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# “It’s your whole way of life really”: negotiating work, health and gender<sup>☆</sup>

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## Abstract

Recent discussions in contemporary geographies of health have highlighted the need to understand the social contexts in which people experience health and illness. Qualitative and mixed method studies have been shown to be invaluable to such research, especially where investigations seek to understand the circumstances and responses surrounding particular conditions. In this paper, we move beyond biomedical approaches to combine methods in health research and gain insights into the complex contexts and relations affecting men’s and women’s respiratory health. Drawing on three literatures and past work on respiratory disease in selected primary industries, we report on qualitative research conducted with men and women horse trainers and vegetable growers working in southern New Zealand. We note the gendered work differences that could be affecting contrasting disease rates and focus on notions of ‘metaphor’ and ‘place’ to analyse the narratives trainers and growers construct about their health. We report that men and women negotiate a “whole way of life” that involves both specific workplaces and social relations that shape their work and health experiences. © 2002 Elsevier Science Ltd. All rights reserved.

*Keywords:* Health; Work; Gender; Metaphor; Place; Way of life

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## Introduction

Geographies of health have increasingly paid attention to the complex combination of individual circumstances and broad social, environmental and economic factors that contextualize individuals’ experiences of health and illness. For instance, Dyck (1999, p. 250) has argued that health should be interpreted “not as an individual issue but one interdependent with a range of

social, physical and political environment influences”. This multifaceted approach to health has encouraged our investigation of differences in men’s and women’s respiratory health. By studying both contrasting industries and gender differences, some basic ‘facts’ have emerged about respiratory health differences in selected primary industries (Kimbell-Dunn et al., 1999; Kimbell-Dunn et al., 2000). However, our engagement with a variety of geographic literatures has enabled us to construct a reading of how the physical, social and economic environments of different industries may contribute to these experiences of respiratory health. After a review of relevant literatures and an introduction to our own study, we show that work within horse training and vegetable growing industries affects men’s and women’s health differently. We argue that places and metaphors of work are important in understanding how men and women experience the conditions under which they work, especially when work is associated

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with “your whole way of life”<sup>1</sup>—a phrase used to accept the often difficult conditions that are faced.

### Past literature: work, gender and health

Three overlapping literatures inform this study, namely those considering: work and health; gender and health; and gender and work. However, little is known of how these three fields of interest overlap. Here, we draw on some of the key themes in these fields and go on to employ Kearn’s (1997) suggestions regarding attention to place and metaphor as we attend to what Elliott (1999) has registered as “social and environmental factors” that influence health beyond the level of individual biology.

In the case of work and health studies, a wide range of medical and sociological literature highlights the variations that exist in occupational health. Health outcomes associated with specific environmental and occupational exposures have been documented as far back as the 1600s (e.g. Ramazzini, 1940); however, occupational health in the modern setting is a vast field of ongoing research, regulation and implementation engaged in by physicians, engineers, scientists and public health professionals. Each group uses their own discipline to address the fact that working populations across the globe encounter a variety of environmental hazards, some of which are well understood and many of which are largely unknown.

Our study has also been informed by a second literature, that of gender and health. Investigations of gender and health draw on a growing heritage of work. While it remains true that women continue to live longer than men on average, they also experience a greater burden of chronic disease over the course of their lifetimes (Goldman and Hatch, 1999). Consequently: “[w]hat seems essential is to look at women’s health separately from that of men—not simply combining the data or adjusting for sex in the analysis—and to use a gender-specific approach” (Goldman and Hatch, 1999, p. 12). Current scientific literature is also becoming increasingly attentive to gender issues (London, 1998). Within geography, health issues have been noted to vary for men and women because of the biological, social and economic contexts of their lives, and the structure and culture of health services they may access in different places. In some cases this has involved “recovery” work since earlier literature has been criticized as silent or limited on questions of gender and ethnicity (e.g. Dyck, 1992; Pearson, 1989; Rathwell and Phillips, 1986). For example, Dyck’s (1995) study of immigrant women in Vancouver has shown how experiences of multiple

sclerosis are gendered and racialized in specific ways. What emerges from these types of work is a growing awareness that the wider gender relations and socio-cultural contexts that shape men’s and women’s lives also affect their health. We follow this perspective as this paper separately address men’s and women’s work and respiratory circumstances, noting that wider gender relations and identities will play an important part in understanding their varying health experiences.

A final source of literature that has influenced this study is that which focuses on gender and work in primary industries. This work has been conducted beyond the field of health studies but provides perspectives on the wider social relations that influence men’s and women’s work (and occupational health) experiences in primary industries. Gender analyses of farming and forestry have shown the importance of recognizing the ways both gender relations and gender identities are established and negotiated through work tasks, work spaces and the cultural construction of gendered identities in association with these industries. In terms of agriculture, studies in many western countries have illustrated how relations between men and women in family based farm units are affected by gendered property arrangements, work tasks, family care, and community commitments (Alston, 1995; Shaw, 1993; Shortall, 1992; Whatmore, 1991). In Australia and New Zealand, Alston (1995) and Liepins (1996, 1998)<sup>2</sup> have argued that the social organization of agriculture (including farm production, industry regulation and rural media) has historically centred on men. These arrangements have contributed to the development of masculine identities based on physical work in outdoor settings and men’s dominance in property and business decisions. Across western capitalist agricultural systems, the position of farm women is much more complex for they are multiply positioned in spheres of unequal power relations which often constrain their autonomy and opportunity to participate in decision-making processes that affect their lives (Liepins, 1998; Shortall, 1992; Whatmore, 1991). These findings become important in our reading of the present work and health study for men’s and women’s work tasks and decision-making opportunities are shown to differ greatly.

