and visiting, spare - time activities, holidays)

G — Activities and Leisure

H — Changes (technological, social, economic and political) and their effects (see Appendix A).

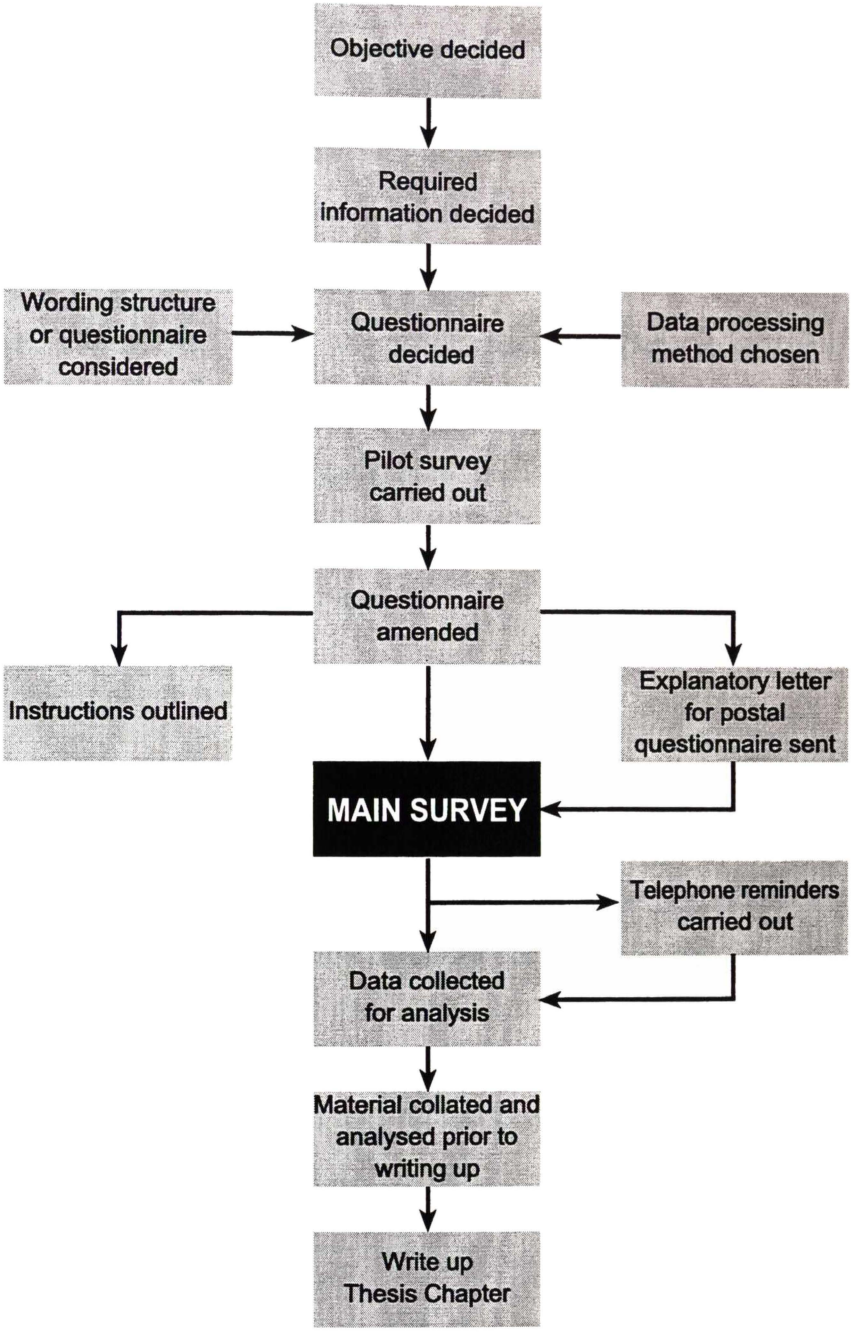

Figure 3.1: Questionnaire Survey Procedure.
Source: Adapted from Robinson (1998, 379)

Pilot study

Most researchers agree that it is advisable to carry out a pilot survey prior to sending out the main survey. Time could be wasted if the questionnaire failed to be understood or produced ambiguous responses. Skimping on the pilot phase of the questionnaire survey is never a good idea as this is the only means of putting right any major defects before its final printing (Flowerdew and Martin, 1997, 102). Participants (Sarah, Hilda and Elsie) agreed to check the questionnaire and advised me of any major changes. All adjustments that were suggested by those participating in the pilot survey were incorporated into the final survey.

The package posted to the 72 participants along with the questionnaire included:

1. An introductory letter which thanked the participants for their agreement to take part and verified what had been said on the initial telephone call. By doing so it was hoped to remove any doubts the participants may have had about the research (see Appendix B).
2. The consent form, which set out the rights of the participant and the researcher, had to be signed and returned with the answered questionnaire (see Appendix C).
3. A separate sheet of paper on which was listed the main purposes of the research. These were as follows:
    (a) How has the work of women on dairy farms changed from the end of World War II until the present time?
    (b) What has brought about these changes?
    (c) How have these changes affected the lives of dairy farming women?

On this sheet the participants were asked to choose one of six listed time periods that interested them and try to recall answers as if they were still living in that time period. The time periods were 1940s or 1950s or 1960s or 1970s or 1980s or 1990s. In a space provided they were asked to indicate

which time period they had chosen. They were further asked to answer all sections of the survey, focusing on their chosen time period.

A space was provided in the top right hand corner where I could enter the respondent's number from the record book on return of the questionnaire. Although the word husband was used in the questionnaire the participants were informed that this could be interpreted as partner or other (see Appendix A).

The packages (consent form, letter, research aims, instructions and the survey questions) plus a stamped addressed envelope for the return of the packages were posted to the 72 participants in June, 1998. This was a good time of the year as it was winter, which is the off-season for dairy farming. The cows were not being milked and the women had greater freedom with their time.

Sample

The initial number of participants recruited was seventy-two. From the seventy-two packages sent out sixty-two participants replied over the next month. Thus giving a high response rate (86%). I phoned the 10 non-respondents to remind them of the survey replies. Three were ill, one was involved in farming politics, another two were overseas and the remaining four said that the replies were ready to post but I heard no more.

DATA ANALYSIS

Interpreting data gained from qualitative research and drawing relevant conclusions that will answer the research questions is one of the most significant steps of the research process. There are no existing rules to guide the researcher about how to interpret the data. As Sarantakos (1998, 323) says: 'While guides in the form of numbers or meanings, might be offered,

the type and direction of the actual interpretation is left exclusively to the researcher.'

Varied approaches to extracting meaning from qualitative data have been provided by researchers. The interpretation of data from such research and drawing relevant conclusions that will answer the research questions is one of the most significant steps of the research process. In so doing it needs to be recognised that the major challenge facing qualitative researchers is that, 'the end point of qualitative research is an analyst's construction of other people's constructions of the meaning systems within which they operate (Johnston *et al.,* 1994, 492). The use of such data means that it is focussed on, 'naturally occurring, ordinary events in natural settings' (Miles and Huberman, 1994, 10). Thus the data collected gives meaning to the happenings in the participants' lives.

However, there are features that recur during any one particular style of qualitative analysis, for example in social anthropology and phenomenology. I use Miles and Huberman's framework as a way of explaining the steps I took to analyse my qualitative data. Miles and Huberman (1994) define analysis as consisting of three concurrent flows of activity. First 'data reduction which refers to the process of selecting, focussing, simplifying, abstraction, and transforming the data that appears in written-up field notes or transcriptions'. Secondly, 'data display which is organised compressed assembly of information that permits conclusion drawing and action'. Finally, 'the final stream of analysis activity is conclusion drawing and verification' (Miles and Huberman, 1994, 10-11). These three components of data analysis are linked.

The returned packages were first checked for the signed consent form which was saved and noted in my record book. Secondly, each returned

questionnaire was numbered to correspond with the number beside the participant's name in my record book. The date of the returned package was also noted in the same record book.

The questionnaires were then sorted into sets according to the decades the respondents had chosen to answer their questions. These were then further placed in order to form three groups. First, a group of 11 older participants who were actively farming in the post war era 1940s and 1950s formed the older group. Secondly, 21 participants who answered their questions in 1960s and 1970s formed a middle group. Finally, a third group of 30 participants whose farming experiences were recent answered questions in the 1980s and 1990s. Most of these women were still farming and they formed a younger group.

For each of the three groups I further collated their returned material into the divisions as set out in the main body of the questionnaire. Thus all the A — background information of the older group was put together and filed as were the divisions B, C, D, E, F, G and H as above. This procedure was applied to the middle group (1960s and 1970s) and the younger group (1980s and 1990s). A coloured sheet was attached to the front cover of each file, on which was noted the information contained within the file and listing the names of the participants. A different colour was used for each division regardless of the decade.

As a further step in collating the material obtained in each of the above divisions I prepared master sheets for each decade which were ruled into longitudinal columns at the top of which was entered each participant's name. Down the left hand side of each page was entered the topics for that division thus giving latitudinal columns. By summarising the material as returned by each participant in each division on the questionnaire and

entering it up on the master sheet I was able to gain easy access to the material and at the same time noting any trends or changes from one decade to another. By this procedure, changes and the various effects on dairy farm women's work could be more easily identified. This codified the material and made it more accessible for further analysis.

A brief outline of the background for each of the three groups (older, middle and younger) is given below but this is followed by more details in Tables 3.2; 3.3 and 3.4 which compare the qualifications of the participants with those of their partners.

Older Group (Table 3.1)

Of the 11 women in the older group (1940s and 1950s), three were born in the Waikato and eight were born in other areas of the North Island. All except four were brought up on farms or in rural areas prior to marrying dairy farmers in the Waikato.

Four of the women were farming in a partnership with their husbands and for the remaining seven the farm was in the husband's name only. The average size of the farm for this group was 73 hectares and the average herd size was 117 cows (see Table 3.2). The average number of children per family was five.

There was little involvement by the wives in farm work except for milking and helping out when necessary. They were involved in household duties of which cooking, washing and cleaning were predominant. They did not receive money for their services but were dependent on what the husband allowed for housekeeping. Some women reared hens and sold eggs for additional income.

These older women averaged 2.6 years of secondary education. One had attained her Higher Leaving Certificate, one had gained her Music

Examination while another had a Commercial Certificate (Table 3.4). The main changes noted by this group of dairy farm women was the introduction of electric stoves, vacuum cleaners, refrigerators and agitator washing machines. On the farm the herringbone cowshed made its first appearance and tractors replaced horses.

At the time of answering the survey questionnaire for this study four of the women still lived on the farm in semi-retirement while seven had retired to a small town nearby.

Middle Group (Table 3.1)

Of the 21 women in this middle group (1960s and 1970s) 11 of these women were born in the Waikato and two overseas while the remaining eight who had lived in cities and towns settled in the Waikato on farms after marriage. They had an average of 3.1 children per family.

Eleven indicated that they were in a legal partnership and three became partners later, one in 1975 and two in the 1980s. They were all in a partnership for taxation purposes. This lessened the rates of tax and death duties as the farm income was split between husband and wife. The others indicated that the farm remained in the husband's name only. The average size of the farm in this group was 79 hectares and the average herd size was 156 cows (see Table 3.2).

For this group the average years spent at secondary school was 3.1. Of this middle group one had School Certificate and one had University Entrance and Higher School Certificate plus an ATCL (Associate Trinity College of Music London). Of those gaining tertiary qualifications, four had commercial diplomas, one a catering diploma, two were state registered nurses and five had university degrees (Table 3.4).

The main farm work that this group was involved in, was milking, feeding calves, feeding out (hay and silage) for the herd in winter time, plus tractor work, weed control, shifting stock and electric fences as well as household duties. For this middle group the important changes were direct dial telephones, farm bikes, herringbone cowsheds, deep freezers, automatic washing machines, television and the first appearance of the computer.

Twelve of the women in this group indicated that they did either part-time or full-time off-farm work. They did so to put their training to use, for example, teaching or to escape from the house or to gain extra money for holidays.

Younger Group (Table 3.1)

The younger group (1980s and 1990s) consisted of 30 dairy farm women. Five of these women, prior to marriage and farming, had lived in the Waikato. Eight had been brought up in cities and towns and the remainder in rural areas.

The average size of the farm for this group was 86 hectares and the average herd size was 266 cows (see Table 3.2). Except for five couples sharemilking, the other women all farmed in partnership with their husbands. The average number of children for each of the women in this group was 2.3.

Their average length of time at secondary school was 4 years. At tertiary level, three had completed university degrees, five had diplomas (teaching, business, catering and dietetics, nursing and advertising). One was a registered New Zealand nurse, one had qualifications in animal science and technology, and had qualifications in computer programming, while another had catering qualifications. Four had business and commercial qualifications. Of those who had only secondary school qualifications one had bursary, one Sixth Form Certificate, one University Entrance, two School Certificate and another had passed music examinations (Table 3.4).

This group was engaged in farm activities similar to those in the middle group as well as household duties and farm record keeping. Twelve out of the 30 women in the 1980s and 1990s group were working off the farm. These were predominantly from the 1980s decade where eight out of nine indicated that they worked off the farm. Their off-farm work ranged from banking, clerical work, teaching, nursing, shopwork, secretarial, teacher aid, social work, art work, geriatric care, selling and waitressing. They listed as their reasons for doing this work as financial necessity, additional income (pocket money), social development and to utilise university training.

Further to the changes noted by the middle group, this group specified further changes as follows; microwaves, video recorders, push button telephones and other electric methods of communication, for example, fax, cell phone, answer and cordless phones, and improved computer technology such as e-mail. On the farm they noted, four wheel bikes, electric drenching systems, mobile calf feeders, round bales (silage and hay), automatic gate openers, automatic teat sprayers and submersible pumps.

Table 3.1 The survey groups showing participant's names and the decade within which each participant elected to answer the survey questionnaire.

Decade	Participants' Names	
Older Group (number = 11)		
1940	Agness	Betty
	Dolly	Joy
1950	Ann	Faye
	Mary	Susan
	Joan	Avril
	Beverly	
Middle Group (number = 21)		
1960	Mavis	Liz
	Karen	Una
	Lynne	Pamela
	Margaret	Crisie
	Audrey	Elsie
	Hilda	Freda
	Ida	Beryl
	Norma	
1970	Laura	Maureen
	Rose	Peggy
	Marian	Tess
Younger Group (number = 30)		
1980	Dulcie	Marie
	Beth	Cathie
	Gayle	Rita
	Kathleen	Debbie
	Phyllis	Helen
	Gladys	June
	Alice	
1990	Isobel	Zelda
	Winnie	Nancy
	Fiona	Emma
	Pam	Joanne
	Heather	Penny
	Priscilla	Jane
	Paula	Jean
	Jenny	Dawn
	Sarah	

Table 3.2 Farm sizes and herd numbers on each of the participant's farms. Information supplied 1998.

Older Group (1940s and 1950s)					
Name	**Farm size**	**Herd size**	**Name**	**Farm size**	**Herd size**
	Hectares			**hectares**	
Agnes	190	180	Mary	50	120
Betty	135	70	Susan	64	140
Joy	52	100	Beverly	115	190
Dolly	102	70	Avril	87	160
Ann	39	90	Joan	33	50
Faye	40	100			
Average = 73 hectares 117 cows					
Middle Group (1960s and 1970s)					
Mavis	71	150	Freda	43	145
Liz	56	120	Ida 2 farms, 2 herds	108	200
Karen	52	90	Beryl	63	120
Una	120	110	Norma	66	160
Lynne	54	120	Laura	48	120
Pamela	48	180	Maureen	140	280
Margaret	67	100	Rose	80	260
Crisie	68	120	Tess	79	156
Audrey	81	140	Marian 2 farms, 2 herds	157	300
Elsie	48	200	Peggy	121	220
Hilda	64	140			
Average = 79 hectares 156 cows					
Younger Group (1980s and 1990s)					
Name	**Farm size**	**Herd size**	**Name**	**Farm size**	**Herd size**
June	33	110	Winnie	100	290
Gladys	42	143	Nancy	84	250
Phyllis	75	200	Fiona	80	240
Dulcie	36	120	Emma	86	266
Marie	63	210	Pam	90	225
Beth	140	350	Joanne	86	260
Cathie	53	200	Heather	94	335
Gayle	68	190	Penny 2 farms, 2 herds	220	620
Rita	80	200	Priscilla	100	330
Kathleen	42	134	Jane	71	160
Debbie	43	125	Paula	87	240
Helen	43	120	Jean	191	900
Alice	75	200	Jenny	50	150
Isobel	80	155	Dawn	167	350
Zelda	120	320	Sarah	42	140
Average = 86 hectares 266 cows					

Table 3.3 Background information supplied by participants 1998

Older Group (1940s and 1950s)

Name	*Age*	*Married Status*	*Number of Children*	*Extra Adults in Household*	*Present Status*	*Where Living*
Agnes	60+	m	10	3 extra adults	Retired	On farm
Dolly	60+	m	3	-	Retired	Hamilton
Betty	60+	m	4	1 farm worker	Retired	Raglan
Joy	60+	m	2	-	Retired	Matamata
Ann	60+	m	3	-	Retired	Morrinsville
Mary	60+	m	3	1 aunt	(widow) retired	Retirement village Tauranga
Faye	60+	m	4	1 extra adult	Retired	Whangamata
Joan	60+	m	3	-	Retired	Hamilton
Beverly	60+	m	5	1 farm worker 1 niece	semi-retired	On farm
Susan	60+	m	4	-	Retired	Morrinsville
Avril	60+	m	4	1 worker in busy season	Retired	On farm

Middle Group (1960s and 1970s)

Name	*Age*	*Married Status*	*Number of Children*	*Extra Adults in Household*	*Present Status*	*Where Living*
Mavis	60+	m	1	1 employee	Retired	On farm
Karen	50-59	m	2	1 farm worker	still farming	On farm
Lynne	60+	m	4	1 disabled child	Retired	Hamilton
Margaret	60+	m	4	1 farm worker elderly mother	still farming	On farm
Audrey	60+	m	2	-	still working	On farm
Hilda	60+	m	4	1 farm worker	Retired	Morrinsville
Ida	60+	m	5	1 farm worker	semi retired	On farm
Norma	60+	m	2	1 farm worker	semi retired	On farm
Laura	50-59	m	3	1 dyslexic child 1 farm worker	still working	On farm
Rose	40-49	m	4	1 farm worker	still working	On farm
Marian	50-59	m	-	-	still farming	On farm
Liz	60+	m	3	son works on farm	Retired	Cambridge
Una	50-59	m	3	1 farm worker	semi retired	On farm
Pamela	60+	m	3	1 farm worker	Retired	On farm
Crisie	60+	m	3	-	Retired	On farmlet
Elsie	50-59	m	4	1 farm worker	still farming	On farm
Freda	60+	m	4	-	Retired	Morrinsville
Beryl	60+	m	5	full-time cadets	Retired	On farm
Maureen	60+	m	3	often odd students	widow semi retired	On farm
Peggy	50-59	m	2	Sometimes farm worker	still farming	On farm
Tess	50-59	m	4	-	still farming	On farm

Young Group (1980s and 1990s)

Name	*Age*	*Married Status*	*Number of Children*	*Extra Adults in Household*	*Present Status*	*Where Living*
Dulcie	20-29	m	2	-	still farming	On farm
Beth	40-49	m	2	1 farm employee	still farming	On farm
Gayle	40-49	m	1	-	still farming	On farm
Kathleen	30-39	m	4	-	still farming	On farm
Phyllis	30-39	m	3	1 farm worker	still farming	On farm
Gladys	30-39	m	2	-	still farming	On farm
Alice	50-59	m	2	1 farm worker	still farming	On farm
Marie	30-39	m	-	-	still farming	On farm
Cathie	30-39	m	4	-	still farming	On farm
Rita	50-59	m	3	1 son on farm	still farming	On farm
Debbie	50-59	m	3	-	Retired	Morrinsville
Helen	50-59	m	2	-	still farming	On farm
June	30-39	m	2	-	still farming	On farm
Isobel	30-39	m	3	1 farm worker	still farming	On farm
Winnie	30-39	m	3	-	still farming	On farm
Fiona	30-39	m	3	labour when required	still farming	On farm
Pam	30-39	m	2	1 farm employee	still farming	On farm
Heather	20-29	m	-	-	still farming	On farm
Priscilla	50-59	m	-	2 farm cadets	still farming	On farm
Paula	30-39	m	4	another adult	still farming	On farm
Jenny	50-59	m	2	cook contract worker	still farming	On farm
Sarah	30-39	m	4	-	still farming	On farm
Zelda	30-39	m	3	-	still farming	On farm
Nancy	30-39	m	3	1 farm worker	still farming	On farm
Emma	30-39	m	3	1 farm worker	still farming	On farm
Joanne	30-39	m	-	1 farm worker	still farming	On farm
Penny	40-49	m	5	casual workers	still farming	On farm
Jane	30-39	m	2	-	still farming	On farm
Jean	40-49	m	2	occasional farm worker	still farming	On farm
Dawn	30-39	m	1	1 farm worker	still farming	On farm

m = Married
- = not applicable
x = Question not answered

Table 3.4 Educational background of participants and partners 1998

Older Group (1940s and 1950s)

	Participant		Partner	
Name	***Yrs of Sec Education***	***Qualifications***	***Yrs of Sec Education***	***Qualifications***
Agnes	3	Commercial Cert.	no	-
Dolly	x	X	x	X
Betty	no	-	no	-
Joy	no	-	no	-
Ann	2yrs correspondence	-	6 months	-
Mary	5	RNZAF Commission SC UE Higher leaving	yes	RNZAF Commission Pilot's licence
Faye	2	-	2	-
Joan	18 months	-	2	-
Beverly	2	-	4	-
Susan	$2^1/_2$	Cert Commerce, Music exams (ATCL)	$2^1/_2$	-
Avril	$3^1/_2$	music exams	1	St John Ambulance Private pilot's licence

Middle Group (1960s and 1970s)

Name	***Yrs of Sec Education***	***Qualifications (Participant)***	***Yrs of Sec Education***	***Qualifications (Partner)***
Mavis	5	SC UE Nat Scholarship MA(hons) Dip teach	4	SC
Karen	5	SC	1	-
Lynne	3-4yrs part time 2 full time	BA 1990 MSocSci 1993	-	-
Margaret	5	Piano Teacher's Dip SC UEHigher Leaving	2	-
Audrey	3	Commercial Dip Govt Comm Exams	3	-
Hilda	$2^1/_2$	MSocSci, Cert of Commerce Dip	$2^1/_2$	-
Ida	3	Various Dips for short courses SC	2	work experience in various fields
Norma	4	SC Teacher's cert Cert in Maori Studies	3	SC Playcentre Parent Helper Cert
Laura	3	BA 1991 communication course	2	-
Rose	5	UE SC Bursary BSc	4	SC UE
Marian	4	x	4	X
Liz	1yr correspondence	SC+UE in English 2 passes in History	3	SC UE
Una	3	SC Chamber of Commerce Dip	3	-
Pamela	4	SC Hotel & Catering Dip (London)	3	SC UE Agriculture Dip
Crisie	-	-	-	-
Elsie	3	SC standard	3	SC attend courses in Flock House
Freda	$2^1/_2$	Commercial, Registered Nurse	3	SC
Beryl	-	-	3	-

Name	*Yrs of Sec Education*	*Qualifications (Participant)*	*Yrs of Sec Education*	*Qualifications (Partner)*
Maureen	1	left at 14	1	-
Peggy	2	Lab technician	2	Commercial and Trade Dip
Tess	2½	-	5	X

Young Group (1980s and 1990s)

Name	*Yrs of Sec Education*	*Qualifications (Participant)*	*Yrs of Sec Education*	*Qualifications (Partner)*
Dulcie	5	SC UE Bursary, Physiotherapist	4	SC UEB.Ag Registered Valuer
Beth	3	SC Public Service exam in short/typ	2	-
Gayle	4	Trained teacher UE & part of BSc	4	-
Kathleen	5	SC (4 subjects) 6 thForm Cert (1 subject)	3	Trade cert in farming
Phyllis	3	Two part time jobs	x	X
Gladys	3	Reached SC level but left to look after sick father	x	-
Alice	3	Currently doing a degree	2	Certified Motor Mechanic
Marie	3	SC Business Dip	3	-
Cathie	4	SC (4 subjects) UE (1 subject)	4	SC (2 subjects), Farm Management Cert, Trade Cert in Building
Rita	2½	-	2	-
Debbie	8 (UK)	GCE Dip Catering & Diatetics (Advanced)	5	Dip Agriculture (Holland) Trade Cert Woodwork
Helen	4	NZ Registered Nurse (General& Obstetrics)	5	SC UE Dip Agriculture
June	3	Business College	4	NZ Cert in Engineering
Isobel	4	SC UE Tech Animal & Vet Nurse qual	6	Farming qualification (Holland)
Winnie	3	SC Shorthand Secretarial	2	-
Fiona	5	Computer Programming	5	X
Pam	4	SC 6th Form Cert TCB Typing Farm Business Management	2	_ of bricklaying apprenticeship
Heather	4	SC 6th Form Cert, B Ag Sc	5	SC UE
Priscilla	3	Music Exams Grade 8	5 (UK)	UE, Dip Farm Management (NZ)
Paula	4	SC UE Display & Advertising Dip	2	-
Jenny	3	SC	4	Farming Cert
Sarah	4	SC 6th Form Cert	3	SC (1 subject)
Zelda	5	SC UE & B Bursary	3	-
Nancy	5	UE, B. Social Work	5	A Bursary, studies toward B.AgSci
Emma	5	SC UE Dip of Nursing	4	SC, 6th Form Cert, Dip Ag. Farm Business Management
Joanne	4	SC UE B.AgSc	x	X
Penny	3	SC, 1996 Pitman's typing, computer training in financial package CCM cash Manager	5	SC UE unfinished Dip.Ag
Jane	3	SC	2	Plumber & Gasfitter

Name	*Yrs of Sec Education*	*Qualifications (Participant)*	*Yrs of Sec Education*	*Qualifications (Partner)*
Jean	5	SC UE Bursary, B.Sc	5	SC UE B.AgSc(hons)
Dawn	3	SC, 3yr course Catering & Restaurant Service	4	SC UE Cert in Farm Management

Cert =certificate
SC = School Cerificate
Dip = Diploma
UE = University Entrance (London)
AB = Artificial Breeding

ED = Education
- = not applicable
x = Question not answered
ATCL = Associate Trinity College Music

SUMMATION

Consideration of how geography as a discipline is structured for a qualitative research project has encompassed a concern for the 'positionality' of the researcher. Different researchers with their unique standpoints will come to different conclusions about their qualitative methods and data. Many social scientists and feminist researchers emphasise that the researcher should take a reflexive position (Denzin and Lincoln, 1994; Harding, 1987; Lather, 1991; Maynard, 1994; Miles and Huberman, 1994; Reinharz, 1992; Roberts, 1981; Stainback and Stainback, 1988; and Wasserfall, 1993).

When thinking about who to recruit as participants for this study, I tried to reflect on who I was and how my identity would shape the interactions that I would have with others. In other words, I had to acknowledge my positionality and be reflexive.[7] This is essential if intersubjectivity and reflexivity are recognised. England (1994, 82) defines reflexivity as 'self-critical introspection and self conscious analytical scrutiny of the self as researcher'.

Our position as researchers influences our research, therefore we need to take a self-reflexive position and situate ourselves and the research

[7] Reflexive research reflects upon and questions its own assumptions. Researchers must self-consciously reflect upon what they did, why they did it, and how they did it. The values of the researchers become an explicit part of the research process. Reflexivity is the idea that social researchers always remain part of the social world they are studying. Consequently, their understanding of that social world must begin with their daily experience of life, that is common sense (Tolich and Davidson, 1999, 37-39).

participants in the context of the research. In the context of this research I had some inside knowledge, which was helpful in carrying out my research (Dyck, 1993, 54; Glucksmann, 1994, 162; and Nast, 1994, 57). Having been brought up on a dairy farm in the 1930s and 1940s and having lived in a Waikato rural town for twenty years I was able to identify with the dairy farm women. In the 1980s I completed a Masters Thesis which studied the work of dairy farm women in Piako County. During this time I belonged to a women's discussion group of fifty dairy farm women. This background facilitated the development of a rapport between the participants and myself as researcher and produced rich, detailed conversations based on empathy, mutual respect and understanding. I felt this very much in the telephone discussions with my participants but I had to be aware that some material might have been so familiar as to be taken-for-granted and as a result would have been overlooked as important data.

Finch (1984, 71-72) believes that, when an interview situation is set up in a non-hierarchical and relatively unstructured way, women researchers have little difficulty in getting women participants to talk openly with them. However, she also maintains that the researcher should be aware of ethical issues involved with eliciting sensitive material from participants. Scott (1984, 165) also recognises that gender is an important factor in the power relations of qualitative research. Also Phoenix (1994, 60) concurs that it has been identified that women often enjoy the experience of being interviewed by women.

Feminist researchers have stressed the importance of interacting and sharing information with the participants rather than treating them as subordinates from whom you are extracting information (Oakley, 1990). On sharing information the researcher may convey to the participants, the reliance on them to provide insights into the topic of study. This is also beneficial as it

is one way of placing more power with the participants in an interview situation (England, 1994, 82). Most of the participants for the research project said that they enjoyed our telephone conversations and doing the survey and if they could be of any further help to phone them.

The material for this thesis is based on telephone discussions and survey questionnaires. My interpretation of this material reflects on the way in which this empirical research was carried out. For this study I collated all the data and therefore I was familiar with the material. Much of the preliminary analysis of the data was carried out during the collating process. The final text is the construct of the researcher. It is the researcher who ultimately chooses the quotes, that is, whose 'voices' to include (England, 1994, 86). The following chapter sets out the evolution of the family dairy farm in New Zealand.

CHAPTER FOUR

THE EVOLUTION OF THE DAIRY FARMING SYSTEM IN NEW ZEALAND UP TO 1946

INTRODUCTION

To provide an understanding of the family dairy farm in New Zealand, this chapter gives a broad historical overview of how the New Zealand dairy farm system evolved. It outlines the main characteristics and features developed in dairy farming with special reference to the Waikato.

I do this because dairying evolved in New Zealand in response to particular environmental, economic and social conditions. A distinctive type of farming emerged, which differed from the European farming practices, with which the settlers at the time were familiar. Men of limited means were enabled, to become viable farmers, not only through government policies, but also through the work of women. Their work played a vital part in the economic survival of such farms. The commentaries in the following chapters need to be set against a background of historical developments up to 1946.

The chapter is divided into five main sections. The first section focuses on the pre-refrigeration era (1840-1880). This is followed by a discussion of the introduction of refrigeration and the developments that followed. The third section covers the period of steady expansion and the 'grasslands revolution' 1900 onwards (Warr, 1988,138-142). The place of sharemilking forms the fourth section. A section on farm labour completes the chapter.

PRE-REFRIGERATION ERA (1840-1880)

Early Beginnings

Dairy cows have been part of farming in New Zealand from the beginning of European settlement. The first dairy cows were brought to New Zealand by Samuel Marsden in 1814 (McLauchlan, 1981, 201; Philpott, 1937, 14), with further shipments by settlers from New South Wales in the 1830s (Philpott, 1937, 17). The Scottish settlers in Otago and Southland imported the Ayrshire breed of cows but the dominant breed in New Zealand was the dual purpose breed (beef/dairy) the Shorthorn (Philpott, 1937, 25).

Dairying at first was based on local requirements that is, the home manufacture of butter and cheese for the local markets. The discovery of gold in the 1860s created a greater market when the European population rose from 59,413 in 1858 to 226,618 in 1868 (Philpott, 1937, 23). A small amount of cheese was exported to Australia and attempts were made to export butter in brine but this was difficult as the butter went rancid.

Introduction of the Factory System

Another feature of the pre-refrigeration era was the introduction to New Zealand of the factory system for processing milk, which began in Rome, New York State, in 1851 and in Hamilton, Ontario in 1864 (Philpott, 1937, 35). In New Zealand the Otago Peninsula Co-operative Cheese Factory Company Limited was set up at Springfield on the Otago Peninsula in 1871, later shifting to Highcliff in 1875 (Philpott, 1937, 28). Cheese was exported to Australia.

In 1882 the government was anxious to promote new industries in New Zealand and offered a bonus of £500 for the first 25 tons of butter or 50 tons of cheese produced in a factory worked on the American principle and exported from New Zealand (*New Zealand Historical Atlas*, 1997, Plate 61).

This bonus was claimed by the New Zealand and Australia Land Company, which in 1881, built a dual (butter/cheese) factory on their Edendale Estate in Southland based on plans which came from Canada. At the time the first successful shipment of frozen meat was transported from Port Chalmers to London on the ship 'Dunedin'. Included with this cargo was a small experimental shipment of butter produced by the Edendale factory. Further factories were built in 1882 at Flemington near Ashburton and Te Awamutu with nine more in 1883 (Grey, 1994, 279). Not only was the commercial viability of dairying in New Zealand being established by the building of processing factories and the development of refrigeration prior to 1890, but also the foundation of grassland farming was being laid.

The Development of a New Zealand Farming System

The Europeans who came to New Zealand from rural areas in Britain were used to a system of farming based on a rotation of grass and crops, both fodder crops and cash crops. The European practice was an orderly system of fields, carefully cultivated for cropping or resowing in grass, and regularly manured by spreading over the fields the 'muck' cleared out of the sheds which housed the animals in the winter.

Many saw such a system being introduced to New Zealand but the reality was otherwise. Except for the open lowland tussock lands of Canterbury and Otago, which were more easily ploughed and sown in grass or cropped for wheat, the landscape of the small farmer in a bush settlement, was an untidy one. Here bush had to be felled, left to dry and at a suitable time burnt off (Plate 4.1). Grass seed was sown by hand amongst the stumps and logs that remained. Cattle grazed on the grass and in winter when feed was short cows were turned out to fend for themselves in adjoining bush. The more benign New Zealand climate obviated the need to house stock in winter. Some fodder crops such as turnips were sown or cash crops such as

potatoes were grown. Farm income was supplemented by work off the farm, felling bush or road making, or if money was not available barter was resorted to.

Plate 4.1: After the bush-burn, seed was hand sown onto the still warm ash
Source: Alexander Turnbull Library Collection. Ref. No: G-6250-1/1.

The system of dairy farming to be followed was not that of Britain, but rather a system which developed in New Zealand. This development drew on the experiences of farmers in other lands with new settlements such as North America. In the technology field it was North American tools and equipment that were recommended to new settlers (Grey, 1994, 206-207). Farmers soon came to realise that the New Zealand soils were not inherently fertile. While pastures flourished following a bush burn largely due to the potash in the ashes, they soon deteriorated if not regularly topdressed (Warr, 1988, 61).

