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Making the (in)visible, visible: A post-disaster case study of social networks in the suburb of Sumner, Christchurch.

A thesis
submitted in partial fulfilment
of the requirements for the Degree of
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Michelle Marquet

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Abstract of a thesis submitted in partial fulfilment of the requirements for the Degree of Master of Resource Studies.

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by

Michelle Marquet

The social dimension of disaster recovery has, in recent times, gained attention in the literature in the fields of social capital, community-based recovery, wellbeing and resilience. Social networks are a consistently recognised component across this scholarship. While there has been a great deal of research around the role and value of social networks, there has been an insufficient amount of work carried out on identifying the social networks themselves. This has resulted in the dominance of some networks (visible networks) and the (in)visibility of others - networks that are recognised, but not assigned enough significance. This thesis presents the results of research that sought to explore this gap by identifying the form and diversity of social networks and exploring their meaning in the post-disaster suburb of Sumner Christchurch. This qualitative case study approach utilised in-depth interviews, open-ended questions and observation. Findings reveal the existence of many more informal social networks than the visible networks typically identified in the literature. Moreover, these (in)visible networks held a variety of meanings for residents of Sumner that were significant for disaster recovery. It can be concluded that (in)visible networks are a valuable form of social network in disaster recovery, and worthy of greater attention.

Keywords: social networks, social capital, social connectedness, post-disaster, disaster recovery, social recovery, resilience, community, research methods.

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Chapter 1

Introduction

The core idea here is very simple: social networks have value (Helliwell & Putnam, 2004).

When you realise that everything is gone and what's left is the people that you know and the relationships that you have, those things become way more valuable and valued (Respondent 8).

This thesis, in many ways, is exceptionally simple. In a disaster recovery context, it is people – us, you and me – who are recovering, and doing the recovery. We are the *roots* of disaster recovery thus it stands to reason that understanding the way people come together post-disaster is important. This was highlighted for me after experiencing a series of earthquakes in Christchurch, New Zealand across 2010 and 2011. Between 4 September 2010 and 3 September 2014, there were over 4500 earthquakes, three of which were particularly destructive – September 4 2010; February 22, 2011 and June 13, 2011 (Geonet, n.d.). These earthquakes catalysed many changes across the city, certainly in terms of the visible physical and infrastructural damage, but also across the social sphere of recovery – the people. I experienced and observed the coming together of people and felt the value of my own social networks – family, friends and different social groups I was connected to. On entering this thesis topic, these experiences were at the forefront of my thinking.

This social sphere of disaster recovery has gained attention in the literature, and within this, is the consistent recognition of the role and value of social networks. Social networks are recognised across a variety of fields in the disaster recovery literature, such as community-based recovery, public health, psychosocial wellbeing, social capital and resilience. The term itself has various ways of being defined and conceptualised; for example social networks can be understood as part of social capital, social connectedness, community connectedness, social support and social cohesion. Sometimes these terms are used interchangeably, and sometimes they are not. While the way social networks are framed in the literature is somewhat convoluted, its essence - that is, the coming together of people - is recognised as being vital to the wellbeing and functioning of both individuals and communities.

When I began to explore the literature on social networks in disaster recovery, I made two observations. The first was from looking at surveys measuring social networks and failing to see how one of my key social networks, my pole dancing community and its associated get-togethers, was represented. The second observation was of the limited diversity of social networks being explored in the literature. There appeared to be a tendency to investigate what I have termed *visible* social

networks such as *friends and family*, *formal networks* (for example churches, sports clubs and community groups) and the *popular networks* (high profile emergent and pre-existing networks). What was infrequently acknowledged and sometimes entirely absent, were the networks somewhere in between, what I have termed the *(in)visible* social networks. I have placed brackets around part of invisible, to indicate their semi visible status.

With the exception of friends and family, the social networks that are explored are also more often than not, formal, rather than the informal or mundane social interactions. If my networks were not easily catered for in empirical research, and such research tended to address the same kinds of social networks, then it stood to reason others were being missed. These observations were then reinforced in my own day to day life in the suburb of Sumner, where I was living at the time of the earthquakes as well as during the majority of my thesis writing.

1.1 Scene setting

Sumner is a coastal suburb approximately 11 kilometres South East of the Christchurch central business district (see the area in red on Figure 1, below). Sumner is generally regarded as affluent, evidenced by the 2013 census which found 41.2 per cent of adults had an annual income of more than \$50,000 (compared to 37.1 per cent of the people in Christchurch City); 35.8 per cent held a bachelor degree or higher (compared to 21.1 per cent of Christchurch City); a high percentage of the adult population were in professional and managerial positions and the suburb as a whole, had lower than average unemployment rates (Statistics New Zealand, 2013). The vast majority of the Sumner population are of European descent though more than a quarter of those living in Sumner were born overseas, particularly the United Kingdom and Ireland (Statistics New Zealand, 2013). This is indicative of Sumner being a popular destination for relocating, likely due, among other things, to its plentiful lifestyle, entertainment and leisure opportunities as a result of its seaside location, but also its close proximity to the estuary, walking and cycling tracks (Christchurch City Council, 2014; Yanicki, 2013).

Sumner was also a badly hit suburb in the earthquakes of February 22 and June 13, 2011. Significant impact on the area was experienced, primarily as a result of landslides and rock fall (see Figure 2) which damaged and destroyed houses and community infrastructure including recreational walking and cycling tracks, the museum and community centre, library and the Returned Services Association (RSA), as well as a number of shops and restaurants (Christchurch City Council, 2012a). The results of this damage have been identified as having “had a significant impact on the economic, cultural and social wellbeing of the community” (Christchurch City Council, 2012b: p. 11). The social environment

of the suburb has been reported as not just having experienced damage from the earthquakes, but also stress from subsequent aftershocks, housing related issues and loss of community members from red zoning¹ and geotechnical issues (Christchurch City Council, 2014).



Figure 1: The location of Sumner/Taylor's Mistake in relation to Christchurch (Google Maps)

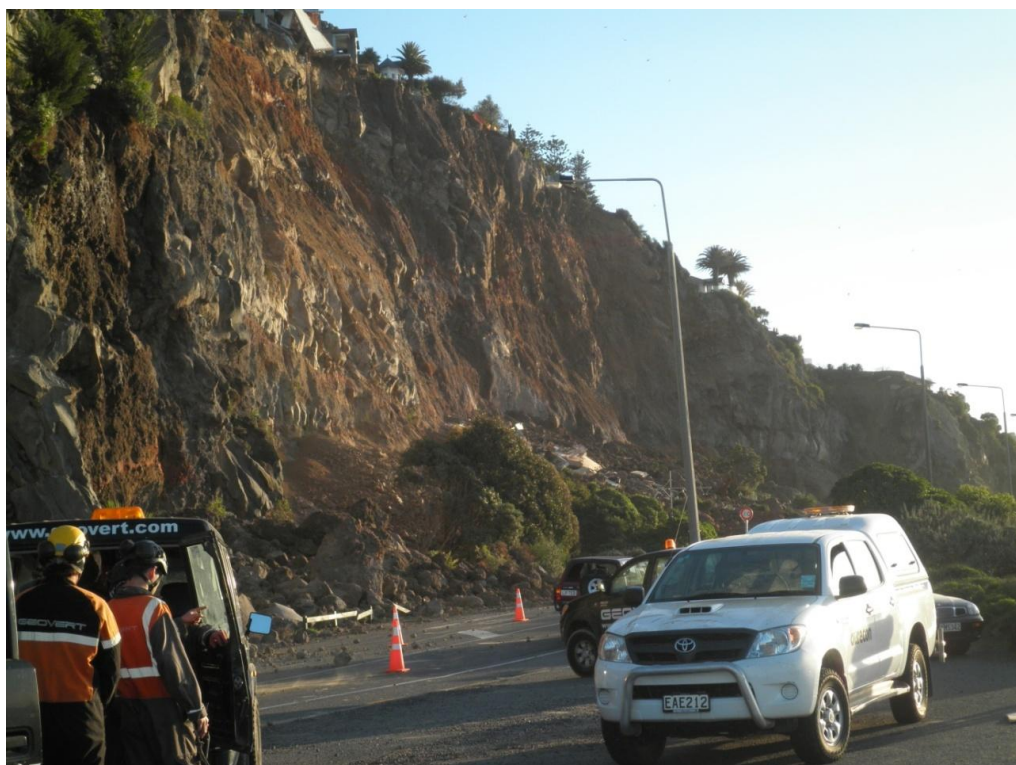


Figure 2: Clifton Hill collapse (Photo source: Michelle Marquet)

¹ Red zoning in the Port Hills area occurred when properties were affected by cliff collapse and had an immediate risk to life or where properties were affected by rock roll where there was unacceptable risk to life and an area wide engineering solution had been determined impracticable for reasons including uncertainty around timeliness and cost (Canterbury Earthquake Recovery Authority, 2015).