Together these three bodies of literature help to inform us of ways in which work, gender and health might intersect. To date, these three fields of research have rarely been combined. Few studies have looked at the gender differences in occupational health. One study of urban workers found that in contrast to the men, there was no significantly elevated risk of lung cancer for the women (Wunsch-Filho et al., 1998). Similarly, cardiovascular health was seen to be associated with

<sup>1</sup>Female vegetable grower’s comment; Focus Group—July 2000.

<sup>2</sup>Ruth Panelli previously published under the name Ruth Liepins.

occupation for men but less so for women in a German study (Helmert et al., 1997). In contrast, women and men farmers were both observed to respond to agricultural work with central nervous system cancers in a large US study (Cocco et al., 1998). One study of occupational stress found gender and alcohol consumption were associated with the particular type of job stress encountered (Roxburgh, 1998). Finally, occupational exposures affecting female fertility have been of interest such as anaesthetic gases in health workers, and lead exposures in industrial workers. In general, however, women have been excluded from most occupational health research for reasons of complexity (that could be considered compelling arguments for including them).<sup>3</sup> A limited body of research addressing gender and environmental exposures has revealed that there are substantial gender-based differences in susceptibility (to tobacco smoke in particular: Becklake and Kauffmann, 1999), and that hormonal fluctuation affects the uptake and metabolism of certain chemical exposures (Amdur et al., 1991). Cultural and social differences also play an important role in exposures on the job, making it impossible to generalize about populations without studying both male and female workers. Overall, a large pool of factors affect our health on the job, and it is increasingly understood that these can lead to “gender-biases” in disease outcomes for workers.

In our own study we recognize the need to consider the complexity of work *and* gender *and* health issues in understanding the different respiratory health experiences of horse trainers and vegetable growers. We follow Dyck’s (1999) contention that health should be interpreted as interdependent with other social and environmental issues. This more multifaceted approach supports our interest in the interdependence of work, gender and health.

To develop our understanding of these interdependent dimensions we frame the following reading of our data by considering work, gender and health through two analytical devices proposed by Kearns (1993, 1997): namely, considerations of place and metaphor. Kearns’ interest in socio-ecological approaches to health (over biomedical science) enables him to contend that ‘place’ is an important, multiply constituted concept which can aid interpretations of health. He explains:

[The] socio-ecological model involves an interactive set of relationships between a population and their social, cultural and physical environment. In other

<sup>3</sup>Such reasons may include disruptions in work activities as a result of childbirth and childcare activities, differing roles in the workforce for males and females based on physical work capacities and/or social construction of gender-appropriate roles, and the differing effects of smoking and other exposures on males and females due to the influence of hormonal and unknown factors.

words, what occurs in a place (in terms of *the relations between people and elements of their environment*) has profound importance to health (1993, p. 142—our emphasis).

Kearns’ (1993) own work has tended to focus on place in relation to health services (Kearns and Barnett, 1997; Kearns and Joseph, 1997). In contrast, we adopt and apply this idea to see how workplaces matter. We question how “the relations between people and elements” in the work environment might affect men’s and women’s (respiratory) health? We recognize work and home places that make up the properties where horse training and vegetable growing occur, and we present a reading of how these places involve a variety of physical, social and economic relations which may significantly affect men’s and women’s health.

The second device we employ involves a consideration of metaphor. In contrast to the more biomedical representations of occupation-related respiratory health data circulated to date, this work uses metaphor as a means to approach individuals’ understandings of their health and choices. Kearns (1997, p. 271) defines metaphor as “the application of a word or idea to something which it is imaginatively but not literally applicable” and argues that metaphor enables us to consider how people make sense of the unfamiliar. A further work in this genre involves the use of spatial and visual metaphors in the study of myalgic encephalomyelitis (ME), (MacKian, 2000). Our study of occupational health inverts this idea suggesting that metaphor may be equally powerful in understanding why change does not take place. In particular, we consider metaphor while seeking to appreciate how people account for (work) circumstances being sustained even when they appear to affect individuals’ and families’ health.

After considering how horse trainers and vegetable growers experience work and health in their industries, we suggest that metaphor is an appropriate way to account for an apparent “status quo” that exists in the industries. First, an association of work with “life” results in a construction of men’s and women’s working lives that maintain a toleration of difficult (and at times unhealthy) conditions. Second, the construction of women in the vegetable industry as “helpers” means that a male-dominated structure is maintained within production units that can subsequently affect the work and health decisions that are made by the farming family. Together, these considerations of place and metaphor shape the following reading of work and health experiences between men and women.