With animals being left to range outside there was not the animal dung and straw available to spread over the fields as in Britain, so farmers turned to

'guano' (a form of phosphate) for topdressing pastures. By topdressing and continually grazing pastures (thus retaining animal excreta to the pasture) New Zealand farmers came to realise that their pastures did not deteriorate so quickly. Nor was there a need to adopt a crop rotation system, all of which demanded labour and money, things that were not readily available to small farmers in New Zealand (Warr, 1988, 61).

The Family Farm

The period prior to 1890 saw the unemployed labouring population in the depression of the 1880s put pressure on the government to establish small farms (Grey, 1994, 269). This pressure was heightened by the granting of the franchise to all adult males Maori and Pakeha in 1881 (*New Zealand Historical Atlas,* 1997, Plate 51). While many sought a small farm as a means to self sufficiency, it was to be the small farm of sufficient size to produce goods for export that the government was eventually to encourage especially in the bush areas of the North Island. By so doing the government promoted settlement policies which gained public support (Grey, 1994, 273).

The pre-refrigeration era then, is important as it is the period during which was established the foundation of the small family dairy farm unit. This was based on a system of pastoral farming, which evolved to suit New Zealand conditions. Further the period saw the introduction of the two breeds of dairy cows which came to dominate the dairying areas in New Zealand. The first Jersey cows came in 1862 and the first Holstein-Friesan cows in 1884 (Philpott, 1937, 24). Two further developments were also of great importance — the factory system of processing milk at a central location and the advent of refrigeration, which gave access to overseas markets. Equally important was the form of labour used on family farms that was carried on into the next century and affected the lives of dairy farm women in New Zealand.

THE COMING OF REFRIGERATION

The beginnings of commercial dairying in New Zealand that is, where products are sold on overseas markets, rests on the development of refrigeration. In 1882 the first cargo of frozen meat left New Zealand for England (Sinclair, 1959, 164-165). Included in the shipment was a small consignment of butter. This made it possible to build up an export trade in meat, butter, and cheese, all of which could be produced efficiently on relatively small farms. Exports expanded greatly in the latter part of the nineteenth and early twentieth centuries. In 1890 butter and cheese to the value of $256,933 was exported (*New Zealand Official Handbook*, 1892, 131). By 1920 this figure had risen to $8,001,817 (*New Zealand Year Book*, 1920, 144).

Infrastructure Development

Although refrigeration had been shown to be a viable means of transporting perishable cargoes over long distances by the early 1880s, it took some time before the infrastructure, both internally and externally, was put in place to take advantage of this development. First, was the need to establish a fleet of steamships equipped with refrigeration machinery to provide a regular service from New Zealand to Britain. The New Zealand Shipping Company had five such ships built in the mid 1880s and the Shaw Savill and Albion Company followed with three more. These ships could do the run in 40-45 days compared with 100-110 days for a sailing ship that had been re-equipped with refrigeration machinery (Warr, 1988, 67).

The development of insulated rail wagons in the 1890s to transport the produce from the dairy factory to the port of export was necessary. Also the building of cool stores both at the dairy factory and the export port had to be undertaken within New Zealand in order to store produce awaiting shipment.

The Co-operative Dairy Company

The main ingredient in this infrastructure development as far as the dairy farmer was concerned, was the establishment of a viable dairy factory. Many of the early factories were proprietary concerns, established by entrepreneurs. In Britain, at the time early immigrants left for New Zealand, there was a surge of interest among liberal thinkers in socialism, which for some led to favouring co-operative control over capitalist control. Among these immigrants would have been some who would have been influenced by such thinking. Doubtless farmers also saw co-operatives as a means to get a factory established and they turned increasingly to co-operative control where the suppliers only, owned the shares in the factory (Yerex, 1989, 66). By having their own co-operative factory, dairy farmers could not only cut out the middle man but also safeguard their position as suppliers. Private companies could shut down leaving suppliers with no outlet for their milk or if the business was taken over by a new owner, any previous agreements to suppliers were cancelled. This left suppliers with little option but to accept a new agreement, whether they liked it or not.

Some of these early co-operative concerns failed for want of sufficient capital, and lack of experienced managerial control. Further, they experienced difficulties of making provision for payments of milk received at the factory. Later, London importers made advances against shipment of produce, and banks began to finance new concerns. The bank's security lay in the building erected, the subscribed capital, and the promissory notes issued by subscribers. Further, because the shareholders were bound to supply the company with milk for the ensuing seasons, any liability the company faced could be met by a deduction from the monthly milk cheque paid out to each supplier.

At first suppliers had to provide capital on the basis of the number of cows milked, usually £1 per cow, although only 30c to 50c per cow was called up for cash. Once production had started and the factory was a going concern, banks were also willing to lend against future production for further developments to the factory. By 1917 over 80% of dairy factories were co-operatives and by 1951 they were wholly co-operatively owned (Warr, 1988, 79).

The Emergence of Taranaki and the Waikato

Underpinning this infrastructure was the growth of the small family dairy farm unit especially in the 'cow kingdoms' (Oliver, 1960, 149) of Taranaki and the Waikato. The bush, scrub, and swamp areas of Taranaki and the Waikato with their generous rainfall, allowing for a good growth of grass amongst the stumps and logs, provided a sound setting for dairying on a commercial scale to begin. These areas were already cattle, rather than sheep areas, and they were also the home of the small settler.

The 'cow kingdom' of the Waikato developed later than Taranaki. Following the 'Land Wars' of the 1860s and the subsequent confiscation of Maori land, the Waikato was opened up to European settlement. At first, much of the Waikato land was taken up in large blocks by such Auckland entrepreneurs as Firth and Morrin and it became locked up in large estates (Gardner, 1992, 65). The Long Depression of the 1880s, plus the difficulties in establishing a large scale capitalist system of farming suited to the climate, saw these entrepreneurs fail in their attempt to profitably farm the land. The humid climate did not allow for large scale wheat growing as evolved in Canterbury during that time. By the time refrigeration had become a tried and proven method of exporting perishable cargoes long distances in the 1890s, these lands then became available for closer settlement due to the financial difficulties of their original owners.

The First Liberal Government

Equally important was the advent of the first Liberal Government under John Ballance in 1892. One of their major policies was the establishment of farms for the 'small' man [*sic*], not however, small farms on which self sufficiency only could be practised, but rather farms of sufficient size to produce commodities for export and take advantage of refrigeration. The Government passed in 1892, 1894 and 1896, *'Land for Settlement Acts'* concerned with breaking up large estates to establish small farms. The 1896 Act gave the Government the powers of compulsory purchase (Grey, 1994, 306).

Although primarily affecting the South Island this acquisition of large estates for subdivision did apply in the Waikato-Thames Valley region to the estates developed there after the 'Land Wars' (Grey, 1994, 306). In 1904 the Matamata Estate of Firths was purchased while Karapiro, Whitehall, and Fencourt estates near Cambridge were purchased between 1898-1901 (Brooking, 1996, 278-285). Between 1899 and 1904 some 32,729 hectares were purchased in the Waikato-Thames Valley area for subdivision (Brooking, 1996, 278-285).

By 1911, 113,075 hectares in the Auckland land region had been acquired under the *'Land for Settlement Act'* (Grey, 1994, 307). As well as the land acquired under the above Acts the Liberal Government pursued an active policy of buying Maori land. Some 2.5 million hectares of land in Maori ownership passed to the Government between 1892 and 1921 (Grey, 1994, 305). The low price paid to Maori enabled the Government to lease or sell this land to settlers at low prices but this left Maori in a landless impoverished position.

It was one thing to make cheap land available to prospective settlers, but it was another thing for such people, even if they had modest means, to be

able to finance themselves onto such land. In 1894 the Liberal Government passed the *'Advances to Settlers Act'* (Grey, 1994, 309). Under this Act the Government borrowed money in the United Kingdom, which it re-lent at favourable rates of interest, lower than those offered by private institutions, to settlers. Thus, the State became the main provider of credit for struggling settlers (Oliver, 1960, 144) and as such was the responsible agency supporting the farming community and in turn providing security to women and the family farm unit.

Hygienic Standards

The Government also realised early on, that the continuing success of exporting dairy produce was going to rest on improved hygienic standards in dairy sheds as well as the control and grading of dairy produce. In 1892 the Government set up the Department of Agriculture following a similar move previously in the United States of America. The department was active in providing advice to dairy farmers, especially concerning dairy shed hygiene (Grey, 1994, 317). In 1898 a separate Dairy Division was set up within the Department of Agriculture (Warr, 1988, 113).

The *'Dairy Industry Acts'* of 1892, 1894 and 1908 were concerned with establishing hygienic standards in dairy sheds along with the control and grading of dairy produce (Grey, 1994, 317). The Department of Agriculture was active also in supplying plans for dairy factories (Warr, 1988, 107) and the 1908 *'Dairy Industry Act'* as well as bringing in tighter controls on hygiene and quality, provided 15 year low interest loans for factory building and protection for co-operative dairy companies (Grey, 1994, 318).

EXPANSION

By 1911 dairying was well established in the Waikato. The area was served by railways, which linked Thames, Rotorua, and Te Awamutu to Auckland as early as the 1890s and to Wellington with the opening of the North Island

Main Trunk railway in 1908. By the 1930s the Waikato had emerged as the major dairy farming area in New Zealand (*New Zealand Historical Atlas,* 1997, Plate 61). From this time on to World War II was a period of steady expansion and intensification which rested on technological developments, improved roading and pastures and the draining of swamps especially on the Hauraki Plains.

Payment by Butterfat Content

The payment received for milk supplied often led to widespread dissatisfaction and much milk supplied was watered by suppliers to increase the volume. The introduction of the Babcock Testing Machine in 1892, from a firm in New York State (Grey, 1994, 317) enabled payment to be made on the butterfat content of the milk supplied by each supplier thus regularising the position. The Jersey cow, noted for its high yield of butterfat replaced the Shorthorn, as a major dairy breed in the Waikato.

The Development of the Milking Machine

It was the development of the milking machine (Plate 4.2) which reduced the labour required in the cowshed. While this did not obviate the need for women to be involved in milking it did solve the problem of children working long hours milking cows. Although milking machines had first been developed in the 1890s, it was not until 1903 that a machine, which gained a measure of acceptance, was imported from Australia (Warr, 1988, 123). The development of the Gane releaser in New Zealand in 1908 enabled the milk to travel direct to the storage vat rather than as previously via an individual bucket for each cow and then to the vat. This cut down the handling of the milk and improved hygiene and reduced the physical tasks involved for women in the cowshed (Grey, 1994, 359). Design improvements enabled easier dismantling and cleaning of milking machines. Further the quality of rubberware used improved and its cost lessened.

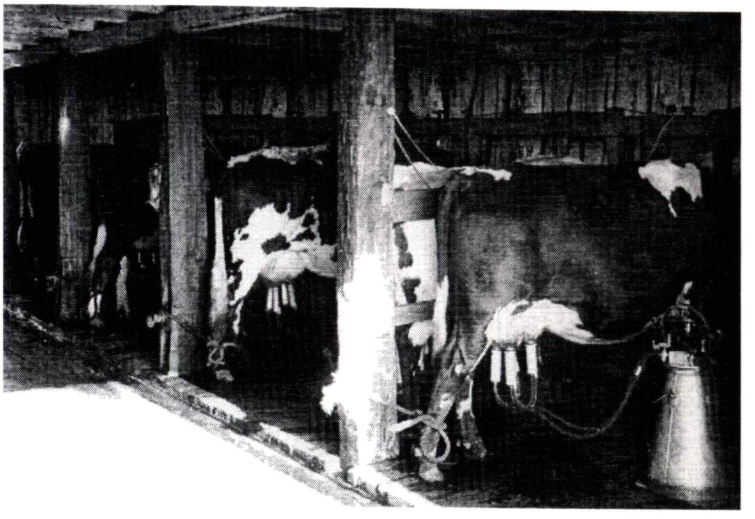

Plate 4.2: Early milking machines (1912). Although there have been innumerable improvements, the basic principle of milk extraction by vacuum has not changed
Source: Alexander Turnbull Library Collection. Ref. No: G-10772-1/1.

The further acceptance of milking machines was hastened by the shortage of labour following World War I. The development of reliable internal combustion engines, followed later by rural electrification and the use of the electric motor and electric hot water systems in the cowshed, made their use further widespread. By 1921, 50% of New Zealand's dairy cows were milked by machine and on the intensively dairy farmed region of the Waikato that figure had risen to 95% by 1941 (Warr, 1988, 124).

Improved Dairy Sheds

Along with this development went improvements in dairy sheds. Many of the dairy sheds developed from the bush settlement days were extremely unhygienic (Plate 4.3). If the shed itself was floored with timber the area underneath was a cess-pit (Warr, 1988, 120). Cows moved in, were locked into position with an upright bar, which went across the cow's neck behind the head and when the cow was milked she was released and backed out. A big advance on this was the 'walk through' cowshed, concrete floors in the cowshed and a concrete holding pen for unmilked cows all of which could be

washed down following each milking and the effluent flushed to a sump and later spread on the pastures.

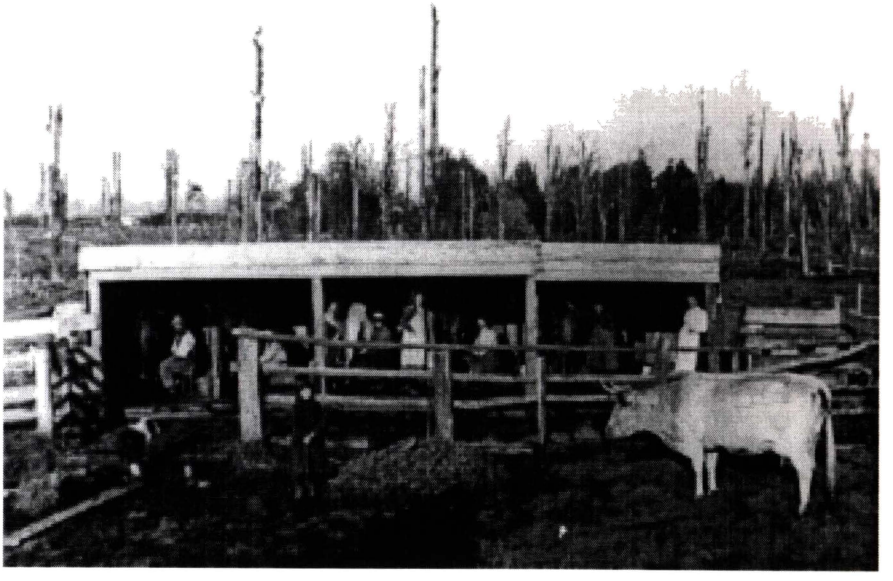

Plate 4.3: Family labour in an early cowshed (1890s)
Source: Taranaki Museum

Home Separation

A third development prior to World War II was that of home separation (Plate 4.4). Dairy factories in the Waikato, unlike those of Taranaki, were largely devoted to the manufacture of butter. In the early days of development, roads were inadequate and sometimes impassable during wet periods. In order to reduce the distance the farmer had to transport the milk, skimming stations were built where the cream was at first skimmed from the milk. Later when separators were developed and installed at the skimming station, the milk was separated by this means and the farmer took the skim milk back home to feed the pigs. The cream was then forwarded to a large creamery to be made into butter. In Taranaki where roads were better, it was the small local cheese factory to which the farmer sent milk. The advantages also of the skimming or separating station was that the dairy company could

keep better control over the quality of the cream which came into the creamery or butter factory.

Paradoxically, it was the existence of poor roading, which brought about home separation. As dairying expanded in the Waikato many farmers in the new dairying areas were again faced with roads along which at times it was impossible to convey a load of milk to the skimming station. The solution was the development of the hand driven separator, the operation of which was usually carried out by women. Later as milking machines became more common, the separator was driven by the motor used to drive the vacuum pump for the milking machine. Now the farmer could separate milk at home, transport only cream to a butter factory and having delivered the cream did not have to wait around in order to convey the skim milk back home. This development was initially opposed especially by the dairy companies which now no longer had the same control over the quality of cream received. The result was that much of the butter made had a fishy or tallow flavour (Warr, 1988, 129).

With the advent of pasteurisation and the neutralisation of the milk to reduce its acidity, the problems were overcome and home separation prior to World War II became the norm in butter factory areas (Warr, 1988, 131). This in turn led to company or contractor based collection and delivery of cream to the butter factory on improved roads. The farmer was now able to devote more attention to developing the farm, especially clearing work and the expansion of pasture. While these technological developments lessened the range of physical tasks it did not lessen the need for women to be involved twice daily in the task of milking. Cows had to be brought into the bail to be milked, udders had to be washed and cows stripped when the machines were removed. After milking was finished the milking machine and the separator had to be washed.

Plate 4.4: A welcome break from working in the dairy. Separator in the background on the right
Source: Warr, 1988, 131

Improved Grasses

Perhaps the most important work undertaken prior to World War II in the development of this intensively farmed grassland system on small farms, was the work undertaken to improve grass strains. At the turn of the century, dairying in New Zealand had become a grassland system of farming as opposed to the rotations followed in Britain. What was needed above all in the New Zealand system were grass strains that had a longer life than the short-lived strains evolved under the British system of rotational cropping. Much early work carried out in Britain and aimed at improving British grasslands was used as the basis for work in New Zealand. This led

in New Zealand to the introduction of certification of high quality grass seed and the work of Cockayne, Sears, and Levy prior to World War II established the high quality pastures on which the dairy farmers depend (Warr, 1988, 138-141). The more benign climate in New Zealand meant that the annual cycle which dominates the growth patterns of grasses in continental climate conditions, was not applicable. In these continental areas, any perennial grasses capable of surviving the cold winter, were hardy, low producing, underground creeping, species (Warr, 1988, 142).

Thus the search for suitable grasses was extended to countries with more temperate climates. The major outcome of this search was the introduction to New Zealand of perennial ryegrass which has high protein value, the ability to withstand cold and drought and the ability to survive the summer heat. The grassland scientists also realised that perennial ryegrass on its own was not enough. It needed to be grown in conjunction with white clover, which had the ability to fix nitrogen in the soil for good ryegrass growth. The clover in turn had to be topdressed with phosphate (which replaced the earlier use of guano) and lime and the resultant sward needed to be heavily grazed to maximise the return of animal urine and excreta. The 1920s and 1930s saw the development of high producing pastures grown from high quality seed, topdressed, and grazed under high stocking rates. Further intensification was achieved by the use of rotational grazing. Surplus grass grown in the summer was cut and turned into ensilage or hay for feeding out in the period of low growth — winter and early spring. All this characterises the intensively farmed grassland areas of the Waikato dairy farms. In the period 1930-1950 livestock numbers in the Waikato counties increased by 50 to 100% (*New Zealand Historical Atlas*, 1997, Plate 89).

By the time of World War II, the main features, which characterised the Waikato dairy farm, were well established. These farms were small by New

Zealand standards. In 1931 the average size of a dairy farm was 39 hectares (Grey, 1994, 308). They were family owned and employed little outside labour having established a tradition of the family farm with a dependence on labour from wives and children. Their income came largely from the production of milk and the major crop grown was grass. By the use of milking machines, and improved cow sheds, they were able to milk herds of increased size without a concomitant increase in labour input associated with the twice daily milking routine. With improved pastures and topdressing an increased herd could be run on the same area leading to greater intensification of the farming system. The close connection of the dairy farm to the local dairy factory through the co-operative system of ownership also was a characteristic of the system. Following the election of the first Labour Government in 1935 which set up the Primary Produce Marketing Department in 1936 to sell all New Zealand's export dairy produce, the first steps had been taken to create a vertically integrated dairy system. From the beginnings of the trade in dairy produce in the 1890s following the advent of refrigeration, when very little dairy produce was exported, by 1937 New Zealand gained some 36% of its total exports by value from dairy exports (*New Zealand Historical Atlas*, 1997, Plate 61).

If much of this was achieved by the physical efforts of the 'cow cockie'[1] it was the state that underwrote it all. The state was the chief provider of credit, it disseminated free information, set the hygiene rules by which dairy factories operated, and graded their produce prior to shipment overseas. It financed the research institutions such as Ruakura and the scientists who brought about the 'grassland revolution', and was active in making land such as the Hauraki Plains available for dairying. If at first using the power of the state was a pragmatic solution to the problems faced in developing

[1] The term 'cockie' meaning a small farmer, was brought to New Zealand in the nineteenth century by Australian settlers (Yerex, 1989, 10-11).

dairying in New Zealand, this was seen as an essential and natural order of things by the time of World War II.

SHAREMILKING

Two further features of this farming system were also important to its viability. First, there was a need to allow young people of 'modest means' to be able to continue to enter the system and eventually become farm owners. This farming system also required additional labour at milking time. The first need was met by the evolution of 'sharemilking' and the second by a reliance on members of the family unit to assist with milking.

The origins of sharemilking in New Zealand are open to conjecture. The first recorded sharemilking partnership in New Zealand was on the Taieri Plains in Otago in 1884 and it is thought it may have developed from a Scottish concept of share farming along with American share-cropping arrangements of the 1880s (Taylor, 1996, 3). It is believed to have spread to the Waikato from Taranaki following World War I and first appeared as a separate occupation on the 1921 Census return (Smith, 1965).

By arrangement with the farm owner the sharemilker received a set percentage of the monthly cheque from the dairy factory. At the turn of the century 25% and 33.3% shares were common. By the 1940s, 50%, 39% and 29% shares were prominent. The varied percentage in the sharemilking agreements reflected the lesser or greater degree of responsibility placed on the sharemilker. Under 29% and 39% agreements, the farm owner maintained ownership of the herd. The sharemilkers (husband, wife, family) were responsible for milking the herd, maintaining on an agreed basis, the milking equipment, and other farm tasks such as haymaking, cleaning ditches, and herd management. Usually accommodation was provided for a sharemilking couple and family. With a 50% agreement the sharemilkers owned the herd

so it was usually the last stepping stone before farm ownership. Here the responsibilities of the sharemilkers were greatest as their future lay in maintaining a high producing herd. Besides being responsible for the health and feeding of their own herd, a 50% sharemilking couple were responsible for rearing calves as replacement stock, fertiliser application, selling surplus stock, maintenance and care of milking equipment and shed and other farm jobs as may be agreed upon. The 50% sharemilkers' negotiating position with farmers is a much stronger one because herd ownership rests with the sharemilkers. Such a position could only be attained after a period of capital accumulation to enable the sharemilkers to buy a herd of cows and eventually to have the equity to purchase a farm.

Sharemilking also enables owners of farms to reduce their involvement in the work on the farm especially the twice daily routine of milking cows. The degree of reduction depended on the type of agreement adopted. At the same time the owners could maintain a reasonable income return on their investment. With a 50% agreement the owner could further be assured that the farm would be run in a manner beneficial to both owner and sharemilkers.

In New Zealand sharemilking first received statutory recognition in 1937 when the Labour Government passed the *Sharemilking Agreement Act*. This Act covered sharemilkers on 25% and 35% agreements as they made up the majority of sharemilkers at that time. Because they did not own their own herds they were considered vulnerable to exploitation by farm owners. Sharemilkers on a 50% agreement who owned their own herd were considered in a strong enough position to negotiate their own agreements with farm owners.

The evolution of such a system in New Zealand may lie in the fact that New Zealand dairy farms have a definite milking season with a break from milking

over the winter months prior to calving. It is this break that enables sharemilkers to change farms or to enter sharemilking while not engaged in the day to day business of milking a herd. The fact that the New Zealand climate allows animals to be housed out of doors all the year round means that there is not a big investment in sheds to house cows and store winter feed. Nor is there a need to employ the extra labour that such a system demands where animals have to be hand fed and sheds 'mucked out'. It has meant that sharemilking also is a family orientated business and is essentially a resource-sharing system allowing young people to enter on the path to farm ownership and older dairy farmers to gradually withdraw from the day to day work on the farm.

While not involved directly in farm ownership sharemilking also calls on the work of wives/partners in order to minimise labour costs and thus make possible eventual farm ownership. In his survey of dairy farms undertaken prior to World War II, Doig (1940, 57) found that it was the wives of sharemilkers who worked the longest hours on the farm.

FAMILY LABOUR

Farm women and children

Along with sharemilking, the other important feature to dairy farming viability is the provision of labour. Despite requiring a regular daily input of labour during the milking season, New Zealand dairy farm owners have not been big employers of hired labour. Being in the main owned by people of limited capital, dairy farms have been operated as family units thus holding labour costs to a minimum. In 1911, when farming and rural pursuits still occupied most New Zealanders, only 5,000 of the 26,000 workers on dairy farms worked for wages and the average herd at that time had 55 cows (Grey, 1994, 405).

It was to the wife and family members that dairy farmers turned when additional labour was required especially with milking and during calving time and the rearing of calves for replacement stock. Such has been the case from the pre-refrigeration days of dairying when the milking of the cow or cows often was the work of the wife or children especially if the husband was away from home earning money felling bush or constructing roads. There was little time for children to play or do their school homework (Warr, 1988, 116). The economic survival of the farm rested on the extra labour provided by the family. As Doig (1940, 20) points out in the analysis of his survey of dairy farmers:

> On dairy farms family life and activity are more closely connected with the means of livelihood (the farm), which is usually run by the family. The wife is in many cases as much a business partner as she is a homemaker; the children often are employees of the father as well as members of the family.

Doig (1940) found, in a survey published in 1940 that, of the 451 dairy farms surveyed, 61% were run without any permanent hired employees. On these farms 38% of the wives worked on the farm (Doig, 1940, 55) and other family members assisted. The wives mentioned above worked up to 37.78 hours per week during the busy time of the year while daughters or sons who were still at school worked up to 22.71 hours per week (Doig, 1940, 50).

The most noticeable thing Toynbee (1995) found in her research about family owned farms and sharemilking, which used only their own labour, was the wide range of tasks women undertook. They not only looked after the house, dairy and garden, but worked on the farm as well. The heavy burden of work was exacerbated by the large numbers of children farm women bore. They often bore children into their late thirties and early forties, so that child-rearing occupied a very great proportion of women's lives (Toynbee, 1995, 47). Having to provide for the large families made daily life very hard and

took its toll on women's health (Plate 4.5). Mothers relied very much on their daughters for support. During the course of the working days daughters learned from their mothers how to organise and run a farm household and also farm work. Sons worked out on the farm with their fathers perhaps with a view of later inheriting the farm, especially the eldest son.

SUMMATION

This historical survey shows that women have been involved in the work on dairy farms since the beginning of dairying in New Zealand. The survey also shows that the support of the government was ongoing in the provision of cheap credit, infrastructural facilities and in research. While machine milking lessened the demand for labour during milking time there was still a need for a second pair of 'hands' in the milking shed. This, on most farms, was provided by the wife and older members of the family. Thus, on the extra unpaid work provided by the family, rested the economic survival of the farm (Doig, 1940, 20). This was especially true during the early days of the development of the farm or for young couples starting out as farm owners and anxious to build up their equity in the farm. Similarly, the work of the family on the farm became essential during times of economic downturn when dairy export prices fell. Thus by 1946 the features, which mark out the traditional family run dairy farm in the Waikato, were established. The next chapter discusses ways in which work can be viewed and further outlines the various tasks undertaken by dairy farm women since World War II.

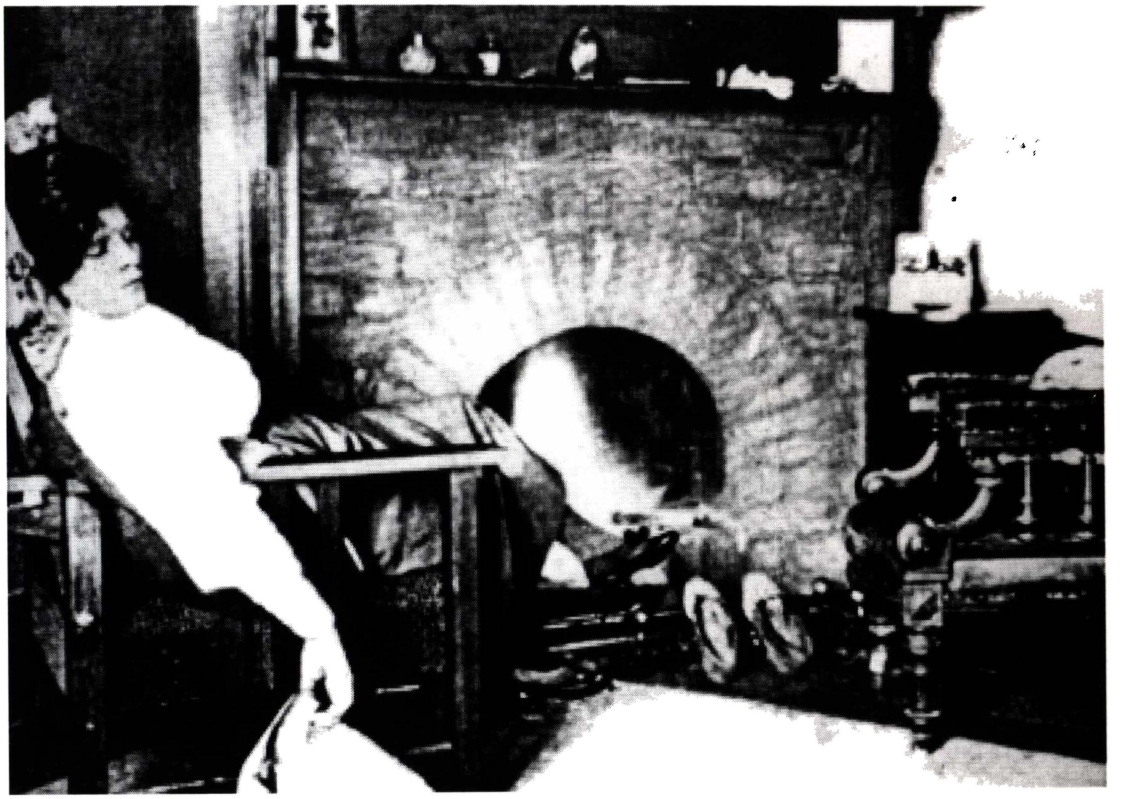

Plate 4.5: A weary farmer's wife
Source: Warr, 1988, 115

CHAPTER FIVE

WORK, WOMEN AND FARMING

INTRODUCTION

Prior to an analysis of structural changes since World War II that have affected women in dairy farming, it is necessary to provide an understanding of their work, activities and leisure. This chapter sets up a conceptual framework and some specific hypotheses with which to study work.

Before one can talk of farm women's work it is necessary to define the term work and to develop an understanding of how it applies to farm women. Farm women work and live in a particular work place that is the farm. To give a sense of the context in which farms operate, a subsequent section traces seasonal changes in farming and outlines samples of the daily routine of farm women.

WORK

What is Work?

Grint (1993) in his book *The Sociology of Work* demonstrates the difficulties delineating the world of work from the sphere of non-work and argues that no unambiguous or objective definition of work is possible. He states that in essence, work is a socially constructed phenomenon without fixed or universal meaning across space and time, but its meanings are delimited by the cultural forms in which it is practised (Grint, 1993, 46). Some cultures do not distinguish between work and non work; others distinguish between work and leisure; still others refer to employment as a particular category of work (Grint, 1993).

For most people work means a job held outside the home for pay. This tends to be the only type of work recognised by a great majority of people. As Ruth Finnegan (1985, 150) states: 'It is somehow implicitly assumed that jobs which are renumerated through the cash nexus, as part of market place transactions and are counted and taxed by government agencies, are real work'. In New Zealand the Department of Statistics defines persons who are aged 16 years and over, and who are normally employed 20 or more hours a week as actively engaged in the labour force. Pahl is of the opinion that work is not simply about employment and that self-employment and unwaged work have largely been ignored. He states further that 'no longer can 'women's work' be referred to without some awareness of the wider implications of what is being assumed' (Pahl, 1984, 11). If types of work other than paid employment are not considered, the work contributions by women, are not recognised in formal accounting systems (Waring, 1988).

What is, and what is not work, is an extremely complex issue which cannot be easily solved or dealt with. Both work and activities may be defined simply as an expenditure or an application of effort to some purpose. Work and leisure are certainly linked but not everybody is in a position to place boundaries around their work and leisure time. Leisure and work may be combined as for example, the housewife who knits while watching the television, or even 'day dreams' while vacuuming the house. The use of time is an important aspect of leisure and work and those people who can separate off portions of their lives into work and life-obligations, generally have more 'free time' than those who cannot (Grint, 1993, 11). For many women this blocking of time is not possible. A woman's leisure (or its absence) is often strongly influenced by the unspecified nature of her domestic and associated responsibilities. As Rosemary Deem (1985, 106) says:

> The more work an individual has, and the more unspecified the work tasks are, the less time, energy and space remain for leisure, even though time can or may be used more flexibly when working hours and tasks are not fixed.

Women's Work

If women's work is measured only by an official definition of employment then large amounts of women's work become invisible or taken-for-granted. In our society much of women's work is unpaid and as a result can go unrecognised and not appreciated for the contribution it makes to a community. 'It can also deny the fact that women do *anything* all day' (Bell and Adair, 1985, 48). Most of the research on work has been on work for pay outside the home. Ruth Finnegan (1985, 150) argues that:

> This delimitation of work to 'paid employment' or even more narrowly to full-time male employment – lies behind much traditional research in the sociology of work, industrial relations, economics, organisation, theory and industrial sociology.

Furthermore, work is supported by a series of deeply entrenched values and classifications in our society which associate work with paid employment. However, it must be added that these are now not necessarily undisputed. Grint (1993) outlines some contemporary theories that attempt to explain the position and experiences of women at work, and provides a review of contemporary gender relationships in capitalist society. He concludes that gendered work variations that exist in time and space simply cannot be generalized. From his review of evidence he draws on two significant points; the insoluble link between home and work, and the historical patterning of gender relationships. For example, the model of a full-time, single occupation, male breadwinner, who worked outside the home and kept his family, achieved pre-eminence. However, this model is historically specific and surrounded by so many qualifications that its period of relevance is now restricted to the past. He goes on to say that;

> 'Marx was wrong in assuming that history was on the side of the proletariat, history is far more contingently constructed than this; but historically rare opportunities for the advancement of women at work are beginning to appear' (Grint, 1993, 235).

Whilst sociologists have discussed work in broad terms, feminist geographers have looked more particularly at the relation of work to women and the way it varies in places and spaces. They have challenged the idea of work as being based on the production of goods and services. This they maintain gives a narrow definition of work making it something that is equated solely with remuneration. For many women their work is 'unpaid', work such as domestic labour and childcare and thus falls outside the scope of such a definition. Any definition must then in their view encompass a broader range of activities (McDowell and Pringle, 1992, 15).