Despite this, Sumner’s local community has been identified as its greatest asset (Christchurch City Council, 2012b: p.4), evidenced by the community coming together in the immediate aftermath of the earthquakes through the formation of the Sumner Community Hub. There was also a “substantive increase” in community development groups and projects, as well as high levels of interest in planning projects which resulted in Sumner having a “community-led” suburban Master Plan (Christchurch City Council, 2012a). The community also came together through events like the Street Party and its community spirit was duly noted in the media (Wright, 2011).

As a resident of Sumner during the time of the earthquakes and in the years following, I observed a number of community and interest groups, activities and events emerge post earthquake, from the Sumner Art Window and Great Sumner Picnic, to the Village Green and local food projects (see Figure 3). I also saw the frequency of interactions that occurred outside a primary school (across the road from my house), in the village, and on the beach. I became curious about the more informal and everyday networks, like my own, that might also exist in Sumner and that may have been playing an important role in recovery.



Figure 3: Sumner Community Garden (Photo source: Michelle Marquet)

The earthquake damage and impacts on the social environment, combined with strong community spirit and seemingly rich social life, made Sumner appealing as a suburb in which to ground this thesis. These factors, along with my sense that my own social networks were not well-represented in the literature and a hunch that there must be much more going on in the realm of social networks,

culminated in the overarching aim of this thesis: to identify the form and diversity of social networks and explore their meaning in the post-disaster suburb of Sumner, Christchurch.

1.2 Thesis Structure

The remainder of this thesis is organised into six chapters. The following chapter provides a review of the relevant literature on social networks in disaster recovery and, in particular, highlights the (in)visibility of social networks and the possible theoretical and methodological reasons for this. Chapter 2 also illustrates how my work will contribute to this body of literature. Chapter 3 goes on to outline my research methods.

Chapter 4 is the first of two results chapters that present a more nuanced understanding of social networks, making the (in)visible, visible. Chapter 5 then presents the importance of social networks in a disaster recovery setting and Chapter 6 discusses these results in light of the literature and objectives of this study. Finally, Chapter 7 highlights the key findings of this research and addresses the significance of this in relation to contributions to theory, methodology and practice and thus closes the thesis.

Chapter 2

Literature Review

2.1 Introduction

This literature review will discuss work pertaining to social networks in disaster recovery settings including their benefits and relationship with concepts like social capital and social connectedness. My particular focus is on what social networks are identified in this setting and how they are identified. Consequently, I highlight the (in)visibility of social networks - that is the visibility of some and the invisibility of others - and outline the theoretical and methodological reasons for this. The chapter concludes with a summary, restatement of my aim and three research questions stimulated by this review of the literature.

2.2 Disaster Recovery: the social component

When a disaster hits, there is often a focus on quantifiable aspects and physical damage such as buildings and infrastructure destroyed, as well as lives lost (Aldrich, 2010). Perhaps as a corollary of this, as Nigg (1995, p.2) has observed, there is a tendency to approach recovery as “putting the community back together again” through reconstructing the built environment so people are housed again, businesses can serve again and infrastructure can facilitate the daily function of lives again. Nigg has challenged this approach, and argued that recovery from disasters is not just the reestablishment and rebuild of the physical and built environment but is, rather, a social process (Nigg, 1995). Others have also noted this, describing recovery as having a “human face” (Ministry of Civil Defence and Emergency Management, n.d., p. 1) and a “social dimension” (Gordon, 2003, p. 1). Now, even engineering approaches to risk management have recognised this human element: “no matter how much physical science and technology are involved in complex systems, no system is ever purely or solely physical or technical” (Bea, et al., 2009, p.32). Despite growing recognition of their importance from various disciplines, researchers and practitioners often struggle to understand and accommodate the social components of disaster recovery, and the field is still in its infancy.

Attempts to understand this social component of disaster recovery have gained traction from the works of, for example, Aldrich (2008, 2010, 2011, 2012a, 2012b) and others on social capital; writing on community-based recovery (for example see Vallance, 2011a, 2011b, 2013a, 2013b) and public health literature, particularly that around psychosocial wellbeing and quality of life post-disaster (see for example Batniji et al., 2006; Healthy Christchurch et al., 2013, 2014; Hobfoll et al., 2009;

Canterbury Earthquake Recovery Authority, 2014b; Ministry of Social Development, 2013). The social component of disaster recovery is also present in the sustainability and resilience literature relating to disasters (see for example Dynes, 2005; Maguire et al., 2007; Reich, 2006). Across these social perspectives on disaster recovery is the common recognition of the role and value of social networks, which the following section will now outline.

2.2.1 The benefits of social networks

Disasters and disaster recovery are stressful and sometimes traumatic experiences that take their toll on peoples' wellbeing. This is commonly reflected in findings of post-traumatic stress in those living in disaster recovery areas (Heetkamp, 2013; Hobfoll et al., 2009; McDermott et al., 2012; Miller, 2005; Steinglass & Gerrity, 1990). Sustained attachment to loved ones and social groups during times of stress and trauma is heavily supported in the literature as being of central importance to one's mental and social health and wellbeing (Aked et al., 2008; Batniji et al., 2006; Healthy Christchurch et al., 2014; Hobfoll et al., 2009;). There are also many references in the disaster recovery literature to social support networks whereby interactions and assistance are perceived to be loving, caring and readily available in times of need (Norris et al., 2008). These social support networks are found to be primarily made up of family networks and other key support networks such as friends, neighbours and co-workers (Healthy Christchurch et al., 2014; Norris et al., 2008).

Involvement in formal social networks such as community groups, volunteer, arts and craft, leisure or sports and recreation groups are recognised as being beneficial for quality of life, happiness, health and wellbeing in general (Ministry of Social Development, 2014b). As Putnam (2001, p.12) critically points out:

There is very strong evidence of powerful health effects of social connectedness...controlling for our blood chemistry, age, gender, whether or not you jog and for all other risk factors, your chance of dying over the course of the next year are cut in half by joining one group, and cut to a quarter by joining two groups.

Such social connectedness is especially important in a post disaster environment; "the individual's need for social connectedness is probably never greater than in times of disaster" (Reich, 2006, p.7). In a post disaster environment, social networks provide opportunities which assist with emotional and mental wellbeing and recovery for individuals (Aldrich, 2010; Hobfoll et al., 2009; Yandong, 2010). Sharing traumatic experiences, for example, is seen as an important step in recovery as it allows people to share their fears, gain an understanding of the impact and begin to process their experience (Flannery & Everly, 2000). Being able to talk like this is a kind of informal therapy (Hosted, 2013). Having a readily available social network to draw upon and thus reserve one's own

resources is thought to be an important factor in preventing post-traumatic stress (Wind & Komproe, 2012).