### **A study of respiratory health in primary industries**

This study is set within a limited knowledge base concerning gender-based respiratory health. Gender

Table 1  
Respiratory health characteristics: males and females in vegetable growing and horse training

	Growers		Trainers	
	Male	Female	Male	Female
Asthma <sup>a</sup> prevalence (%)	14.9	42.5	17.3	14.3
Odds ratio for asthma among the women ( <i>p</i> -value) compared to the men	3.3 (0.003)		0.8 (0.71)	
Chronic bronchitis <sup>b</sup> prevalence (%)	3.0	15.0	8.0	9.0
Odds ratio for chronic bronchitis among the women ( <i>p</i> -value) compared to the men	7.1 (0.005)		1.1 (0.89)	

<sup>a</sup> Asthma was defined as a positive answer to one or more of the following questions: Have you had an asthma attack in the last 12 months? Has a doctor ever told you that you have asthma? Are you currently taking any asthma medication? and Have you woken with shortness of breath in the last 12 months?

<sup>b</sup> Chronic bronchitis was defined as a positive answer to: Have you coughed up mucus or phlegm almost daily for 3 months or more of the year (as an adult)?

Source: National Farmers Study of New Zealand Phase II, Wellington Asthma Research Group, 1999–2000.

differences in respiratory health have been recognized for some time but now are beginning to be studied more closely (Becklake and Kauffmann, 1999). In New Zealand, adults aged 20–44, women report more asthma than men: 17% vs. 13% (Crane et al., 1994). Among New Zealand farmers, the gender gap in asthma prevalence rates is even greater, although reasons for this are unknown (Kimbell-Dunn et al., 2000).<sup>4</sup>

The current investigation stems from ongoing work on the gender gap in respiratory health among New Zealand farmers (Kimbell-Dunn et al., 1999, 2000). Horse trainers were originally selected because of their daily exposure to horses (previously determined as a risk factor for respiratory disease among New Zealand farmers). Vegetable growers were selected to represent farmers with daily dust exposures. To begin with, male and female farmers were studied quantitatively using a postal questionnaire on respiratory health, work exposures, smoking and family history.<sup>5</sup>

Table 1 shows the results of two of the respiratory health symptoms (asthma and bronchitis) of the four groups. Odds ratios were derived in logistic regression

<sup>4</sup> Twice as many women report asthma symptoms as men farmers in New Zealand. These types of gender differences resonate with other studies—see for example: Dodge et al., 1986; Kimbell-Dunn et al., 1999; Osborne et al., 1998; Pallasaho et al., 1999; and Prescott et al., 1997.

<sup>5</sup> The two groups included 506 randomly selected vegetable growers from the Vegetable and Potato Grower's Federation of New Zealand and 659 licensed horse trainers from the Harness Racing New Zealand directory (also randomly selected). Response rates for the two groups were 72% and 64%, respectively. Although the numbers of female respondents were small for each of the two groups, there was no difference in response rates between males and females in either group, but there were significant differences between how females compared to males in terms of respiratory health.

after adjusting for the following variables: age, smoking, family history of allergic diseases, full-time vs. part-time work hours, and dust exposures outside of farming. The odds ratio of 3.3 and 7.1 for female vegetable growers in reference to asthma symptoms and chronic bronchitis (respectively) after adjusting for other known risk factors, are strong indications that gender is an important risk factor in determining whether or not growers are burdened with respiratory disease. In contrast, female gender was not significantly associated with asthma or chronic bronchitis among horse trainers. Hypothetical explanations for the female grower's increased respiratory symptom status could include: (a) greater respiratory susceptibility to farm agents, (b) different and perhaps more potent exposures than male growers, (c) reduced healthy worker effect in the female growers resulting from a relative lack of decision-making authority on the job. To explore the last two possibilities it was decided to use a qualitative approach.

The current paper reports on this qualitative work. Taking a case study of the Oamaru area,<sup>6</sup> we investigated the work conditions and gender relations that might be affecting the previously established odds ratios. Focus group interviews<sup>7</sup> gathered accounts of men's and

<sup>6</sup> Oamaru was selected as an ideal location because of the relatively large number of female horse trainers (nine in the immediate area) and the willingness of the local vegetable growers to participate.

<sup>7</sup> We established four focus group interview sessions in July 2000; one each for men and women in each of the industries. After hearing of the context and purpose of our study, we taped participants' histories and interpretations of their lives through which they constructed links between their experiences and our research interests. Sessions were taped and transcribed, then two forms of coding followed. First, we related narratives to the key features of the industries already determined in earlier work (e.g. work tasks; use of preventative measures—such as face

women's experiences which went beyond positive phenomena and simple causal relations. We commenced this work theorizing that a complex set of (not necessarily measurable) physical, economic and social relations would be variously interwoven in different men's and women's working lives. We gathered verbal accounts of these conditions in order to appreciate how trainers and growers made sense of the conditions under which they worked. This decision resulted in our attention to narrative, a form of study that has now gained wide acceptance in many fields of geography (Kearns, 1997; MacKian, 2000; Miles and Crush, 1993; Valentine, 1999). Like Miles and Crush (1993), we valued the "interactive texts" produced in these focus groups; these were active constructions being made by different participants as they represented some of the interconnected aspects of their lives. The data provided rich alternative social representations to the standard health statistics that could be generated from other methods. Consequently, the following findings are presented by giving considerable attention to the collected narratives. At times, discussion was cryptic; however, we have often included as much comment on specific topics as possible in order to respect the constructions of the participants themselves.<sup>8</sup> The extracts presented in the following discussion also indicate a little of the identity of each speaker: pseudonyms are used to indicate gender and these start with T (for horse trainers) or G (for vegetable growers).