Until industrialisation both men and women were seen as producers working from the household in a cottage industry system. Industrialisation with its factory system changed this, separating work from home, that is the public from the private. This in turn changed the value placed on the work done by men and women (Daniels, 1987, 411). It made the home invisible in the sphere of work and ignored the unpaid domestic work carried out by women (McDowell and Pringle, 1992, 15).

McDowell and Pringle (1992, 15) reason that the significance of the separation of work and home, the public/private dichotomy was shaped into its present form by the advancement of industrial capitalism and urbanisation in Western societies. The resulting ideology from this capitalist process was one in which society should be controlled by men while women looked after the household. This belief that 'a woman's place is in the home' has led to an increased division between women's and men's lives and has had a significant impact on women as it became embodied in theory and practice

(McDowell and Pringle, 1992, 15). In some minds such ideas continue to exist.

Since the 1970s many feminist geographers (Domosh, 1991a, 1991b, 1997; Dyck, 1993; Johnson, 1990; McDowell, 1989, 1992; McDowell and Court, 1994; McDowell and Pringle, 1992; Massey, 1994; Momsen, 1991; Rose, 1993; Tivers, 1985) have been researching and debating the question of why women are responsible for domestic labour and caring work of various kinds while men are primarily breadwinners (Jagger, 1983). Hanson and Pratt (1988, 299-321) argue that home and work cannot be treated as separate spheres and they have suggested ways in which waged work affects the home. Their studies have found the structural limitations placed on women by their domestic work.

Women often seek part-time work, the hours of which coordinate with the demands of their families and the working hours of their partners. Hanson and Pratt, (1995, 149-156) argue that the preference for part time work is especially significant in sustaining the occupational segregation of most women in low-status as well as low-paid work. They suggest that women can only succeed in the labour market by becoming full-time career women, or by delaying parenthood until they are sufficiently high up the ladder to afford full-time nannies.

In focussing on women's waged work, these studies reclaim the work side of the work/home dichotomy. They bring women into spaces, which in much of human geography are portrayed as exclusively male worlds and insist that there is a geography of women to be recovered. Many studies however, concentrate for the most part on reclaiming the world of women's employment within the formal economy.

New Zealand Women in the workforce

Before considering dairy farm women's work there is a need to look at the broader New Zealand background of women's participation in the work force. From the 1970s onwards there has been a rise in women's involvement in the work force. In 1966 about 40% of New Zealand women aged 15-64 were in the workforce (Department of Statistics/Ministry of Women's Affairs, 1990, 57). By March 1987 this figure had risen to 41.9%, by March 1995, 44%, and by March 1999 was 45.2% (*New Zealand Official Year Book*, 1996; 2000, table 14.1).

An important feature of the evolution of women's participation in the labour market over the last three decades has been the entry of large numbers into the part-time workforce. Part-time workers are those who normally work fewer than 30 hours a week. Since 1971, nearly 56% of the total increase in women's employment has been in the part-time sector. Over the 1971-1990 period the number of people in part-time employment almost trebled and women accounted for 64% of this growth. In 1995 women employed part-time accounted for 84.25% of the total part-time employment (*New Zealand Official Year Book*, 1996, table 14.2).

Another significant trend was the increase in the proportions of the female labour force who were married, partnered or de facto. The most marked increase has been for women aged 40-54. The proportion of women in the workforce at these ages increased steadily in the 1981-1990 period, largely as a result of a substantial rise in full-time participation rates. The evidence available suggested that workforce participation was becoming a constant part of more and more women's lives (Department of Statistics/Ministry of Women's Affairs, 1990, 57-58).

This increase in the participation of women in the paid workforce since 1970 is reflected in the number of the participants in this study who were engaged in paid work off the farm. Amongst the 26 women who farmed in the 1940s, 1950s and 1960s only four (15%) indicated that they had been involved in paid work off the farm. Amongst the 36 women who farmed in the 1970s, 1980s and 1990s, 20 (56%) indicated that they had been involved in paid work off the farm.

Despite the increased participation of women in the workforce they have still retained the main responsibility for unpaid domestic labour in the home. A time-use survey conducted by Statistics New Zealand in 1998/1999 shows that the responsibility for unpaid labour rests mainly with women. Seventy percent of their work was unpaid whereas 60% of men's work is paid. This unpaid work by women included household work, care-giving, shopping and voluntary work (Statistics New Zealand, cited in MAF Rural Bulletin, June, 2001, 9). There is little evidence of a reorganisation of domestic responsibilities and I maintain that the 'double burden' is sanctioned by the division between women's and men's work.

FARM WOMEN'S WORK

There are difficulties in attempting to undertake an analysis of dairy farm women and their work. These difficulties stem from the fact that dairy farm women's roles are flexible and always changing (Sachs, 1988, 123). The main problem is that the concept of work generally used in much theoretical, empirical and statistical work excludes or devalues a significant proportion of the work necessary for the production and reproduction of the family farm which is traditionally done by women. The whole sphere of domestic economy (housework, food preparation and so on) is ignored, yet it includes tasks that are essential to the daily and generative reproduction of the family labour system. Dairy farm women are expected to undertake a wide variety of

tasks in the sphere of production, but this contribution is either not recognised or considered 'complementary' to the main work of male family members.

Distinctions between production and reproduction, farm and household, work and home, business and family, do not have any definite boundaries in relation to the work on the dairy farm. Smith (1995, 97) argues that the problem is due to the multi-dimensional and interrelated nature of farming, and farm work, where the home is situated on the business property and many of the activities that take place in the home are related to farm production.

Other writers have seen the domestic labour of women on farms as essential to the reproduction of the family farm system (Garcia-Ramon and Canoves, 1988, 263). Unlike other women workers, who work in areas off the farm, farm women carry out their tasks out of view of the general public and furthermore, the intertwining of their various tasks, both on the farm and in the home, makes an assessment difficult (Fink, 1988, 238). Whatmore (1991, 74) concludes: 'Whatever else women do on the farm, it is clearly in *addition to,* rather than *instead of,* their domestic tasks and responsibilities (emphasis in the original)'.

Many dairy farm women have multiple roles as workers. Some work may be done for a wage or salary and other work involves no remuneration. Some can be done in the home, others outside the home. These various roles, giving a broad perspective of farm women's work, can be summarised into four categories. First, there is work done outside the home for wages or salary — 'off-farm' work. Secondly, there is work done outside the home for no remuneration — voluntary work. Thirdly, there is work done at home involving a small home based business enterprise not connected to the farm

or involving the carrying out tasks for an outside business enterprise, for example the clothing trade (out-workers) all of which is done for remuneration. Fourthly, there is work which involves housework, child care, or care of the elderly as well as work on the farm for which no direct pay is received (Figure 5.1).

However, one needs to note, that within the farming partnership of wife/husband or partner, remuneration for work done on the farm does not involve direct pay to either partner. Any payments received for farm activities are payable to the farm bank account in which both participate. Therefore, the remuneration that the farm women receive for household or other expenses is allowed for in the farm budget.

	Direct Pay	**No Direct Pay**
Outside Home	1. Wage or salary work	2. Volunteer work
Inside Home	3. In-home business or 'out –worker'	4. Housework, farm work, child care, care of elderly

Figure 5.1: Types of Work
Source: Adapted from Rosenfeld, 1985, 6.

DIRECT PAY

Off Farm Work

There have always been some women who have earned a living outside the home. Since the 1960s however, the proportion of women and especially mothers of young children who are employed or actively looking for

employment has increased. Over the last three decades there has been an increase in the participation of women in the paid workforce in New Zealand (*New Zealand Official Yearbook*, 1996:200, table 14.1; Department of Statistics / Ministry of Women's Affairs, 1990, 57).

This increase has included dairy farm women. With high prices for land, dairy couples when purchasing a farm are faced with high mortgages and high repayments. In many cases, the production income from the farm is not adequate to meet the expenses. Farm women in this predicament sought paid employment to help supplement the farm income.

Home (business)

On the other hand, women can earn money working at home, for example, women who produce craft objects such as pottery, or make toys or embroider, while others cater for 'home stays' and tourists. The opportunities to earn money through such activities are set out in self-help books. Apart from such publications as "Starting Your own Business: Enterprise Allowance" (New Zealand Employment Service, 1993) information is also available on the internet (www.maf.govt.nz/mafnet). Some manufacturing businesses have paid 'outworkers' where women take home work such as sewing, making curtains or sewing pre-cut clothing garments (Begg, 1988, 41).

NO DIRECT PAY

Volunteer Work

Work without pay outside the home includes volunteer work. This may be done through voluntary organisations. Many farm women become involved in such organisations as the church, school, support groups, or political participation in electoral work for candidates. Helping with the sick, elderly, meals on wheels, fund raising for sports groups and school projects, are but

a few of the many voluntary activities (Begg, 1988, 41). The list is varied and endless.

Housework and Childcare

Most research that exists on farm women is similar to the general research on women and work in that it has been done in regard to women as helpers, mothers, and wives. Unpaid work in the home was and is primarily women's work. What women do for the home has not been seen as real work, but since the late 1960s with the advent of the women's movement, much more literature about work done in the home has been published (for example, Boulding, 1980; Dyck, 1989, 1990; Tivers, 1985).

Some time-budget studies, of how work is done in the home, do exist (Berk and Berk, 1979; Begg 1988; Fortuijn and Karsten 1989; Oakley, 1974, 1981). One notable finding from such research is that even when the woman is employed, she is the one who does most of the childcare and housework. Also there has been only limited recognition for the work women do in the home which may also be part of a husband's or partner's career progress. For example, a wife may take on the responsibility of providing meals for visiting stock agents or other business people who may call at the farm. Thus, work within the home, can be part of a two person career, where only one person, the husband, is regarded in the eyes of the public as the worker (Kanter, 1979).

Women on family farms inevitably do housework. Sometimes this housework is above and beyond that of city and other rural women, for example when meals are prepared not only for the immediate family but also for other farm workers. How the women organise their daily tasks, housework, shopping, farm work and child care activities differ from day to day and week to week. Nevertheless, there are constraints, which impose

similar patterns on all farm households (James, 1985, 135). First, there are the necessary tasks for the functioning and well-being of other family members, necessity of food, clean clothes and so on. Secondly, the number of children and their ages are very important influences in shaping the household routine. Thirdly, the marketplaces, school, dairy company and other organisations, plus voluntary work and paid employment off the farm, may direct household routine. Finally, activities out on the farm, as well as the weather and seasons, influence routine in the home.

Farm Work

It is difficult to analyse changes in the work roles of dairy farm women because researchers generally have not considered women as 'farmers'. There is very little information about what they did in the past, nor is there any statistical evidence on which to analyse the changes. Much of what they did in the past and continue to do in the present is 'unacknowledged labour' and hence this does not show up in any official returns. From the little knowledge we have, we do know that traditionally women have participated in the work on dairy farms since the beginning of such farming in New Zealand in the nineteenth century (Warr, 1988, 40).

Dairy farms are productive units from which 90 % of the farm's income comes from milk produced by the twice daily routine of milking the herd (Begg and Begg, 1997, 165). Thus unlike other types of farming such as sheep or cattle, additional labour twice daily is needed during the milking season. Mostly it has fallen on the women to provide the extra pair of hands required at this time (Begg, 1988, 41).

Furthermore dairy farms are in the main smaller units than sheep or cattle farms and they were initially set up by people of limited means although unlike sheep or cattle farmers, dairy farmers receive a monthly payment for

their milk during the milking season. By utilising unpaid family labour dairy farmers avoid labour costs. Thus the 'unpaid labour' (MAF Policy Policy Technical Paper , 97/21) of dairy farm women has often meant the economic survival of the family run dairy farm in a capitalist system especially in times of economic downturn.

Then again where a young couple are setting out on farm ownership for the first time, they are faced with mortgage repayments and the cost of establishing a herd of cows. Thus the woman's 'unpaid labour' saves the expense of employing labour or alternatively the farm woman may seek paid employment off the farm to supplement the farm income.

Because the farm is the site of home, work and leisure for dairy farm women, it is not easy to make home and farm separate places of work. There is considerable variation among farm women in how much work they do on their farms, as well as variation in the farm tasks they do. The variation and urgency of farm tasks differ from time to time and from month to month because of the seasonal nature of the work (see Figure 5.2) and the weather. Thus the balance between farm work and house work changes from season to season.

In order to give some idea of the variety of tasks, which were undertaken throughout the year, the participants were asked to write up bi-monthly accounts of what happened throughout the year. Three such accounts are set out below — one from each group. I chose each account because in my opinion they typically represented seasonal tasks performed by women in each decade.

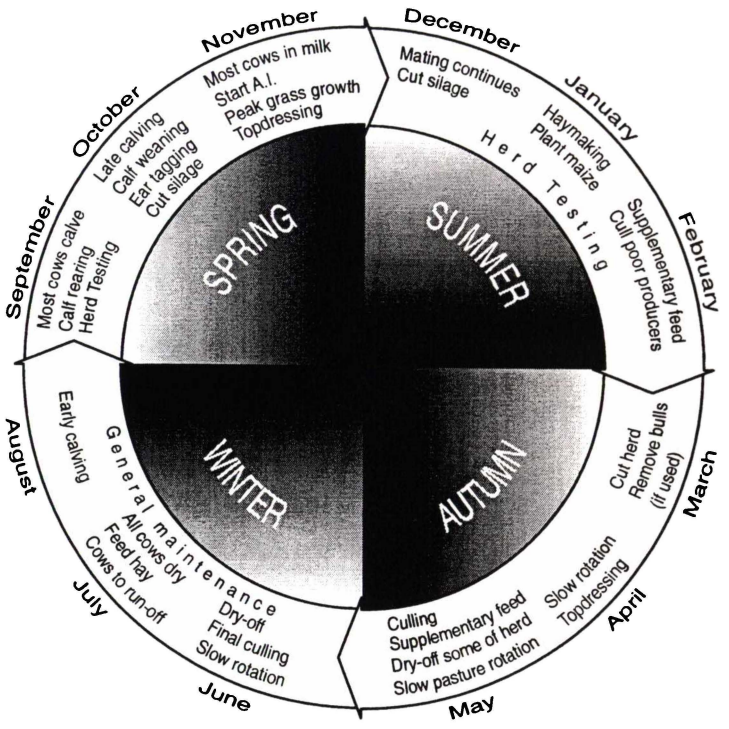

Figure 5.2: A dairy farm seasonal work cycle
Source: Begg, 1990, 165

YEARLY TASKS

Older group – 1940s and 1950s

Ann's account.

July - August.

A busy time of the year as the cows were calving — calves to be fed — herd testing started. Assist children with school calves and tidy up fruit trees. Only routine housework done — clean up garden — prune roses and spray orchard. Break fencing and feeding out — watch cows for mastitis and staggers. Thistles and ragwort to be sprayed.

September – October.

Calves weaned and cows mated. Silage paddocks shut up. Routine housework continued and vegetable garden organised and tomatoes planted. Silage making started – peak milk flow – watch cows for bloat and plant potatoes.

November – December.

Chop thistles — silage making finished off and haymaking started. For me a time in the house — spring clean everything from top to bottom for Christmas. Attend end of year school functions — Christmas shopping and make Christmas cake. Enter flowers, cooking and sewing in Institute Flower Show. Feeding out and break feeding finished. Husband free to do general farm maintenance.

January – February.

Start bottling fruit and making jam. Try to work in trips to the beach with children. Check children's school clothing ready to start school and deal with weeds. Finish off hay and clear drains while water flow at its lowest. General patching of races and tracks while ground dry and easy to work.

March – April.

Cull any cows that have dried off — hedgecutting — store wood for winter. Paint out-buildings, dehorn heifers and start top dressing paddocks. I rather enjoyed this time of the year. As it turned colder I would do another clean-up job on the walls and ceilings as the summer flies would disappear.

May – June.

Time to relax as the cows were dried off. Time to have a holiday and visit relatives who lived some distance away as we did not have to rush home to milk. Sell cull cows and strip down milking equipment, clean and scrub all walls in the cow-shed. Spray fruit trees, go to football and to

the Winter Show. Get up late because it was a novelty. Attend social functions, balls to which we wore long ball gowns.

Middle group – 1960s and 1970s

Beryl's account.

July – August.

Calving started and fed calves. Spring cleaned house. Herd tester used to come and stay overnight and leave next morning after breakfast. Would give them dinner, bed and breakfast.

September – October.

Still rearing calves — weaned mid-October. Silage making —— most cows in milk — A I (artificial insemination) mating mid-October — top dressing — plant potatoes.

November – December.

Mating cows ——silage and hay making. Weed control work — peak milk flow — herd testing.

January – February.

Herd testing — hay making — fruit bottling — jam and sauce making. Bottling tomato soup and spaghetti — milking.

March – April.

Fertiliser — maintain gate-ways and races. Fencing — harvesting potatoes — drenching calves and collecting firewood.

May – June.

Feeding out supplementary feed — milking machine maintenance. Tried to get an off-farm break during winter.

Young group – 1980s and 1990s

Heather's account.

July – August.

Early July tidy garden and mow lawn one last time. Mid-July calving starts. Flat-out for 2-3 months. Employ single person August – September to help. I will milk, rear calves, set up breaks for cow in paddocks, get cows and calves in etc. Monitor pasture cover for grazing rotation.

September – October.

First herd testing, calf rearing — all cows calved by end of September. Mating starts 10th October, pull cows out for AB, spread urea, cut silage, wean calves end of October. Organise truck to put on spring fertiliser — monitor pasture cover.

November – December.

November start selling bull calves as they reach 90-100 kg. Heifer calves go off to grazing. Tidy garden and house after spring rush. Extend grazing rotation going into summer.

January – February.

Try to have a week off in January — spray weeds — general farm maintenance — milking. If weather conditions dry, young herd may go onto once a day milking in February. May start feeding silage in February.

March – April.

Silage feeding continues — bottle fruit. Start drying off cows — monitor pasture cover and feed budget on computer.

May – June.

Dry off cows mid-May depending on pasture cover and cow condition. Get organised for spring. Put baking in freezer for spring. Organise books to accountant. GST done on a two monthly basis on computer.

These three examples show the continuing pattern of yearly work on the farm. Ann, Beryl, Heather and other participants in this study stress that springtime is the busiest time of the year. This is the time when calves are born and milking resumes. The farm activities during calving require constant attention and the urgency with which tasks have to be performed demands time, care and consideration. The rearing of calves, which requires patience and skill, is very much the farm women's work. As Ann points out housework has to take second place.

Other tasks undertaken by farm women in the yearly farm cycle include assisting in the care of sick animals, mating, feeding out, herd testing, making hay or silage, weed eradication and the maintenance of milking equipment. Winter brings relief from the daily milking of the herd and early rising as Ann shows but for Heather it was a time of the year to prepare for the next season.

There is however an underlying change in outlook between Ann and Beryl and Heather who belonged to the young group. While Ann and Beryl were involved in work on the farm, it is Heather who shows a greater degree of active involvement in farm management and administration. She frees herself from house duties in the spring, organises the truck for spreading fertiliser, monitors pasture growth and uses a computer to work out feed budgets, GST records as well as preparing farm accounts for the accountant. This is a change in outlook which is analysed in subsequent chapters.

DAILY ROUTINE

As well as writing up a seasonal resume of the work carried out on the farm, the participants in each of the three groups as set out below, wrote up a reconstructed daily diary and these indicated how they spent their time for that day, in other words their daily routine.

Four examples are shown below — one from each group with an additional one who was involved in part-time work from the younger group. The focus is on the tasks they carried out each day. Unlike their urban counterparts, where there is usually a clear division between home and outside work, for the participants this was not the case. Their daily work involved, throughout the day, varied tasks both on the farm and in the home. It is the intertwining of farm work, housework and child care that makes their daily work patterns different. Although each respondent comes from a different group, with differing circumstances, and the availability of differing technologies, there is an over-all constancy in what they do. The home tasks are their responsibility while the farm tasks, which they carry out in conjunction with their husbands or partners, are fitted in with these domestic duties with no apparent reciprocal help in the home.

Older group – 1940s and 1950s

This example is from Joan's diary in which she reconstructs a day in October 1958. Joan farmed during the 1940s and 1950s. This was a time when the coal range was still used, washing was done in the wash-house and the radio provided entertainment in the evening. As Joan points out her child-care responsibilities remained with her while she was engaged in farm tasks.

5 - 7am *Prepare children's school lunches, prepare breakfast — light coal-range. Go and feed calves each individually with a bucket.*

7-8 *Back to house, help children dress and have breakfast. Dress youngest boy (2 yrs). Feed cats and hens.*

8-9 *Take eldest child to school. Cook husband's breakfast. Start washing in wash-house.*

9-10 *Help feed out and shift stock — bring home any late cows with calves. Two youngest children come too.*

10-11 *Hang washing out, make beds — clean bathroom etc.*

11-12 *Prepare lunch — bring in firewood — sweep floors.*

12-1 *Have lunch — put children down for a nap.*

1-2 *Ironing — mending — baking. Help on farm if needed — taking children with us.*

2-3 *Prepare evening meal.*

3-4 *Collect child from school — pick up groceries. Afternoon tea.*

4-5 *Feed calves and assist in cowshed.*

5-6 *Cook evening meal — bath children. Feed children — put to bed — read them stories.*

7 on. Listen to radio — do ironing, sewing or knitting.

Other tasks listed by Joan apart from those mentioned above were the collection of groceries from the local store (one and a half kilometres away). On her monthly visits to Hamilton she was accompanied by children, nappies, and bottles. This was fitted in between milkings. Her attendance at

monthly night meetings of the Plunket[1] committee was followed by supper. This was one occasion when her husband looked after the children.

Middle group - 1960s and 1970s

Marian farmed between the 1960s and 1970s. This example is from her reconstructed daily diary (August, 1976). By now there is no mention of a coal range, Playcentre for the pre-school children had become a feature even in rural areas and 'putting on the washing' indicated that the washing machine had arrived. Home and farm work still feature in the daily routine with farm work fitted in around domestic duties. Among the unpaid duties that Marian carried out was that of 'mother help' at the playcentre on rostered days usually twice a term.

5-7am. Rise and down to cowshed about 6-30am to feed calves. Check children before I left.

7-8 Home from shed approx. 7.30. Boys would be up. Get 10 month old up and dressed. Cut lunches for 2 school-age (9 and 7) boys. Give 4 children their breakfast. Boys left at 8.10am for school bus.

8-9 Put washing on. Get husband's breakfast ready and have it with him approx. 8.30-9am. Do dishes — sweep kitchen floor.

9-10 Make beds — tidy the house — washing on line if fine. Keep baby and 4 yr old happy.

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[1] The Plunket Society was founded in New Zealand in 1907. Its principal founder was Dr Truby King, the Medical Superintendent of the mental hospital at Seacliff, north of Dunedin. He was concerned about infant mortality rates in New Zealand and ignorance about mothercraft as he felt it should be practised, that is, proper feeding methods, good hygiene and a regular regime for babies. The society took its name from the then Governor General of New Zealand, Lord Plunket. It employed nurses to assist mothers in the home with their babies and ran hospitals called Karitane Hospitals (Karitane is a seaside resort near Seacliff) for mothers and babies who needed hospitalisation. Much of the Plunket Society's work was undertaken by volunteers (Deem and Fitzgibbon, 1957, 7-11).

10-11 *Take 4 yr old to playcentre approx. 5 km away. Usually worked in with neighbour. If my mother-help day — needed to be there by 9.30 to set up.*

11-12 *Collect 4 yr old from playcentre by 12pm.*

12-1 *Lunch with husband and children approx. 12.30pm.*

1-2 *Baby put down for sleep — 4 yr old usually look at books etc. while I put my feet up and read paper. Sometimes he would go out on farm with husband, depending on what he was doing and the weather. Preparation of meat and veges for tea — also dessert.*

3-4 *Husband in for cup-of-tea about 3pm. Then he went to get cows and calves in, and milk. Boys home from school — afternoon tea, then we all went to the cowshed to feed calves.*

5-6 *Home from shed approx. 5.30. Put veges on to cook. Bath time for children.*

6-7 *Children and I had tea at 6, husband not usually in until 7pm in August.*

7pm onwards. Read to children. If husband in early enough he would often read or play with them. School children read their books, did spelling etc. Children settled down to bed by 8pm. Then we relaxed — reading, knitting, sewing.

In addition Marian visited town once a week for grocery shopping and once a month had the responsibility of paying the farm accounts.

Young group – 1980s and 1990s

Helen farmed during the 1980s and 1990s. This example is from Helen's reconstructed daily diary (July 1980). Feeding calves by now involved using

a tractor and a 200 litre calfateria. Going to town was a routine occurrence and shifting electric fences part of the daily work.

5-7am. Alarm woke us at 4.45am. dressed and down to milking —cleaned up and started feeding calves out in paddock. Use a tractor with 200 litre tank on front. Calves feed off drums with teats.

7-8. Come home, wake children, get breakfast ready. Make school lunches. Hear their spelling and reading.

8-9 8.30am take children to the corner of the road to catch school bus. Wash breakfast dishes, make beds then start a wash.

9-10 Help bring in newly calved cows, drive tractor for husband to put bobbies in calf pen.

10-11 Help move breaks and electric fence, walk any springing cows (cows about to calve) back from run off. Move new breaks of grass at run off. Mix up drench ready for drenching milkers during milking.

12-1 Lunch for husband and self. Sweep lino floors. Put wash out on line. Quick vacuum around house.

1-2 May go to town for house shopping or run errands for husband — things needed for the farm. Get tea organised — peeling veges, meat.

2-3 Go out with husband — drive tractor while he collects calves in paddock — bring cows to shed. Collect washing in off the line — cup of afternoon tea. At 3.30 collect children from school bus — their afternoon tea and short chat.

4-5 Go for cows, help with afternoon milking. Feeding of calves when milking completed. Clean vat after tanker pickup.

5-6 *Clean up yards. Go home for tea — final preparations. All meet for evening meal together around 6pm.*

6-7 *Bath time for children. Husband would read to children or hear their reading, spelling. I would wash up dishes and clean up ready for next day.*

7 on. *Children washed and in bed, relax now, watch TV, read daily paper. We would always sit down for tea together as a family and be in the house by 6pm unless an emergency on farm.*

Twice a week Helen went to town to do the shopping. She was also active in helping at the local school once a week with reading groups and with school functions such as gala days. When needed she took the children to sport practices and gymnastics.

Many farm women worked 'off-farm' for wages during the economic downturn during the 1980s — some working full-time, some part-time. This example is Beth's reconstructed daily diary (August 1988). Beth worked part-time in a bank in a nearby town. In addition to her 'off-farm' work Beth continued to do her housework, look after children as well as farm work. For her the microwave was indispensable.

5-7am. *Up at 6am, quick cup of coffee and off to feed calves.*

7-8 *Bobbies must be at gate in pen for calf collection before 8am so feed them first. Usually rear up to 80 calves to replace culled cows.*

8-9 *Feed calves that are down the farm with a mobile calf-feeder (50 teats on it) behind motorbike.*

9-10 *Home for breakfast, start housework, get ready to go to work in town for 10am start.*

10-11 *Work at bank*

10-12	*Work at bank*
12-1	*Work at bank*
1-2	*Work at bank*
2-3	*Home in time to help round up cows and calves — quick cup of coffee.*
3-4	*Feed all calves both in shed and down on farm.*
4-5	*Hopefully kids have got washing in. Try to think of something for tea — and thank heavens for the microwave.*
5-6	*Try to spend time with children whilst juggling dinner, homework and any emergencies.*
6-7	*Dinner time. Time to sit down for a while.*
7 on	*Organise children to do dishes, have showers. Time to spend with husband. In bed usually by 9.30 at latest.*

For Beth shopping involved a quick trip around the supermarket after work. She has always done all the farm paperwork, accounts, and stock records and had recently purchased a computer in order to save time with these jobs. Beth milks when necessary and has always helped out at hay and silage making — driving tractors, sometimes mowing and turning hay.

SUMMATION

A definition of work, which encompasses its many manifestations, is not easy. At times work is defined as paid employment, a definition that overlooks all the work carried out for which no remuneration is received. As a result much work that women do has remained invisible and is taken for granted. Further the separation of home from work, which is a feature of industrial societies, has placed a division between men's work (paid work) and women's work (unpaid work) and placed a higher value on paid work.

Recent work by feminist geographers has focussed on the broader aspects of work and raised the question as to why women's work is largely confined to unpaid domestic duties and childcare while men are primarily those in paid employment and thus accorded higher status in society.

However, current trends have shown that women are participating in increased numbers in the work force, although this is largely in part-time work and low skilled jobs. Despite this trend women are still mainly responsible for unpaid domestic work and as such face a double burden.

In moving to a study of dairy farm women's work one is faced with the difficulty of defining boundaries between home and work. For dairy farm women the work of the home and the work of the farm are intertwined and at times the home becomes the scene of farm work in matters of farm administration. Dairy farm women have long been involved in farm work. Their farm work is essential in carrying out the twice daily task of milking the herd and to the survival of the family run farm in times of economic hardship.

Some farm women are actively engaged in the practical aspects of farm work while others are involved more in the administration side of the farm, such as keeping records whether financial or stock. Others are involved with the care of young children and fit in what farm tasks they can in association with childcare or as required. Some again are employed off the farm, while there are a few dairy farm women who work for payment at home such as 'home stays' or as outworkers making soft toys and sewing. There is variation in the tasks dairy farm women perform. Financial circumstances can dictate to what extent they become involved in farm work.

I conclude that because much of the work is not recorded as paid work, and thus invisible, it does not show in statistical evidence, and this means that any analysis of the changes in dairy farm women's work has to be

approached using other than statistical data. By using material gathered directly from dairy farm women where they outlined their yearly work pattern and reconstructed a daily diary, I was able to give meaning to their work and experiences on the farm. As Blumer (1969, 139) suggests: 'The procedure is to approach the study through the eyes and experience of the people involved in the activities'.

The participant's roles as workers are varied and flexible and while there is a constancy to their participation in farm work, it can be seen that its nature and function has changed since the end of World War II. The following chapters investigate and analyse how and why this work carried out by dairy farm women has changed.

CHAPTER SIX

TECHNOLOGICAL CHANGES

INTRODUCTION

Technological innovations have profoundly altered rural societies since World War II (Summers, 1983, 1). Technological and social change are related forces in history both impinging on each other. Sometimes social change can bring about technological innovations as for example when a scarcity of labour brings about a need to develop labour saving devices or the drudgery involved in a task brings about a mechanical method of performing that task as with the development of the milking machine. This in turn can set up further changes in society. Perhaps it is more customary to think of technology as the causal factor and social change as the consequence than to review them from the reverse side (Summers, 1983, 1). These technological changes have had as widespread an effect on rural society as on urban society. As Summers (1983, 2) says:

> The partial successes of adoption and diffusion of technological innovations has dramatically reshaped the structures of agriculture and ultimately the social order of rural segments of society, even total societies.

Technology can refer to two differing aspects. It can refer to the knowledge required to repair, operate and design objects or it can refer to human practices (Wajcman, 1991, 15). In this thesis, however, it is used to cover the physical objects that humans use to aid them in their work for example, such items as washing machines, vacuum cleaners, milking machines, tractors, computers and many others used either in the home or on the farm.

Another major change in rural areas began prior to World War II with rural electrification. It was the needs of the farm, which brought this about. The

electric motor was a more convenient, economic and reliable means for driving milking machines than the internal combustion engine. Electric water heating provided a more constant supply of hot water for maintaining dairy shed hygiene. By 1930, 30,500 kilometres of line for reticulation had been erected in New Zealand (Martin, 1991, 124-125). In 1932 the Arapuni hydro electric station on the Waikato river was generating power.

Factories, which during World War II had been engaged in the production of essential items and war material, began manufacturing consumer goods. Many products developed in the United States in the 1930s and 1940s (Strasser, 1982, 264) had their introduction delayed by the war and the imposition of import restrictions by the then Labour government. As the economy recovered after the war, factories converted to civilian production, and electrical household appliances became more readily available to women in the household (Martin, 1991, 131).

In this chapter I analyse how technological developments both in the home and on the farm affected the lives and work of dairy farm women. I look at the changes, which these developments have brought to their work in the household, on the farm and the wider community. Because the home is an integral part of the work of the farm, unlike urban areas where home and work are often separated, both domestic and farm technology need to be examined. Nor must it be forgotten that these technological developments have wider implications than just the work on the farm or the household. They affect also the wider community within which the farm is located. Because technology involves the home, the farm, as well as telecommunications and the wider digitally connected community, the chapter is divided into three parts: domestic technology, farm technology and other technologies.

DOMESTIC TECHNOLOGY

The introduction of new domestic technology into the homes of dairy farm women has affected their lives in many ways. By 1946 rural households, especially in the Waikato, were already connected to the national grid. In addition to electric lighting, electrical appliances such as electric stoves, washing machines, refrigerators and vacuum cleaners became available to farm women.

Prior to their arrival housework involved physical effort and time. Houses, which had been built in an earlier age, had to be adapted to accommodate the new technology. Ann, who married a dairy farmer in the immediate post-war years, sums up this adaptation of her home built in an earlier era to the installation of electrical appliances:

> *As a special treat for the young bride an electric stove was bought and placed inside the back door... 1951 also saw an electric light put in the washhouse, pantry and bathroom. There was only one power point in the house on the far side of the kitchen into which a 1938 'Westinghouse' fridge and an 'Ultimate' radio was plugged.*

While these new appliances removed much of the drudgery from housework they also altered work patterns and imposed on dairy farm women increased expectations from other members of the household. They further increased household productivity.

INTRODUCTION OF ELECTRICAL APPLIANCES

Electric washing machine

The 1940s and 1950s saw the completion of a decade of transition from the largely pre-electric era to the electric era. One of the appliances, which made a major change to farm women's work, was the electric washing machine. No longer did farm women have to do the physically demanding tasks of lighting the copper, boiling the clothes and lifting the heavy clothes from the copper

to the tub for rinsing. Rinsed clothes were fed through the hand-wringer into a second tub for the blue rinse to whiten them. Clothes were then given a final wringing prior to hanging out on the line.

Agnes and Faye, who farmed in the 1940s and 1950s, had clear memories of what washing was like prior to the arrival of the washing machine:

> *Washing was done in a tub with a washing board, whites were boiled in the copper with cut up soap. Suds were put into a tub for hand washing. Oh! Those filthy, smelly cowshed clothes (Agnes).*

> *July and August were busy times for all. It was always cold and muddy so therefore lots of washing to be done. I was so grateful for my washing machine, so different from the days of the boil-up in the copper and using a hand wringer (Faye).*

The electric washing machine removed much of the physical labour from the laundry task. Lighting of a fire under the copper, heavy lifting, or using a hand wringer were no longer required. The electric washing machine had to be stopped and started when clothes were taken out or put into the washing bowl. Clothes were fed through the electric wringer, which was part of the machine.