Participation in social networks may even assist in achieving a sense of empowerment, control, positivity and normality, things that are important for psychosocial recovery post trauma and in times of stress (Collins et al., 2011; Kunz, 2009; Mooney et al., 2011; Reich, 2006; van Zomeren et al., 2008). It is also possible for such participation to assist in enhancing individual adaptive capacity (Miller, 2005), or even to assist in creating positive post-traumatic outcomes such as gains in being able to relate to others (Tedeschi & Calhoun, 1996). Moreover, social network activities that take place in nature in particular are documented as being beneficial for alleviating stress and ill health as a result of the restorative benefits of natural environments (Kaplan, 1995; Tidball, 2012; Velarde et al. 2007).

Alongside these benefits to wellbeing, social networks have also been identified as having more practical, community and general recovery-related benefits. They are important post-disaster for “accomplishing critical tasks” (Dynes, 2006, p.2) such as evacuation and transport, structure and order and organising of resources, which community members often assist with (Brennan et al., 2014). In Christchurch for example, neighbours and various emergent groups assisted with tasks such as chimney dismantling, collecting and distributing food and checking in on elderly people (Thornley, et al., 2013). Social networks are also valuable as a source of “informal insurance” such as provision of financial, physical and logistical support as well as information (Aldrich, 2010, p. 5; Yandong, 2010). Assistance with housing, food, child care, finances and information are often more readily available and accessible from core network members, than from local government (Aldrich, 2010) or recovery authorities and agencies. This is because it is the community that is often first on the scene responding to need, and then self-organising quickly to help in the weeks, months and years to follow (Aldrich, 2012b; Vallance & Carlton, 2014). In China, after the Wenchuan earthquake, one study found that 95 per cent of respondents who had been trapped in earthquake debris, were rescued by relatives, neighbours and other community members; only a small portion were rescued by external personnel (Yandong, 2010).

There are multiple flow-on benefits of a socially connected community. Where social networks in a community are strong, it is thought to raise the cost of “exit” as individuals are less inclined to leave areas they are committed to, or “embedded” (Aldrich, 2012b, p. 401) as they have become “stakeholders in the community” (Paton et al., 2013, p. 16). More generally, socially connected areas have also been linked with having more effective, efficient and expedient recovery efforts (Aldrich, 2011; Leitmann, 2007; Nakagawa & Shaw, 2004).

Social networks have been identified as being important for mobilising collective action (Aldrich, 2012b; Carpenter, 2013; Dynes, 2006) in terms of sharing information and working together to overcome barriers and achieve desired outcomes. In a post-disaster environment this could involve monitoring bureaucratic procedures, deterring looting, initiating informal planning to address needs (Aldrich, 2010), removing silt and debris from homes and sharing the task of watching out for theft and vandalism (Thornley et al., 2013). In Christchurch, almost 400 community led groups and initiatives were identified as playing a role in addressing and responding to various issues and needs (Carlton & Vallance, 2013). In Japan following the Kobe earthquake, local residents organised around creating fireproof housing (Olshansky in Aldrich, 2010).

Ultimately, the support and help social networks provide immediately after disasters and the diverse skills, abilities and experiences of people in communities is of value for disaster preparedness and mitigation (Brennan et al., 2014; Sharma, n.d.; Yandong, 2010) and is thus of interest to local authorities (Schellong, 2007). Moreover, the evaluation of community responses is important for contributing to understanding adaptive and resilient responses as well as being useful for validating theories and testing policies, plans and assumptions about disaster recovery (Paton et al., 2013).

Social networks are clearly valuable in a post-disaster situation and deserving of examination in terms of their value and meaning. Nonetheless, in order to assess such value and meaning, we must first get a clearer sense of what we mean by 'social networks'.

'Social networks' is a term for referring to the networks of formal and informal social interactions and/or personal relationships one has. These might consist of relationships with partners, family, friends, work and school colleagues or connections formed based on beliefs or shared interests such as sport and leisure as well as connections made through involvement in voluntary or community groups and spatial proximity (i.e. neighbours) (Healthy Christchurch, 2014; Ministry of Social Development, 2010). Social network as a theory, was developed by sociologists seeking to understand the relationships between people, with a focus on measuring structural patterns of network behaviour (Hossain & Kuti, 2010). Social network analysis is a methodology that developed out of this theory (Hommes et al., 2012) whereby the actors (the individuals or organisations) are "nodes" and the relationships between them are "ties" which constructs a "network-like structure" available for analysis (Yandong, 2010, p. 1-2). Social network analysis, however, is not commonly used in disaster recovery studies though Hossain & Kuti, (2010) advocate its value as part of a proposed social network-based coordination model for disaster response preparedness. Social network analysis aside, social networks are mostly addressed in disaster recovery literature as part of other concepts, primarily social capital and social connectedness.

Social capital is described as having “no ‘set’ definition” (Harpham et al., 2002, p. 106) though references are commonly taken from the originators of the concept. Bourdieu (1986, p. 51) described social capital as an “aggregate of the actual or potential resources which are linked to possession of a durable network” while Coleman (1988) focused more on social capital in the form of obligations, expectations, information and trustworthiness of social networks. Putnam (1995) framed social capital as networks, norms and trust for mutual benefit and, later, considered generalised reciprocity as vital to social capital (Putnam, 2000). In the context of disaster recovery, social capital theory mostly focuses on networks, trust, social norms and engagement in civic society (Aldrich, 2010; Dynes, 2006; Leitmann, 2007; Mathbor, 2007; Wind & Komproe, 2012; Nakagawa & Shaw, 2004). Social networks make up one element of social capital, thus it is not always the focus of post-disaster studies using a social capital framework.

Where a social capital framework is being applied in disaster recovery literature, and where social networks are more of a focus, they are often distinguished as *bonding*, *bridging* and *linking*. Bonding relationships are commonly defined as existing between similar people, for example in terms of age, race, ethnicity or religion (Putnam, 2000). They might also be friends and family, or those who live in close proximity to each other such as neighbours (Aldrich, 2011). Bhandari & Yasunobu (2009) however, believe it is more narrow than this, that it is only the more personal, intimate relationships between family and close friends who support and nurture each other. Bonding relationships have also been termed as ‘strong’ ties, that is, they are tightly connected (Newman & Dale, 2005). Bridging social capital generally refers to relationships between dissimilar people (Hawkins & Maurer, 2009); they are ‘weak’ ties (Granovetter, 1973), occurring externally and connecting more diverse people and groups that provide access to resources and opportunities (Newman & Dale, 2005). Examples include relationships with neighbours and friends (Islam & Walkerden, 2014) and associations between individuals with shared interests or goals (Pelling & High, 2005) such as involvement in sports clubs or parent teacher associations (Aldrich, 2011). Linking social capital is considered a sub-group of bridging social capital and is used to describe relationships that cross vertical boundaries such as social class and power structures (Pelling & High, 2005) and connect those with unequal status (Aldrich, 2011); they are the networks formed by an individual with institutions or other individuals in positions of authority (Hawkins & Maurer, 2009). Social networks in this context can thus be understood in a utilitarian sense, according to their use.

The bonding/bridging/linking framework is useful but lacks clarity at the same time. Pelling & High, (2005) note that refinement of the language is needed as not all bonding ties are “strong” and not all bridging ties can be called “weak”. It can also be observed that overlap exists in descriptions and use of the framework where, for example, friends and neighbours may fall under both bonding and bridging categories. These challenges within the framework exist because of the fluid and dynamic

nature of social life and the context in which relations play out; “the ability of individuals to change orientation and character of their social ties gives social capital a dynamic and contextual quality through time and in response to external and internal stressors” (Leonard & Onyx, 2003 in Pelling & High, 2005: p. 311). Pelling & High, (2005, p. 313) claim that because of these challenges, formal organisations are frequently used as a “proxy indicator” to represent social capital, despite the clear existence of informal relationships which are present in the bonding and bridging elements of social capital. What is required is, firstly, a focus on social networks outside of formal organisations and, second, for this focus to not succumb to the bonding, bridging, linking triad in order to allow social networks to be defined on their own terms. A concept that partly addresses this is social connectedness.