## Findings

Our study found that vegetable growers and horse trainers in the Oamaru area have dramatically different working lives that can provide some insight into the contexts surrounding the types of respiratory data

presented above.<sup>9</sup> The following reading of our data attends to the two analytic devices introduced earlier. First we consider *metaphor*; specifically one based on "life", as a way to understand how conditions are maintained and/or choices are constrained. Second we include in this reading of "life" a reflection on *place*, noting that places of work—as socio-spatial sites—involve activities and conditions that directly or indirectly affect the health of the men and women working there.

*"It's your whole way of life really"*

While our research gathered health-related data on the contrasting industries and work patterns of trainers and growers,<sup>10</sup> the qualitative study has been most significant for highlighting how trainers and growers constructed core meanings or reasons for their work/health circumstances. Trainers' and growers' accounts of their working lives and health led us to consider their use of metaphor in more detail. Curiously, the most common metaphor—associating work with "life"—has been used across the two industries although in different ways and with different health implications. This variation reminds us of Kearns (1997, p. 272) advice that researchers should consider the "polysemic qualities" of metaphor. In this study, notions of "life" have been invoked in different ways; both to account for both trainers' pleasure in their work and growers' acceptance of difficult work and health conditions.

In the case of horse training, men and women equally described their "love" for horses and stated that "life" was based on their opportunity to be around horses. For instance, Trevor explained: "if there was no riding anywhere I would still have a horse and I would ride it around whatever, because it's part of me. It [has] been

*(footnote continued)*

masks; conditions of entry into the industry); second we read the transcripts against the analytical devices of place and metaphor. We sought to read past the relatively artificial chronology of the interview order (MacKian, 2000; Miles and Crush, 1993) and look for the relationships and overall experiences being noted by participants. Here then, we focussed on listening (Kearns, 1997, p. 273); paying particular attention to narratives about workplaces and the metaphors used to explain particular arrangements of work, gender and health circumstances. Once focus group data was analysed, feedback was given to the participants in follow up sessions: October 2001.

<sup>8</sup>The verbatim nature of the quotations includes a number of examples from Chinese vegetable growers who learnt English as their second language and thus spoke in slightly different ways to other growers.

<sup>9</sup>It should also be noted that differences within both industries occur in terms of the scale of the operations in the Oamaru area. For example, horse training units varied from small concerns with just a few horses that were trained as much for a "hobby" as for income to large units where training was "a business" and decisions about horses and training were made on "strictly commercial" grounds. In horticulture, vegetable growing units were all commercial enterprises but varied in area and volume of product as well as labour structure: some being relatively small family units to others combining family inputs and a significant amount of hired non-family labour.

<sup>10</sup>Trainers complete a varied set of tasks depending on each horse, including: grooming, training, jogging [track] work, fast [track] work, preparing feed, harness maintenance, preparation for race meetings. In contrast, growers complete a more regular and at times monotonous set of production tasks, including: bagging sawdust, potting, ploughing, planting, watering, spraying, picking, digging, sorting, packing, labeling, transporting and cleaning glass houses.

Table 2  
Selected characteristics of vegetable growers and horse trainers: males and females

	Growers		Trainers	
	Male	Female	Male	Female
<i>N</i>	273	40	440	35
Average age	49.8	46.3	54.2	41.9 <sup>a</sup>
Average age at which work exposure started (years)	16.5 (4–57)	22.5 <sup>a</sup> (4–50)	11.6 (0–45)	8.1 <sup>a</sup> (0–30)
Number of previous generations in farming	2.99	2.55 <sup>a</sup>	2.52	2.94 <sup>a</sup>

<sup>a</sup> Different from males in that category of farming according to paired *t*-test with a statistical significance of  $p < 0.05$ .

Source: National Farmers Study of New Zealand Phase II, Wellington Asthma Research Group, 1999–2000.

all my life. When I die I'll give it up". This notion of working with horses as being 'one's life' is also reflected in data from the national study of trainers and growers (Table 2) showing that this work stemmed from a generational connection to the industry and that trainers commenced work exposures at young ages.<sup>11</sup> In contrast, women growers entered their industry and work exposure later—Oamaru women explaining that they "married it" or entered the industry because they formed relationships with men involved in horticulture. In these cases, the weaving together of work and life occurs as women's personal lives and relationships are shown as fundamental to their commencement in horticultural work.

Additional considerations of 'life' were made by the male and female trainers who discussed the value of organizing a working life based on a small enough number of horses to maintain an enjoyable quality of life, e.g.:

Tom: I don't want it to be a chore I would like to be happy. Once you get too many [horses], I used to train six or seven at one time and I was flat out. It took the enjoyment out of it. But I found that if there is three or four you can do it comfortably. Finish by lunch and it's easy. I don't want to be working 24 hours a day.