Ida stressed the time saving aspect of the washing machine, although 'time saving' usually meant time to do another job while the clothes were being washed:

> *The washing machine was a luxury and such a time saver.*

Electric stove

Likewise, the electric stove reduced the physical drudgery for the housewife. No longer was there the need to have a supply of firewood or coal or to spend time blackening the coal range in order that it looked well cared for as a sign of good housekeeping.

Mary and Joan comment on the above although Mary still had an attachment to her coal range:

> *Cooking meant using the coal range and this meant filling buckets with coal and wood. It was dirty and sooty. The arrival of the electric stove made things easier but the coal range did cook well (Mary).*

> *I cooked on a 'Shacklock' black coal range. The chimney needed cleaning weekly and then the stove was blackened and polished (Joan).*

With the electric stove the housewife no longer had to get up early enough to light the range before milking nor did she have to work in an overheated kitchen in the summer. Furthermore, an electric stove equipped with a thermostat took away the guess work when baking. Lighter aluminium saucepans replaced the heavy cast-iron pots of the coal range era. Electric hot water heaters in the house replaced the wet-back of the coal range thus giving a better supply of hot water for domestic purposes and for bathing.

Refrigerator

At the same time as the household was being equipped with washing machines and electric stoves, refrigerators were becoming universal. The refrigerator replaced the fly-proof meat safe, which was located in a cool spot out of the sun's rays. Sometimes these were situated on the verandah or even placed under a shady tree as Norma, a farm woman from the 1960s points out:

> *In our house the kitchen sink and a two foot bench was in a little scullery immediately inside the back door. There was a safe to keep the meat, butter etc., which opened from the scullery. The safe was sheltered by the back porch.*

With the advent of the refrigerator, perishable items could be safely kept over a longer period of time, thus reducing some anxiety over perishable items becoming ruined.

Liz found that her refrigerator gave excellent service:

> *I had bought an excellent fridge (Prestcold) in 1955 and it lasted for over twenty-five years with only a new door rubber needed. It was still going when we traded it in on a new one.*

Other appliances

Other electric appliances, which affected the work of the housewife and lessened the physical effort involved in domestic work, were electric irons later fitted with thermostats, electric sewing machines and vacuum cleaners, which replaced carpet sweepers. Lino, which could be easily mopped, became a more common floor covering especially in kitchens and dining rooms. This reduced the time spent on scrubbing floors, but on the other hand raised the expectation of a clean floor at all times. The daily mopping of the floor became the norm.

The 1960s saw Liz replacing an earlier vacuum cleaner and at the same time gaining a deep freeze:

> *I had a funny old vacuum cleaner and later in the 1960s bought a new electrolux on time payment and was also able to have the luxury of a small deep freeze on our fridge.*

UPGRADED AND NEW APPLIANCES

The 1960s and 1970s saw further advances in the application of new technology in the house, which further reduced the physical effort involved in house work, and freed the farm women from having to do one job at a time.

Automatic washing machine

In the latter half of the 1960s the automatic washing machine began to appear. Now the farm women were not tied so much to the washing machine except to put clothes into the machine and take them out when the washing cycle was completed. These machines incorporated a spin drying cycle and this obviated the need for the traditional wringer while at the same time left clothes freer of water prior to hanging them on the line. The automatic washing machine meant the end of the blue rinse for white clothes. Various soap powders and detergents now on the market were used in the automatic washing machine and the manufacturers claimed they leave clothes whiter.

Whereas in an earlier decade the agitator washing machine was seen as a liberator from physical work now the automatic washing machine was seen as even more of a liberator. Unlike the agitator washing machine of the previous decade which required the operator to put the clothes through the wringer, rinse them and then wring them out again, the automatic machine did all this without any attention by the operator. Its introduction brought a similar response as that brought about by the introduction of the agitator washing machine as Tess and Maureen testify:

> *The automatic washing machine made a huge difference (Tess).*

> *In the house my automatic washing machine would be the best thing that 'hit' me (Maureen).*

Maureen further notes that the automatic washing machine allowed work patterns to change. The automatic washing machine could be set up to operate at night. This freed her to engage in other jobs at times, when during the day, she was busy on the farm.

> *When we were so busy and this still applies, I would do my washing sometimes at 11pm and hang it out as I went to the shed at 5.30am.*

Wash-day changes

Further, the traditional Monday wash-day began to disappear and while Monday could still be a bigger than usual wash-day for sheets and heavy work clothing, farm women began to do some washing each day of the week or as necessary, rather than one big wash on Monday. Washing could now be fitted in with other jobs such as making beds or vacuuming or even work in the cowshed and thus making available more frequently freshly laundered clothes.

Clothes driers

Clothes driers also appeared, first as cabinet type driers with an electric heating element in the bottom. These were replaced with the rotary clothes driers with controllable times and heat settings. Prior to the advent of driers getting washing really dry or aired off was a protracted business especially in periods of wet weather.

As Mavis and Audrey explain this involved utilising the heat from the coal range in the kitchen through suspended wooden racks — a common feature in households prior to the electric clothes drier:

> *For a long time we had a wooden rack suspended from the kitchen ceiling in front of the coal range stove. This could be lowered by ropes through pulleys and used to dry washing on wet days — invaluable when children were small (Mavis).*
>
> *Our first drier was bought in 1962. This was a long cabinet type with an element on the bottom. The opening was a lid on top and inside were racks to spread the clothes on. Prior to this clothes were aired on a rack above the coal range (Audrey).*

New and upgraded homes

As new farm houses were built and old ones upgraded, so there was better provision for power points, lighting and electric heating as well as internal flush toilets. Kitchens were better designed to make full use of the new

electrical appliances. Norma noted the difference in lighting between the old and the new:

> *When we lived in the cottage we had eight lights and when we built a new house we had 48!*

The laundry became an integral part of the house. No longer did women have to trek to an outside laundry or washhouse. Also this facilitated the undertaking of other tasks while the clothes were washing.

Another innovation in the 1960s and 1970s was the rotary clothes line usually now situated much closer to the house and not a long line some considerable distance from the house in the orchard. Sometimes animals were left to run in the orchard to keep down the grass and they would knock over the prop used to keep up the clothes line with the result that the freshly laundered washing had to be redone. Also animals would chew the corner of sheets leaving behind green coloured perforations.

Margaret's statement of how and where she hung out the clothes to dry contrasts with Beverley's comment about her new rotary clothes line:

> *The clothes were hung on a long line, which was raised by a wooden clothes prop, and situated in the orchard (Margaret).*

> *A revolving clothes line was erected in mid 1960. What a bliss! (Beverley).*

Automatic electric stoves

During the 1960s and 1970s electric stoves were often upgraded to new models incorporating automatic ovens which could be set to switch on and off at certain set times. This was a boon for the farm woman who was tied up milking in the cowshed in the afternoon. Now it was possible to prepare meals prior to milking, set the oven, and come home to a cooked meal. This

enabled household tasks to be concurrently carried out with other tasks such as milking.

New model refrigerators

New model refrigerators with a separate deep freeze compartment along with stand alone deep-freezers also appeared. The provision of frozen foods in the supermarket and the ability of the farm woman to freeze her own foods saw the disappearance of the traditional bottling of fruit and vegetables which dominated much of the work of farm women in the autumn. Now farm women needed to know where to procure fruit and vegetables for freezing or where frozen items could be procured at the best price.

Debbie outlines the upgrading and purchase of new appliances in her home in the 1960s:

> *There was an 'Atlas' stove here when we arrived and we changed it to an automatic 'Frigidaire' in 1969. We bought a large freezer and a black and white TV in 1966 and that was a real bonus .*

Electric floor polishers and the later provision of vinyls with permanent shiny surfaces further reduced the drudgery, which was part of the farm women's lot.

New fabrics

New fabrics also played their part. Synthetic fabrics or part synthetic and part natural fabrics were much easier to wash and dry. They also reduced the need for ironing and the starching of whites, tablecloths and other items all of which was time consuming.

Mary was conscious of how much the new fabrics reduced or eliminated time consuming tasks:

I used to starch tablecloths, aprons, tray cloths etc. All these had to be sprinkled with water and rolled up prior to ironing. Ironing was a huge job as everything was ironed. All sheets, blouses, shirts, baby clothes with tucks, pleats, lace and frills. Just folding and putting them away was in itself a big job.

THE ALL-ELECTRIC HOUSE

By the 1980s and 1990s farm houses like their urban counterparts were equipped with a wide range of electrical appliances from cake mixers, chip friers, electric frying pans, coffee makers, toasted sandwich makers to waffle makers. Furthermore houses were now built to make provision for these appliances rather than earlier when the use of such appliances had to be fitted into the existing design. By now dairy farms were better established financially and this is reflected in the range of appliances to be found in farm households.

Some of these new electrical appliances enabled the farm women to become more flexible in their work patterns. Automatic washing machines, which incorporated computer chips, enabled the farm women to program the machine to operate at night with the washing ready to hang out in the morning. The microwave has enabled the farm women to cook meals or reheat pre-prepared meals quickly. Often these meals are prepared and frozen at a 'slack' time on the farm, such as in the winter when the cows have been dried off. Then the frozen meals could be brought out for re-heating when the farm women are busy on the farm at calving time. The crockpot with its slow cooking fulfils a similar function at busy times as meals can be prepared and set to cook throughout the day when the farm women are busy elsewhere. The dishwasher has reduced the time spent over the sink.

By the 1990s most farm households had become 'all electric' and Nancy expresses clearly this revolution which had been taking place since the end of World War II:

I have electric everything! Washing machine, dryer, microwave, dishwasher, kettle, cake mixer, crockpot, vacuum cleaner, fridge, freezer and oil-filled heaters.

FARMING TECHNOLOGY

Just as domestic technology since World War II changed the nature of housework, so too has farm technology changed dairy farming and the farm work carried out by women. The change has been brought about by increasing mechanisation, redesigned cowsheds, and ancillary equipment, and a more intensive utilisation of the grass pastures on which New Zealand dairy farming is based (Begg and Begg, 1997, 162). Along with these changes, the size of the average dairy herd has increased from 28 cows in 1950-51 (Report on the Agriculture and Pastoral Statistics, 1950-51, Tables 39, 42, 53 and 55) to 212 cows in 1993 (Agriculture Statistics 1993, 18). There was also an increase in the size of the average dairy farm from 87 hectares to 123 hectares between 1986 and 1996 (Agriculture Statistics, 1996, 19). These changes all had implications for farm women as they involved them in an increased range of tasks on the farm.

Increased intensification

The grassland basis of dairying in the Waikato was well established by World War II but the limiting factor as to how many cows a dairy farmer ran, was the number of cows that could be kept over the winter or in a dry period. This involved having plenty of hay or silage available to feed out in times when grass was in short supply. This in turn involved shutting up paddocks to later make hay or silage (Yerex, 1989, 119), thus reducing the area available on which to graze the milking herd.

Grass turned into hay or silage loses some of its food value. Following the work undertaken by research scientists at Ruakura,[1] farmers began to feed their cows grass for as much of the year as possible (Scott, 1997, 184). Feeding hay, silage or other supplements is now used as a last resort in times when grass growth is slow, such as in the winter or in times of low rainfall. Not only are better grass strains (clover and ryegrass) used but pastures are sprayed to eliminate weeds often a task done by women as Gayle who farmed in the 1980s and 1990s notes:

> *I would also spray ragwort and thistles. Weed spraying was done with a solo knapsack sprayer, which was very heavy.*

Also nitrogenous fertilisers are applied to maximise grass growth, another task which can involve women, whether it be the organisation or carrying out of the job of spreading the fertiliser or monitoring pasture growth. Heather, who farmed in the 1980s and 1990s, and Liz in the 1960s and 1970s both carried out this task:

> *Apart from herd-testing, calf rearing, artificial insemination (AB mating), cutting silage and spreading urea, I organise the truck to put spring fertiliser on and monitor pasture cover (Heather).*

> *In July and August I do very little housework as calving starts about 20th July and all my spare time was spent spreading nitrogen fertiliser (Liz).*

Such a system demands close control of grazing and close monitoring of grass growth. Feed budgeting and planning becomes critical, as does estimating the kilograms of dry matter per hectare available for the cows on the pasture as well as determining the dry off date for cows.

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[1] Ruakura is an agricultural research centre situated at Ruakura, Hamilton.

As Heather and Joanne state they are as familiar with this side of farming as their husbands and as Heather's comment shows the 'digital age' had arrived:

> *I monitor pasture cover and feed budget on the computer and catch up on farm maintenance (Heather).*

> *A big emphasis now is on monitoring pastures and cow condition to determine dry off dates of cows. Cows are dried off in batches (Joanne).*

The use of the electric fence to subdivide paddocks into 'breaks' and to carry out rotational grazing, to eliminate pasture wastage, makes such control possible. Electric fences are easily shifted, a job which can be accomplished between other jobs as Ida points out:

> *Electric fences were used extensively in winter to break feed paddocks. I could easily move these in between other jobs.*

The concentration on growing grass and keeping to a minimum the reserves of hay and silage means that hay and ensilage making are no longer a major feature of work on the dairy farm in summer. Further, much of this work is now carried out by contractors, obviating the need for the farmer to keep capital tied up in expensive machinery. This has brought about changes also for the farm women as they no longer have to prepare food for the workers and transport it out to the paddock. Joan and Hilda, who farmed in the 1940s – 1950s and 1960s – 1970s respectively, recall those days:

> *Haymaking consisted of the provision of food because it was done as a group work. Machinery was shared (tractors, tedders, balers). One may have a baler and did everyone's baling. The bales were picked up by sledges and stacked in a barn. Each wife provided food on her farm. So much cooking was done. We made savoury tarts, scones, pikelets, apple pies and cakes. The food was taken out to the hay paddocks together with a big billy of tea at lunch and afternoon tea*

times. In my mother's time a hot cooked meal was provided — we had it easy! (Joan).

Ensilage and haymaking extended over a period from November to the end of January and involved everyone one way or another. Catering for the workers was a major job for women with many treks either on foot carrying baskets and billies or with the car loaded with food and children (Hilda).

For Laura, who farmed in the 1960s and 1970s, this time of the year involved her undertaking tasks on the farm:

I have helped out at hay and silage making, driving the tractors, sometimes mowing, sometimes turning the hay and I was always on the bale sweep until we started making large round bales.

Redesigned milking sheds

With increasing herd sizes the time spent milking began to increase. Prior to the 1950s the common milking shed in New Zealand was the walk through type (Plate 6.1). In this type of shed the milker went out into the yard, brought the cow into a bail, chained her in, leg roped the cow, washed the udder and then stooped again to put on the teat cups.

When the cow finished milking, the milker removed the teat cups, released the leg rope, opened a door in front of the cow by means of a long pole and the cow walked out along a race and out into a holding paddock, and so the cycle was repeated with the next cow. All this involved much activity and time by the milker.

The herringbone shed, which came into use in the 1950s, reduced the number of activities a milker had to perform (Plate 6.2). For a start the milker stands in a pit so that he/she has no longer to stoop to put on the teat cups. Cows are brought into the shed in batches of maybe 6, 8 or 10, depending on the size of the shed, not individually as previously during milking. They are arranged

on each side of the pit standing at an angle with the rear of each cow towards the pit. Leg roping and washing of udders is dispensed with and when the batch of cows on one side has finished milking, the teat cups are then put on the batch on the other side. Then the recently milked cows are released and another batch of cows are lined up to be milked.

For the farm women, involved as they were with milking, the change from a walk through shed to a herringbone shed made a difference. Avril found the walk-through cowshed slow while Liz and Faye found life easier in the herringbone shed with reduced milking times.

> *Our walk-through cowshed made milking very slow as it took $2^1/_2$ hours. Our milking machines were slow and old fashioned compared with today. How different! (Avril).*

> *We had a walk-through (four bail) shed in early 1960s then in 1965 had this converted to a herringbone (10 aside). We thought we would have an easier time of milking and in the event increased the herd over the next few years until we had about 125 cows (Liz).*

> *In 1954 we had a herringbone cowshed and although it had many faults by today's standards it was better and still away ahead of the old walk-through shed. It cut milking time considerably (Faye).*

In such a system no allowance can be made for individual cows such as slow milkers as in a walk-through shed. All cows must conform or be culled. By the use of the herringbone shed one person could deal with up to 220 cows whereas in the walk-through shed one person could deal with 60 to 70 cows in the same time.

Plate 6.1: Milking in a walk through cowshed.
Source: Begg, M.M.

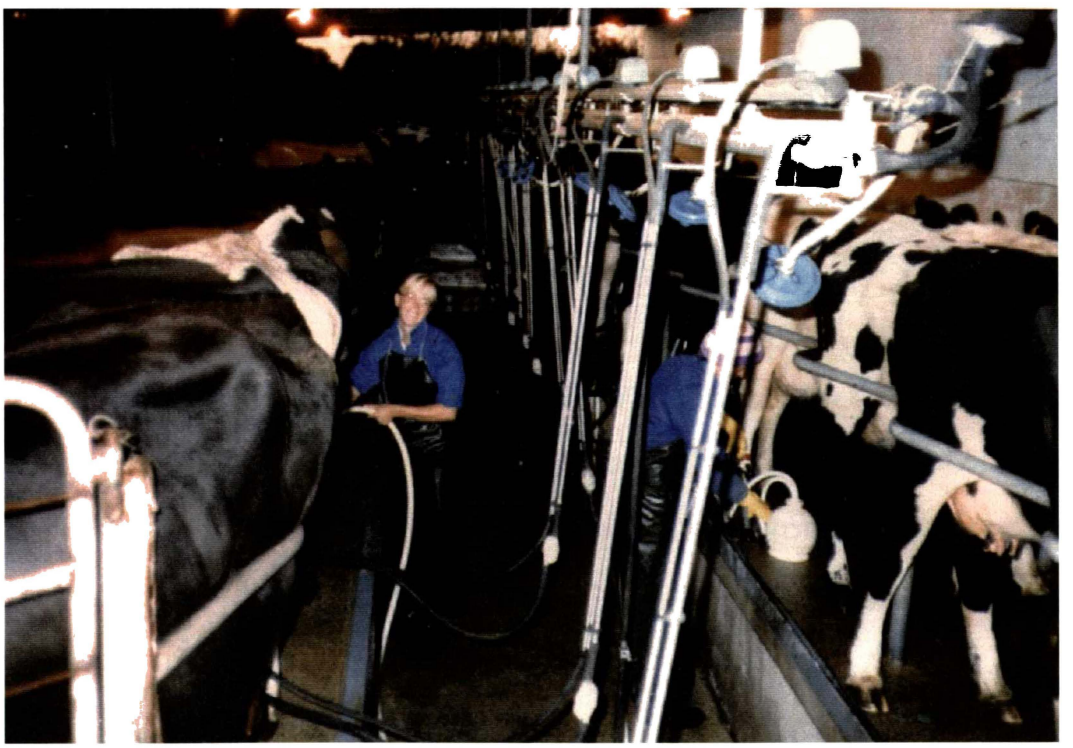

Plate 6.2: Milking in a herringbone cowshed.
Source: Begg, M.M.

A later development in the 1970s adopted by some dairy farmers, especially those with large herds, was the rotary cow shed. Here the cows stepped one by one onto a circular moving platform, had the teat cups put on and when the rotation finished had the cups removed, and they then backed off the platform to exit the shed. In this system if a cow was a slow milker she was left to do another rotation. Again the milker was level with the cow's udder and according to the design either stood outside or inside the rotating platform. Later developments incorporated automatic teat cup removal, which is activated when the milk flow from the cow falls below a set rate. Rotary cow sheds are however more costly and complicated to install than herringbone sheds.

Ancillary equipment

Attention was also paid to the design of the cowshed yard and ancillary equipment so that cows would move up easily to be milked. Backing gates, which moved forward under the control of the milker, brought the cows up to the shed obviating the previous need for a milker to go out into the yard and bring cows to the shed especially when the yard began to empty out. Now the milker, by pressing a button, could accomplish this task without leaving the pit or the rotating platform. Pendulum gates similarly controlled the exit of cows from the shed out onto the farm race. The cows then walk off to the day or night paddock under their own volition. An electric fence wire across the farm race directs cows to the correct paddock. Likewise methods for washing the yard down after milking improved with the use of high pressure hoses and/or the tilting of drums of water placed around the edge of the yard on the surrounding railings.

All these installations lightened the work of the women involved in milking as Ann and Margaret point out:

In the 1950s we also had a washing down pump, which was an amazing invention as before I had to push the muck with a large broom while husband threw the water around. The hosing down pump saved me a lot of back breaking work (Ann).

As far as shed cleaning was concerned at the beginning of this period (1960s), cow manure was shovelled out by hand and the concrete washed down by buckets of water. Later in this decade the shed was altered. Pipe railing was put in. A sluice pump, which provided water to wash down the yard, was much quicker and easier and a hose in each pair of bails made water available to wash dirty udders. Prior to these improvements a bucket of water and cloth was used in each pair of bails to wash udders. This new scheme was much quicker and more hygienic (Margaret).

While milking machines, which had been developed early in the twentieth century, operate basically the same today they were extended to cope with the increasing size of the herds. The use of stainless steel and automatic washing systems, controlled by pushing buttons, made washing up much easier and quicker.

Nancy, who farmed in the 1980s and 1990s, outlines the measures that eliminated many physical tasks associated with milking and cleaning up and the utilisation of the computer in herd testing:

We have a rotary cowshed and a backing gate, which is worked from an electric motor operated from inside the pit. We have an automatic (walk through) teat washing spray machine. I help with herd testing — MINDA computer software available. A water blaster (electric) is used for cleaning. Powerful wash down water pumps are used to clean cowshed yard. We have an in-line drench system and also use drench guns during milking. We also have an automatic vat washer where hot water is directly piped/sprayed into the milk chillers as well as coolers and a 'filter sock' system to reduce 'counts'. A jetter system is used for cleaning cups in the shed.

Perhaps the biggest change came about when dairy factories began producing a wider range of products such as milk powders, which

necessitated taking whole milk from their suppliers. This applied especially where factories had previously been engaged in making butter as was the case with most dairy factories in the Waikato.

From cream to whole milk

While farmers in some cases had their cream collected by contractors for delivery to the factory, many took their own cream either by truck or horse drawn wagon which was a time consuming task as Beverley points out:

> *Our milk was transported to the dairy factory in milk cans on the back of an old Chev. Truck. It took $3^1/_2$ hours as we had to wait for boiling water (supplied by the factory) to bring home to wash the cans.*

From the 1950s onwards factories began to collect the whole milk by tanker and installed stainless steel vats in the dairy sheds of suppliers to enable the milk to be stored until the milk tanker arrived (Plate 6.3). Hilda describes some of the changes this brought to the daily routine on the farm:

> *The main change in the 1950s was when the tanker collection of milk began in 1952. It was very good as it freed me earlier from the shed to go to the house but it tied us to a very rigid time-table as we were on an early collection, 7 a.m. Only once a day pick up and we had to build a vat stand and also a turntable for the tanker. No more trips to the milk dump[2] so we sold the old truck.*

With the collection of whole milk, dairy farmers supplying butter factories no longer had to separate their milk and thus be involved in the time consuming daily cleaning of the separator, a task which Beryl and Una faced each day after milking:

> *Our first farm was on cream supply so after milking I washed up the separator (48 plates) (Beryl).*

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[2] A dump site was a central location to which a number of farmers took their cream for collection by a contractor who then took it onto the factory.

Plate 6.3: Milk tanker.
Source: Begg, M.M.

> *I spent many hours cleaning the separator with so many plates and I had problems because I was never strong enough to turn the handle of the separator (Una).*

Such farms stopped raising pigs, which were fed with the skim milk left over after separating the milk. It was only the older dairy farm women who mentioned pigs as they were phased out in the 1950s. Like the keeping of hens, pigs provided additional income for women.

Ann combined pig keeping with her job in town:

> *For years and by the time we stopped getting skim milk I had a couple of good sties with running water laid on and good concrete floors. Even when I first started to work in town, I'd run down, sweep and hose my sties, feed my pigs before I showered and went to work.*

The farmer now had only to give attention to the dairy herd whereas previously he/she had to raise and sell pigs. Along with the separator, a

system for piping skim milk to a container from which the pigs were fed no longer had to be maintained. To use the popular expression, 'the pig no longer swung on the cow's tail'. Furthermore the farmer did not have the time consuming job of taking the milk to the factory thus reducing the time that could be spent doing farm jobs. This marked the beginning of the 'modern' dairy farm based on the growing of grass and concentration on a dairy herd alone and the replacement calves.

> *We were on cream supply in first years of 1960s then went onto whole milk supply. Milk was collected by tanker. With the advent of whole milk we gave up the pigs (Liz).*

The farm women were now relieved of some of the tasks they previously had to do. No longer did they have to wash the separator or attend to pigs while the husband went off to the factory or the nearest dump site to deliver the cream.

At first vats had to be cleaned by hand but later they incorporated automatic washing systems activated by the tanker driver after he had emptied the vat. Also later in the 1980s, a cooling unit was incorporated in the vat which brought the temperature of the milk down to seven degrees thus enabling milk to be kept longer than one day in the vat. This enables daily collections to give way to collection every second or third day before and after the 'flush' of the season.

FARM MECHANISATION

While tractors were in use in New Zealand prior to World War II their widespread adoption took place in the immediate post war years. Manufacturers of tractors such as Ford, Ferguson, Massey-Harris and Case returned to peace time production and the horse, the common provider of power on the farm, disappeared from the farming scene. This was an event not grieved over as Dolly and Betty point out:

We purchased our first tractor in 1947. What a transformation! No horse to catch. The tractor was always in the shed every morning (Dolly).

We bought a Case tractor and that made a big difference on the farm regarding work — no horses, needed. In 1945 we bought a four ton International truck which meant we could take our own stock to the sales and collect one ton of coal at a time (Betty).

Tractors became more versatile with the development of hydraulic links. Now it was possible to fit to the tractor front-end loaders and scraper blades for cleaning ditches, or cultivation equipment such as ploughs which became an integral part of the tractor. Previously ploughs and other cultivation equipment, which had been horse drawn, had been adapted for haulage by the tractor. As well as hydraulic links, tractors came equipped with a power take-off, that is a shaft driven from the tractor differential which was used to operate other machinery such as the hay-baler, hay mower, tedder, or post hole digger. Mechanisation reduced much of the physical effort involved in hay making as Betty relates:

Haymaking was a labour intensive job. The grass was cut with a horse drawn mower, raked with a horse drawn rake and swept into the stack site with a gate lying on the ground drawn by two horses, then forked into a stack by hand — no easy task (Betty).

The coming of the hay baler from the 1950s onwards also changed this activity. No longer did hay stacks have to be built although hay baling did at first involve much physical work in collecting the bales manually from the paddock and then stacking them in a hay shed. Later, contractors undertook this work. Laura comments on this change:

We changed from stacked hay to baled hay, which was a wonderful help. Ensilage was also made and later in the winter loaded on the cart by pitchfork and then slowly unloaded as the cart was moved in the paddock.

Today large round bales are made which are picked up by a front-end loader and stacked in rows out in the paddock or in a shed as Joanne relates:

> *Hay is made early December. We do all of it ourselves making big round bales, which are equivalent to ten small ones.*

With changing farm practices, as outlined above, hay became less important as supplementary feed and silage gained in importance. At first this involved stacking green grass in a large pit where it was compacted and allowed to ferment. When needed the ensilage is fed out to the herd. Today the grass after being cut, is picked up, wrapped in large plastic bags, stacked in rows in the paddock and then fed out using a specially designed feed-out wagon, with the ubiquitous front-end loader being used to load the wagon. Special feed-out wagons now automatically spread the silage or hay out onto the paddock at feeding-out time (Plate 6.4).

Another versatile piece of farm equipment, which came to be adopted from the 1960s onwards, was the farm bike. At first these two wheeler, two-stroke motor cycles were used to transport workers around the farm for such tasks as bringing in the cows. They later had carriers attached and even small farm trailers and were cheaper to run than the farm tractor. Later a three wheeled bike was introduced (Plate 6.5). As these proved dangerous in certain situations, a four wheeler made specifically for the farming scene took their place. The four wheeler has proved more versatile still and is used on dairy farms for a wide range of operations, from pulling the calfateria out to the calf paddock, to being used with a spray boom attachment for spraying weeds, to pulling a trailer as well as a farm runabout vehicle.

Plate 6.4: Feed-out wagon.
Source: Begg, M.M.

Plate 6.5: Three wheeled farm bike.
Source: Begg, M.M.

Rita, Isobel and Zelda, who farmed in the 1980s and 1990s, all mention the farmbike or motorbike and its versatility on the farm.

We used a Honda 90 motorbike and later on a bigger Suzuki 185. Another two years on we purchased a second vehicle (a farm utility) and it was a great asset as the children were now at school (Rita).

I spread urea (amongst other farm jobs) on the motorbike especially in September and October (Isobel).

Farm technology has improved with more efficiency plus saving time and energy. We have gone from having one two wheeler bike to having two four wheeler farm bikes as today's practices utilise a four wheeler more, for example applying urea and towing calfaterias (Zelda).

Calving during the spring is a very busy time on any dairy farm and it is a time of the year when the farm women found themselves fully occupied rearing calves. As herds increased in size, feeding the increased number of calves being reared as replacement stock out of a bucket became onerous and time consuming. Calfaterias were developed whereby the milk was placed in a container around which are located rubber teats for the calves to suck on (Plate 6.6). Today the calfateria may be mounted on wheels, the container filled with milk by a milk pump and the unit then towed out to the calf paddock by a four wheel bike.

The comments by Marian, Dulcie and Ann illustrate the boon the calfateria was when it came to feeding larger numbers of calves.

By mid-seventies we changed over to the calfateria system but before that I always fed and taught the calves to drink out of a bucket. In the springtime calf feeding took up to approx. 25 hours a week (Marian).

Plate 6.6: Feeding calves with a calfateria.
Source: Begg, M.M.

> *It was my job to look after the calves. Once the calves lived outside the shed, they are fed by a mobile 30 teat calfateria which is filled and towed to their paddock with the farm bike (Dulcie).*
>
> *During the late 1950s calfaterias were invented and we had one that enabled me to feed 15 calves at once – a great help. The poor wee bobbies[3] were taken out to the gate by sledge and put in a covered calf pen for collection. We usually reared 20 to 25 replacement calves to allow for casualties (Ann).*

It is my view that the farm women acquired this job because they had greater patience and skills gained from their nurturing role as mothers. Maybe the men were happy to leave them to it. They certainly had an empathy towards the calves as Ann's comment above shows. In addition to caring for the calves farm women also became involved with sick animals and keeping an eye on those cows about to calve. Such cows are often kept in a paddock

[3] A bobby calf is a calf not required as replacement stock. These calves are fed for two or three days prior to being collected by a truck and sent to the meat works.

close by the farm house. Something of this caring nature can be seen in the comment by Gladys, on the occasion when a cow died and the calf lived:

> *Well I became that calf's mother, didn't I? I wiped it down with sacks and towels and carried it back to the calf shed and placed it in a sunny spot. It had to be fed with a cup full of colostrum every two hours. The last feed of the day was at 1a.m. in the morning.*

Lessened physical work

Like the domestic technology developed since World War II, new farm technology while not doing away with farm work, has removed much of the heavy physical work associated with farming. No longer do post holes have to be hand dug, hay forked, or drains dug. The physical effort required to do these jobs in the past was now no longer required and they could be done just as readily by women as by men.

Today these heavy tasks are done by mechanical means and the operator only has to drive a tractor or pull a leaver or press a button in order to carry out the task. Even in the cowshed, the centre of all operations on the dairy farm, physical work has been lessened. Cleaning down milking machines or vats is accomplished automatically rather than having to lug around buckets of hot water to each set of teat cups and stripping down parts of the milking machine to hand scrub them or climbing into a vat to clean it down.

Similarly the physical work involved in cleaning up the yard and cowshed after milking has been lessened. Whereas once the milker scrapped up the cow muck left behind, sloshed around buckets of water and hand swept the yard now high pressure hoses and pumps accomplish this task. Many previous tasks such as cultivation, top dressing, hay and ensilage making, carried out by individual farmers, and sometimes with the help of neighbours, are now undertaken by contractors.

OTHER TECHNOLOGIES

The telephone

Because of their distance from either neighbours or service businesses in their nearest town the telephone has always been an important communication link for farmers. At the end of the Second World War, telephones were well established in dairy farm households. Most households were linked by party-lines to the local exchange. By this system up to about 10 households would be linked on the same line to the local exchange.

Each household was then allocated the number for the line plus a letter of the alphabet, for example, 69k. The call for each individual household being identified by the morse-code call for the letter allocated to the household. This system sometimes led to frustration as party-line members waited to get a clear line to contact the exchange especially if the person on the line was long-winded. Similarly the line had to be cleared for incoming toll calls resulting in the conversation on the line being abruptly ended.

The frustration of being on a party-line are all expressed by Betty, Ann and Beverley, who farmed in the 1940s and 1950s. Sometimes there was a benefit in knowing the local operator.

> *We were on a party line with up to 10 members. We each had a letter sign, for example I was one long ring and three short rings. The post mistress would ask if you were talking to someone to clear the line for incoming tolls. To get the post office exchange you would give one long ring and to end a conversation you would give a short ring to let other members know the line was clear. When putting a toll call to Hamilton one had to be prepared to wait at least $^1/_2$ an hour to get through (Betty).*

> *I always had a telephone from the beginning — a hand rung job and our ring was 'long-short-long'. There was about 8-10 of us on the line and trying to get your turn was bedlam. If desperate we could*

butt in and ask the offending neighbour to get off the line and this actually caused a great deal of hostility (Ann).

Our phone was manual — a party line and later a single manual line. The operator was helpful — always knew where everyone was or wasn't. Could leave a message with her. No conversation on the party line was necessarily private and often you could hear heavy breathing (Beverley).

Automatic dialling

The installation of automatic dialling whereby every telephone was linked individually to a local exchange put an end to such frustration and made telephone calls a private matter. At first with the automatic system toll calls necessitated working through a toll operator but by the 1980s even tolls could be dialled automatically both within and outside New Zealand. reducing the time and frustration in making such calls. Margaret notes the improvement this brought:

We were on a party-line until the 1960s when the party line now gave way to the dial through system which was much quicker.

New developments

Now fax machines, answering machines, cordless telephones and mobile or cell phones enable the farm women to be instantly linked to the outside world whether they are in the home or out on the farm. Such technology also enables them to access information as Emma and Nancy point out:

On the farm we have a voicemail box, an answer phone and a cell phone (Emma).

Telecommunication developments have made access to information and services much easier and quicker (Nancy).