Social connectedness is another concept in the post-disaster literature that commonly refers to social networks. It has been defined as the experience of belonging and relatedness between people (Bel, et al., 2009) and as the extent of interactions, either individually or through groups as well as the relationships and connections people have, and the benefits of these to the individual and to society (Canterbury Earthquake Recovery Authority, 2014a; Ferris, 2012; Marsh & Watts, 2012; Ministry of Social Development, 2014a). Social connectedness, however, has also been described as being synonymous with social capital (Ferris, 2012) and is often used interchangeably with both social capital and social cohesion throughout the literature, without consistent definition (Marsh & Watts, 2012). It has also been described as contributing to the creation of social capital (Canterbury Earthquake Recovery Authority, 2014a). Its usefulness as a concept is therefore somewhat diluted.

Based on the definition of social connectedness, the concept appears to include both formal and informal social relations and does not have a bonding/bridging/linking focus. Social connectedness is, however, frequently understood as consisting of the individual level (one’s feeling about a particular person), the overall level (one’s whole social network), and a community level (community connectedness)(Bel et al., 2009; Ferris, 2012; Onyx & Bullen, 2000; Thornley et al., 2013) thus has its own measurement framework. Disaster recovery studies that refer to social connectedness tend to do so in reference to the overall and community level of connectedness and less so the individual level. Measures used also tend to be wider than simply social networks, for example community connectedness measures include sense of community with others in the neighbourhood, whether residents are still living at the same address and volunteering rates (Canterbury Earthquake Recovery Authority, 2014a). Measures also tend to be prescriptive in that they list networks to select from which has the effect of reducing the capture of network form and diversity (see for example Canterbury Earthquake Recovery Authority, 2014a; Healthy Christchurch et al., 2014; Ministry of Social Development, 2014a). While more focused on social networks in its definition, social connectedness, like social capital, is not useful for exploring and understanding the diversity and

form of social networks. What is required again, is a primary focus on social networks but also, a qualitative approach that does not limit the identification of such networks.

This study focuses specifically on social networks, understood as the social interactions and relationships people have with others, be they *formal* or *informal*. Social capital with its links to trust, norms and civic participation and the rigidity of its bonding/bridging/linking framework makes it less likely to illustrate the manifestation of less visible, informal networks. Social connectedness has uncertainty around its use as a concept, is wide and prescriptive in its measures and is thus also a less useful term to utilise. As a consequence, this study uses *social networks* as a *term* to identify *visible social networks* (the social networks commonly studied in the literature) and more specifically explores *(in)visible social networks* (the networks less captured in the literature). In the next section, I outline in more detail, the visibility and (in)visibility of social networks to justify this approach.

2.3 The (In)Visibility of Social Networks

A variety of social networks have been identified across the disaster recovery literature though ultimately they reflect Pelling & High’s (2005) findings that formal organisations are used as proxy indicators. Social networks tend to be either ‘formal’ networks or ‘friends and family’ as a representative of informal networks, with less attention paid to those somewhere in between. These social networks are, consequently, relatively invisible. While it would be unrealistic to say that social networks could be explored in their entirety, and idealistic to say studies could go deeper or continue further into a subject (they always could), to confidently use the term ‘social networks’ it is important to have a more nuanced understanding of their rich diversity as well as the meanings they have for people and the purposes they serve. To some degree, what networks are found, depends on how they are researched.

In empirical studies where surveys and questionnaires have been used to examine what is frequently described as ‘informal’ social networks, the questions tend to focus on key support networks of family and friends whilst other informal networks are often neglected or entirely absent. This is illustrated by Table 1 and while the list of literature is not exhaustive, it illustrates the dominance of exploration of family and friends.

Table 1. The range of informal networks questioned in surveys and/or interviews in disaster recovery research

Informal Social Network questioned	Literature
Family	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014c) • (Carpenter, 2013)

	<ul style="list-style-type: none"> • (Healthy Christchurch et al., 2014) • (Islam & Walkerden, 2014) • (Ministry of Social Development, 2014b) • (Nakagawa & Shaw, 2004) • (Tse, Wei, & Wang, 2008) • (Yandong, 2010) • (Yanicki, 2013)
Friends	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014c) • (Carpenter, 2013) • (Healthy Christchurch et al., 2014) • (Islam & Walkerden, 2014) • (Ministry of Social Development, 2014b) • (Nakagawa & Shaw, 2004) • (Tse et al., 2008) • (Yandong, 2010)
Neighbours	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014c) • (Carpenter, 2013) • (Healthy Christchurch et al., 2014) • (Islam & Walkerden, 2014) • (Yanicki, 2013)
Colleagues/Education	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014b) • (Ministry of Social Development, 2014b) • (Yandong, 2010) • (Yanicki, 2013)
Catchall e.g. associates or 'other'	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014b) • (Carpenter, 2013) • (Tse et al., 2008) • (Yandong, 2010) • (Yanicki, 2013)
Online community	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014b) • (Ministry of Social Development, 2014b)
Parent networks; Cultural Group	<ul style="list-style-type: none"> • (Canterbury Earthquake Recovery Authority, 2014b)
A hobby or interest group; gym/walking group; age specific groups; ethnic/cultural group	<ul style="list-style-type: none"> • (Ministry of Social Development, 2014b)

There are logical reasons why family and friends are the dominant informal networks to investigate in a post-disaster context; they are typically found to be the networks one feels most connected to (Healthy Christchurch et al., 2014) and they are often the “core” networks (Carpenter, 2013, p. 12) that make up one’s “social support system” (Hawkins & Maurer, 2009, p. 1778). Questions about neighbours are also frequently included, and this attention is likely due to the place-based nature of them; those in the neighbourhood are often available in the initial stages of a crisis (Murphy, 2007) where street level caring and grassroots responses take place (Vallance, 2011a).

Informal networks, however, exist beyond immediate support networks. As Table 1 also indicates, education/work colleagues, associates, parent networks, online communities, cultural groups, hobby and interest groups, fitness groups, age specific groups and 'other' networks also exist, yet comparatively, these are addressed less often in the literature. Informal networks even go beyond these loose categories, and can include more fleeting and subtle interactions such as a nodding acquaintance, as well as "highly informal" connections, such as a group of people who meet at a bar each week (Putnam, 2001, p.2). Putnam (2001, p.2) has observed that such connections can be "densely interlaced, like a group of steelworkers who work together every day at the factory, go to Catholic Church every Sunday and go out bowling on Saturday". As illustrated in Table 1, these kinds of social connections are not well catered for in social network surveys. Where they are catered for, it is not always easy to ascertain the degree to which they overlap or interlace. Putnam (2001) argues that it is important not to dismiss these kinds of interactions because they tend to be very regular and have potential value which may be missed.

As noted previously, formal organisations are a commonly used proxy indicator and this is reflected in the visibility of *formal networks* in the disaster recovery literature. These networks are organised and more easily identified as they leave visible traces; their contact details are available, they might have memberships or formal structures or they might just be well known. They are organisations such as churches and sports clubs as well as formal groups such as residents associations or community groups such as community garden groups. In post-earthquake Canterbury, multiple surveys have included faith-based networks, clubs and societies and community groups as networks to select from in respect to feeling connected to (Healthy Christchurch et al., 2014), belonging to (Ministry of Social Development, 2014a) or being able to turn to for help (Canterbury Earthquake Recovery Authority, 2014b). Case studies on these sorts of networks are also very common. In Canterbury, the Grace Vineyard Church (Harvey, 2012), Project Lyttelton (Cretney, 2013); the Lyttelton Time Bank (Ozanne & Ozanne, 2013) and sports clubs (Mills, 2014) are examples that have been examined in the literature.

These kinds of social networks are often regarded as part of the community fabric and have the potential to "unlock a community...[as] no one knows a community better than the people that work and play within it" (Everingham, 2012, p.30). Thus, from a disaster recovery perspective, they are appealing to explore. They are also pre-existing groups so may be more ready and able to mobilise and provide organised support (Thornley et al., 2013), assist with recovery efforts through oversight for emergent groups, provision of information, labour and assistance (Vallance, 2011b). These groups may also have better capacity to publicly communicate their efforts which may lead to them gaining recognition and ongoing support for their work, and ultimately enhancing their visibility.