Most Oamaru trainers were involved in the industry as a pleasurable choice and had another (primary) source of income. This contrasted with vegetable growers whose work provided the primary source of income. They felt their working lives were subject to major economic pressures including a volatile market

<sup>11</sup> It should be noted that these are the ages at which work activities were listed to have started. While 8 years old seems young for starting a work exposure it is not unusual for children to work with horses and indeed some trainers in focus group interviews talked figuratively of being born into the saddle and sulky; life and work being particularly tightly woven together in such narratives!

and all growers spoke of the stress of the industry. Some explained the consequences of this fluctuating industry:

Gillian: The market is really the thing, they all say they want certain things, you know. [They] want us to grow certain things. When we grow it, they change their mind, and they don't want it, and the grower hoes them under, and that involves the seed and all the labour and also spraying...

Glenda: [F]or example, this year the prices for cauli's [cauliflowers] have been really poor and I think 'Grant' [her husband] was saying last night that he's hoed under a 100,000 cauli plants because the price has just crashed this year... You haven't got any choice but to hoe it under.

Work pace as a feature of 'life' is also reflected in growers' narratives. Unlike the trainers' varied and relatively leisurely work experiences, growers explained how work could dominate their lives:

Gilda: We start at 8 o'clock in the morning, you see [I] get the kids off to school. Eight o'clock in the morning we are usually in the shed. [It's] too cold to go outside [so] we usually sort a couple of hours on the sprouts. So we are standing inside the shed. I am physically picking them out and cleaning off the yellow leaves and any rotten ones, you know, and just throw them into a box. So we get that done and then we go and cut some lettuces. Couple [of] hours of lettuces, and then the broccoli. We do the broccoli. So you're virtually standing up all the time.

Geoff: We tend to follow the sun a bit in the summer time. It's very long hours... But at this time of the year you can't do a great lot if things are frozen and it's dark. There's not a lot to do, so you're tending to go out say eight in the morning and be back in about six. [But] in the summer time you could be four or five in the morning and in again at eleven o'clock.

While markets and seasons influence growers more than trainers, decision making was a further means by which gendered patterns of work and life could be identified. Both male and female trainers had an autonomous working life making various decisions depending on the individual horses they are handling at any one time. However, male and female growers had different lives as a result of their participation in decision making. Narratives about decision making and management showed considerable male control. Women were most often constructed in support roles, e.g.:

George: I'll probably just um, [for] the normal day-to-day running of the farm I'll just go ahead and do it, just what needs to be done. The wife sort of stays and does the housework, I keep out of the house, as much as possible. But if we get enough [potatoes] binned [stored] that we want to dig [i.e. harvest additional potatoes] I'll probably just say "what are you doing on such and such a day or tomorrow".

A second significant metaphor was evident in these gendered narratives about work. Even though most women were doing many hours of physical work as well as administration and book work for the vegetable units, the metaphor of "helper" was frequently invoked and never countered even by those doing very long hours alongside their partners. For example, George noted: "The wife helps if we're actually bagging [potatoes], and for the shops if we're doing that. She helps doing that, otherwise I'm doing it myself, yeah". Women vegetable growers and their partners both constructed this type of labour as "helping" and this ensured that the unequal gender relations noted in decision making were maintained in terms of how the work was valued:

Gillian: I usually end up helping with the market garden side of things... like at this time of the year, I've been helping in packing broccoli. He likes me to, I'm one of the packers. So I pack properly and it can be broccoli, brussel sprouts... Cut lettuces, pack lettuces and what not, I am still doing things in the shed, and [driving] the car and trailer. I often do whatever he needs. And during the summer I'll I often go up to the shed to help out with the packing.

While these patterns mirror some of the patriarchal relations reported in other non-health related studies of farming (Alston, 1995; Shaw, 1993), these gender relations and constructions of women's work are also likely to affect the degree to which men and women feel able to negotiate health issues that emerge through their work.

In addition, vegetable growers have also employed the metaphor of "life" as a way to narrate their ongoing work in an industry that is clearly a source of health

problems for them, their families and friends. In one case, growers supported one woman's frustration over a work injury, noting that she had little choice but to keep working to 'make a living':

Glenys: Before I hurt my hands I was full time on tomatoes, brussels sprouts, flowers, lettuce—anything we grow, and this is how I have problem. Maybe seven years before I had the operation done. They called it OOS [occupational overuse syndrome]. The operation wasn't a success. So after [the] operation I suffer more. I get a lot of pain and the doctor, [and] ACC did not want to know me. The doctor say "just do a little". He reckon I should retire. Easy to talk than do it.

[Chorus of sympathetic retorts]

Gilda: It's easier to talk than do it. Yeah, you still got to live.

Constructing work as "life" was particularly significant when female growers considered whether they could leave their industry. While recognizing health problems and difficult work conditions, women explained how they deferred to their partners' occupation:

Gillian: I know that my husband, that he's been on the farm well for years and I don't think that he could [leave]. He'd find it really *really* difficult to come out [of the industry].

Gilda: If I wanted to get out of the industry I would, in doing that, I would have to say to my husband "you'll also have to give up your job". And that's incredibly difficult to do. To *compel* somebody else to do what you want...