The computer

The development of the personal computer has also had a big impact on the management of dairy farms. Modern herd management practices involve the dairy farmer in extensive record keeping. Herd records detailing the identification of individual cows, their production, breeding records and mating records all need to be kept for efficient herd management. Besides these records financial records are also important. Banks advancing loans require budgets and cash-flows to be kept. The introduction in 1986 of a Goods and Services Tax (GST) necessitated further financial records to be kept in order that the tax paid can be reclaimed on goods which are part of the 'inputs' into the farm production.

Prior to the advent of the computer these records had to be kept manually necessitating the laborious task of entering data into large record books by the farm women on whom this task usually fell. Ann details the manual system she used in pre-computer days to keep track of all the individual cows in the herd and from what cow they were descended:

> *I kept a very close record of our stock. I had a large book with records of mating and births, also due dates of calving. A list of young stock was kept and their parentage. Also every animal on the farm had a name apart from the feathered ones. My cows had family branches which I made slightly easier for myself by grouping their names, for example, Betty's daughters would all have a name starting with 'B'. This made them easier to keep track of. Also all heifer calves kept were ear marked. Nowadays the ears are tagged with their numbers etc.*

Beth found that her work skills gained before marriage could be put to good use:

> *As I had always done office and bank work my husband thought I should do the farm paperwork. I did all the farm and financial records.*

Today the computer is used to keep these records and with the linking of individual computers by means of telephone lines a wide range of services can be accessed (Plate 6.7). Through e-mails and faxes, instant messages can be sent and received. Through the internet the dairy farmer can tap into wide ranging information and by such means banking and purchasing can be carried out. Thus, the dairy farm is even more extensively linked to the outside world of business, information and personal communication.

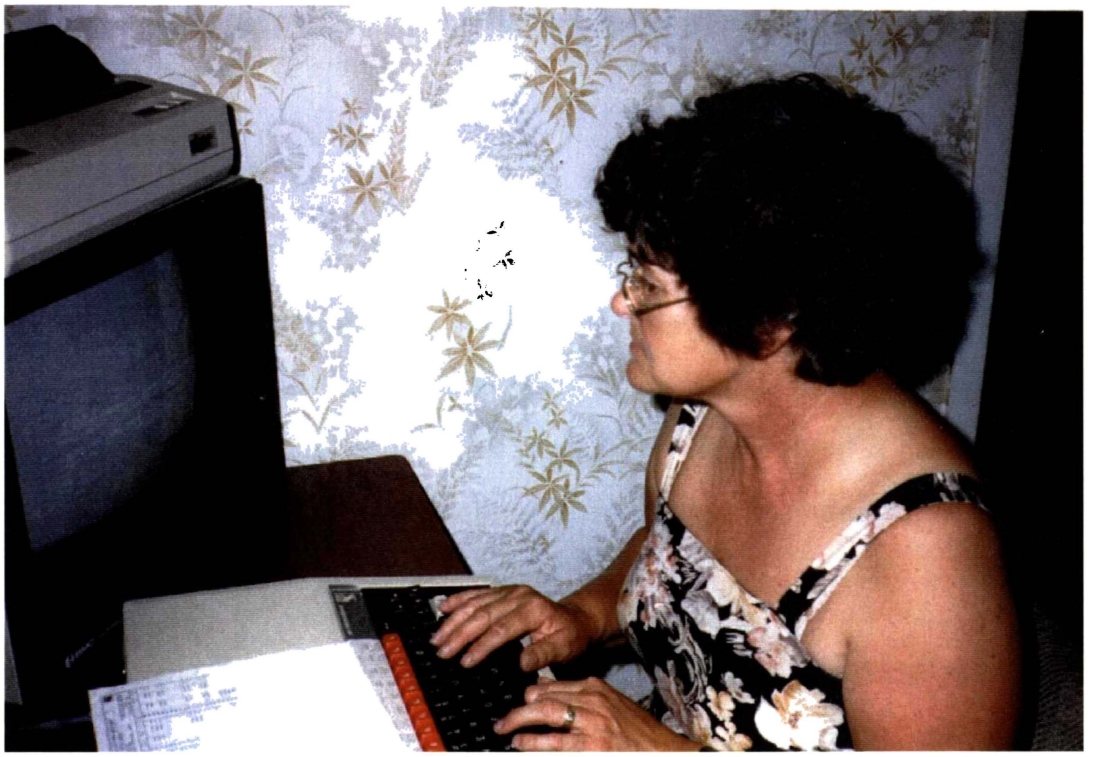

Plate: 6.7: Working on the computer.
Source: Begg, M.M.

Although not asked specifically in the survey whether they possessed computers, 14 of the younger group of 30 participants indicated that they used a home computer on which they kept financial and farm records. More than 43% of farmers now have a computer, compared with 24% in 1993 and 6% in 1986, according to a Lincoln University national survey on computer use on farms (*Dairy Exporter,* May 1999, 44).

Joanne, Emma and Penny are all familiar with this administrative side of the farm business using computer technology:

> *I now use a computer for all farm records, financial records and paying the bills (Joanne).*
>
> *Today we have much better and faster computer technology, for example, a hand held data logger for cows in the Livestock Improvement farm records (Emma).*
>
> *The computer has become part of my every day life and part of the farming business (Penny).*

SUMMATION

Changing technology in the household, on the farm and in the field of telecommunications has had implications for dairy farm women since the end of World War II. While such technology has not removed the need to do certain jobs or eliminated entirely the physical effort involved it has changed the nature and manner of the work and in some areas created new tasks which have been taken up by the women.

The farm women are still involved in housework such as washing, preparing meals and cleaning the house. There is little evidence from the women surveyed that husbands are involved to any extent in housework or child minding except to do the dishes in the evening or put the children to bed and read to them as Zelda comments:

> *He helps a little with the children such as putting them to bed and reading stories to them.*

Nancy however, sees that there are degrees of importance when it comes to looking at the farm operation in its totality and that when these are taken into consideration some things have to be ranked ahead of housework or caring for children:

> *Help in the house depends on the season of the year. Farm jobs can't wait and have direct economic relevance. He would help bathing the children and reading stories and doing the dishes if free (Nancy).*

If domestic technology has removed much of the drudgery and physical effort from housework it has generated other more flexible patterns of work. The 'Monday washday' has been replaced by the daily washing of clothes giving rise to the expectation of clean clothes at all times. Rooms can be vacuumed frequently and the microwave enables meals to be ready at short notice or the automatic electric stove enables meals to be cooking while the farm woman is engaged elsewhere such as in the milking shed.

While some tasks such as polishing floors have been eliminated, the time taken for other tasks has been lessened. Housework has become more evenly spread throughout the week or, as is the case with the automatic washing machine, performed at night. The adage that new electrical appliances saved time is something of a misnomer when in effect time saved becomes time to do other jobs as Gayle notes:

> *Of all the modern electrical appliances the automatic washing machine was the greatest time saver. It meant I could do other jobs while the clothes washed.*

For Joanne, who farmed in the 1980s and 1990s, such technology enabled her to participate in farmwork during the week and undertake most of the housework during the weekend:

> *I do most housework in the weekends as week days are for farmwork.*

As Wajcman (1991, 83-84) states:

> Further although domestic technology did raise the productivity of housework, it was accompanied by rising expectations of the housewife's role, which generated more domestic work for women.

Because of farm women's involvement in farm work, changing farm technology has had implications for them as much as with changing domestic technology. Just as changing household technology has made household work more flexible and to some degree less time consuming, so too has changing farm technology made it possible for women to engage more easily in a wider range of farm tasks. Machinery has largely replaced physical effort and lessened the time involved in carrying out such tasks and made such tasks less gender specific.

Even from the earliest days of dairying in New Zealand, women have been engaged in physical farm tasks especially milking which forms a major part of the labour input on a dairy farm (Yerex, 1989, 40-42). Despite the increased size of farms and dairy herds, changing technology has made it possible for New Zealand dairy farms to remain largely a family run operation despite the arrival of corporate and equity shareholding farms. On the family owned farms milking is still done by wife and husband (Yerex, 1989, 43-44). Wives still assume responsibility for rearing calves even though the number of calves being reared as herd replacements has increased. Herringbone or rotary cowsheds and high pressure hoses as well as calfeterias all make this possible in much the same time these tasks took previously.

Some of the tasks that befell the farm women may now be gone, for example the provision of meals, morning and afternoon teas during haymaking or washing up the separator following milking. But as with housework, in their place have come other tasks generated by either mechanisation or new equipment. Dairy farm women shift electric fences, move stock, assist with feeding out by driving tractors, spread fertiliser or spray weeds with the use of the four wheel farm bikes and assist with hay baling. If changing technology has lessened physical effort and the time spent on particular tasks, it has by no means lessened the involvement of farm women in farm

work. It has if anything widened the range of tasks undertaken by farm women during the day on the farm while at the same time leaving them with household and family responsibilities.

Penny, Rita and Priscilla reiterate the 'multi-tasked' nature of their involvement on the farm:

> *I helped with much of the farm work which included harrowing, top dressing, ploughing and cultivation, draining, fencing and repairing races along with milking and herd-testing (Penny).*

> *Such changes as machinery to cut hedges, dig drains and spread manure have made farming easier but I don't seem to have much idle time to spare (Rita).*

One can sense from Penny's and Rita's remarks that they no longer see themselves as the 'dutiful' wife who accedes to her husband in what were once traditionally called 'men's tasks'. They are as fully involved as he is in the farm work regardless of its nature. While Priscilla points out emphatically that she is fully involved, there is no indication in her comment as to whether this workplace equity extends to decision making equity:

> *I always rear calves — in fact I help with everything.*

Yet despite this increasing involvement of the participants in a wide range of farm activities, other than milking, there is little, if any, mention by them of an increasing involvement in housework or family caring by husbands. As mentioned above their involvement was largely confined to helping with the dishes in the evening, helping bath the children or reading stories to them.

The common belief amongst farming couples is that work on the farm is all important as it is the economic activity that underpins all they do. The universal reply to the question as to whether housework was as important as farm jobs was, 'No'. Nancy summed up this point of view by inferring that

her husband had more power perhaps suggesting that he was the decision maker when it came to setting priorities:

> *Farm jobs couldn't wait as they had direct economic relevance. I find that my husband's definition of what has priority, or is of more importance, has more power.*

For Debbie the importance lay in what had to be attended to first:

> *Attention to stock, milking, haymaking had to be done. A calving cow cannot wait, nor hay when rain threatens.*

Modern telecommunications, computers and the requirement for full and accurate financial and stock records have made the farm house more than ever the administrative centre of farming operations. Here it is the computer that has created new tasks and it is the farm women as active partners in the farming enterprise who have undertaken these new tasks. By and large it is the wives who have the skills for this work either through their educational background or experience in the work force prior to marriage.

Thus the 'multi-tasked' nature of their work has been further extended and it is they who are often the ones with the knowledge of this side of the farm operation. They have taken on the additional tasks required in the more business orientated management of today's farms and have adapted to new technologies. Further with the increased mechanisation of farm jobs they now undertake tasks that in the past were regarded as men's tasks.

However, if changing technology has altered the nature and patterns of work it has also brought about social changes. These changes along with changing social outlooks form the content of the next chapter.

CHAPTER SEVEN

SOCIAL CHANGES: INTERACTION, ACTIVITIES AND LEISURE

INTRODUCTION

The fifty years following World War II have seen marked changes in organisations and social relations within dairy farming communities. Increased mobility has seen the close local communities that existed in dairy farming areas, become less cohesive and more centred on the nearest service town. Television and advances in telecommunications have brought as never before the wider world into the focus of the people in these areas. There has also been a decrease in the available service facilities such as banks, post offices and local stores in rural areas as the rural population has declined (Britton, Le Heron, and Pawson, 1992, 169). At the same time there has been a greater intensification of the grassland farming system on which dairying is based and a more rigorous application of business methods to that farming system. All this has impinged on the lives of dairy farm women.

In this chapter I analyse social changes that have had an influence on the lives of dairy farm women. The concepts of space and place are significant in the chapter because they form an integral part of social life and are always open to contestation by different individuals or groups.

HOME SPACE

During World War II with a shortage of male labour, women were called upon to fulfil tasks, which in pre-war days, were seen as essentially male ones. They became tram conductors, operated factory machinery and worked on the land as members of the Women's Land Army (Edmond, 1986, 153, 192, 233). Many of these people were 'manpowered' into such jobs, that is they were directed by the Government into jobs where there was a scarcity

of labour (Montgomerie, 1992, 184). Others joined the women's sections of the armed services, army, navy, air force (Taylor, Vol. 2, 1986, 1112). There they undertook tasks not previously considered the prerogative of women; they drove transport trucks, refuelled aircraft and operated radio transmitters (Edmond, 1986, 109, 189).

However a return to peacetime in 1945 saw a halt to this movement of women into non-traditional areas of work when servicemen were demobilised and returned to their civilian jobs. Women reverted to their more traditional areas of work either teaching, nursing, shopwork or clerical positions if they were unmarried or back to domestic duties if they were married (Parker, 1988, 48; Edmond, 1986, 250).

On their return from the war, servicemen were either assisted onto existing farms through rehabilitation loans or settled on new farms developed by cutting up larger properties or breaking in previously unfarmed areas (Taylor, 1986, Vol. 2, 1281). Some servicemen married women who had been brought up in the towns or cities and for these women adjustment to farming life involved making big changes. They were not used to the greater isolation that they had to face living on a farm as Dolly and Joy relate:

> *Being a town girl I found the long hours and late meals hard to cope with. It was a big change and it took me a long time to get used to it. Also milking twice a day was a tie (Dolly).*
>
> *People didn't make many visits very often because they were too busy with everyday work. Sometimes people called collecting for a good cause or for a young woman getting married (Joy).*

Ann, who farmed in the early 1950s, adds that:

> *There were no cars and no people about especially if the house was well back off the road, as ours was. You had to go out otherwise it was quite frustrating and you could get into a rut, lonely and depressed.*

On the other hand Audrey found relief after city life from the quietness and loneliness of farm life by participating in work on the farm as she explains:

> *Having lived in Hamilton for 21 years, brought up in a family of six, then working in an office with four others, I found moving to live on a farm very quiet and lonely to begin with. Perhaps this is why participating in farm work was to me enjoyable. I missed being with people.*

Although the rural women on dairy farms in the Waikato lived in areas that were reasonably closely settled by New Zealand standards, their lives were very much focussed on the local community. They had access to cars but cars were not so freely available as they are today nor did people use them so freely. Petrol rationing was still in force during the immediate post war years and the two-car family was a rare thing. Secondary roads were often gravel roads with pot-holes. The local grocer and butcher usually provided a delivery service to the house.

On the other hand there were positive aspects of life on a dairy farm. It was a freer life and not so constricting as in the city or town. The daily routine did not have to be organised around a nine to five job. Apart from being tied to milking cows morning and afternoon, the day could be organised to suit the farming couple. Furthermore, they were not confined to a quarter acre section and children had plenty of space in which to play in as the following respondents recalled:

> *There was a certain freedom, though. You could do what you had to do when you wanted. There was plenty of space, which was lovely for children (Betty).*
> *I like it because there is not the same pressure, not like being at work with someone giving me orders (Beryl).*
>
> *I'm free to do what I want to do with the kids and I like seeing my husband frequently during the day (Joy).*

Social contact

Social contact apart from the immediate family was infrequent. Occasionally local farm women entertained at home with afternoon tea. This had to be fitted in before evening milking. Getting up early in the morning to milk was not conducive to entertaining at home in the evening (Parker, 1988, 130). Neighbours would visit in small groups. As a child I recall vividly how the table or tea wagon would be covered with a hand embroidered cloth and a silver three-tiered cake stand would be in a prominent position. This would be set up with pikelets, pavlova and a sponge with cream filling. Rich fruitcake slices often occupied another plate. Cups, saucers and plates of fine bone china (usually Royal Doulton) along with cake forks and serviettes would surround the silver teapot and silver hot water jug. Pre-school children were brought along and would sit in a corner on the floor playing with various toys. The conversation would be on local topics and guests were addressed with appropriate titles such as Mrs or Miss. Unless guests were well acquainted with one another Christian names were not used.

Social etiquette and social skills in the 1940s and 1950s were important and emphasised. These were mainly passed on and taught to daughters by their mothers (Parker, 1988, 64). Also at this time schools ran home science courses, which had practical applications as well. The girls were taught the skills of waitressing and hostessing. A homecraft flat was attached to the cooking room and often girls doing home-craft practised their skills by entertaining staff to afternoon tea or lunch. Young people with good social manners were recognised as having a good upbringing (Parker, 1988, 72).

On the weekend it was often friends and relatives living in town who came to visit. This meant seeing that the cake tins were always full, not only in order to set out an array of cakes and biscuits for visitors, but also for those visiting the farm on business who would be asked in for a cup of tea. The

grocer and butcher delivering their goods were not excluded from being asked, 'Would you like a cup of tea?'

> *People came to visit us because we were on a farm and this was a novelty for them (Elsie).*

> *I went out socially about once a month, which was quite acceptable, but I did have friends and relatives visit me. Most young wives were in the same position as us, with young families. We never went out unless we took the children (Joan).*

Another occasion for visiting a home was to inspect the glory box[1] of a daughter who was about to be married. This was a time when there was much emphasis on girls getting married and the glory box was a preparatory step for that event for both rural and urban girls. It was also a time when many girls did not go off to seek a career but rather stayed at home prior to marriage. Thus the glory box became an important article. Into such a box would be stored items that young women collected to be used in the home following marriage. It contained such items as bed linen, blankets, towels, tablecloths and cups, saucers and plates. It was customary to give young girls Christmas or birthday presents that could be put in her glory box.

Faye, Crisie and Joy all express the pride that they had in their glory boxes. Faye however realised how changed life-styles have brought an end to this custom:

> *In my young days it was customary for a girl to have a glory box in which she put items of linen etc. for her new home when she was married. It was just amazing what was collected, then a few weeks before the wedding friends and their mothers were invited to an afternoon tea when all the lovely things were proudly displayed. Usually gifts were brought along also. My daughter who was married*

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[1] The origins of the term glory box are indeterminate. It first appeared in New Zealand literature in 1917 and was common in Australia and New Zealand. It was a box or chest in which single girls stored items such as blankets, sheets, pillowcases, towels and embroidered articles for use after they were married. Glory boxes were prevalent when single girls lived mainly at home. Today the glory box has disappeared from the scene (Balham, 2000, 48).

in 1963 had the same but I think these days the custom, which was a great help, seems to have vanished. Maybe it is because young girls leave home, work, then travel overseas before settling down (Faye).

I was pleased to own my glory box when I was married. Many hours of embroidery went into this (Crisie).

Glory boxes usually became a piece of furniture in the bedroom or 'lounge.' Lounge was a new word for living room (Joy).

Baby boom

During the period following World War II New Zealand experienced a 'baby boom'. Many marriages had been delayed by the war and now couples were eager to settle down and raise a family. This combined with improved economic conditions raised the birth rate from 18.73 births per 1000 of the mean population in 1939 to 27.08 in 1946. From 1947 to 1959 this rate averaged 26.11 (*New Zealand Official Yearbook*, 1946, 1956 and 1960).

For many young married women on dairy farms much of their time was spent looking after young children. While contraceptives were available, their use was not widely practised or talked about. For Ann, Joan and Hilda, as young married women on a dairy farm, farm life had to go on as usual despite being pregnant. For them, distance from the maternity hospital, the lack of antenatal clinics and the need to keep milking, were factors they faced:

I never really had an awful lot of time or energy left to spend running around in my first years of farming. A lot of us milked and helped outside right through our pregnancies. Also preventing babies was harder than it is today so our families were born in the early days of our marriages. I don't think we were cared for as well as the present expectant mothers. A lot of my friends had miscarriages (Ann).

The main problem on the farm was the distance to travel to the maternity hospital or for a doctor when the children were young. It was accepted when labour began for husbands to deliver their wives and 'the suitcase' to the front door of the maternity hospital, say 'Goodbye', and disappear. He reappeared again after being informed

by the hospital of the birth. During the fortnight's stay in hospital the baby was viewed through a special 'viewing window' in the nursery (Joan).

I was confined to bed for a week and a few days prior to going home, taught how to bathe and dress the baby. No extra help was given when I went home. In those days there were no antenatal clinics and I would say ignorance and fear caused many long drawn out labours and instrument births (Hilda).

Plunket Society and childcare

The Plunket Society played an important part in the lives of young mothers especially in the 1940s and 1950s. Regular visits to the home by the Plunket nurse following the birth of a baby were eagerly looked forward to as Agnes and Ann point out:

The Plunket nurse was the most important visitor and friend (Agnes).

In the 1950s the Plunket nurse came to your home to see you and your baby. She came once a fortnight for about six weeks after the birth of your last baby (Ann).

Many farm women became involved in the local branch of the Plunket Society. At the local hall Plunket days were held regularly during which weights of the babies were recorded regularly by the Plunket nurse, who also dispensed advice on baby care. Such primary health care advice often meant that a visit to the doctor was not necessary and the gathering at the local hall was a social outlet for young mothers.

Childcare was seen as the responsibility of the mother and this placed constraints on her activities both in the home and out-of-the home. In the days before disposable nappies the washing and drying of flannel nappies was a time consuming task especially if the mother had two children in nappies which was often the case. Breast feeding was not generally popular

in the fifties so that feeding bottles had to be sterilised and a milk formula made up to keep up a supply of four hourly feeds for around five times daily.

Over the years it has been widely acknowledged that Sir Truby King contributed greatly towards child welfare but as Longhurst (1997, 253) points out '...it could be argued that King's regime did much to put women under surveillance and constructed a cultural hegemony around mothering that had not existed prior to his interventions'.

For the dairy farm women, the major responsibility as to who looked after the children, rested with them. From the replies of the participants this aspect of family life on the farm remained constant. Sometimes husbands took the children out on the farm but this was limited because of the dangers involved with machinery as Dulcie, who farmed in the 1980s and 1990s points out:

> *Our children when small didn't spend a lot of time out on the farm. I felt there were too many dangers with machinery and my husband couldn't be responsible for watching them every minute. I would quite often take them down the farm to see what their Dad was doing.*

However, the most critical time for the mother, whatever the decade and especially those with young children, was during milking time while she was working in the cowshed. A variety of strategies were used to overcome this. In some cases children had to either confine their play to the vicinity of the cowshed, or they were looked after by older children. For those fortunate enough to have parents living nearby, the grandparents became baby-sitters. During the morning milking children would be asleep in their beds in the home. If a baby was involved a cot would be taken to the cowshed as was the case with Beryl who farmed in the 1960s:

> *I took our baby to the cowshed when I milked. We had a cot in the anti-room at the shed. We left the older ones asleep or they came to the shed and played in the calf pen.*

In a later decade other developments had taken place, which enabled the mother to exercise a degree of control while the baby remained at home in its cot. For Gayle, who farmed in the 1980s, the intercom system from the shed to the house was an important link to let her know when the baby awoke:

> *In the morning our child was left in his cot in the house. We had an intercom system from the shed to the house so I would go home once he woke. We had smoke alarms in the house.*

For Ida the older children had to assume the responsibility of looking after the younger children:

> *I had five children and the older ones always looked after the younger ones while we were milking.*

As the children grew older and close supervision during milking time was not such an issue, they did impose another burden, which fell mostly to the mother. This becomes most marked in the later decades of the study from the 1960s onwards when extra curricula activities such as sport, gymnastics, music and dancing required that children be transported to different venues. The greater availability of cars, resulting in increased mobility, and the increased number of two car families, plus improved sealed roads, made this possible. Some mothers such as Norma, who farmed in the 1960s, felt that they were running an unpaid taxi service:

> *I think it was hard work but good and I still think it is the best environment to grow up in. The worst part was the constant driving so as to participate in the urban life — music, theatre, sports, cinema etc. I took them — an unpaid taxi — for about 14 years.*

For Nancy, who farmed in the 1980s and 1990s, and who faced the extra commitment, occasioned when the children became involved in extra curricula activities, also felt this would be worth the effort.

> *There are very good reasons for extra curricula activities and I'll encourage it but I can see that it will mean a commitment — car travel, time and my own involvement (another volunteer!) especially as two children get involved.*

Despite the drawbacks, the mothers saw farm life and a rural upbringing as being ideal for the bringing up of children. As Beryl relates this was seen as giving them space in which to play, a chance to care for animals and ride horses and to work with their parents while at the same time being removed from the city:

> *Open spaces, privacy, learning to care for animals, the chance to have friends to stay, and to learn to ride a horse, while being kept out of town.*

For rural people the city was seen as a place of isolation in contrast to the close knit relations that existed in their rural community. Further, in their view, it was a place of crime and drugs with little privacy. Country children they felt were removed from these bad influences.

Gardening

Gardening was another job undertaken by the farm women and for people who had a strong belief in the work ethic this led them to always being 'kept busy' (Parker, 1988, 120). They gained much pleasure from working in the vegetable garden, mowing the lawns and creating displays in the flower garden (Plate 7.1). As Parker (1988, 122-123) states: 'Gardening was a passionate interest of most Waikato countrywomen. Under their care expansive country gardens bloomed into areas of beauty and became a source of immense pride to their creators.'

In the days prior to the widespread availability of frozen foods and freezers, the vegetable garden had a utilitarian function. It was an important source of

fresh vegetables in a time when self-sufficiency was highly regarded. Dolly, a participant from the older group, relates:

> *I was a gardener both vegetable and flower although my husband did the heavy digging for me. Being on a farm we were really self-supporting. We had our own meat, vegetables, fruit, eggs and milk. In winter I made soap and butter.*

Plate 7.1: Weeding the garden.
Source: Begg, M.M.

The orchard likewise helped towards the aim of self-sufficiency in the days prior to the advent of the deep freeze. Home preserving of fruit and jam-making was a highly regarded skill among farm women. Beverley comments on this aspect of farm life:

> *I looked after the vegetable and flower gardens and mowed the lawns. We also had an orchid and over summer and autumn months I made jam and preserved many jars of fruit. Later of course deep freezing took over.*

If the orchard and vegetable garden contributed to the need for self-sufficiency the flower garden offered another avenue of interest and artistic expression for the farm women. In the days when farm women belonged to few clubs and the car was not so widely available 'Garden Circles' became an important source of contact and information. For Hilda, who farmed in the 1960s, the monthly meeting of the 'Garden Circle' was looked forward to eagerly:

> *Our garden circle met once a month and was held in each other's homes. I really enjoyed it and learnt a lot.*

Despite the arrival of frozen foods, the supermarket and the increased mobility of the farm women from the 1960s onwards there is no indication that their interest in gardening waned. Further it still remained an area of women's work in which they could take pride in accomplishing the heaviest of tasks as Crisie, who farmed in the 1960s and 1970s relates:

> *I had a big 'vege' garden plus a potato patch at the back of the farm. I did the digging myself (still do).*

Not only did the garden have to be looked after, there were lawns to mow — a job which also fell to the farm women until such time as the children were old enough to undertake the task or pregnancy brought relief as Marian and Rose relate:

> *I looked after the 'vege' and flower garden and did the lawn mowing in the early 1970s until the children were old enough (Marian).*

> *I did all the gardening (vege and flower) and mowed the lawns except when pregnant or breast feeding (Rose).*

Self-sufficiency is not mentioned by the later groups of women (post 1960s). Instead they mention the desirability of having fresh vegetables and the

satisfaction gained from providing the vegetables required by the family for most of the year as Debbie, who farmed in the 1980s, states:

> *I had a reasonable vegetable garden. We hardly ever bought vegetables except in the winter.*

Few of the farm women mentioned that they had help from their husbands with the garden. Maybe this was because the garden and the lawns were seen by the husbands as an extension of the house and therefore their wife's domain and consequently left it to them. Nancy, who farmed in the 1990s, makes this point in an emphatic manner:

> *I have a vegetable garden in various states of production. There has always been a garden to care for at the houses we've lived in. I do lots of handyman jobs. Shane's first priority is farm jobs. I built a children's sand pit, cut lawns, pruned trees and attended to the firewood. I get help when I request it but around the house is my responsibility.*

Almost all the respondents recorded that they kept a vegetable and flower garden and mowed the lawns. Perhaps one can surmise that this was something they got satisfaction from or that they liked working outside tending the garden as Helen recorded:

> *I enjoy gardening and grow most of our own vegetables.*

Maybe gardening was something like housework in that it was long associated with women's work and they were carrying on a tradition that is deeply ingrained in their outlook. Whatever other tasks they have taken on in later decades gardening has remained their responsibility.

Radio

Prior to the advent of public television in the 1960s evenings were usually spent listening to the radio, which was an important source of entertainment

in pre-television days. Such features as 'Dr Paul',[2] 'Life with Dexter', 'Dad and Dave', or shows run by Selwyn Toogood[3] or Jack Maybury had big followings. Apart from radio listening, reading, sewing, knitting or writing letters occupied farm women in the evenings as Ann, Beverley and Elsie explain:

> *My great love was reading. There was a good library in town and before television days I would bring home five or six books along with the Australian Women's Weekly and the pink covered Auckland Weekly (Ann).*
>
> *I listened to the radio for about an hour in the evenings and I knitted at the same time but with such early risings I was soon ready for bed (Beverley).*
>
> *If I wasn't too tired I would open up my old treadle machine and sew. I made my own dresses, skirts, and blouses and also clothes for the children. To buy them was a luxury with a family of four children growing up (Elsie).*

Holidays

For those involved in milking cows twice a day seven days a week the freedom to take an annual summer holiday was not easily gained. At a time in the 1950s and 1960s when jobs were plentiful it was difficult to get the labour necessary or someone reliable enough to undertake the milking especially if the husband wished to go as well or if their finances permitted. Una, Beryl and Margaret explain their difficulties in getting labour to look after the farm if they wished to go on holiday:

> *We managed a few days every two or three years and mostly in the wintertime when the cows were dry. Perhaps the odd summer break of one, two or three days when somebody came in and did the milking (Una).*

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[2] 'Dr Paul', 'Life with Dexter' and 'Dad and Dave' were the radio equivalent of today's TV 'soap operas' such as 'Coronation Street' and 'Shortland Street'. They were mostly of Australian origin.

[3] Selwyn Toogood and Jack Maybury ran radio quiz shows with 'give-away' prizes such as washing machines or refrigerators to the successful contestants. This was a forerunner to Selwyn Toogood's highly successful TV show 'It's in the Bag'.

We had one short holiday in some years but couldn't afford to pay someone to look after the farm (Beryl).

We had one holiday a year — a week or fortnight if our worker was capable of looking after the farm (Margaret).

Summer was a busy time on the farm not only with the milking but also with haymaking. If a holiday was taken at this time of the year it was not always possible for all the family to go. It was the wife and children who went to the beach for a few days while the husband stayed behind to carry on with the milking or haymaking. Sometimes he would join them for the day or if someone was available to milk maybe for the weekend. Ann, who belonged to the older group, tried to give her children a few days at the beach in the summer:

Once we had children I tried to take them for a break in summer and we would all have a break in winter. These were often for a few days.

Otherwise breaks away from the farm were confined to occasional weekend or taken during the winter when the cows were dried off. Even the younger group continued to have problems sorting out holidays as Nancy narrates:

I aim for at least a one or two week holiday a year plus an odd weekend. But it depends on the farm projects or commitments and also on the availability of a relief milker or someone reliable to care for the stock.

For these farm women holidays were not something that came round on a fixed cycle as it did for other people. The taking of a holiday especially in summer depended on a number of factors — the availability of relief workers, the financial situation or farm commitments. Yet despite these inhibiting factors they did make an effort even if for a short period. For them a holiday was something to be coveted even if it had to be taken in winter.

The home space prior to the 1960s was an important centre of the farm woman's life, focussed as it was on the rearing of children and the cultivation of a wide range of domestic skills. Wives accepted their lot and took pride in their ability to make butter, soap, and to sew and cook. The second wave of the feminist movement with its more critical views on the woman's place had not yet arrived to disturb what appeared to be the 'natural' order of things.

COMMUNITY SPACE

The term community has been widely used and is applied to a wide range of contexts. Young (1990, 311) defines the term community as 'a group that shares a specific heritage, a common self-identification, a common culture and set of norms'. Thus, in its broadest sense, a rural community is a social network of individuals who interact while living in a defined area.

Service to the community has always been a major focus of farm women. To achieve this most farm women in the post-war era turned to local organisations. Involvement in these also relieved the isolation as well as made a break from the tedium of housework and the twice daily milking routine which restrained their outside activities. But the most important overall aspect of these organisations for the majority of farm women has been the public space that they created for women's recreation (Smith, 1993, 377).

Local school

Central to farming communities was the local school, which all the children of the district attended (Plate 7.2). It was here that the local community met for such events as 'calf day' when the children took along the calves that they had reared at home for judging. School sports days, school picnics, fundraising and end of year concerts also involved the community. Male

dominance was still a feature of life and membership of school committees was seen as a male prerogative while women were confined to membership of the Parent Teacher's Association (PTA).

Hilda and Lynne, who belong to the middle group of participants, indicate the part that school activities played in the community:

> *School activities were Calf Club day, the annual picnic, the fancy dress ball and end of year break-up combined with Xmas tree party. Like all mothers I took our children along (Hilda).*

> *School picnics were forever a treat. The children enjoyed swimming if it was at the Springs and also running in the races (Lynne).*

Avril, who farmed in the 1950s, was heavily involved in school affairs:

> *I worked many hours at the local primary school doing anything and everything. I also belonged to the PTA and school committee, which took up two hours for two or three days a week (Avril).*

Local hall

Central also to the life of the community was the local hall, which was a popular meeting place (Plate 7.3). Here were held the local dances, evening socials such as kitchen evenings for the bride-to-be, card evenings, church and harvest festival services, Sunday school concerts, Christmas parties and farewell and welcome evenings for departing and new residents.