The last kind of social network frequently addressed in the literature and thus also visible are the *popular networks*. These are the social networks that are picked up in the media and/or the literature due to having contributed to the recovery in a visible sense and are both pre-existing and emergent networks. In Canterbury, these would include social networks such as the Student Volunteer Army (Johnson, 2012), the Canterbury Communities Earthquake Recovery Network (CanCERN) (Carlton & Vallance, 2013; McBrearty, 2012; Stallard, 2012; Thornley et al., 2013; Torstonsen & Whitaker, 2011; Vallance, 2011a, 2011b); Gap Filler (Carlton & Vallance, 2013; Harvie, 2014; Thornley et al., 2013; Vallance, 2011b), Greening the Rubble (Carlton & Vallance, 2013; Montgomery, 2012; Vallance, 2011b), and suburb centred groups such as the Sumner Community Hub (Kent, 2012; Yanicki, 2013), or the Lyttelton Time Bank (Cretney, 2013; Everingham, 2012; Ozanne & Ozanne, 2013; Torstonsen & Whitaker, 2011).

These popular and formal networks often have an underpinning of existing connections that have enabled or assisted with their emergence or their successful contribution to the recovery. Yanicki (2013: p. 35-36) hints at the value of these by commenting about networks growing from the Sumner Community Hub in two ways, including “on a far more neighbourhood level....residents who had other existing local network connections began to funnel information into the Hub...”. Likewise, in a broader piece of research on building community resilience in Canterbury, Thornley et al. (2013: p. 11) stated their research involved “ordinary residents, whose voices may have had less coverage in disaster research compared with those of experts or authorities”. Nakagawa & Shaw (2004) explored social capital post disaster in Japan and India and found that a number of people involved in a “loosely connected alliance” were also old secretariat members of an organisation but because of this existing connection, were able to plan and implement community projects flexibly and quickly after the earthquake (Nakagawa & Shaw, 2004: p. 18). In a slightly different thread, but still indicating the existence of *other* networks, Mamula-Seadon, et al. (2012) who explored stories of resilience in several suburbs of post-earthquake Christchurch, found that the spontaneous interactions were considered just as valuable as pre-existing connections for community resilience post-earthquake.

These ‘neighbourhood level’ ‘ordinary residents’ ‘existing local networks’; ‘nodding acquaintances’; ‘loosely connected alliances’; ‘very informal’ connections and ‘spontaneous interactions’ are often neglected in research, though, as Putnam (2001) noted, they almost certainly play an important role. Other than occasional recognition and brief attention in the literature, they do not appear to be explored to any great extent. These kinds of social networks and connections might be “very thin almost invisible” but they are present and they are deserving of exploration (Putnam, 2001, p.2), which is part of the aim of this study.

2.3.1 Theoretical challenges

The following sections illustrate some of the potential theoretical and methodological reasons why these thin, informal or almost invisible social networks may have not been explored particularly well. As mentioned earlier, while social networks are commonly referred to in the disaster recovery literature, they are not often a primary focus. It is commonly the case that social networks make up but one part of a number of different elements being explored. For example, Nakagawa & Shaw, (2004) surveyed participants about their social networks as well as trust, social norms, collective action and community leaders. Similarly, in some of the large surveys that have taken place in Canterbury, social connectedness is but one topic among many others (Canterbury Earthquake Recovery Authority, 2014b; Healthy Christchurch et al., 2014). The focus then, is not often on exploring the diversity of social networks, it is just one part of a larger study. Even where social networks are the primary focus, it is common to see them related to some other aspect of disaster recovery. For instance, in the work of Beggs et al. (1996) personal networks were the focus, but in the context of receiving formal disaster aid. Carpenter (2013) also looked into formal and informal social networks but the focus was their relationship to resilience of communities and the built environment. The focus of such studies was therefore not on exploring social networks themselves, but on seeing how these might relate to the chosen research topic.

Social networks are also sometimes identified as being important post-disaster, yet are not directly measured. Social capital for example, despite being a theory essentially centred on social relationships, is often measured and understood through using indicators of civic society, trust and social norms (Aldrich, 2010, 2011; Bhandari & Yasunobu, 2009; Coleman, 1988; Putnam, 2001; Woolcock & Narayan, 2000). Aldrich, (2008, 2010), for example, argues that trust, civic engagement and strong networks assist communities in recovery and explains that this can be measured through levels of trust (in fellow citizens and in government officials), engagement in civic duties (such as voting in elections) and the ability of citizens to collectively mobilise (for example through demonstrations or neighbourhood clean-up days). These measures, while certainly relevant to social capital, are more focused on the trust and civic engagement aspects and provide less of an understanding of the kinds of social networks that are important.

Similarly, in Christchurch, as part of its social recovery focus, the Canterbury Earthquake Recovery Authority developed the Canterbury Wellbeing Index which tracks the progress of social recovery through a number of indicators including social connections (Canterbury Earthquake Recovery Authority, 2013a). The social connectedness chapter defines social connectedness as the “relationships people have with others....” such as “...relationships with family, friends, colleagues and neighbours, as well as connections people make through paid work, sport and other leisure

activities, voluntary work or community service” (Canterbury Earthquake Recovery Authority, 2014: p.1). One might subsequently expect questions in the Wellbeing Survey would assist in identifying the number or different types of connections and relationships participants of the survey have. Instead, the survey investigates social connectedness by asking about sense of community with others in the neighbourhood and whether or not there is a person one can turn to for help if needed (and if so, who that person is, with options provided to choose from) (Canterbury Earthquake Recovery Authority, 2013b, 2014a). As a large scale survey with a section on social connectedness, these questions are not particularly revealing in terms of understanding the *kinds* of relationships people have, nor how these relationships are formed and imbued with meaning.

In short, social networks on the whole, tend to be addressed secondary to other foci which may contribute to the dominance of visible networks. Along with this secondary nature of social networks, they also tend to be heavily classified and characterised (see Table 2, below) which, while useful, may also be limiting. As noted earlier, and as Table 2 illustrates, social networks are heavily linked with social capital and are commonly classified across the disaster recovery literature.

Table 2. Describing social networks in disaster recovery literature

Classifying Social Networks	
<i>Classification</i>	<i>Description</i>
Formal	<ul style="list-style-type: none"> • More formally organised groups, for example with a Chair or President, or formal membership (Putnam, 2001; Largey, 2005) • Neighbourhood and formal community systems (Gordon, 2003) • Formal community organisations e.g. churches, school groups, professional organisations (Carpenter, 2013)
Informal	<ul style="list-style-type: none"> • Networks of family, friends and neighbours (Carpenter, 2013; Largey, 2005; Thornley et al., 2013) • Based on personal relationships (Gordon, 2003) • Highly informal, for example a group of people who meet at a bar each week (Putnam, 2001) • “Very thin, almost invisible”, e.g. nodding acquaintance (Putnam, 2001, p.2) • Support networks
Bonding	<ul style="list-style-type: none"> • Existing between similar people, for example in terms of age, race, ethnicity or religion (Hawkins & Maurer, 2009; Putnam, 2000); • Friends and family, or those who live in close proximity to each other such as neighbours (Aldrich, 2011); • Family members and relatives (Islam & Walkerden, 2014) • Personal, intimate relationships between family and close friends who support and nurture each other (Bhandari & Yasunobu, 2009). • Ties between immediate family, neighbours, close friends and business associates with similar demographic characteristics (Nakagawa & Shaw, 2004) • Internal – “the linkages among individuals or groups within the collectivity...” (Adler & Kwon, 2002, p. 21).
Bridging	<ul style="list-style-type: none"> • Outward looking, horizontal relationships, relationships with similar entities (Islam & Walkerden, 2014)