Gillian: Yeah. It's your whole way of life really.

[Strong general assent] (growers' original emphasis noted)

#### *Places of work: healthy or otherwise?*

While work has been constructed as a 'way of life' by these trainers and growers, the spaces in which this life is lived show how physical, economic and social dimensions could combine to make workplaces influential in these men's and women's lives and health. First, in terms of direct health-related phenomena, both horse training and vegetable growing involved workplaces that contributed to respiratory problems. In both cases the workplaces involved certain physical attributes, which—because of economic and social decisions—could become health hazards. For example, in horse training feed preparation was usually conducted in a shed where grains were crushed by machine and then mixed in horse buckets with various supplements being added to

different mixes. While the noise and dust generated by this task were considerable, trainers' decisions regarding ventilation and the use of face-masks and ear muffs also affected the impact of this particular work site:

Ted: I basically do it all you know, feed them, and make all the feeds, crush the feeds, crush the oats

Panelli: And you do all that in your own sheds at home?

Ted: Yeah, in my own oat crusher. Talking about respiratory that's very dusty.

Gallagher: Do you wear a mask for that?

Ted: I'm meant to—I got one of those things to put over your mouth but I forget to put it on, because you're usually doing other things as well. I do wear the ear things—it's that rowdy.

Workplaces and tasks that are physically dusty or irritating in other ways were even more commonly noted by growers. Accounts ranged from the dustiness of planting and grading potatoes to worries about potting mix for tomatoes, and the prevalence of hay fever during different parts of the vegetable growing cycle. For example:

Gail: The other thing that really affects me is planting seed potatoes. Sitting on the planter... It's the dust, when they come, drop down from the hopper. They come down from the hopper and the dust just goes pshoooooh. It just gets to you—yeah its very, very fine powder... [And] if I'm outside in December one thing that does affect me is when they are mowing. They go along and mow the tops of the potatoes. The smell of the shaws when they've been freshly cut... When they're mowed, I just sneeze like crazy. It really affects me.

Greg: Well the potting mix, it's one someone mentioned before—it's one I think we should all be reasonably careful about, but I don't know how you get careful about it, because you've got to work with it.

Gavin: Well really you should use a mask with it.

Greg: Yeah but to wear a mask for that length of time, sometimes I don't think that would be terribly desirable.

Gilbert: There's an OSH brochure on the potting mix.

Greg: There have been reports of some people getting quite sick with it.

Cumulatively, vegetable growers' narratives built a picture of the workplace as a series of field- and shed-

sites where many physical irritants are unavoidable because of the pressure to work for long periods with repetitive tasks. In addition to these circumstances, vegetable growers face a workplace that maintains a considerable level of stress. As shown in Table 3, market-based communication, heating systems and irrigation all illustrate the type of pressures and anxieties that texture the workplace and provide a constant source of stress in growers' lives.

In sum, the workplace involves a multiplicity of health factors. This is particularly so for the vegetable growers where there are many physical irritants, as well as pressures and risks. Finally, relating back to the metaphor of "life", the workplace is also a socially significant place in the domestic life of the growers, since vegetable growing is primarily organized around family units. Growers noted that this can increase the levels of stress that are associated with work because they cannot "get away"; thus, sometimes work and life are conflated in anxiety in one place:

Greg: I think the other thing that comes into it [i.e. one's health] too though is the fact that we actually live on our places of work. The moment you open the back door all you can see is bloody work, and you know if you don't get out there and do it. No one else is going to do it for you.

[Emphatic general assent]

Gordon: I think that's one of the worst aspects of it. It's because you can never get away from it.

## Conclusions

Overall, this study has shown how men's and women's experiences of work and health in horse training and vegetable growing are shaped both by gender relations and the industries themselves. Initial quantitative research indicated contrasting odds ratios for respiratory conditions between male and female vegetable growers. This recent qualitative case study highlights some of the environmental, economic and social factors that interconnect to affect the health of individuals and industry groupings. Specific work sites, tasks and industry contexts all differ between horse training and vegetable growing. Similarly, the gender relations in the two industries appear to have considerable influence. In both horse training and vegetable growing, notions of masculinity (associated with strength, autonomy and toughness) are likely affecting horse trainers' limited use of preventative measures such as face masks, and male growers' decision-making dominance in maintaining vegetable production—sometimes in the face of considerable stress and health problems. Women's differing experiences in the two industries were also confirmed in