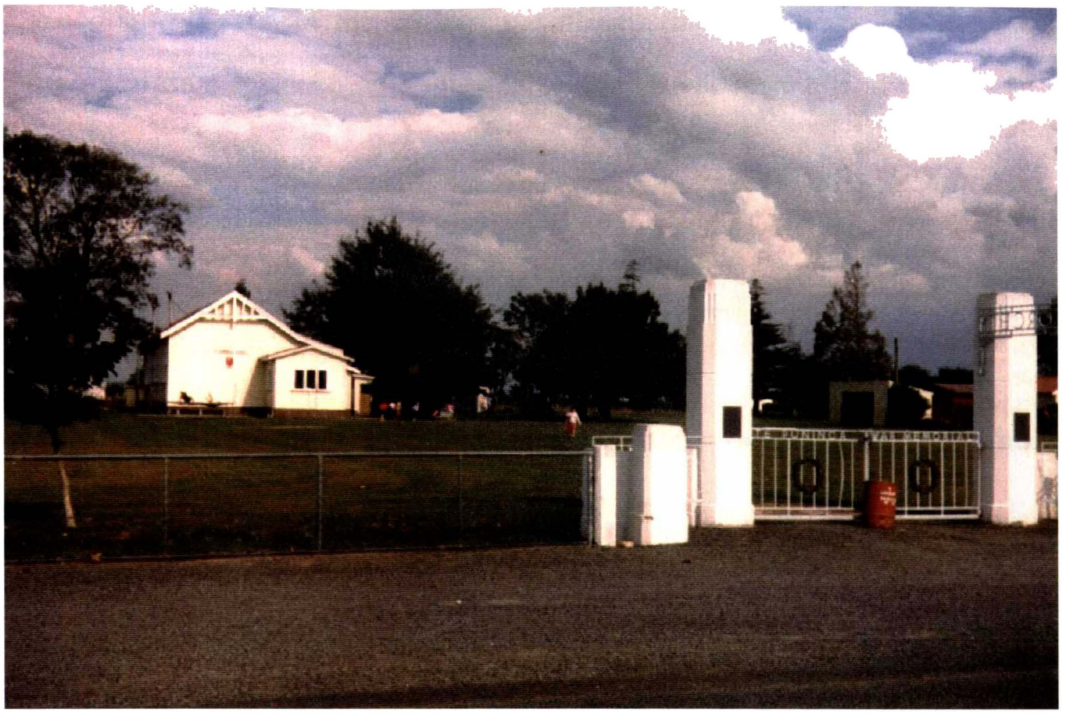

Plate 7.2: The local school.
Source: Begg, M.M.

Plate 7.3: The local hall.
Source: Begg, M.M.

For Joy much enjoyment was gained from the social events held in the local hall. She also reflects on the wide range of organisations that used the hall and the age range of those who attended functions at the hall:

> *I enjoyed the social occasions held in the local hall. Dances, concerts, church and Sunday school as well as meetings for such groups as the Country Women's Institute (CWI), Women's Division of Federated Farmers (WDFF) and Red Cross were held there. Everybody from babies to grandparents attended.*

Hilda for her part points out that running such events involved those organising the event in a great deal of hard work:

> *The social occasions and organisations were our relaxation and social life but they meant a lot of hard work too. We did all our own organising, preparation, decorating, catering, and cleaning up afterwards.*

For Zelda going out was essentially a family affair:

> *For the first two years we were busy and only went out if we could take the children with us. We had an Essex car with a back seat that let down and we made up a bed in there.*

Sport

Some districts had active sports organisations such as tennis, swimming, cricket, and of course rugby and netball (basketball in those days). All these activities had to be fitted in between milking if they operated through the milking season. They also provided an opportunity for socialising as well as for playing sport.

Sport, as with social events in the local hall, was another focal point for the community involving as it did sometimes all the family. Tennis, as Betty and Joan explain, provided an opportunity for families to meet:

In 1945 we put in a clay tennis court just across the lawn from our lovely big concrete verandah. It was well used by neighbours. There were 80 people at the opening counting children (Betty).

I played tennis but this was a family affair. We always took the children to district socials (Joan).

For Ann, participation in a sport prior to her children attending school involved her husband minding the children:

I never played a lot of sport until all my children were at school and then I played golf. I played some indoor bowls at night in the local hall while my husband minded the children.

For Beryl participation in tennis involved taking the children and having to rely on the cooperation of fellow members to look after the children while she played. On the other hand her husband continued playing rugby and going to training unencumbered by the family which indicates the status of rugby in New Zealand, especially in rural areas:

I was a member of the Tatuanui Tennis Club and once again I took the children. Other members always looked after them while I played. My husband played rugby and when it was possible I went to watch on Saturdays with the children. He'd go training once a week (Beryl).

ORGANISATIONS

Women's Division and Country Women's Institute

The principal organisations farm women joined in the era following World War II were the Women's Division Federated Farmers (WDFF) and the Country Women's Institute (CWI). They emerged in the 1920s at a time of great social change in New Zealand. New Zealand was becoming mainly an urban society and the services and job opportunities available to rural communities lagged behind those of urban areas (Smith, 1993, 378).

Both of these organisations attempted to give a cohesion to the lives of rural women in particular and to help lessen their isolation. The Women's Division of the New Zealand Farmers Union (WDFU), which after 1946 became The Women's Division Federated Farmers (WDFF), catered for the women of landowning families. By contrast, The Women's Institute (WI), which in 1952 became The Country Women's Institute (CWI), was originally based on communities under 4000. In the same year this number was expanded to 6000 in order to gather in a wider membership. Unlike the WDFF the CWI had amongst its membership many women who lived in rural service towns and who belonged to non-farming families. It further made efforts to include Maori women (Smith, 1993, 381).

Both organisations placed much emphasis on the importance of the wife as a homemaker and attempted to raise the self-esteem of their members (Smith, 1993, 378, 382). They provided adult education albeit of a domestic nature as well as community services (Smith, 1993, 381). They had a Christian basis. The last three lines of the WDFF 'Women's Creed' states, 'And may we strive to touch and to know the great human heart, common to us all, and O Lord God let us not forget to be kind' (Parker, 1988, 119).

This Christian basis enhanced moral and spiritual values as a responsibility for the women who formed their membership. An important part of their social life was the large amount of voluntary work and fund raising for others that they undertook (Smith, 1993, 381).

Although they operated in rural areas, which were predominantly National Party strongholds, they were not affiliated to any political party. They did, however, give women a chance to participate in a democratic organisation on their own terms and achieve high office. They also created a personal space for the women involved. Becoming provincial president of the WDFF or the

CWI was the nearest most women got to attaining any sort of prominence in public life (Parker, 1988, 22). But it did give rural women an opportunity for their voice to be heard at the local level and through the annual conference of branches at the national level. This was something not always provided by other public bodies dominated as they were by men. These two organisations were at their peak level of activity in the 1950s and 1960s (Smith, 1993, 382).

However membership often meant different things to different people. For Audrey it meant companionship and stimulation while for Ida it was gaining confidence to speak publicly. Crisie for her part enjoyed the chance to put on nice clothes instead of her working ones:

> *I belonged to the WDFF and enjoyed the companionship with other women as well as the stimulation of ideas and creativity (Audrey).*
>
> *I think because it was solely female in membership it gave us confidence so that we got up and spoke publicly which was something we had never done (Ida).*
>
> *It was good to be out of smelly, wet clothes and dirty gumboots now and again. I was glad to dress up in nice clothes once a month for the 'Division' meeting held in our local hall (Crisie).*

The low membership subscription rate appealed to Hilda. She also saw in the growing membership of WDFF, the ability of that organisation to influence government policy in matters pertaining to rural women and their families:

> *I could afford to join because membership subscriptions were kept very low to enable every rural woman to belong if she wished. As the WDFF grew in membership it came to influence government policy through its watchful interest and representations on matters affecting rural women and their families.*

Church

Another organisation, which was important in this era (1940s and 1950s), was the church. Parker (1988, 133) observes that Christianity was a major influence in the lives of farm women. She found in her research that, 'observance of Christian rituals and belief in Christian principles were unquestionably accepted.'

This was a time when the questioning of such beliefs was not widespread. These beliefs had been instilled by previous generations and carried on, especially in the immediate post war period. Church attendance on Sunday was, as Betty says, a regular occurrence:

> *Our nearest church was four miles away and we were regular attenders (Betty).*

For Avril, also a regular attender in the 1950s, attendance was combined with her interest in music:

> *I've always been interested in music and had my own piano. I've been a church organist for 50 years. The church was only 10 minutes away and we went every Sunday (Avril).*

Attendance at church did not always mean that one went to the church of one's denomination. For country people, served as they often were by visiting ministers of different denominations, mostly Protestant, and with services held in the local hall, interdenominational cooperation was supported. Except for those churches, which applied strict rules of attendance to their members, religious barriers tended to break down. Such attendance enabled a sense of community to be fostered as well as worship (Parker, 1988, 133).

These country services however were not always held on a weekly basis as it was not possible for a minister to be available weekly. Church then became a fortnightly or even a monthly occurrence as Joy and Ann relate:

We attended once a fortnight (Joy).

About once a month (Ann).

For Agnes the arrival of babies put an end to her church going:

I attended weekly and then not at all — too many babies.

In some instances where there was no church building or hall in the local area the church service was held in a home as Faye relates:

Church was held two or three times a year at mother in law's home on the farm.

Church involvement was a family affair. Children attended Sunday School which was held prior to the church service. Bible stories were relayed and the moral rights and wrongs of life were espoused. Many of the Sunday School teachers were women while the men participated in working bees or took part in church administration as members of the vestry or kirk (church) session or became deacons.

This was an era when Sunday was observed as a 'holy day' much more so than later. Except for the corner dairy, shops and businesses were closed and there were few other attractions open to the public. Church services were a central feature of the day.

Infrequent visits to town

Journeys to town or to the nearest city, Hamilton, were also seen as time away from the daily routine of housework and milking especially in the winter when the cows were dry. Although having a car was the rule rather than the

exception in the years following World War II up until the 1960s most families were one-car families. Its use by the wife had to be fitted in with its use by the husband for farm purposes. Nor were cars seen as such a ready adjunct to everyday life as they are today. In the 1940s and 1950s going to town or the city was considered a 'highlight' and meant the wearing of formal attire, complete with hats and gloves. Such visits usually coincided with sale-days so that while the husband went to the sale-yards the wife visited the shops.

This was certainly so for Betty and Joan while Dolly's monthly visit to town centred on more mundane matters:

> *We dressed up in our Sunday best for our trips to Hamilton. I remember very clearly a black and gold summer suit, a matching boater hat, which I dressed up along with black shoes and gloves. We always wore stockings. I felt a millionaire. It had to last a long time (Betty).*
>
> *A trip to town was a time to dress up, that is a good coat, hat, gloves and handbag. Many women had only one good frock and this was well looked after and perhaps accessories changed each year (Joan).*
>
> *I went to town once a month to pay the bills (Dolly).*

Home deliveries

In the early days after the war there was also not the same need to visit town regularly to obtain household requirements as these were supplied by the local grocer, butcher or baker many of whom also delivered goods to the door on receipt of an order given over the telephone. Furthermore, the mail-man also acted as a delivery man, delivering to mail boxes at the farm gate, not only mail but also bread, meat or other farm supplies usually ordered over the phone prior to the mail-man's departure from town as Agnes points out:

> *I was able to phone for meat and groceries and have them delivered the same day. Most trips to town were taking stock to the sale and buying things for the farm and clothes.*

Lynne saw another side to this home delivery service in addition to the delivery of goods. It gave her much appreciated social contacts involving cups of tea:

> *I noticed the difference in not having everything delivered and missed the socialising that could go with it — cups of tea for the butcher and baker. The grocer rang for our order and again the driver of the van became a good friend, plus the mail-man. I got to know them all.*

This was a period where the farm woman's focus outside the home was still very much centred on the local community such as, the hall, school, sports club and the church. The activities associated with these drew the community together and provided a break from domestic and farm duties. In the sphere of women's interests the WDFF and the CWI played an important part not only in providing an outlet for leadership but also being part of a national organisation. The car had not yet become a dominant factor in the lives of farm women.

EXTENDED SPACE

The period following the 1960s began to see changes occurring both in the home space and in the area of social interaction off the farm. The availability of electric appliances while not freeing the farm women from domestic duties did decrease the work load and remove much of the drudgery associated with housework. More importantly increased mobility meant that the farm women were not so tied to the home. The post-war shortage of cars had been largely overcome and car ownership more common. With the arrival of the farm 'ute'[4] and farm bike,[5] the family car was no longer the main source

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[4] The farm 'ute' or farm utility vehicle which is much the same size as a large car has a comfortable cab and an outside tray on which can be carried goods, such as fencing materials, tools or animals. It

of transport. This is turn meant that the farm wife was not so dependent on her husband's activities as to whether the car was available or not for her purposes.

Increased mobility

At the same time most rural roads had by now been tar-sealed and improved (Chalmers and Joseph, 1997, 15) so that while the distance to town remained the same, the journey time was reduced and more easily undertaken. The supermarket had also made its appearance in provincial towns offering a greater range of goods at cheaper prices than the local store (Plate 7.4). Local stores began to fade from the scene as local people by-passed them to purchase their requirements at the supermarket in the nearest town (Plate 7.5). With the disappearance of the local store, the custom of home delivery also vanished. The advent of the home freezer also meant that perishable items such as meat did not now need to be purchased as frequently as in the past but that these items could be purchased in the supermarket and stocked up in the freezer. Thus by the 1980s and 1990s changes had taken place that extended the space of farm women from the local to a wider space often based on the nearest town to which a weekly or twice weekly visit became the norm as Marie reported:

> *I live five kilometres from our nearest town and I drive in once or twice a week. I like to go to the supermarket for groceries and clothes. I don't go to larger towns as our nearest caters for our needs.*

Ann noted the move to a less formal style of dressing:

> *I would shoot into town for an hour or two in a light frock in summer, or skirt and jacket or even slacks in winter. Also by now (1960s) stockings in summer and hats and gloves had long gone.*

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is in effect a multi-purpose vehicle being light enough to serve as a car yet having the capacity to carry goods and fulfil the role of the second vehicle on the farm.

[5] A 'farm bike' is a light two stroke motor cycle of rugged construction and used on farms to bring in the dairy herd for milking or to visit parts of the farm.

Plate 7.4: A country store.
Source: Begg, M.M.

Plate 7.5: A supermarket in a service town.
Source: Begg, M.M.

The car by now had become an almost essential item and Heather realised, when her car was out of action, just how dependent she had become on it:

> *Once my car was out of action. It was dynamite. When you haven't got a car you feel cut off and realise just how dependent you are on other people without your own vehicle.*

Changing focus

This increased mobility from the 1960s onwards saw a lessening of the focus on the local community, which usually centred on a nearby public hall, primary school or general store. Farm women now went to the nearest town. Here they could join art and craft clubs, embroidery, or floral art groups. Women's organisations were still fairly dominant. Now not only did they go for shopping but also for sport and leisure as the comments by Nancy and Ann show:

> *I like to play netball but it's a bit of a hassle getting children ready to be left with a friend in town where I play (Nancy).*

> *I enjoy playing golf and feel at this stage of my life I deserve some pleasure. I do not feel guilty about my golf (Ann).*

By the 1970s intermediate schools had become established in provincial towns so that rural children left the local school after standard four and caught the school bus into town. With the raising of the school leaving age to 15 in 1944 secondary education was now well entrenched as part of compulsory schooling and with an increase in their rolls local secondary schools now offered a broader range of subjects and at a higher level than offered in the past. As qualifications became more important to gain jobs pupils were staying at school longer. As Zelda notes the focus of their activities centred on the school in the nearest town:

Young people are expected to stay at secondary school longer and require some tertiary qualification and education to improve their employment chances.

Likewise their parents now attended not only functions at the local school but also in town and some became involved in the Parent Teacher's Association (PTA) or the governing bodies of those schools. Adult evening classes of a varied nature were offered by these secondary schools and this enabled farm women to pursue activities of their interest. These interests were wide ranging as Audrey outlines:

I attended weaving and spinning classes and also a cane furniture course (Audrey).

However the range of classes began to broaden and some of the farm women began to delve into new interests apart from the crafts. The computer was beginning to be more widely used and Penny took the opportunity to extend her computer knowledge as well as that of farm management:

I attended classes such as interior decorating, typing and computer courses. Also courses to learn how to use our financial computer package and attended large-herd seminars (Penny).

Norma, who was heavily involved in the playcentre movement, furthered her knowledge of child development, psychology, education and Maori culture. With the 'Maori Renaissance' bringing a greater awareness of things Maori, evening classes in Maori language and culture were now being offered:

I did heaps of courses, floral art, sewing, child development, psychology, education and later Maori culture (Norma).

Transport providers

A further result of this increased mobility and focus on the nearest town meant that mothers became transport 'providers'. If their intermediate or secondary school children needed to stay for after school activities, it was

the mother who provided the transport to enable them to get home as the school bus departed at the end of the school day. Similarly, if they participated in school sports teams transportation had to be provided at weekends although it was necessary at times to limit the number of activities each child pursued, or there were difficulties when the mother was involved with milking.

For Dulcie, Debbie and Helen catering for the children's activities saw them having to juggle their time between farm activities and those of their children. Mothers now had to undertake the task of being the transport provider:

> *It wasn't difficult to transport children to activities. The only time it was difficult was when their activity coincided with baling hay or making silage. Everything else we worked around although we did limit each other to two activities at a time (Dulcie).*
>
> *It was difficult for the children's activities, as I had to go and pick them up — not always easy especially if I had to milk or at calving time (Debbie).*
>
> *It was difficult for the children to take part in activities because living in a country area they were reliant on me to transport them to functions (Helen).*

Kathleen and Pam note, that not only did farm women now provide transport for the family, but they also were called upon to run the farm messages such as collecting parts needed for broken machinery, stock medicines, or taking into town items for repair. The task of 'farm courier' also fell their way:

> *I spent more trips going to town when necessary for on-farm things for my husband. Our largest town is thirty minutes away (Kathleen).*
>
> *Recently I had to take the farm bike tyre into town as it had a puncture. This was urgent as we use the bike every day (Pam).*

CHANGING SOCIAL ATTITUDES

Changing social attitudes and a shift in focus from the local to a wider community brought about other changes from the 1960s onward. The two organisations WDFF and CWI, which had played a big part in the lives of rural women, were now losing membership. Younger rural women did not find the same interest in attending a local meeting of the WDFF or the CWI in order to learn how to do some craft activity such as paper hat making. Their horizons had been broadened. They were the ones who were more likely to stay longer in the expanding secondary school system and obtain some qualification while boys could leave school and return to the farm. This option was not open to girls who had to seek work in the nearest town, in shops, banks, or offices, or train as nurses or teachers. If they returned to the land as wives of farmers or farmers in their own right their educational background in many cases exceeded that of their husbands. As Jocelyn Fish, President of the National Council of Women, herself a rural woman, commenting in 1990 on the declining membership of rural women's groups, explained, 'Young farming women don't want to stop computing the latest herd breeding index to go and make a cake to have a contest with someone' (Smith, 1993, 383).

The demise of the WDFF[6] saddened some of the farm women. Dulcie, who had been an active member for many years, felt that the WDFF had done much for the women in the local community although she could see that increased mobility opened up other avenues of interest for farm women. As she points out this was done on an individual basis thus undermining the local community spirit:

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[6]The WDFF has been recently renamed 'Rural Women of New Zealand'. This renaming was to disassociate the name WDFF from 'Federated Farmers' and also to modernise activities to attract membership of younger rural women.

For me it was sad seeing the demise of organisations like the WDFF especially among my generation. We now have to organise or create our own entertainment. Local women tend to join clubs and organisations in town now and do so individually for example gymnasiums, netball clubs etc.

As with the WDFF and CWI attitudes to the church also began to change and attendance declined. With the relaxation of measures forbidding the opening of shops and businesses on Sunday it was no longer a 'holy day' and began to be just another day of the week when people could go shopping or attend the other attractions that were being held. Church services no longer held centre place and for many the church was somewhere one went to attend weddings and funerals as Marie, who farmed in the 1980s, points out:

I don't go to church — only for weddings and funerals (Marie).

For Gayle, who also farmed in the 1980s, attendance at a church service became spasmodic:

I attend once or twice a year.

For Nancy church attendance was something to be fitted in when the situation allowed. It was not of paramount importance:

I attend very infrequently while the children were young or I was in early pregnancy — a little more frequently now when I can. Sometimes I have decided not to go because church time coincides with Shane being home for breakfast or I needed to help on the farm.

Others again such as Pam had developed a divided outlook on the place of the church. She still felt it important for the children to attend Sunday School while she herself had ceased to attend church:

I don't go to church. I take the children to Sunday School.

These changes brought about a decline in community participation something that Priscilla, Dulcie and Fiona had observed:

> *I have found that the 'community spirit' in rural areas has declined mainly because society is much more mobile. Travel and communication is much easier (Priscilla).*
>
> *Real community involvement seems to come only in years when children attend the local primary school (Dulcie).*
>
> *There are less people getting involved in schools due to both parents working and smaller families (Fiona).*

Playcentre

Other organisations were now coming to the fore such as the playcentre movement, which was being taken up in rural areas, although its basic ideology was still that of women as mothers and caregivers. Unlike the kindergarten movement, the playcentre movement was a self help one and was not as structured as the kindergarten and mothers took an active part in its organisation and operation. Playcentres often operated in rented churches or community halls as well as homes. Those participating in their running did so on a voluntary basis and this fitted in easily with the voluntary community work ethos of rural areas. Further these groups were as much for the mothers as for the children. They gave an opportunity for young rural women to discuss matters of importance to them as Zelda points out:

> *We cannot always get to the larger playcentres so we formed a play group in our small area. This was as much for mothers as the children.*

For other farm women, such as Audrey and Norma, the playcentre movement provided them with an opportunity to widen their interest beyond the local area and become involved regionally and nationally:

I used to go to town once a week but once I became involved in playcentre I always seemed to be in town. I travelled all over the Waikato (Audrey).

I was involved in playcentre in the 1960s and 1970s. Later I took leading positions in playcentre locally, regionally, and nationally (Norma).

The younger married farm women now had other interests to pursue apart from the WDFF and CWI. As the rural population declined as a percentage of the total population from 30 percent in 1920 to 16 percent in 1990 (Smith, 1993, 382) many services provided locally also declined and had to be accessed in the nearest town. Increasing numbers of rural farm women took up urban jobs or continued in their off-farm jobs for part or all of their income after marriage. This was especially so for the better qualified young women. For them transport was readily available and unlike in their mother's time contraception taken for granted.

Rise of feminist movement and the *Matrimonial Property Act 1976*

While the rise of the feminist movement in New Zealand in the 1960s did not impinge directly on farm women, situated as they were in the conservative section of New Zealand society, it did have an influence. The advent of television meant that happenings both within New Zealand and the outside world were brought into the lounge with the TV news each evening. Now they were exposed to changing views on the place of women in society and while they would not claim to be feminists they were affected by these changing views.

Further the passing of the *Matrimonial Property Act in 1976*[7] altered the status of dairy farm women. Now they were full legal partners in the

[7] In 1976, the *Matrimonial Property Act* recognised 'the equal contribution of husband and wife to the marriage partnership' by giving wives an equal share of the matrimonial home and chattels after marriage breakdown (Davey and Atkin, 1990, 28).

enterprise and not as previously in a partnership because it was advantageous from the point of view of taxation claims. They began to see themselves, not in the old 'tea and scones' image or the providers of unpaid labour but as full members of the society entitled to their share of the assets should the marriage break up as Zelda remarks:

> *The Matrimonial Property Act has resulted in the wife receiving a share of assets rather than get nothing. This is much more satisfactory for women.*

This change in attitude was evident in the writing of a number of the participants. In the earlier post war decades the participants often referred to their *husbands* as doing the jobs on the farm when they themselves were involved as Faye's comment shows. In other words they often took themselves for granted. Faye farmed in the 1950s:

> *My husband had individual calf buckets and used to pour the milk in for each calf but we had to watch them closely as some calves were very bossy and greedy.*

Women, who farmed in later decades were more self assertive in their writing and made it clear that not only did they share in the decision making but that they were fully involved as individuals in the farming operations. Liz, who farmed in the 1960s and 1970s, obviously felt she was part of the farming operation:

> *We thought we would have an easier time milking and in the event we increased the herd over the next few years.*

The younger group of participants (1980s and 1990s) on the other hand were plainly more self-assured. Debbie who is an active partner carrying out farm tasks, sounds confident when she claims:

I milked in the spring in an eight-a-side herringbone shed. I always reared the calves and helped with feeding out. I drove the tractor for turning hay and sprayed weeds with a knapsack. I helped with covering the silage stack and ran around picking up parts from agents in town.

Discussion groups

These expanding horizons saw farm women organise their own discussion groups along the same lines as their male counterparts (Plate 7.6). Within such a group they could learn about farm management, farm finances, stock breeding and stock health.

Unlike the earlier organisations such as CWI and the WDFF and even the play centre groups the ideology was not now based on women as mothers or care givers but rather women as participants in the farming enterprise. A recent development has been the establishment of "The Network for Women in Dairying" using the internet. This network, using a shared e-mail system, allows isolated dairy farm women to participate in a nationwide discussion group. The topics to be discussed also reflect the desire of dairy farm women to extend their discussions to a wide range of interests such as the effects of globalisation on dairying, health cuts and recent proposals to form a new structure for the dairy industry. The network further allows research scientists to tap into the network both to help to solve problems and to be aware of what problems exist among the women accessing the network (Waikato Times, 2000, May 16, 13).

Furthermore women are beginning to take up positions in the professional farm service occupations such as veterinarians, farm consultants, bank and tax officials. The 'Women's Discussion Groups' are able to call on these people to address their groups. These groups were not only educational in their purpose, but provided contact with other farm women. They are a means of socialising as well as learning.

Plate 7.6: Farm women's discussion group.
Source: Begg, M.M.

Joanne's and Jean's comments draw attention to this change in outlook amongst farm women — from passive to active participation in farm affairs:

> *I belong to a 'Ladies' Discussion Group', which meets once a month. Farm women have a chance to air their views and explain individual problems (Joanne).*

> *With a husband involved in the dairy industry, I have got involved in some of the discussions about changes taking place (Jean).*

Off-farm work

Changing social attitudes can also be seen in the response the participants made on the question of off-farm work. In the older group (1940-1950) only one of the participants indicated that she worked part-time off the farm and that was in a period starting in the 1960s. For them such a thing wasn't done or if it was, it was most unusual as Avril and Joan say:

It wasn't done in those days (Avril).

Women working off the farm was not usually done (Joan).

In the middle group (1960-1970) 10 out of the 23 participants indicated that they had been involved in work off the farm and this was mostly in a part-time or seasonal capacity. None of these women indicated that they were doing it solely for economic reasons. Social considerations were also a factor as Tess notes:

The extra money was helpful but it was enjoyable working with others

Their responses as to what they thought about women working off the farm indicated that it did not loom large in their minds and reiterated what the older group said, that is, it was not done at that time. As Margaret points out, if it did happen then it was most unusual:

It very rarely happened in our area at that time.

Others mentioned that if at first it was done because of financial pressure social considerations came to the fore later as Beth says:

It was financial necessity at first but later it was the enjoyment of the job that I liked.

Many of the participants stated that they could only obtain casual or part-time work such as raspberry picking or packing kiwi fruit. This work was fitted around family commitments, that is either undertaken prior to the arrival of a family or taken up later in life when the children had reached high school age. Despite this, those farm women involved in off-farm work were still involved in on-farm work.

For Jean and Gayle off-farm work meant utilising their training as teachers gained prior to marriage while for Una it was something she took up when freed from family commitments:

> *In the 1970s I did two and a half years high school teaching before my babies arrived (Jean).*
> *I did occasional relief teaching (Gayle).*
>
> *My children are now married and since then I have become the local correspondent for the Paeroa Gazette (Una).*

Others mentioned, as they were one-car families, transport was not available. If they did off-farm work their reasons for doing so varied somewhat from the earlier decades. Economic conditions (1980s), which brought about a fall in the dairy factory payout and high inflation, were now a consideration. With farmers struggling to make ends meet financially off-farm work by the wife helped the farm survive as Marie points out:

> *The job offered a challenge and farming was experiencing a downturn so the extra money came in handy.*

The response of the farm women in the younger group (1980s-1990s) to working off-farm was much more varied and acceptable. Apart from this changing social outlook economic necessity also played its part as Debbie's comment illustrates:

> *At the start of the decade (1980s) it was unusual for women to work off-farm and also considered disloyal. After the economic downturn it became a necessity for survival and therefore acceptable (Debbie).*

However economic factors were not the only consideration advanced by these farm women. For some off-farm work offered either stimulation or a chance to pursue the career for which they had trained prior to marriage. To them such work was seen as acceptable and not unusual although commitments to young children governed whether this was done or not.

Helen, Mavis and Nancy were more interested in using their previously gained qualifications. This was more important to them than whether off-farm work was the accepted thing or whether financial conditions made it a necessity:

> *Because we employed labour in the 1980s I was able to return to nursing and the extra money was spent around the home (Helen).*
>
> *I was interested to use my training as a secondary school teacher (Mavis).*
>
> *I worked for two and a half years at the Waikato Hospital as a social worker and another 11 months prior to the birth of our first child. The reason for this was to follow my chosen career for which I had studied at university (Nancy).*

Decision making

The responsibility for decision making in regard to family and farm expenditure as well as financial and investment decisions remained fairly constant throughout the period studied, despite changes in the way bank accounts were organised. In the earlier decades of 1940s and 1950s bank accounts were mainly in the husband's name. From the 1960s onwards joint accounts became the norm with the operation of a farm account and a household or personal account with a set amount being transferred to the personal account each month from the farm account.

In the main, decision making reflected the divided responsibilities of husband and wife with frequent consultations between them. The wife's most important area of decision making remained with the purchase of household goods and family needs such as clothing. The husband generally made decisions over the day to day running of the farm, the purchase of things needed for running the farm and the buying and selling of stock. However where large items were being considered for purchase whether

household items (refrigerators, furniture) or for the farm (tractors, farm bikes) almost all the participants said they made joint decisions.

Joint decision making was the norm with Beth, Rita and Penny:

> *We always make joint decisions on major items (Beth).*
> *We have always made a policy of sitting down together just about 20th of each month and paying accounts by cheque so that we know who has been paid. At the same time we address envelopes and enclose what is necessary (Rita).*
>
> *My husband and I work together and discuss farm business and make joint decisions. The business is owned jointly so we can both sign the cheque book (Penny).*

Pam however felt she was unjustly left out over the buying and selling of animals when she was given wide responsibilities in other areas:

> *I organise everything but not always listened to when it comes to buying and selling animals. I am given most of the responsibility for upbringing of the children and organising days off, holidays and paying bills — seeing that everything flows (Pam).*

SUMMATION

Whilst this chapter has focussed on social change one needs to be mindful that technological change impinges on social change. The rising use of the car coupled with roading improvements brought about an extension of the space in which dairy farm women operated. This in turn had repercussions in the social area. No longer were the local store or hall a central part of dairy farm women's daily lives as they by-passed them either to shop in the nearest town or participate in activities located there.

This in turn brought about a decline in the cohesive nature of local communities as country stores began to close, social events were no longer centred on the local hall and local organisations began to wane in importance. The dairy farm women began to feel that they were becoming

more individualistic in outlook as much of what they now did was centred on the nearest town.

Further as intermediate and secondary schools developed in nearby towns this contributed also to the outward extension of their space as their children's activities took place in a wider sphere. They now began to take up another role; that of being 'transport providers' for their children along with that of 'transport courier' when parts were needed on the farm or had to be repaired. Thus their lives began to revolve around the car.

Changing circumstances saw many dairy farm women begin to lose interest in the two major women's rural organisations – the WDFF and the CWI. The young women coming onto dairy farms saw little relevance in the matters which had taken the attention of older members. These younger women were more extensively educated and trained and not so ready to accept the subordinate position occupied by the older women. With their expanded outlook they had matters of more pressing importance to attend to, such as computing, farm management, record keeping and pre-school education.

New organisations and interest groups began to emerge to cater for the needs of these younger women. The playcentre movement gave them an avenue to cater for the pre-school needs of their children and exercise their organisational talents while the women's farm discussion groups expanded their knowledge of farm management and record keeping.

All this took place against a background of broader social changes that affected the lives of women in general. Through the feminist movement, which emerged in the 1960s and 1970s, women began to assert a greater place in the scheme of things. Dairy farm women were exposed to new ideas and with the advent of television in the 1960s it was within the confines of the home that these ideas often reached them. Like their urban counterparts

they began to seek a greater say in matters affecting them. The passing of the *Matrimonial Property Act* in 1976 made their status as partners in the farming operation one of legal equality.

The old adage that 'a woman's place is in the home' began to lose its force as married women increasingly began to participate in the work force. Dairy farm women began to seek off-farm work. For some it meant continuing to pursue a career for which they had trained prior to marriage while for others it was a matter of economic necessity. Whatever the reason the main underlying factor was that the social conventions that restricted them in the past from such participation no longer applied with such force. They began to see themselves as more independent and co-partners in the farming operation. As Rosemarie Smith states, 'By the 1970s most young women could take education, relative prosperity, contraception and a driver's license for granted' (Smith, 1993, 383).

While these technological and social changes have brought about changes in the lives of dairy farm women since the end of World War II and extended the space in which they operate, other events have also been of importance. International market prices, and the internationalisation of the economy have affected the structure within which they operate. Perhaps the biggest change has been a political one. No longer is the dairy farmer actively supported by the government through a wide range of measures. Now the government follows a market led approach with minimum government intervention. It is these international and political changes and their affect on the lives of dairy farm women that form the basis of the next chapter.

CHAPTER EIGHT

POLITICAL AND ECONOMIC CHANGES: UPS AND DOWNS

INTRODUCTION

In its simplest form 'economic' can be seen to mean a geography of people's struggle to make a living which should be concerned with sustainable production. Incorporated with this production is the humane use and reproduction of the social, natural and material conditions of human existence (see Massey, 1984; Storper and Walker, 1989 and Johnston, *et al.*, 1994, 147). Such a simplistic definition however, is easily lost in the analysis of complex technicalities and apparently impersonal processes of change in the economic world of today. Change is nothing new in human affairs but recent changes have brought confusion and uncertainty. For most people the obvious indicators of change are those which impinge most directly on their daily activities. Making a living is becoming more and more unevenly developed[1] and what is happening is largely due to the product of forces operating at global geographical scales (Dicken, 1998, 1). The transnational corporations, together with national governments and enabling technologies, were the three major forces identified by Dicken (1986). Dicken (1992, 106) maintains that the growth of satellite technology linking computer technology with information technologies over vast distances were of particular importance for global operations. Economies are for people and the concern for making a living in the global economy is always and should always be present in any economic geography (Dicken 1992, Chapter 13).

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[1] For example, the United Nations Development Programme (1992) reported in their projection for the 1990s, that the richest 20 % of the world's population by country has incomes 60 times greater than the poorest 20 %, whereas in 1960 the equivalent ratio was only 30. If the distribution of income

In this chapter I examine and analyse some of the main economic and political changes, which helped construct the lives and work of dairy farm women. Milk is produced on dairy farms, which in turn is processed into commodities for export, and these commodities are affected by movements in dairy prices on the international market. In the survey for this thesis, the dairy farm women participants did not comment to any large degree on the wider aspects of change to the dairy industry or on the political and economic changes that occurred, some of which impinged directly or indirectly on their lives. For most of the women their concerns were with more immediate things in relation to finance and household expenditure. However, the chapter does examine some of the changes to dairying against the broad political and economic background since the end of World War II to the present. An attempt is made to take a parallel look at how these events impinged directly or indirectly on the lives of the dairy farm women.