	<ul style="list-style-type: none"> • Relationships amongst dissimilar people e.g. age, socio-economic status, race/ethnicity and education (Hawkins & Maurer, 2009) • Relationships amongst dissimilar people but with similar economic status and political influence (Nakagawa & Shaw, 2004) • Neighbours and friends (Islam & Walkerden, 2014) • External - “social capital as a resource located in the external linkages of a focal actor” (Adler & Kwon, 2002, p.21)
Linking	<ul style="list-style-type: none"> • Networks formed among those with very different social backgrounds or levels of power such as policy makers (Bhandari & Yasunobu, 2009) • Relationships built with institutions and individuals with power (Szreter & Woolcock, 2004). • For example ties with banks, schools, housing authorities, police (Nakagawa & Shaw, 2004)
Strong ties	<ul style="list-style-type: none"> • Small, well defined groups, primary groups (Granovetter, 1973) • Relationships with close friends and family (Beggs, Haines, & Hurlbert, 1996; Largey, 2005; Stallard, 2012)
Weak ties	<ul style="list-style-type: none"> • Relationships between dissimilar people, or associates and neighbours, people who’s faces might be familiar but a strong relationship may not have been established (Stallard, 2012) • Friends of friends, acquaintances (Beggs, et al., 1996) • Formal organisations (Largey, 2005)
Horizontal relationships	<ul style="list-style-type: none"> • The relationships between similar individuals and groups in same social context (Harpham et al., 2002; Mooney et al., 2011)
Vertical relationships	<ul style="list-style-type: none"> • The relationships between different levels of society such as relationships from governance bodies to grassroots (Harpham et al., 2002; Mooney et al., 2011)

Generally speaking, these classifications offer different ways of explaining similar things. The labels of ‘formal’, ‘bridging’, ‘linking’ and ‘weak ties’ refer to connections with formal organisations or groups where relationships might form with dissimilar people from different backgrounds. Alternatively, ‘informal’, ‘bonding’ and ‘strong ties’ generally refer to the more personal connections one has, such as friends and family. Horizontal relationships are also similar to bonding and bridging social capital, and vertical relationships similar to linking social capital (Harpham et al., 2002).

However, when one looks deeper into these classifications, overlaps and confusion exists. As noted in the previous section, clarity is lacking in the social capital bonding/bridging/linking framework and this also runs true for the other classifications. For instance, informal networks can mean both personal and intimate connections as well as including very casual connections such as those we have with acquaintances (Putnam, 2001). Informal networks can consist of both strong and weak ties. Some networks may also have formal and informal elements, for example a community group may be formal in that it is established and organised (i.e. meets regularly, or has a written constitution), but also informal as the people in it may have formed strong personal ties so as to become friends and connect outside of the group. The key point here is that this overlap raises questions as to where some networks fit in, if at all, and if they do not fit well, are they rendered less

visible in the literature, despite their importance? This is where the risk of social networks that easily fit, specifically those that are more visible are focused on, and others are minimised or missed entirely.

While these classifications are useful in understanding broad kinds of social networks, application of such classifications are likely to find social networks that fit into the categories, but potentially miss many more. Classifications are less useful where the diversity of social networks are sought to be understood at the outset. The use of classifications in this sense could limit the way networks are examined, or may not adequately reflect the nature of the networks that exist.

While it may never be possible to construct a complete picture of all potential kinds of interaction in all types of networks, it has been noted that it is “still instructive to investigate” (Largey, 2005, p.3). Moreover, the dynamics and changes in social networks in a disaster setting has been noted to deserve further study (Yandong, 2010).

2.3.2 Methodological challenges

The dominance of visible networks in the disaster recovery literature is only compounded by the way in which social networks are measured in the research. Just as the theoretical classification of social networks potentially limits the discovery of social networks, it appears to be possible that the surveys that try to measure them are also failing in some way. Many of the questions in surveys that measure what social networks people are involved in, both in a post-disaster context, and outside of it, prescribe the networks available for participants to then select from. The New Zealand Quality of Life Survey 2014, while not specifically designed for Canterbury and the earthquake context, was nonetheless carried out in the region post-earthquake. The survey included a section measuring social connectedness and respondents were asked to indicate which social networks and groups they belonged to with the options as listed below in Table 3 (Ministry of Social Development, 2014a). Similarly, Yandong (2010), in a study looking at social networks of residents living in the Sichuan earthquake area in Japan, also took a prescriptive approach and asked respondents “In the spring festival of 2008, how many relatives, friends and other acquaintances had you contacted?” (Yandong, 2010: p. 3).

These prescriptive approaches not only limit the initial selection of social networks but they also force participants to think about their connections within the bounds of the pre-selected options, which may not necessarily be well suited to their situation. For example, if I were to answer what social networks and groups I belonged to, I would be unsure whether my mostly irregular dance jams with friends would be classified as a ‘hobby or interest’ or ‘sports’ or ‘none of the above’ in the Quality of Life Survey, and I would be uncertain who to include in the ‘acquaintances’ option

provided in Yandong (2010). The phrasing used in survey questions may also compound this. I would also be uncertain whether dance jams qualify me as “belonging” to a “group” as per the language used in the Quality of Life Survey.

Interestingly, the 2014 Quality of Life Survey also provided a “friends” and “family” option for participants to choose from, though the results (see Table 3, below) showed only one percent indicated they belong to a ‘family network’ and two percent for a ‘friends network’. These results are very low, especially given a similar study around the same time found that the five most common groups forming a respondents’ support network included friends (95 per cent) and family (95 per cent) (Healthy Christchurch et al., 2013). This is potentially indicative that participants may have experienced the same kind of uncertainty I would in terms of “belonging” to specific “groups” and “networks”.

Table 3. Social networks and groups belonging to question statistics (Ministry of Social Development, 2014b)

Appendix 3 Chart 1: Social networks and groups belonging to (%)

	Christchurch Total (n=484)	Shirley-Papanui (n=78)	Fendalton-Waimairi (n=72)	Burwood-Pegasus (n=65)	Riccarton-Wigram (n=102)	Hagley-Ferrymead (n=70)	Spreydon-Heathcote (n=83)	Banks Peninsula (n=14*)
Online network through websites such as Facebook / Twitter, online gaming communities and forums	49	53	43	66	48	38	47	76
People from work or school	47	43	57	39	50	38	50	62
A hobby or interest group	28	22	29	22	30	36	33	16
A sports club	26	22	30	33	26	24	24	21
A church or spiritual group	18	15	22	18	22	16	10	33
A community or voluntary group such as Rotary, the RSA or Lions	12	10	12	16	10	11	11	17
Friends	2	0	2	2	3	2	5	7
Family	1	0	1	0	0	0	2	0
Gym/walking group	1	2	0	2	2	3	0	0
Age specific group eg senior citizens or children's	1	3	0	0	1	1	2	0
Ethnic/cultural group	0	0	2	0	1	0	0	0
Other social network or group	0	0	0	0	0	1	1	0
Don't know	0	0	0	0	0	0	0	0
None of the above	15	25	10	11	14	14	17	0

Base: All Respondents (excluding not answered)

*Caution small base sizes

The other kind of data commonly used is census and population level data, but the limitations of this have been observed by King, (2001: p.153) in the context of using socio-economic indicators of community vulnerability to natural hazards:

We make extensive use of statistically derived indicators because they are easily and relatively cheaply available, and because we can easily aggregate, manipulate and analyse them. But they are only indicators of some aspects of the public and the community.

The point that can be made in these cases, is that social networks have highly subjective “answers”, something which quantitative surveys are unable to easily address. By using quantitative and more prescriptive approaches, the results are limited to statistical representations of social networks, such as the size of the network, or the proportion of total respondents who belong to a particular network. The approach also limits illustration of the fuller extent of these networks such as the actual networks that exist within a ‘hobby’ group, or a ‘sports club’, or how many potentially different networks there are within one category, least of all an understanding of the quality or meaning of such contact for those involved. Furthermore, the continued use of such a framework perpetuates the potential exclusion of other networks.