Table 3  
Examples of workplaces as sources of stress

Market communications	Maintaining heated glass houses	Field irrigation
Grant: Our days are mainly controlled by the phone, the orders. I think you know that it's the more competitive nature business. [If you turn an order down] you might not get the order next time	Geoff: That's another thing with particularly those of us with tomatoes, most of us are tied down seven day a week, 365 days of the year. Because there must always be somebody on the property, no matter how computerised you are, the power's only got to go off [on a cold night] and you've lost it. You've got about an hour or two hours and she's all over [to get heating working again]. And you've got a whole years income down the tube	Gilbert: From the end of September onwards you're irrigating so because it's windy here you tend to irrigate here early in the morning or late at night and you've got to fit it in with any other work
Gallagher: I wondered why all the growers had cellphones		Gallagher: And the irrigating, is it something you can turn on and off?
Greg: Today if you can't be accessible, you're history		Gilbert: No you're shifting, because of our type of land [topography] and that and you are using [hand lines] <sup>a</sup>
Goran: They [the buyers] just move on to the next one	Greg: People might think that it is easy to get away say at this time of the year, once they're planted. But we've got heaters going so you need to have someone in the house who knows what's happening if the frost alarms go. Who can get up in the middle of the night and sort out what the problem is and plus that is also all your next years income. So it is really a big responsibility to leave with somebody else	Gavin: You tend to find that nighttime is the right time to irrigate. So you are going right through [watering into the night] or [watering] first thing in the morning
Grant: You've got to weigh up whether you take that order or if you don't want to do it, he'll give it to someone else and then next time won't get it from you		
Gilbert: He'll turn around and say 'well you turned me down last time'. You never say no		
Geoff: We have a very small property we have seven telephones through our property in the glass house. Seven telephones plus the cellphones. But if the telephone rings one of us can just get it within, without having to go too far	Geoff: If we'd a heater go down at midnight last night, that's the whole crop wiped out. You start all over again	

<sup>a</sup> Growers explained that large scale irrigation equipment was rarely used because of the topography of their land, thus small hand lines were being constantly moved during watering. While employees often did this during normal work hours, growers reported that they carried the responsibility for continual decision making regarding location and timing of watering, as well as having to complete much of the work at night or in the early morning.

Source: Male Vegetable Growers' Focus Group, July 2000.

this study. Although rarer, women's involvement in horse training may be as autonomous and varied as men's, while women vegetable growers are positioned as more inferior "helpers" who endure difficult working conditions while also supporting their male partners' stressful but more autonomous responsibilities and working life.

More specifically, we argue that considerations of place and metaphor are effective strategies for approaching the complex social relations and physical factors that may underpin statistical trends noted in more standard epidemiological studies. In our case, attention to the workplace indicated that health issues will be generated:

- at a site which includes material/environmental phenomena (such as dust, pollens, and chemicals);

- in a socio-cultural space where domestic and economic relations may be closely interwoven (in the case of family farms producing vegetables); and
- through a gendered space where men and women are positioned in different ways which provide them with contrasting identities and degrees of power or autonomy in terms of the work tasks they undertake and the decision-making opportunities they enjoy.

In terms of metaphor, this study has highlighted two key metaphors which support the maintenance of current work/health experiences. First, in vegetable growing, women's positions and contributions are constructed through notions of "helping"/"helpers". This limits their recognition as workers and decision makers; placing them (and their health) as secondary to men's work, decisions and preferences to remain in the

industry. Second, the metaphor of “life” is used to construct understandings about horse training and vegetable growing as much more than an income-generating job. Trainers’ “love” for horses builds up an emotive view of training as an idyllic “life” for which both men and women note considerable affection. If working with horses is constructed as “one’s life”, then the tolerance of health risks such as dust is constructed as a minor issue in relation to these trainers’ occupations and lifestyles. In a contrasting way, “life” for vegetable growers is noted in such ways as to narrate a toleration for considerable industry pressure and health concerns. By constructing vegetable growing as “your whole way of life”, men and women acknowledged the gender relations at play whereby men’s horticultural occupations were prioritized as a form of identity/life, while women’s preferences and experiences were secondary and often subservient to their partners. A closing statement by one grower encapsulated this:

Gavin: My wife would say that um “I [i.e. the male] can do what I like”. She didn’t choose to do what we’re doing but she’ll support me all the way... It wasn’t what she set out to do. Horticulture wasn’t what she was trained for, where she was heading, but she, and probably Greg’s Glenda would be the same. [Greg assents.] But she would support me 100% there, but if she had a choice in *life*, it would probably, it wouldn’t be the thing she would do [our emphasis].

This paper endorses the analytical approaches encouraged by Kearns (1997) concerning the study of metaphor and place, however, a great deal of further work can be done to pursue the importance of metaphor in gendered analyses of occupational health. The current paper is based on a modest study but a more detailed appreciation of people’s understandings (and consequent actions) regarding occupational health will be gained if researchers pursue the environmental, economic and discursive contexts men and women negotiate while pursuing primary industries. We trust that such investigations can gain from the multiple methods reported in this study, where initial statistical work is complemented by qualitative inquiries that respect the socially constructed and clearly gendered nature of people’s health experiences.