'THE LONG BOOM' 1945-1972

This era from 1945 to 1975 was a period of relative social and economic stability.[2] It has been called 'the long boom' (Le Heron and Pawson, 1996, 2) and was an era of free access to the United Kingdom for New Zealand's dairy products. The year 1972 marks the end of this era. It was at this time that the United Kingdom finally gained access to the European Economic Community (EEC), which later in 1992 became The European Union (EU). This restricted the free access of New Zealand dairy products into the United Kingdom. Today access is negotiated with the EU, under a quota system.

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within countries is taken into account the reality is even worse. The richest 20 % have incomes over 150 times greater than the poorest 20 % (United Nations Development Programme, 1992).

[2] New Zealand joined the global economy with the first European trader and settler contact (Le Heron, 1996, 21). Government intervention has driven the New Zealand economy, which depended on dairy farm exports from the earliest days of colonisation. Government commitments to regional development, social welfare and universal provision of core public services such as health and education, helped shape the structure and values of the society which was rather complacent and

The 'oil shocks' of the early 1970s further worsened New Zealand's trading position.

The shadow of the 'Depression'

It was not however 'the long boom' which dominated the minds of dairy farm women following World War II but rather the spectre of 'the Depression of the 1930s' and the shortages experienced during the war years. Living within one's budget was of paramount concern and self-sufficiency reduced expenses. Most farm women kept hens and the vegetable garden and orchard, which supplied most of the requirements for vegetables and fruit. Deep freezers and ready access to frozen foods were not yet part of the domestic scene.

The use of sugar bags for a variety of purposes was one way of saving money as Agnes points out, she used her skills to make bread and butter and thus supplement the household food provisions:

> *We used sugarbags made out of jute and these had a dozen uses, such as aprons, oven-cloths, mats, patching farm clothes and on our beds when wirewove gave way. Food rationing was lifted in 1947, we had plenty of milk so I made butter. Bread making was a daily chore — never seemed to get enough what with visiting in-laws and extra men to feed when helping on the farm.*

Joy stressed just how self-sufficient they were on the farm:

> *During and after the war we managed as best we could. Most of our food was provided from the farm, milk, meat, vegetables and fruit. We bought only necessities.*

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conservative (Kelsey, 1999, 8). These procedures rendered a fairly stable and even distribution of wealth in the early 1950s, 1960s and early 1970s.

Private Economy

Few women had direct access to bank accounts. In the immediate post-war years cheques were not commonly used except for the purchase of big items. The economy was largely a cash one and farm women were reliant on their husbands for making financial provision for domestic purposes as Agnes, Joy and Beverley state:

> *I had no allowance for spending on myself. We had a joint cheque account but I had no say in any money spent. I would ask for things needed but I would have liked to have had an allowance for housekeeping (Agnes).*

> *I bought what was necessary and could be afforded. My husband paid accounts by cheque including housekeeping. No joint cheque accounts. I had no allowance for myself on a regular basis but did get a small amount of money from time to time (Joy).*

> *I had no allowance for myself. My husband organised the finances. We should have had a joint cheque account but we didn't (Beverley).*

Many farm women operated their own private economy, the proceeds of which they could use for themselves. By keeping hens the women had not only eggs for household use and fowl for the table but also a surplus to sell at the local shops. As Agnes states she also reared chickens to sell:

> *We had a kerosene powered incubator which raised 30 chickens at a time. I sold them at six weeks or when fully grown ready to lay. Every household had its own fowls so we had a steady market. I also sold eggs in the nearest town and also preserved eggs with 'ovaline' a vaseline mix. There was always a supply of eggs and old hens to be eaten.*

The Universal Family Benefit

After 1946 however, all women with children had recourse to another source of money, which was paid direct to mothers. The Labour Government of the time extended the welfare provisions paid by the state by introducing a

Universal Family Benefit,[3] which was payable to the mother through a Post Office Savings Bank account for each child under the age of 16 (Sutch, 1966, 299). The amount payable at this time was $1 per week per child and it remained at this level until 1958 when it was increased to $1.50 a week (Rice, 1992, 379) and was increased to $3 in 1972 (Trlin, 1977, 29). The hens became less important as a source of private income as farm women now had access to money in their own name independently of their husband. Margaret and Crisie used the Family Benefit for the children's needs:

> *Family Benefit was put aside for children's needs and it was adequate. Later we became a partnership and had a joint account. My husband was quite understanding concerning family needs and we both knew how much we could afford to spend (Margaret).*

> *I got the Family Benefit and with that I had to clothe the children and myself. Our groceries were paid monthly by my husband. I think family finances should be a joint effort (Crisie).*

Guaranteed price

For the dairy farmers following World War II dependence on the open access to the United Kingdom market underpinned their income (Chapman, 1992, 378). The war-time contracts were re-negotiated and gave New Zealand guaranteed markets until 1954. From then on access continued but prices received for dairy products were now set by a free market (Chapman, 1992, 378) bringing about fluctuations in the prices received as Margaret recalls:

> *Payouts (prices paid to farmers for milk supply) varied, sometimes good, sometimes not so good. Extra payout made more money available for the home and farm.*

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[3] Family Benefit was a means-tested mothers' allowance which was established by the Family Allowances Act in 1926. In 1939 this was 40c a week for the third and subsequent child (under 16, formerly 15), with an allowable family income of $10 a week which was 15% above the male nominal average wage level. In 1940 the benefit was made payable for the second and every subsequent child and in 1941 to all children. In 1942 the benefit was 60c, and in 1943 it was 75c and in 1944 payment was increased to $1 a week for each child (Sutch, 1966, 299).

The sale of New Zealand's agricultural products on world markets has always been marked by fluctuating prices. It is not easy with such commodity flows to match demand with supply. Steps to reduce these fluctuations for dairy farmers and bring about more stability had been taken by the first Labour Government. In 1936 it instituted a guaranteed price to the dairy farmer for milk or cream supplied to the dairy factory based on butterfat content (Sutch, 1966, 184). In return the dairy farmers passed over the control of the sale of dairy products to the government rather than each dairy company selling its produce to agents who represented marketing organisations in the United Kingdom.

The guaranteed price was a price equalisation scheme whereby in good years when the price obtained overseas exceeded the guaranteed price paid to farmers the surplus was paid into a reserve fund. In those years when the sale of dairy produce overseas was less than the guaranteed price and a loss resulted, the shortfall was made up by paying money out of the reserve funds (Sutch, 1966, 184). As Mavis narrates by 1945 this guaranteed price scheme had brought a degree of stability to dairy farming incomes:

> *Payouts were never stable as we were governed by overseas conditions and policies as well as by the weather and government policies in New Zealand. Dairy farming has always been vulnerable but the guaranteed price gave some measure of security.*

A farmer supported government

After World War II greater emphasis was placed on increasing production in order to expand exports and thus enable New Zealand to meet the demand for increased imports. As New Zealand's exports at this time were predominantly agricultural, farming was important to the government (Hawke, 1985, 332).

With the advent of the National Government to power in 1949 New Zealand was governed by a party which had widespread farmer support for all but three years until 1972. Sir Keith Holyoake, a farmer, became Prime Minister and Minister of Agriculture. In 1961, 24 out of a total of 46 National Members of Parliament were farmers or from a rural background. The membership of Federated Farmers was predominantly made up of National Party members thus making it an influential pressure group (Roche, Johnston and Le Heron, 1992, 1745).

A Woman's Place

For most of this period the place of women was seen as 'in the home'. Few women were publicly involved in government. Their place was behind the scenes making the suppers and raising funds. Husbands were seen as the controllers of the 'purse-strings' and their views were usually considered paramount. Whatever their views about women working, dairy farmer husbands did not extend this to the work of their wives in the cowshed even if they had reservations about such work. Dairy farms were by and large small units and their economic survival has depended on the unpaid work of wives and family (Parker, 1988, 92). For Joy and Margaret this was the accepted state of affairs but they noted that when necessity arose these role relationships were put aside.

> *My husband did not approve of women going to work off the farm. He did not approve of women in the shed unless in an emergency and then only when necessary (Joy).*

> *My husband did not wish me to work full time on the farm but was glad for me to help out when normal labour was unavailable (Margaret).*

Avril regretted that this outlook precluded her from helping with household expenses although I assume she helped in the cowshed:

I gave up a good job to get married and have babies! Looking back I could have kept on working in Paeroa (office secretary) but it wasn't done in those days. Not even thought of. My salary was £5-10-0 ($11) per week and it would have helped with household expenses etc.

The modern dairy farm emerges

While the participants saw life going on in much the same way changes were taking place especially in the dairy farming scene. The degree of stability engendered by the guaranteed price, came under pressure with the ending of the wartime bulk purchasing agreement with the United Kingdom in 1954 and the increasing competition on the United Kingdom market from European countries with subsidised dairy farmers (Begg and Begg, 1997, 172). The 1950s saw the emergence of the modern dairy farm system in New Zealand as covered in Chapter Six.

Government support

With greater emphasis on farm production, and a government favourably disposed towards helping the farmer, measures were put in place to bring about this increased production. Subsidies were available for fertilisers and its transport, drenches, weed and pest control and a dairy-beef incentive introduced. This dairy-beef scheme encouraged dairy farmers to inseminate their dairy cows with semen from beef bulls and thus unwanted calves could be reared for beef production (Hawke, 1985, 248). Other government interventions also assisted dairy farmers. The price of petrol was kept uniform throughout the country irrespective of transport cost to areas distant from supply points. Electrification was extended to all rural areas and favourable tax rates granted (Hawke, 1985, 248).

Beryl and Laura comment on some of the assistance available at this time (1950-1970s) to dairy farmers:

We had the aid of Government Suspensory loans. We put it toward the bulldozing. Also we had subsidies for fertiliser, sprays and other farm items. There was tax relief on farm development such as drainage, bulldozing, clearing willows etc. Some of these items encouraged us to develop our farm quite quickly and so increase production (Beryl).

There was a great deal of (government supported) research into new farm methods of milking, animal health and farm management. Big studies in artificial breeding techniques and we made good use of British and Canadian sires' semen available for use with our Pedigree herd (Laura).

Government support was further evident in facilities granted to the New Zealand Dairy Board. The Dairy Board originated from the Dairy Product Marketing Commission set up by the Labour Government when it took over the marketing of New Zealand's dairy products. Dairy farmers not being content with the setting of the guaranteed price and the marketing of products being solely in government hands, gained representation on the Commission (Ward, 1989, 105). In 1969 the marketing body became the New Zealand Dairy Board and was composed of members elected by dairy company directors who in turn were elected by dairy farmers (Begg and Begg, 1997, 172). When export prices fell in the late 1950s and the reserve account which financed the guaranteed price was exhausted, the Dairy Board Marketing Commission was given access to cheap one percent loans from the Reserve Bank (Hawke, 1985, 224). This facility was extended to the Dairy Board to enable it to finance its activities.

Thus was established a financially cosseted farming system underpinned by the state. For the participants, who were farming in this period (1950s-1970s), it is seen as a period of stability and relative prosperity as Laura points out:

The Holyoake-Kirk[4] *years were very stable for farmers as far as good prices and reasonable inflation rates were concerned. We had a*

[4] Sir Keith Holyoake was Prime Minister of New Zealand from 1960-1972. Norman Kirk was Prime Minister of New Zealand from 1972-1974.

guaranteed price for milk and butterfat. Services were good and neighbours willing to help each other.

Uncertainty could however intervene, as in 1957 when prices slumped and the dairy reserve account became depleted (Yerex, 1989 107). It was on occasions such as these that the farm work and other cost cutting measures of the farm women were vital to the farm's survival. It was a time for being thrifty and putting homemade clothing skills into action as Elsie comments:

It was scary when export prices fell. During economic downturns I was always thrifty. I always did sewing and knitting for the children. Clothes were cut down for younger children.

The main priority

In this period (1950s-1970s) there was no evidence amongst the participants' replies of off-farm work nor that the increased farm earnings were committed to personal spending. The farm still remained as the main priority in this regard as farmers adapted to the increased intensification of the grassland system on which dairying is based as well as installing new cowsheds and facing increased input costs.

Avril, Joan, and Ida point out that the greater part of the farm income was reinvested in the farm:

Our farm income for 1955 was approximately $16,000-20,000 and 60-80 % was reinvested in the farm repaying mortgages and interest and also improving the farm (Avril).

Our farm income in 1956 was under $16,000 and 60-80 % of this income was reinvested in the farm (Joan).

Our farm income (approximately) in the tax year 1965 was $20-25,000 and 80-100 % was reinvested into the farm (Ida).

The continuing welfare state

The National Party on assuming power in 1949 continued with welfare measures instituted by the previous Labour Government and this further gave rise to the sense of security felt by the participants during this period as Elsie, Margaret and Pamela express:

> *Free hospital and maternity care were a big help. Doctors were accessible and not expensive. They would visit a very ill person on the farm at that time (Elsie).*
>
> *The district nursing service was very helpful to country people and did an excellent job. Health nurses visited schools and kept a check on children's health, cost free. Protection against poliomylitis was begun and free vaccination for children against diphtheria, tetanus and whooping cough (Margaret).*
>
> *Health Service was free and available. Access to public hospitals, doctor's visits and vaccinations, polio etc. all free in 1960s (Pamela).*

Farm partnership

One change in relation to farm ownership did occur. At the start of this period, that is the 1940s and 1950s, few if any participants indicated that the ownership of the farm was other than in the husband's name.

By the 1960s, 71 % of the participants indicated that they had formed a farm partnership, that is husband and wife became joint owners of the farm. In their replies they indicated that this was not because their husbands or society in general accepted the equality of women, but rather it was for a pragmatic end. Whereas previously a husband and wife both earning had their income aggregated for income tax purposes, thus putting them in a higher tax bracket, they could now declare their incomes as separate and both claim any applicable tax allowances. Farmers realised that by forming a farm partnership the farm income could also be split between husband and

wife, both of whom could claim tax allowances and thus lessen the amount of tax required to be paid:

Taxation changes led to us forming a farm partnership (Norma).

The reason for forming a farm partnership was for taxation benefits (Freda).

Being in a farm partnership gave us taxation advantages (Margaret).

Other changes

However, other changes were taking place which were to put an end to the 'old order', that is reliance on the United Kingdom market for the sale of New Zealand dairy produce. The United Kingdom along with European countries, having faced severe food shortages during World War II, began to subsidise their farmers in order to increase local production. Thus New Zealand found itself supplying a market into which European surpluses were being dumped while at the same time United Kingdom agricultural output was rising. Further in 1963 the United Kingdom attempted unsuccessfully to join the European Economic Community (EEC)[5] and this put pressure on New Zealand to seek other outlets for its dairy produce (Roche, Johnston and Le Heron, 1992, 1753). The Dairy Board made considerable efforts to diversify its markets while the dairy companies progressively expanded the range of dairy products to be sold on the export market. These moves enabled the Dairy Board to overcome the restrictions placed on New Zealand dairy exports following the United Kingdom's entry into the EEC in 1972.

STALEMATE 1973-1984

The decade 1973-1983 marked as it was by the entry of the United Kingdom into the EEC and the loss of New Zealand's free access to the United Kingdom market was further marked by a worsening world economic

situation and depressed world markets. The National Party lost power in 1973 to the Labour Party, but regained the Treasury Benches in 1975 until 1984 under the leadership of Robert Muldoon. The leadership of the National Party had now passed to an urban politician.

'Oil shocks'

The 'oil shocks' of the 1970s when the oil producing countries restricted output and increased the price of crude oil further aggravated the world economic situation. This contracted the markets for New Zealand exports in industrialised and oil importing countries (Hawke, 1987, 1-7). New Zealand now had to negotiate in Brussels with the EEC the volume of dairy produce allowed into the EEC market (Roche, Johnston and Le Heron, 1992, 1753). It was in this decade that the New Zealand Dairy Board transformed itself into a global food marketing organisation (Roche, Johnston and Le Heron, 1992, 1758).

Government intervention

With falling export returns and rising inflation coupled with the 'oil shocks' the National Government intervened to support the economy. In 1978 they introduced 'supplementary minimum prices' (SMPs)[6] (Ross, 1987, 10-2). These were, in effect, subsidies paid to farmers to stabilise farm incomes when commodity prices fell below a set minimum price set by the Producer Boards (Roche, Johnston and Le Heron, 1992, 1753). These subsidies were in the main paid to sheep and beef farmers. Dairy farmers only received one payment in the 1979/80 year of $17.4 million as against $1109 million allocated to sheep and beef farmers from the 1981/82 year to the 1984/85 year (Le Heron, 1989, 28).

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[5] The EEC is now known as the European Union (EU) (Roche, Johnston and Le Heron, 1992, 1753).
[6] SMPs were minimum prices set by the Government and maintained where necessary by direct payments, which supplemented those provided by the Producer Boards (Ross, 1987, 10-6).

The Dairy Board continued to be the 'single desk' seller that is, the sole seller of dairy products on the international market under statutory regulations. It continued to have access to cheap loans from the Reserve Bank in order to fund its stabilisation account. Dairy farming families, like other farming families, did continue to receive the input subsidies that had been established earlier, on such things as fertiliser except that the value of such subsidies had been eroded by inflation. Marion notes:

> *Subsidies continued to be available on chemicals and fertilisers. There were subsidies available for topdressing and spreading, also regrassing after cropping. But direct taxation was high — up to 66c in the $1.*

Little impact

There is little evidence from the participants that this period showed any marked change in their way of life from what had gone before despite the 'oil shock' effects, depressed international markets, rising inflation and increased national debt. The effects on dairy farming were doubtless mitigated by the continuing support of farming by the government and the active work undertaken by the New Zealand Dairy Board which transformed itself into a leading New Zealand food marketing corporation. Further the welfare benefits of the previous era remained in place. Because talk and time were taken up with immediate farming interests, the above events appear not to have made much impact on the dairy farm women in this study. As Laura points out the immediate things were of most concern:

> *We were living very much in 'our little worlds' doing the accepted thing and trying not to make waves. Trying also to do the best we could for our children and animals — our livelihood.*

Laura's view illustrates that women were still taken for granted in the dairy farm world. Despite the passing of the *Matrimonial Property Act 1976*, they still did not see themselves as 'true' partners in the enterprise.

RESTRUCTURING AND DEREGULATION — 1984 ONWARDS

If the period from the end of World War II to 1984 saw the 'status quo' continue, that is active government support for farming, a continuation of the Welfare State, and a significant state role in the economy, the years following 1984 saw a reversal of these policies. In 1984 the Labour Party, led by David Lange, defeated the National Party and set about instituting new economic policies, which sharply curtailed the role of the state in economic matters.

Opening up the economy

By the early 1980s it was clear to many economists and officials that significant changes were required (Hawke, 1987, 1-10).[7] The previous interventionist government had attempted to prop up the stagnant New Zealand economy, not only by subsidising farmers, but also by overseas borrowing and intensive capital development such as the 'think big' energy projects.[8] For many economists the way to correct the imbalances in the terms of trade in the New Zealand economy was by opening the economy up to international market forces, while at the same time reducing the role of the

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[7] In the 1980s there were changes made in the organization and management of the economy. Thus began a period of restructuring. New Zealand had become involved in a more developed global economy. Some researchers have written recently about the world economy, which has become to be known as 'globalisation' (Cox, 1994; Fagan and Webber, 1994; Kelsey, 1999; Le Heron, 1996; Larner, 1993; Lidgard, 1998). Le Heron (1996, 22) defines globalisation 'as a process of deepening and changing links throughout the global economy. It is a powerful force reshaping the geography of world economic activities' or as Peter Dickson (1986, XIV) in his preface states: 'globalisation is a complex set of processes which operate very unevenly in both time and space'.

[8] These were based on the oil and gas fields of Taranaki and involved building a methanol plant at Waitara, the natural gas to petrol plant at Motunui and the enlargement of the oil refinery at Marsden Point near Whangarei. They were designed to make New Zealand more self-sufficient in energy.

state in relation to the economy. All this was to have a significant impact on dairying and dairy farm women.

The removal of government support

If in the 1950s, 1960s and 1970s farming was seen to hold a position of importance with the government of the day, that position altered in 1984. The incoming Labour Government, which set about initiating a process of restructuring and deregulation, drew its support in the main from urban seats. Further, the declining rural population (see Table 8.1) also meant that the number of urban and 'mixed character', that is part urban and part rural, electorates increased.

Table 8.1: New Zealand's Percentage of Rural and Urban Population: 1946 – 1996.

	Percentage Rural	Percentage Urban
1946	39.6%	60.4%
1956	37.3	62.7
1966	22.7	77.3
1976	17.0	83.0
1986	16.2	83.8
1996	15.05	84.95

Source: Department of Statistics 1946-1996, Statistics New Zealand, 1998

The government, committed as it was to a market economy, removed all subsidies paid to farmers (see Table 8.2) and in 1986 the Dairy Board's access to cheap Reserve Bank credit was removed (Begg and Begg, 1997, 172). Under *The Dairy Board Act* 1988 the New Zealand Dairy Board was no longer accountable to the government and became responsible for its own decisions on borrowing, investment and milk price setting (Begg and Begg, 1997, 172). No longer did the government underpin the dairy industry and the government clearly stated that the Dairy Board acted on behalf of dairy farmers. The dairy farmers, and the vertically integrated industry (see Figure 8.1) they controlled, were now out on their own. The National Party, which returned to power in 1990, continued the process of deregulation and restructuring initiated by the 1984 Labour Government.[9]

Dairy Board reaction

The Dairy Board reacted to these conditions by cutting the initial payout for milkfat from a basic price of $4 per kilogram to $2.55 (Dunn, 1986, 2). This in turn depressed farm values while at the same time interest rates rose steeply. Those farmers who carried substantial mortgages were placed in jeopardy as their equity in the farm had been effectively removed. If events in the past had not had a great impact on dairy farm women by now the impact was being sharply felt as Gladys graphically points out:

> *We had a kick in the guts from the Lange Government. It made me feel bitter. We had worked very hard to get our farm. It seemed we were starting all over again.*

However, I do not think that Gladys's reaction considers the widespread support that dairy farmers had received from previous governments nor the structure of which dairy farms are part, and through government regulation operate as a single seller of dairy produce on international markets. This

[9] Under the *Dairy Industry Restructuring Act 1999* (*Dairy Exporter*, September, 1999, 78) the government passed enabling legislation making provision for the creation of a mega co-operative with the merger of the two largest dairy companies in New Zealand — The New Zealand Dairy Group and the Kiwi Dairy Company. This took place in 2001.

Table 8.2: Selected Indicators of Changing Conditions for Pastoral Farm Production (adapted from Sandrey and Reynolds, 1990; and Willis, 1992 cited in Nolan, 1994, 2).

1963 Assistance for Pastoral Farmers.
- Modified tax deduction schemes.
- Subsidies were established on transport and fertiliser.
- Government finance available.

1964 Input Subsidies.
- Fertiliser subsidies extended to cover price, transportation and application.
- Farm finance packages; farm amalgamation assistance, research finance.
- Assistance during hardship and drought; stock retention, diversification.
- Catchment Board subsidies.

1976 Input and Output Subsidies. Price Support.
- Stabilisation schemes.
- Farm income equalisation.
- Livestock incentive scheme.
- Further fertiliser and lime subsidies.
- Credit and suspensory development loans.

1977 Common Custom Tariff on Lamb Imports.

1978 Introduction of 'Supplementary Minimum Price' (SMP) Scheme.
- Land development encouragement scheme.
- Exchange rate policy to provide incentives to exporting industries.

1978 Introduction of Vendor Finance Scheme.

1982 Freeze on all Wages and Prices in New Zealand.

1984 - 1987 Changes Specific to Agriculture Included:
- An end to 'Supplementary Minimum Prices'.
- The deregulation of the meat industry, the egg industry, town milk industry, the fertiliser industry, fruit distribution industry, the tobacco industry, and the wine industry.
- Producer boards charged commercial rates of interest.
- Removal of fertiliser, transport, irrigation and water supply subsidies.
- Removal of subsidies on noxious weeds, farm vendor finance and investment allowances.
- Product inspection fees reintroduced.
- Government services charged at full recovery cost rates.
- Removal of land development tax concessions.
- Major change to the 'Livestock Standard Value System'.

Changes in Economy Included:
- The floating of the exchange rate.
- Changes in the monetary policy.
- Tax changes.
- Changes to the import licensing and industry assistance.
- Changes in the regulation of financial markets, product markets, labour markets and state owned enterprises.

vertically integrated agro-industrial system (see Figure 8.1), which operates at three levels (milk producers, milk processors, international marketers), had effectively restructured itself. The NZDB had become an international marketing corporation, while at the processing level the eight dairy companies which operated in the Waikato in 1971 had been reduced to two (Begg and Begg, 1997, 167). Thus dairy farming families were cushioned to some extent against the government's restructuring.

Adjustments

In response to the economic downturn the farm women had to make adjustments in order to meet the challenge of a declining farm income. There was no indication from the participants that they became politicised despite their reaction to government restructuring. From the participants' replies it appeared that it was farm expenses that loomed large in their minds.

One strategy was to cut down on personal spending such as new clothes or luxuries (ice-cream, chocolate biscuits) from the supermarket. Holidays were foregone and some women sought off-farm work as a way to supplement the farm income. Fertiliser spending was reduced, although not on every farm as its importance in maintaining farm production was recognised. The employment of relief milking staff was also reduced and this meant the farm women had to cover for the absence of such staff. Similarly, any dispensing with farm labour meant that these tasks became wife and husband efforts. Strict farm budgeting both for the farm and household became critical. Penny, Jean, Fiona, Debbie, and Marie all detail the various strategies they employed to face this economic downturn:

> *If we experience economic downturns we have to live within our budget. That means I look seriously at our outings and have taken to bush walks instead of paying to go to amusement parks, as an example (Penny).*

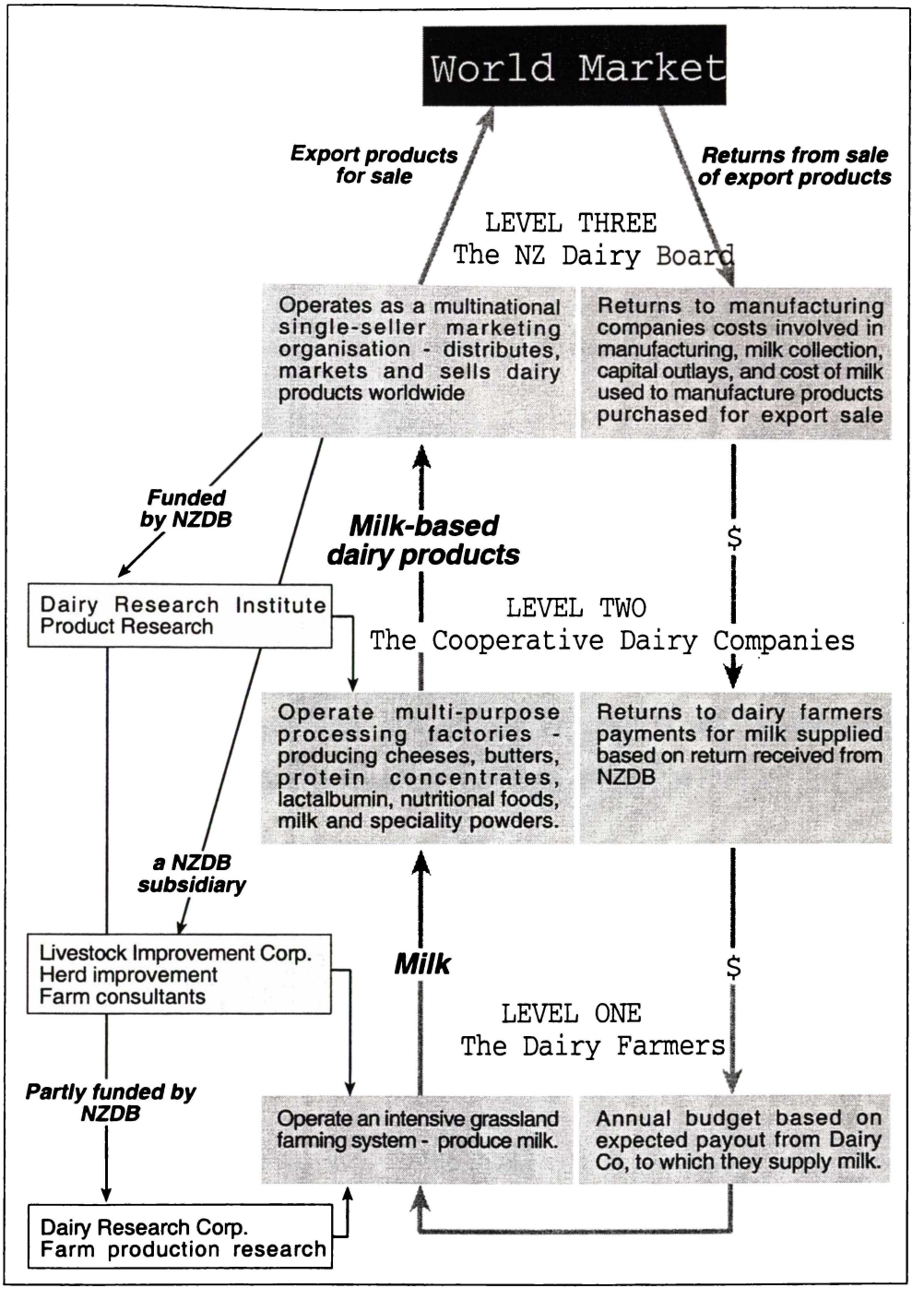

Figure 8.1: The vertically integrated dairy industry - a *structure* which encompasses the dairy farm and through which *dairy farmers* are actively involved in all stages of the processing of their milk and the ultimate sale of the products processed on the international market.

We cut down on any spending where applicable, such as relief staff and I would cover. We cut down on any development work that is less fertiliser etc. (Jean).

Stop spending! Less spent on farm and we cut labour out by doing it all ourselves. Rented the farm cottage out and I sought outside employment (Fiona).

The farming downturn in 1986 and the crash of 1987 strained things. We had to cut back drastically on farm spending, such as herd testing, maintenance, but not fertiliser. Personal spending was also cut back — I had no new clothes for two years! (Debbie).

My husband and I made decisions together. We took care with our spending but didn't scrimp on major purchases such as fertiliser that would affect our milk production and animal health (Marie).

Changing outlook

However the participants who faced these changes on dairy farms no longer saw themselves as subservient in a male orientated world. While they did not take an active part in the feminist movement they had absorbed much of the changing social outlook in New Zealand. No longer was it considered contrary to social convention to seek employment off the farm to help supplement the farm income, even if they did not always feel comfortable doing so. For June, Beth and Phyllis who farmed in the 1980s and 1990s going to work off-farm was a financial necessity:

I went to work to pay the bills. This farm was not a living at that time. We couldn't have existed financially if I hadn't worked fulltime (June).

When the dairy payout crashed in the mid 1980s it was the first time that I had to go back to work off-farm just to help make ends meet (Beth).

I went to work just to make ends meet such as buy the groceries etc. We had bought this farm and were into our second season on it (Phyllis).

No longer did dairy farm women see themselves as being a 'sleeping' partner in the farm partnership that is where they took no direct part in farm management. If previously it was a partnership formed for taxation purposes they now began to see that partnership in a wider dimension. For them it was a partnership of equality in which they shared in farm management. On Census forms well over half of the younger group identified themselves as farmers. This change in outlook is exemplified by the comments of Avril, Gladys and Fiona:

> *We used the Matrimonial Property Act to transfer half of the farm to my name (Avril).*
>
> *My mother would never put on a form that she was a farmer even although she milked and did farm work. Ideas have changed (Gladys).*
>
> *I always identified myself on a census form as a dairy farmer (Fiona).*

A further sign of the new outlook was the farm women's reaction to visiting stock agents or salesmen. If the women had changed it did not always extend to the business community, which serviced the farms. Many were still male orientated and on arriving at the house asked to see, 'the boss'. Marie, Emma, Fiona, Kathleen, Karen and Zelda all narrate that they did not find it acceptable to be treated as less important than their husbands in relation to farm business. They all see themselves as equal partners in the enterprise:

> *If they called at the house they would mostly want to talk to my husband (Marie).*
>
> *Stock agents did not involve me to start with but I made it plain that I was a 50% partner. One stock agent we chose not to deal with because of his male chauvinistic approach (Emma).*

Sometimes I feel accepted as an equal partner but there are stock agents who are extremely sexist. I hate being referred to as 'the little woman' as one salesman does. He will never get any of our business (Fiona).

When I first lived on the farm in early 1980s farming mail was addressed to 'Mr Farmer' (Kathleen).

Women were not encouraged to attend Dairy Company meetings and suppliers letters were addressed – 'Dear Sir', later 'Dear Sir/Madam' and now 'Dear Supplier' (Karen).

Some women do attend dairy company meetings, but it can be very annoying when they overlook you. Phone calls in particular when they have no desire to speak to me. On occasions my husband has had to ask me for the information anyway. But the situation is improving (Zelda).

A further aspect to this changed outlook on the farm partnership was the passage of the *Matrimonial Property Act* 1976. As a consequence of its passage into law, some couples saw the need to establish a legal partnership that clearly set out how their joint assets were to be divided in the event of a marriage breakdown — a much fairer situation from what happened in the past as Zelda notes:

The Matrimonial Property Act has resulted in the wife receiving a share of assets rather than get nothing — much fairer in most cases.

Banking arrangements by now also better reflected this partnership of equality and the need for farm women to have access to money in their own right. By the 1990s joint cheque accounts became universal often with one joint account for the farm and another for household and clothing expenses while in some cases the participants had their own personal accounts. Priscilla, Joanne and Pam all exercised a degree of financial freedom through the operation of bank accounts:

I do not get a spending allowance for myself but can draw on our personal living expenses. We have a joint cheque account (Priscilla).

We have a joint cheque account and I also trade under my own name (Joanne).

I could buy what I want which isn't much. We have a joint account and a set amount goes into a private account each month (Pam).

Drastic as the changes were, it is obvious from the comments of the participants that a new outlook had emerged amongst the farm women. They were no longer willing to be taken as inactive partners in the enterprise and it was their actions, as much as their partners, which enabled the farm to survive in changing economic conditions.