2.4 Chapter Summary

As the research reported in this chapter illustrates, there are clear deficiencies in the way social networks are addressed and in particular, there is a lack of in-depth focus and exploration in identifying the form and diversity that social networks take. The way social networks are currently addressed results in a focus on *friends and family, formal and popular networks* and results in a gap in the understanding and meaning of social networks outside of these, primarily the more informal social networks that are typical of one’s day to day social practice. Such networks are currently, *(in)visible* in the literature. The purpose of my research is to identify the form and diversity of social networks and explore their meaning in the post-disaster suburb of Sumner, Christchurch. In relation to this broad objective, I have three key research questions:

1. Drawing primarily from Social Capital theory, what does a more nuanced understanding of social networks look like?
2. How can social networks be better captured in disaster recovery research?
3. What is the significance of this more nuanced understanding for disaster recovery?

Chapter 3

Research Methods

3.1 Introduction

This study was conducted primarily at an explorative level using a case study. I sought depth and detail on the social networks present in the day to day lives of residents in Sumner. I also sought to understand the meanings held for the social networks that are often missing from the literature, what I have termed (in)visible social networks. Qualitative research methods were the most appropriate given this desire for insight and the need for descriptive data that is rich in meaning (Hakim, 1987). This research comprised a review of the literature on disaster recovery with a specific focus on social networks and the way these are understood and measured. In-depth interviews, questions via email and observations were also utilised. In this Chapter, I will further explain my research methods and provide details of the ethical considerations given, as well as the limitations of this study.

3.2 Qualitative based case study strategy

The qualitative approach adopted in this study was borne out of a key concern that much of the existing recovery literature recognised the value and importance of social networks, but appeared to have limited exploration beyond quantitative measures and/or surface level detail. This contributed to the rendering of the more informal and day to day social networks as (in)visible in the literature. I wanted to look in-depth at social networks and sought the kind of data that arise from what Geertz (1973) terms 'thick description'. As the Literature Review identified, studies of social networks tended to use standardised lists of prescribed networks for participants to select from. While such studies offer important data, such as a general overview of the broad kinds of networks people are involved in, the richness of the study participants' own experiences and thoughts can be lost through such methods (Blackwell, 2002). It was therefore important for me, in order to both discover the more (in)visible networks, as well as understand their meaning, to utilise a research methodology that would enable this.

There are three components stated to make up qualitative research: the data collection, the procedures used to interpret and organise the data and the written (or verbal) reports that present the findings (Strauss & Corbin, 1998). My aim was to ensure a qualitative approach at each of these stages, as it was observed in the literature that some qualitative studies at the data collection stage,

would then code their data in a way that would effectively quantify their findings and result in the same limitations of social network identification as quantitative studies. It was important for me to represent the social networks found *on their own terms*.

This study then, was exploratory in nature; I was following my nose (Stevens et al., 2006) in the search of a thick description of the more informal and day to day social networks that I thought must exist. I also wanted to understand what those social networks meant and how they related to the disaster recovery context we are in. This research thus sought to understand the what, how and why questions of social networks; questions that require explanation and understanding through meaning, best gleaned through qualitative research methods (Flick et al., 2004; Snape & Spencer, 2003). By utilising in-depth interviews, short interviews and observations, meaning-rich data that shed light on social life and social networks were able to be collected. The fieldwork took place in the suburb of Sumner, Christchurch.

Case studies are appropriate when the focus of the study is on answering how and why questions and where the context is relevant to what is being studied (Yin, 2003). I chose to conduct a case study in Sumner for two main reasons. Firstly, the aim was to achieve *depth* of information and Sumner was highlighted by others as being resilient and having a strong community spirit post-earthquake (Christchurch City Council, 2012b, 2014; Wright, 2011). It was thus seen as being an *information rich* case study (Johansson, 2003; Patton & Cochran, 2002; Patton, 2006). This was further reinforced by the second main reason and that was my positionality. At the beginning of this thesis, Sumner was where I lived. I had also lived there through the earthquakes. I had connections in the area, had observed, and been part of, the community as it came together post-earthquake. I had observed a number of community and social interest groups, activities and events emerge and I also had a hunch that much more was going on in and around the edges of these networks. Being geographically discrete also meant there was a more clearly defined boundary in which to focus this research.

3.3 Data Collection

Data were collected from four main sources. Primary data were collected through in-depth interviews with residents of Sumner and emailed questions with representatives from various groups. Secondary data were collected from the literature pertaining to post-disaster recovery and observations in the community reinforced my sense that what could be described as a very *soft* topic, did have substance worth exploring in depth, because I could see it. The following sets out the data collection in more detail.

3.3.1 Literature Review

The literature review was important as it provided a context for the research topic and was the proper place to begin (Stevens et al., 2006). The first part of the literature review explored post-disaster recovery literature focusing on research and articles that were socially focused in nature such as those centred on human or community recovery, as opposed to literature, for example, on the structural integrity of buildings. The second part of the literature review focused on scholarship that addressed social networks. The literature review provided me with an understanding of the existing research around my topic, how such research on social networks was conducted and for what purpose. This in turn enabled me to identify gaps and generate ideas around my own topic.

3.3.2 Observations

While a detailed observational study was not carried out, as someone living in the community I was studying, some observation was unavoidable. As a result of living opposite a primary school, I saw my research in action throughout the week when parents stood outside chatting while dropping or picking up their children. I saw these interactions throughout the Sumner village, people bumping into each other and catching up, some brief but for others much longer. I observed it every Wednesday in our pop up fresh produce market and was pleased that our space fostered that kind of social activity. I also experienced it myself. These simple though constant observations both enhanced my curiosity about the value of some of the more informal connections people have, and reinforced the existence of these other forms of social networks. These observations contributed to the beginning of my thinking around informal, everyday social networks but have not been used as a source of data. This aided in avoiding insider tension, that is, tensions relating to my living in the community in which I was conducting a case study.

3.3.3 Interviews

In-depth one-on-one interviews

Interviews are perhaps the best way to obtain insights and clarifications of the experiences, thoughts and opinions of others and are an integral part of qualitative research. In-depth interviews are a privilege for a researcher to conduct, and interview styles vary from formal and structured to informal and unstructured (Allmark et al., 2009; Patton & Cochran, 2002). The latter was adopted in this study to allow flexibility in pursuing interesting lines of conversation but also because it suited the nature of the topic. A conversation essentially about one's social life is a relatively personal one, so the interview style was much more suited to a flexible conversation than a rigid schedule of questions. It also allowed the participant to focus more on what they considered important and my role was primarily to listen, and prompt further detail around particular themes. A brief interview guide was developed (see Appendix 1) but was rarely looked at while interviewing. Essentially the

interviews were guided conversations that lasted between thirty and ninety minutes. The interviews were conducted mostly in the homes of the participants although two interviews were also conducted at a local cafe. Interviews were recorded with permission, transcribed and the data then coded and analysed. As a thank you for their time, participants were gifted a bag of fruit and vegetables.

Fifteen in-depth semi-structured interviews were conducted with residents of Sumner across late April, May and early June, 2014. The majority of participants for this research were recruited via the snowball technique (Patton & Cochran, 2002). Using this method, the initial participant provided the name and contact details of someone they knew, who they thought may also be interested in being interviewed. The first few participants were people I knew and most, though not all participants were able to provide me with a contact of another person, sometimes several. The only requirements were that they were residents of Sumner, having lived in the area prior to the earthquakes and over the age of 18. All but one participant met this criteria, with the exception having moved into the area the year following the earthquakes. The decision was made to still interview this participant as they provided a perspective from someone outside of the community moving in, but also because this person was not a parent, yet a similar age of other parents I had spoken to. I was curious as to how their social life differed from those with children.

Short open-ended questions via email

As well as interviewing residents, nine representatives of various groups and organisations were also contacted via email with a list of questions (See Appendix 2) over the same time period. One in-depth interview also covered, in detail, these same questions for a participant who was both a group representative for two groups, and speaking from a personal standpoint. This brought the number of groups and organisations questioned, up to eleven. These interviews were not as personal as the in-depth interviews, rather they focused on the role those groups played in general, from a social point of view as well as from an earthquake recovery perspective. Insights were gained from a total of eleven groups, ranging from sports and recreation, to the environment, community and youth and young children focused. While these interviews were more brief in nature, where more detail or clarification was desired, this was requested and the information was provided.