## References

- Alston, M., 1995. Women and their work on Australian farms. *Rural Sociology* 60, 521–532.
- Amdur, M.O., Doull, J., Klassen, C.D. (Eds.), 1991. *Casarett and Doull’s Toxicology*. Elmsford, New York.
- Becklake, M.R., Kauffmann, F., 1999. Gender differences in airway behavior over the human lifespan. *Thorax* 54, 1119–1138.
- Cocco, P., Dosemeci, M., Heineman, E.F., 1998. Occupational risk factors for cancer of the central nervous system: a case-control study on death certificates from 24 US States. *American Journal of Industrial Medicine* 33, 247–255.
- Crane, J., Lewis, S., Slater, T., 1994. The self-reported prevalence of asthma symptoms amongst adult New Zealanders. *The New Zealand Medical Journal* 107, 417–421.
- Dodge, R., Cline, M.G., Burrows, B., 1986. Comparisons of asthma, emphysema and chronic bronchitis diagnoses in a general population sample. *American Review of Respiratory Disease* 133, 981–986.
- Dyck, I., 1992. Health and health care experiences of the immigrant woman: questions of culture, context and gender. In: Hayes, M.V., Foster, L.T., Foster, H.D. (Eds.), *Community, Environment and Health*, Vol. 27. Western Geographical Series. Department of Geography, University of Victoria, Victoria, BC, pp. 231–256.
- Dyck, I., 1995. Putting chronic illness ‘in place’: women immigrants’ accounts of their health care. *Geoforum* 26, 247–260.
- Dyck, I., 1999. Using qualitative methods in medical geography: deconstructive moments in a subdiscipline? *Professional Geographer* 51, 243–253.
- Elliott, S.J., 1999. And the questions shall determine the method. *Professional Geographer* 51, 240–243.
- Goldman, M., Hatch, M. (Eds.), 1999. *Women and Health*. Academic Press, San Diego.
- Helmert, U., Shea, S., Bammann, K., 1997. The impact of occupation on self-reported cardiovascular morbidity in western Germany: gender differences. *Reviews on Environmental Health* 12, 25–42.
- Kearns, R.A., 1993. Place and health: towards a reformed medical geography. *The Professional Geographer* 45, 139–147.
- Kearns, R.A., 1997. Narrative and metaphor in health geographies. *Progress in Human Geography* 21, 269–277.
- Kearns, R.A., Barnett, J.R., 1997. Consumerist ideology and the symbolic landscapes of private medicine. *Health and Place* 3, 171–180.
- Kearns, R.A., Joseph, A.E., 1997. Restructuring health and rural communities in New Zealand. *Progress in Human Geography* 21, 18–32.
- Kimbell-Dunn, M., Bradshaw, L., Slater, T., Erkinjuntti-Pekkanen, R., Fishwick, D., Pearce, N., 1999. Asthma and allergy in New Zealand farmers. *American Journal of Industrial Medicine* 35, 51–57.
- Kimbell-Dunn, M., Bates, M., Crane, J., 2000. Gender differences in occupational respiratory symptoms among farmers. Paper presented at the International Society for Environmental Epidemiology Conference, Buffalo, New York, August.
- Liepins, R., 1996. Reading Agricultural Power: media as sites and processes in the construction of meaning. *New Zealand Geographer* 52, 3–10.
- Liepins, R., 1998. Fields of Action: Australian women’s agricultural activism in the 1990s. *Rural Sociology* 63, 128–156.

- London, L., 1998. Occupational epidemiology in agriculture: a case study in the southern African context. *International Journal of Occupational and Environmental Health* 4, 245–256.
- MacKian, S., 2000. Contours of coping: mapping the subject world of long-term illness. *Health and Place* 6, 95–104.
- Miles, M., Crush, J., 1993. Personal narratives as interactive texts: collecting and interpreting migrant life-histories. *Professional Geographer* 45, 95–129.
- Osborne, M.L., Vollmer, W.M., et al., 1998. Characteristics of patients with asthma within a large HMO: a comparison by age and gender. *American Journal of Respiratory Critical Care Medicine* 157, 123–128.
- Pallasaho, P., Lundback, B., et al., 1999. Increasing prevalence of asthma but not of chronic bronchitis in Finland? Report from the FinEsS-Helsinki study. *Respiratory Medicine* 93, 798–809.
- Pearson, M., 1989. Medical geography: genderless and color-blind. *Contemporary Issues in Geography and Education* 3, 9–17.
- Prescott, E., Lange, P., et al., 1997. Effect of gender on hospital admissions for asthma and prevalence of self-reported asthma: a prospective study based on a sample of the general population. *Thorax* 52, 287–289.
- Ramazzini, B., 1940. *De Morbus Artificum Diatriba*. University of Chicago Press, Chicago (transl. by W.C. Wright).
- Rathwell, T., Phillips, D. (Eds.), 1986. *Health, Race and Ethnicity*. Froom Helm, London.
- Roxburgh, S., 1998. Gender differences in the effect of job stressors on alcohol consumption. *Addictive Behaviors* 23, 101–107.
- Shaw, D., 1993. *The Work of Farming Women*. Unpublished MA Thesis, Department of Politics, University of Waikato, Hamilton.
- Shortall, S., 1992. Power analysis and farm wives: an empirical study of the power relationships affecting women on Irish farms. *Sociologia Ruralis* 32, 431–451.
- Valentine, G., 1999. Eating in: home, consumption and identity. *Sociological Review* 47 (3), 491–525.
- Whatmore, S., 1991. *Farming Women: Gender, Work and Family Enterprise*. Macmillan, London.
- Wunsch-Filho, V., Moncau, J.E., Mirabelli, D., Boffeta, P., 1998. Occupational risk factors of lung cancer in Sao Paulo, Brazil. *Scandinavian Journal of Work, Environment and Health* 24, 118–124.