New tasks

These changing economic circumstances also brought about new tasks. In order to farm successfully there was now a greater emphasis on the financial management of the farm, and many dairy farm women widened their sphere of operations. If changing household technology reduced the time women had to spend on household tasks, other demands came to take up the available time. For those seeking credit, banks demanded detailed financial budgets, cash flows became important, and the introduction of the Goods and Services Tax, GST[10] meant that detailed financial records had to be kept. The farm women also realised that they were paying for accounting and financial services much of which they could do themselves by acquiring the knowledge, if they had not acquired such knowledge prior to marriage. They furthered their book-keeping skills and knowledge of financial management by attending courses, seminars on GST and discussion groups and by

[10] GST, which came into effect in 1986, is a tax on the consumption of most goods and services in New Zealand. It is charged at the point of sale, now at a rate of 12.5%. For farmers many of their purchases are inputs, that is they are the purchase of items required to produce the final product. They claim back the tax paid on these items hence the need to retain and file receipts showing the GST paid.

reading financial management topics in farm magazines. The availability of home computers greatly aided this work.

Financial management, now a much more important part of farm management, became part of the farm women's work and thus extended the 'multi–tasked' nature of their daily work as the comments by Kathleen, Sarah, and Penny demonstrate. They farmed in the 1980s and 1990s:

> *In the 1980s we purchased a computer and now have all financial and herd records on it. We do cash-flows for the bank manager, GST returns, grass and fertiliser recording and stock reconciliations. This has made a huge difference to our accountancy bills, reducing them by $1000/year (Kathleen).*
>
> *The introduction of GST meant a lot more input into paperwork and polishing up of bookkeeping skills. I attended courses put on by our accountant to learn how to do our GST returns (Sarah).*
>
> *The financial records are maintained by computer on a programme called 'Cash Manager.' I have recently changed from manual cheques to computerised banking by 'Directlink' through the National Bank (Penny).*

Marie likewise was involved in the financial management of the farm. She however was conscious of the fact that 'time–saving' household appliances did not bring increased leisure time but rather time to undertake other tasks:

> *Life was made easier with the time saving devices but I guess it was just as well as I spent a lot of time doing GST. On hindsight though it was good to have monthly balances and it helped us with our cash flow and budgets, which were vital when payouts went down (Marie).*

Just as financial records are important to farm management so too are farm and stock records. Increasing herd sizes and the necessity to keep track of all farm animals in the herd, has given rise to another area of record keeping which often falls to the dairy farm women. Farm herd records showing the

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For dairy farmers, the final GST on the sale of dairy products, is paid by the New Zealand Dairy Board (NZDB) (Inland Revenue Dept. IR 120G, 1997).

breeding and production of individual cows are necessary in order to cull from the herd non-producing cows or to provide information to buyers. A buyer purchasing a farm will more likely be impressed with the production index and breeding records of the cows in the herd rather than with just viewing the animals in the paddocks. Now not only are dairy farm women an extra pair of hands on the farm or in the cowshed but they are also financial and farm administrators whose work and knowledge is critical to the successful operation of the farm as Pam, Debbie and Marie, who farmed in the 1980s and 1990s, point out:

> *I keep and do all farm and financial records. I keep an animal register, calving dates and herd testing results, grass rotation records, finances and budgeting (Pam).*
>
> *I did all the administrative work and was totally responsible for both farm and financial records. My husband had very little to do with that side of farming (Debbie).*
>
> *Yes! I do all farm and financial records. On the computer I have herd records, pasture records, GST returns, mating and milk production figures (Marie).*

The effects of a declining population

The declining rural population and the shift to a market economy has had other effects on dairy farm women. Many services in rural towns have vanished with the closure of post offices, banks, stock and station agencies and rural hospitals, not only making access to these services more difficult, but reducing the jobs available for off-farm work in the local community. The rural communities are now dispersed and farm women are forced to travel greater distances in order to access these services and this involves added expense and time as Joanne records:

> *The amalgamation and privatisation of many rural services means centralisation of those services provided. This means adding time, delays and expense. We also have longer distances to travel.*

SUMMATION

While the participants, through their comments in this study, did not display any direct public involvement in politics or other issues they did show that these matters were of concern to them. For the greater part of the period (1946-1996) covered by this thesis, the farming world in which they operated was treated benevolently by the state. Following their experiences of the 'Great Depression' of the 1930s the dairy farmers sought, like most New Zealanders, security. The National Party, which came to power in 1949, was very much a farmer's party and it was sympathetic to the endeavours of farmers to gain this security. The National Party remained in power for all but six years until 1984. The participants expressed the feeling of security engendered by the policies followed by the governments of the day.

Following the election of the Labour Party to power in 1984 a radical restructuring and deregulation of the economy of New Zealand was undertaken in response to changing international conditions. This restructuring and deregulation saw the removal of the state structures that underpinned farming in New Zealand. As the dairy industry now faced market forces, dairy farming women were faced with new challenges and tasks in order to ensure the economic viability of the farms in which they were partners. A new generation of dairy farm women had emerged no longer content to play an inactive role in the farming enterprise. The 1980s and 1990s have seen them assume added areas of responsibility and increased participation in farm management.

CHAPTER NINE

CONCLUSION

This thesis has a twofold objective. First, I wanted to investigate structural changes that had taken place and affected dairy farming in the Waikato from 1946 to 1996. Secondly, I aimed to show how these structural changes affected the working and social lives of dairy farm women.

This is an interdisciplinary study that sits at the crossroads of geography, history, feminism and sociology. I drew on insights from structuration theory. Agency and structure, the constructs proposed by Anthony Giddens and developed by others (Dear and Moos, 1986; Moos and Dear 1986) were appropriate propositions when analysing data which dealt with the actions of agents (dairy farm women) acting within the structures that influenced their lives.

Giddens maintains that the structures are organised by human agents and that these structures only exist through the practices of human agents who reproduce human life. It is human agency that influences the meaning of the environment by building up social structures, which may be challenged or negotiated. As Giddens, in the works that I have used, does not deal with gender dimensions I have drawn on feminist geographical work to provide the project with a critical edge.

The methodology, methods and techniques, used to explore changes affecting dairy farm women were shaped by my theoretical perspective. I set out to acquire from a wide area of the Waikato Region, a group of dairy farm women of various ages, as participants for the research investigation. Data

was collected through telephone conversations and postal questionnaires and finally collated and analysed.

While it is the dairy farm structure, which is central to the lives and work of dairy farm women, there are also other overarching structures, which have changed and influenced their lives. The dairy farm is part of the vertically integrated dairy industry, which operates at three levels. At the first level is the dairy farm, at the second level the co-operative dairy factories and at the third level the marketing division. In 1946 this structure was one with many small dairy factories, selling through its state organised marketing division largely butter and cheese on a single market, the United Kingdom. By 1996 it had become a structure dominated by two large co-operative dairy companies, operating a few large multi-purpose processing plants and selling its products on international markets through a corporate marketing division.

Changes have taken place in the structure of government, which for much of the period under study was one which actively supported and cosseted farmers. From 1984 onwards through deregulation and restructuring this structure no longer plays a part in directly supporting farmers or the vertically integrated dairy industry. Farmers are now responsible for how they run their farms and how they run and organise their industry.

Apart from these overarching structures there is the social structure or the community in which the dairy farm women interact. This has gone from one based on a local community to a much wider one. At the same time changes have occurred in social outlook resulting in dairy farm women becoming more visible and thinking about themselves in a changed manner.

One needs to note that all these changes have not occurred in isolation but are interconnected and influenced by what has taken place politically, economically and socially in both the national and international arenas.

Further, underpinning what has taken place, are technological changes, which both promote change and result from change. It is against this changing structural background that I draw my conclusions in relation to the lives and work of the dairy farm women who participated in this study.

During the period 1946–1996 the participants in this study continued to be involved in the work of the farm but under circumstances that have changed markedly over the period of the study. The increasing intensification of dairy farming, brought about by the need to increase production, and at the same time keep down costs, has seen increases in farm and herd sizes resulting in changes in the way the farm is managed and the cows milked.

Increasing herd sizes, and the need to keep milking times to a minimum, has brought about the introduction of the herringbone and rotary cowsheds with automatic washing facilities. This has greatly changed the conditions dairy farm women face in the cow shed since the end of World War II. The task of milking has been simplified and the time spent on this task reduced, or in some cases, held constant, despite the greater number of cows being milked. The participants were still involved in calf rearing, a task that has been traditionally performed by dairy farm women. Technological changes, such as the calfateria, now enable them to handle the greater number of calves kept as replacement stock.

With mechanisation many of the manual jobs associated with such tasks as fencing and drain clearing, are now undertaken by machines. The advent of the tractor saw the disappearance of the horse. Whereas, in the 1940s the participants reported that they were largely involved with milking and calf rearing, in latter decades they reported involvement in a greater range of farm tasks. Mechanisation has reduced the time and physical effort that these tasks required. Now they are involved in tractor driving during hay or silage

making, shifting electric fences, feeding out, spreading fertiliser and bringing in the herd for milking using a four-wheel farm bike.

If the younger participants were engaged in an expanded range of farm tasks, there emerged another aspect of dairy farming which brought additional tasks. Increased herd sizes brought about the need for detailed stock records. The restructuring carried out from 1984 onwards brought about a corresponding need for keeping detailed financial records and careful budgeting. The participants have shown that it is dairy farm women, who have, aided by the computer, risen to the challenge, and undertaken this work. Furthermore they are the ones who have founded and run discussion groups and aimed to better prepare themselves for these tasks.

Apart from these expanded farm tasks the participants were still engaged in domestic duties and the nurturing of children. If mechanisation has changed the nature of work on the farm, rural electrification and the wide spread use of electrical appliances have brought changes to household work and in some ways lessened the need for farm women to be tied to such work as in the past. The use of these appliances enables more than one task to be undertaken at a time. This gave the participants greater flexibility in how they organized their time and enabled them to undertake other tasks. While they are still engaged in household tasks and child-care, they now find superimposed on their available time, such tasks as farm administration or farm related work.

While the farm still remains unique as the site of home and work, the house is now a more central part of the operation. In the past the home was largely the place where the family lived, slept and consumed food. Today it has become in addition, an administrative area, where with the aid of the computer, financial and stock records are attended to. With an increasing

reliance on telecommunications, through not only the telephone, but also the answering machine, the fax, and e-mail, the home has become a place where messages come in and go out and also transport is arranged. It is the participants who have become central to the administrative and coordinating side of the farm operation.

Not only have the tasks undertaken by the participants expanded, but so too has the range of spaces in which they work. In the immediate post-war years life was still largely centred on the local community and visits to the nearest service town were infrequent. The increased availability of the car, plus improved roads, led to increased mobility. The participants now travel to the nearest service town for their shopping, as do their children for their intermediate and secondary schooling. This in turn has resulted in local communities, based on the local school, store and dairy factory, declining as these local services have closed down. Restructuring since the 1980s has also played a part in the decline of local communities. To achieve efficiency and cut costs many small post offices and bank branches have shut down thus adding to the necessity to travel to the nearest town in order to access these facilities.

Further the interests of the participants outside the farm and home in such things as clubs and sporting activities also became centred on the nearest town or city, as did those of their children, although some transactions can now be conducted from home through telecommunication systems, for example phone and internet banking. The operation of the farm also adds to this travelling as the participants are called upon to collect equipment required on the farm or to deliver broken equipment for repair. Children also make demands when they are engaged in sporting teams, school or club activities based on a wider catchment area than in the past and need to be

transported. The participants became in effect transport carriers for the needs of the farm and the family.

To this end the participants became multi-tasked. As well as being mothers, child carers, housekeepers, they are also farm administrators, farm coordinators, computer operators, transport providers, milkers, and general farm workers. It is these *varied tasks,* which become intertwined throughout the day or week.

A significant change that has occurred from the 1970s onwards is one that is not as visible as technological changes or the decline of local communities. This change rests on a changing social outlook, which in turn has resulted in a change in the way that the dairy farm women perceive themselves. While not actively involved in the 'feminist movement' they have none the less been influenced by it, and absorbed its message of feminine equality. The older generation of participants farming in the 1940s, 1950s and 1960s described themselves as housewives or farmers' wives while those, who farmed from the 1970s onwards, described themselves as farmers or farming partners. This change is further evident in their attitude towards men visiting the farm on business who still think in terms of the husband as the 'boss'. They were no longer prepared to accept this gendered outlook.

In the case of the participants farming in the 1940s, 1950s and 1960s they formed partnerships with their husbands for taxation purposes and saw themselves as 'sleeping partners' in the enterprise. The younger group of participants, especially following the passing of the *Matrimonial Property Act 1976,* saw the farming partnership in legal terms as a 50/50 partnership in which they played an active part as a partner. Furthermore, because of their involvement in the administrative side of the farm, they saw themselves as

the partner with the most knowledge about the animal records and financial matters pertaining to the farm.

The organisations to which the participants belonged also reflected this change in outlook. For the older group this was the WDFF or CWI but the younger participants saw these organisations as irrelevant and no longer meeting their needs. They were not interested in belonging to an organisation that dealt mainly with domestic matters. The younger group were more likely to involve themselves in farm women discussion groups dealing with matters of more fundamental concern to farming, such as farm management, record keeping, budgeting and tax returns. The members of these groups now see themselves as an important part of the farming economy of New Zealand in a manner, which was not contemplated in earlier decades. They further see a necessity for dairy farm women to be involved also in the dairy industry by attending dairy company meetings and putting themselves forward for election as directors on the dairy company boards.

This change in social outlook has seen the participants, apart from the expanded role they have taken on in farm administration and farm work, move beyond the farm and engage in off-farm work. In this, they reflect what has happened in society in general, where increasing numbers of women are continuing to participate in the work force after marriage. Whereas previously, in earlier decades amongst the older participants, such off-farm work was unusual or not contemplated because it was against the social 'mores' of the time. For the younger women it is now considered quite normal. These younger participants have higher educational qualifications at secondary and tertiary level than their predecessors and for them it is a case of putting these qualifications to use after marriage and continuing the careers which they had established prior to marriage, for example teaching, financial services, nursing or secretarial work.

For some of the participants, engagement in off-farm work was a result of economic necessity, such as in the 1980s, when farm incomes fell with a corresponding fall in the equity of the farm from falling land prices. The farm's survival, as an economic unit, depended on the additional income brought in through off-farm work by the wife or partner. For women living in a rural situation the increased mobility brought about by the car and the two car household has helped make this possible.

This movement, as shown by the participants, to undertake off-farm work underlines the basic resilience of such women. Dairy farms are still predominantly family run farms that is, they are operated by a husband/wife/partner ownership. Such farms have shown they have the flexibility to survive and adapt to the forces of economic change in a capitalist society (Little, Taylor, Mclintock, 1997, 39). Apart from their paid off-farm work, it is also the work of women on such farms that enables the family farm to adjust to periods of economic downturn. In times of economic prosperity, labour may be employed, only to be dispensed with, when economic conditions change for the worse. It is the wife/partner who undertakes the tasks previously carried out by the farm worker.

In summary, it can be seen that technological changes both in the domestic and farm sphere made time more flexible for the participants, enabling them to undertake more than one task at a time, or undertake new tasks. Mechanisation on the farm has opened up more avenues for them to participate in farm work and because the farm has become more of a business, the participants became involved more in the administrative side of the farm. The home became a focal point on the farm where increasing administrative business was carried out. They became transporters as well as couriers and many became engaged in off-farm work. Changing social attitudes brought about a changed view as to how these participants now

saw themselves. No longer were they willing to describe themselves as housewives or mothers, but rather as farmers. Their self identity had changed.

Analysis revealed that meanings of change were constantly reformulated by the participants over the 50 years covered by the project. Dairy farm women are still undervalued and unacknowledged but they are not as invisible as they were in the past. They are more assertive as they are now legal partners in the enterprise. They have gone from being financially dependent on their husbands to seeing themselves as legal partners with equal access to cheque accounts. Furthermore, apart from being actively engaged in the work on the farm they have taken steps to set up their own organisations with the aim of making themselves better informed on the issues that confront dairy farmers.

This analysis is limited but my aim was not to be exhaustive but to offer examples of changes, which impacted on the lives of dairy farm women. My analysis of changes and the effects of these changes has been aided by an engagement with dairy farm women and their willingness to reveal their knowledge and share their experiences. Researchers and policy makers need to recognise and take into account the extent to which dairy farm women are already involved in paid and unpaid activities. Also the perspectives and interests of these women need to be taken into account in policy decisions, particularly regarding equality and equity in the home, on the farm and in the community. An examination of the validity of traditional concepts of work is necessary particularly in relation to the division of labour on family-run farms.

This research involved dairy farm women in the Waikato Region — a traditional dairy farming region, based largely on family run dairy farms.

Changes are taking place which may affect the present role of women on dairy farms. The position of the smaller family run dairy farm is under threat due to rising costs limiting its profitability (*Dairy Exporter,* June, 1998, 30; Waugh 1998, 6–8). Large dairy farms milking between 500–1000 cows require a full time manager in order to oversee the operation and deal with administrative work (Waugh, 1998, 6). These operations are sometimes financed by equity partnerships, that is, more than one person owns the farm, their share being determined by the amount of capital they have invested in the enterprise (Macmillan, 1999, 6-7; *Dairy Exporter,* May-June, 2000, 126-127). In the newly emerging centers of dairying in Southland and Canterbury, where sheep farms have been converted to dairy farms, many of these larger farms exist. On these farms new structures within the farm may emerge which could affect the position of women on such farms. This is another area of study which could be undertaken.

The dairy farm women's contribution, despite their multi-tasked involvement at the farm level, is little recognised on the governance boards at the manufacturing and marketing levels of the vertically integrated dairy industry. There is a male orientated ethos in the dairy industry at these levels which does not accept a place for dairy farm women. On the board of Kiwi Co-op Dairies, out of 16 directors, there is only one woman. Out of the 13 directors on the board of the NZ Dairy Board there is only one appointed woman. Of the 12 directors on the board of the NZ Dairy Group there are no women (Christian, 2001, 36-37). Researchers need to investigate reasons why women in agriculture are not moving up to executive positions or being elected to governance positions in the dairy industry.

While not directly related to the changing role of dairy farm women there is a wider area associated with dairy farming in which women are playing an expanded role as service providers. Many of the people employed today as

farm consultants, veterinarians, herd testing technicians, and agricultural research scientists are women. Of the signed articles in the *Dairy Exporter* (January, 1998), 28 % were written by women and of the Consulting Officers listed for the Dexel Consulting Officer Service in the *Dairy Exporter* (March, 2001, 13), 47 % were women. Dairy farm women are increasingly encountering women as service providers or seeing them as scientists engaged in dairy research. Further research needs to be done about the contribution of these women to dairy farming.

Although dairy farm women under the *Matrimonial Property Act 1976* gained legal parity there is scope to examine the power relationships that exist between couples in dairy farm partnerships. From the replies given by the participants in this study it is obvious that while women engage in 'men's work' there is little evidence of men engaging in 'women's work'. To what extent are women still seen as primarily concerned with domestic matters and while actively engaged in farm related tasks do not share equally the same power as the male partner? Is this still a 'one sided' division of labour which does not give due recognition to the contribution of the female partner? Further investigation of 'men's work' is also needed. One cannot merely assume who does typically 'male' and 'female' work. If researchers do not go out and see what exists in this sort of detail, indications of change may be missed. Also the position of farm women owning and running dairy farms on their own, as well as women sharemilkers, calls for research.

Social scientists need to examine the institutions and practices, which maintain and produce gendered divisions of labour. Also the family and its ideology along with an examination of the extent to which ideology influences participation in particular work activities requires examination (Anderson, 1993, 294). Without such analyses our understanding of changes in the way the New Zealand family dairy farm operates today will be

limited and more over dairy farm women's contribution to the farm and through that to the dairy industry will continue to be unrecognised and undervalued.

By surveying the social, technological and economic changes that have impacted on dairy farm women from 1946-1996, one is made aware of the challenges that dairy farm women and dairying in general have faced over this period. That these challenges have been faced and overcome is in no small way due to the contribution of dairy farm women. This is a contribution, which has played a vital role in raising the productivity of New Zealand dairy farms, and hence contributing to the national economy, yet it is a contribution that has gone largely unacknowledged. Nor is there any indication up to the present that their skills and knowledge have found a ready place in farming organizations, or on the governance bodies of the dairy industry. As Margaret Alston (1990, 25) says ' . . . the ideology of male hegemony, which is prevalent in agriculture, does not allow due recognition to the work farm women do'.

APPENDICES

APPENDIX A

Instructions and Questionnaire

DAIRY FARMING WOMEN IN THE WAIKATO : QUESTIONNAIRE

All information is Confidential Participant's No:_____

The main purpose of this research is to address the following questions.

1. How has the work of women on diary farms changed from the end of World War II to the present time?

2. What has brought about these changes?

3. How have these changes affected the lives of dairy farming women?

---

1. Please choose **ONE** of the six time periods listed below.

2. Choose one that interests you and try to recall answers as if you were still living in that time period.

3. Answer <u>all sections</u> focusing on your chosen time period.

Time Periods

1940s or 1950s or 1960s or 1970s or 1980s or 1990s.

Which time period have you chosen? **19.... s**

The term husband is used in the question but this can be interpreted as partner or other.

Researcher:- Margaret Begg
69 Knighton Road
HAMILTON

Affiliation:- Dept. of Geography
Waikato University
HAMILTON

Phone (07) 856-0323

A. Background Information

1. Where were you born? .....

   In what age bracket are you now? (please circle e.g. 20-29)

   20-29 30-39 40-49 50-59 60+

2. Where were you brought up (e.g. rural area, small town, city, overseas)? .....

   Did you continue to live in the same area? .....

   If no, why did you move? .....

3. Did you attend secondary school? ..... If Yes, for how long? .....

   If yes, did you obtain any qualifications at secondary school?.....

   Any further qualifications since (e.g. commercial, trade, diploma, degree etc.)?.....

4. Did your husband attend secondary school? ..... If Yes, for how long? .....

   .....

   Did he obtain any qualifications at secondary school? .....

   Any further qualifications since (e.g. commercial, trade, diploma, degree etc.)? .

5. If you are retired are you continuing to live on the farm? .....

   If not, where did you move to? .....

   If not retired, do you and your husband intend to continue living on the farm when you retire?.....

6. Where was/were your farm/farms (location,road,district)? .....

   How long had you been farming? .....

   What was your situation of the farm e.g. owner, sharemilker, contract milker, or other? (please state) .....

7. If you were owners what was the nature of the ownership e.g. you solely, husband solely, jointly with husband, legal partnership, family, company, or other? (please state) .....

   .....

   What was the area of the farm? ..... acres ..... hectares

   What was the size of the herd? .....

   Did you own part or all of any other property? .....

(A Continued)

8. Did you employ labour? .....

   If yes, was this full-time, seasonal or contract? .....

   If yes, did you cook for them and do their washing? .....

   If yes, did you actually receive money for these services? .....

9. In your household who lived with you (adults, children - under 16 yrs)? .....

   .....

   Did anyone require special care (e.g. elderly, handicapped children, etc.)?.....

B. <u>Work Experiences</u> (farm, domestic, off-farm work)

In your chosen Time Period -

1. What did you think of women working on the farm? .....

   What did you think of women working off the farm? .....

   Did your husband approve of either of the above? .....

2. Did other family members help with housework? .....

   If yes, in what way? .....

   What did your husband do around the house? .....

   If you worked on the farm was the housework shared equally? .....

   Was housework as important as farm jobs? .....

   Why/why not? .....

3. Have you been in paid employment since farming (apart from farm income)? .....

   If yes, for how long, what did you do and where? .....

   .....

   If yes, what was your reason for this? .....

4. Did your husband work off the farm? .....

   If yes, what did he do and what were his reasons for doing so? .....

   .....

   Did this affect the amount of farm work you and family members did on the farm? .....

5. Did you work on the farm? .....

   What kind of work did you do on the farm? (milking, feeding out, etc.) .....

   How many hours approximately a week would this be? .....

   Did you receive money for this work? .....

(B Continued)

6. Describe how you did farmwork in your chosen time period
For example: your time spent in the cowshed - kind of cowshed - milking machines (electric or otherwise) - feeding calves - how was milk taken to dairy factory? How long did it take? Cleaning shed - spraying ragwort etc. How? Fencing - haymaking etc. .....

7. Describe other activities or work that you carried out. For example: gardening, keeping hens etc.

8. Who made the decisions regarding seasonal planning? .....
Who made the decisions regarding the day to day running of the farm? .....
Did your children at any stage work on the farm? .....
If yes what did they do? .....

9. Write up the main things you did in other seasons in the home and on the farm. For example early July did spring cleaning in the house - washed curtains, cupboards etc. because no hope of doing this at start of calving. The following chart with some examples might help.

July - August

For example: spring cleaning house - early July calving - feeding and rearing calves - most cows calve - herd testing etc. .....

September - October

For example: calf rearing and calf weaning - late calving - cut silage - most cows in milk - start AI or mating - top dressing etc. .....

(B Continued)

November - December

For example: mating continues - cut silage - haymaking - herd testing continued - peak milking - plant maize - supplementary food - cull poor producers etc. .....

January - February

For example: freezing fruit - bottling fruit - making jam - cull herd - remove bulls (if used) - haymaking - milking etc. .....

March - April

May - June .....

10. Describe how you did housework in your chosen time period. For example: washing - did you have a washhouse, copper and tubs or laundry in the house with washing machine (what make?) etc. How long (approx.) did it take you? Did you blue whites, starch tablecloths etc.? Ironing - did you heat iron on range, or was it electric, if you had an electric stove what make was it?, did you have a Microwave etc.? .....

(B Continued)

11. Please attempt to construct a one day diary from your chosen time period.

Day of week.....Month.....Year.....

Up to 7am

7-8am

8-9am

9-10am

10-11am

11-12pm

12-1pm

1-2pm

2-3pm

3-4pm

4-5pm

5-6pm

6-7pm

7pm onwards .....

12. Briefly state any particular kinds of work you did apart from routine jobs on other days. For example: shopping etc.....

C. Finances and Decision Making

In your chosen Time Period -

1. Did you have anything to do with keeping farm records and financial records? If yes, what, and to what extent? .....

2. What was your farm income (approximately) in the tax year for the year 19....?
e.g. $20,000-40,000, or $16,000-20,000, or over $50,000 .....

3. What percentage of this income was reinvested into the farm?
(e.g. 20%, 20-40%, 40%-60%, 60%-80%, or 80%-100%) .....

4. Did you get an allowance for spending on your self? .....
How did you organise your finances e.g. joint cheque account, set amount for housekeeping money and other? .....
How did you think farm family finances should be organised? .....

5. If you experienced any economic downturns, what adjustments did you have to make? .....

6. Who in your household made decisions in the following (tick appropriate column)

(a)	Family Expenditure	Me	Husband	Both
	household goods			
	clothing			
	furniture			
	holidays			
	dishwasher, fridge, etc			
	television			
(b)	Farm Expenditure			
	new farm equipment			
	buying and selling animals, etc			
(c)	Other decisions			
	finance and investment			
	paying fees			
	school fees or boarding schools, etc			

Any further comments

D. <u>Farm Interaction</u> (Marriage, legal partnership)

In your chosen Time Period -

1. If you were in a legal partnership, in what way did you think you contributed? .....

2. For what reason was the legal partnership formed? .....

   .....

   Did you share in farm management decisions with your husband? .....

3. In the wider community did you feel accepted as an equal partner? .....

   Did you think as a partner you should be invited and share in conferences, meetings, etc. as your husband did? .....

   Did stock agents, farm equipment salesmen, herd improvement advisors and others take you into their discussions, etc? .....

4. To what extent did you think the media, journalists, etc included women when they spoke of farmers and farming? .....

5. In your chosen decade how did you identify your occupation (e.g. wife, housewife, homemaker, farmer's wife, farmer, farming partner or other - please specify).....

6. In your opinion does farming lead to a successful marriage? .....

   .....

   In what ways did your life change with marriage? .....

Any further comments

E. **Children** **(child rearing, schooling, etc)**

In your chosen Time Period -

1. Who had the major responsibility for looking after the children? .....

   Did your husband help with the children? .....

   What did he do for them? .....

2. Who looked after the children when you wanted a break? .....

   Who looked after the children when you and your husband wanted to go out? .....

   Where were the children while you were milking? .....

3. Who had the most say in decisions about bringing up the children?.....

   Did you want your children to:

   (a) stay in the area when they grew up? .....

   (b) work on the farm? .....

   (c) marry there? .....

   What ambitions did you have for your

   - son/s .....
   - daughter/s .....

4. Did your children attend pre-school? .....

   If not, where was the nearest? .....

   Was there any means of transport? .....

5. How many of your children were at primary school? .....

   How many of your children attended secondary school? .....

   Did your children board to attend primary or secondary school? .....

   If so, were they State, Private, Church or other schools? .....

6. How long did it take your children to travel to school? (daily travelling time both ways) .....

   What means of transport did they use? (e.g. bus, car, bike, walk, ride pony or other).....

7. Was it difficult for your children to take part in extra curricular activities? .....

   Why/Why not? .....

8. What was it like, bringing up children on a farm? .....

   What did you like/dislike about it? .....

Any further comments

F. <u>Off-Farm Communication</u> (Amenities and Services, visit and visiting, spare-time activities, holidays)

In your chosen Time Period -

1. What was the distance to your nearest town? .....
   How often did you go and what for? (e.g. groceries, meat, clothes, etc.).....
   How much time did you spend travelling to larger towns or cities? .....
   How often did you go? .....

2. Did you have transport readily available? .....
   (e.g. horse and gig, private car, public bus, or other (taxi or other).....

3. Were the following available in your nearest town (please tick)

Doctor	Dentist	Maternity Hospital	Hospital
Vet	Farming equipment	Service station	other? (State)

4. How much time did you spend travelling to church?.....
   How often did you go to church? .....

5. How many times (approx) did you go out socially in a month? .....
   Was this as often as you wanted? .....
   If no, what prevented you from going out more often? .....
   Did friends and relatives visit you? (phone or visit).....
   Was this as often as you wanted? .....

6. How often did you talk to your neighbours? .....
   Regularly ..... Hardly ever .....
   Occasionally ..... Other (specify) .....
   In emergencies, whom did you phone first? .....
   How long did it take to get to your nearest neighbour? .....

7. How many holidays did you have in a year? .....
   If none, why were you unable to have one? .....

Any further comments on the above

G. Activities and leisure

In your chosen Time Period -

1. Did you do any community work? (e.g. youth, groupwork, hospital visits, work with the elderly or handicapped, etc.).....

   .....

   About how many hours approx. were you involved in such work? .....

2. What organisations or clubs did you belong to (e.g. women's organisations, church organisations, sports clubs, political parties, handicraft groups or other).....

3. Did you attend any courses or classes? (e.g. adult education, pottery, university, correspondence or ante-natal classes, etc.).....

4. Were there any other spare time activities, hobbies or sporting activities or interests that were not available in your area? .....

5. How many hours daily did you listen to the radio, play cards, read, watch television or other (please state)? .....

6. What aspects of your life did you find most satisfying and how could your life be more satisfying? .....

H. Changes

In your chosen Time Period

1. What changes took place on your farm and in farming generally? .....

Some examples of change are:

(a) Technological changes

In the home - electricity, telephone, electric stove, washing machine, drier, vacuum cleaner, sewing machine etc. .....

.....

On the farm - cowshed, milking machine, hot water (electric) at the shed, farm bike, truck, car etc. .....

(b) Social Changes

For example: mail delivery, joining organisations, clubs etc. Sport, social, picnics etc. Taking children to activities - how you spent your leisure time (if any) music etc.....

(c) Economic and political changes

For example: pay out, subsidies, extra expenses, taxation changes, G.S.T., Matrimonial Property Act, any new Acts, legal partnerships.....

2. How did these changes affect your life? .....

(H Continued)

(a) If the changes made life easier, in what ways did they make it easier? .....

(b) If the changes made life harder, in what ways did they make it harder? .....

3. Any miscellaneous information please add

For example: Dress - clothes worn, for example: hats, gloves, boots etc. Glory boxes and their significance.....

Education

access to education and training, especially secondary, tertiary etc. Boarding allowances, number of years most attended school, kinds of jobs available (if any).....

Health

problems, illnesses, cures, costs, access to doctors, nurses, hospitals etc. Social security, benefits etc. .....

Any further comments

Thank you for taking part and completing the questionnaire.

Spare Page for extra comments:

APPENDIX B

Introductory Letter Following Telephone Conversation

Geography Department
University of Waikato
Hamilton
Ph (07) 856.0323
9 June 1998

Dear .....

It was lovely talking with you on the phone and I am so grateful to you for your interest and help with information regarding dairy farming women. It is only the help from women like yourself that the project can get off the ground.

The enclosed questions may look overwhelming at first glance and some of the questions may not apply to all decades. These are just as a guide, as are the examples, which may help to give some idea of what is wanted. It takes time thinking about what happened in the past so just take your time.

If you wish to include another decade please feel free to do so, for example, 1940s and 1950s. If you run out of space, please use the reverse side of each page. Page 15 is also available.

I am seeking information over a broad time range, as some participants are retired and some still actively farming. This should produce information on a wide range of changes that have taken place as well as indicate the times when such changes occurred.

Please do not hesitate to ring me if you have any problems.
Thanking you once again.

Yours sincerely

PS. No stamps required on the enclosed FREEPOST envelope which is supplied for the return of your completed questionnaire.

Appendix C

Consent Form

CONSENT FORM

I (your name) ..... consent to participate in the doctoral research project 'A Social Commentary on Structural Change: Dairy Farm Women in the Waikato 1946-1996', to be conducted by Margaret Begg of the Department of Geography, University of Waikato. The purpose of the project (to explore the work of dairy farming women in the Waikato and analyse important changes and transformations in dairy farming which have affected the lives of these women) has been explained to me.

I understand that my participation in the project will included the following activities and rights:

1: Margaret Begg will observe and discuss with me my involvement on the farm. I shall fill out a questionnaire. Such observation and discussion will be recorded on paper (field notes) and / or on audio tape (recorded interview). I have the right to refuse observation or discussion, or the recording thereof, of any event or activity, and have the right to request the erasure of any record with which I am uncomfortable for any reason.

2: I understand that personal names or any other information which would serve to identify myself as an informant **will not be included** in this thesis, unless I request otherwise.

3: Margaret Begg will keep all records confidential. Field notes and audio recordings will not be destroyed upon completion of the project, but will be kept confidential and placed in a secure locked location.

4: The data collected by Margaret Begg will be used in her doctorate degree in geography at the University of Waikato. This data may also be used in articles, book chapters and presentations. Unless specified by participants, pseudonyms will be used.

5: I may withdraw from participation in this project at any time without recrimination.

_____
Signature of participant

_____(Date)

_____
Signature of researcher

_____(Date)

APPENDIX D

Letter of Thanks

Geography Department
University of Waikato
Hamilton

Dear ,

Thank you very much for your answered questionnaire. Your help and contribution is very much appreciated as I know how busy you are. I shall get in touch with you later.

Many thanks

Yours sincerely,

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