Contact was initially made with people who I knew were involved in co-ordinating various groups though I also widened this out to local businesses which I thought would have a strong social aspect. Networks discovered through the in-depth interviews were also included where possible. The following groups provided input into this study:

- Sumner Theatre Group
- Sumner Environment Group

- Book Club
- Italian Cooking Classes
- Fuse Youth
- Heidi2Health (Fitness classes)
- Long Boarders Club
- Sumner School Parent Teacher Association
- Sumner van Asch Community Garden
- Mini Music
- Play Group

3.3.4 Participant Range and Sample Size

Qualitative research does not require a particular number or range of interviews for the work to be of value as the aim is to be able to make generalisations about social processes and typical patterns of meaning, as opposed to being statistically representative like quantitative research (Liamputtong & Ezzy, 2005). In this study, interviewees were selected if they were residents from Sumner and had lived there prior to the earthquakes. Participants were primarily women (70 per cent, or 18 of the total 24 respondents). More specific demographic data was not collected as there was no desire to explore gender/age/ethnicity roles within this study.

In terms of sample size, the rule of saturation (when no new themes emerge) is frequently used (Mason, 2010; Patton & Cochran, 2002). Generally, however, samples should be large enough to ensure most or all important aspects of a topic are uncovered (Mason, 2010). I was impressed with the detail and number of social networks that emerged after completing the first dozen in-depth interviews. It was hard to say whether saturation was reached after a total of 15 in-depth interviews as new social networks undoubtedly would have been identified the more interviews I did. I was not, however, seeking to provide an exhaustive list, and the depth and quality of the data gathered proved to be sufficient for the purpose of this thesis. Time constraints and a significant event in the community (see section 1.6) also played a role in deciding to stop the in-depth interviews at 15.

3.4 Data analysis

Data analysis involves making sense out of and learning from the data collected (Taylor & Bogdan, 1998). In this study, the data came from the interviews. All of the face-to-face interview participants agreed to a voice recording. These recordings were transcribed, and along with the other already typed transcripts from emailed questions with group representatives, they were read and memos pertaining to the data were made. I originally imported the data into the NVivo qualitative data analysis software, but after coding like responses and topics into various nodes, decided that manual analysis was more suitable. This was mainly because I was used to using Nvivo for large-scale

qualitative analysis projects and this felt smaller and manageable manually. I also felt that manual analysis was more personal, which seemed appropriate.

Coding was both deductive and inductive. It was deductive in the sense that I had broad themes as part of my overall aim and objectives of this study that I coded to. These were the identification of social networks, their meaning and importance to participants, and how this related to the disaster recovery context. Coding was also inductive in the way that the data relating to the meaning and importance of social networks was further coded and analysed as themes emerged from the data itself.

3.5 Ethical Considerations

Ethical considerations are important in conducting any kind of social research and researchers have responsibilities to their research participants (Patton & Cochran, 2002). A key ethical consideration is consent. This study was approved by the Lincoln University Human Ethics Committee for consent to interview residents of Sumner (See Appendix 3). Interviewees were contacted through email or telephone and a clear explanation of the research was provided. All interviewees were given a research information sheet prior to the interview and upon reading this all participants signed a written consent form (see Appendix 4). This ensured respondents were well-informed about what their participation entailed (Patton & Cochran, 2002).

A second key ethical consideration is confidentiality. The research information sheet and consent form detailed my undertakings in regards to confidentiality thus the participants understood that confidentiality would be maintained throughout the research including in any published work. Participants of this research were assigned numbers to make their transcript anonymous and only the researcher had access to the corresponding names. This is consistent with ethical considerations identified in the literature (Babbie, 2007; Patton & Cochran, 2002; Snook, 1999). Names of the participants, original recordings and transcriptions were stored on my password protected laptop.

Ethical considerations were also taken into account in regards to the thesis topic as it involved some references and questions related to the earthquake which was a potentially sensitive topic. I made the topic clear to participants when I first spoke to them and the research information sheet outlined the potentially sensitive nature also. I had a strategy in place in advance of the interviews to deal with potential difficulties as suggested by Allmark et al. (2009). This strategy involved starting broadly with questions and allowing the participant to take control of the conversation, not pushing lines of

inquiry if the participant appeared uncomfortable and being prepared to pause, stop or take a moment to allow the participant to re-gather themselves if needed (Allmark et al., 2009).

3.6 Limitations of the Study

During the time of interviewing, the community was shocked by a sudden accident involving the loss of life of three Sumner residents who were well known². After this event, one more interview was carried out but it was then decided it was no longer appropriate. This decision was made in consultation with my research supervisors.

It should also be noted that while the most significant earthquakes had occurred prior to data collection, there were still earthquakes occurring. This also contributed to testing circumstances (see the red rectangle in Figure 4, below).

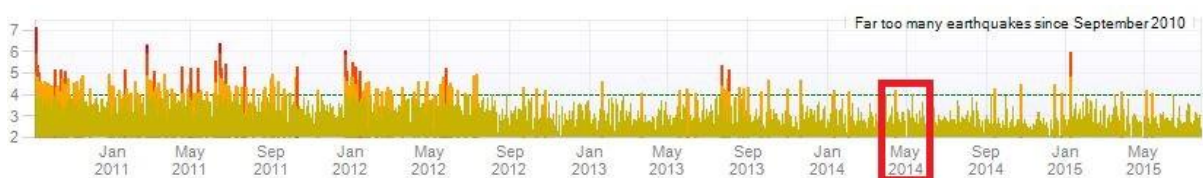


Figure 4: Earthquake frequency during data collection (Crowe, 2015).

3.7 Summary

This study employed qualitative research techniques of in-depth interviews and open-ended questions to explore social networks and their meaning in a disaster recovery context. Observation also resulted in an affirmation of my curiosity around this topic. The suburb of Sumner was chosen as a case study due to being information rich and accessible as a result of my positionality.

² See Young (2014).

Chapter 4

Making the (in)visible Visible

4.1 Introduction

The literature review identified a key gap in the understanding of social networks in the post-disaster context around a lack of in-depth focus on, and exploration of the form and diversity of social networks. More specifically, there is scope to add nuance to the understanding of the more mundane, day to day and informal networks; making these (in)visible social networks, visible.

This chapter presents the results of the first part of my aim of identifying the form and diversity of social networks in Sumner. This in turn assists in answering the first key research question of what a more nuanced account of social networks looks like. In fifteen in-depth interviews with residents of Sumner, I asked respondents about the kinds of things they did to feel socially connected, and to talk about their social life more generally. In nine shorter interviews with representatives of specific networks I also asked about the social side of such networks. The networks identified in this study are summarised in Tables 4 and 5. It is worth noting that these Tables are formulated from data collected from interviews and are indicative of the sorts of social practice undertaken. There will no doubt be many more examples present in Sumner. However, this research aims to add a level of detail to more orthodox descriptions of social networks in a post-disaster context. The data in the Tables have also been organised by theme for ease of reading. These themes emerged from the data collected but also corresponded with organising around enthusiasms (Bishop & Hoggett, 1986).

In this chapter, I begin by providing an overview of the social networks found in Sumner and then go on to look more specifically at the (in)visible social networks that emerged. A series of mini case-studies that were uncovered in this research are featured throughout the chapter for added depth and insight. The complex nature of social networks is then illustrated and the chapter is concluded.

4.2 Social Networks in Sumner

A great number and variety of social networks, as well the context in which they occurred, were provided by participants in this research. Included in the networks found were many of the visible social networks typically identified and explored in the literature (see Table 4, below). Respondents commonly identified their support networks of *friends and family*, a large number of well established, organised *formal* social networks they were involved in as well as a handful of *popular*

networks, most commonly the Sumner Community Hub which was described as a “really important development” (Respondent 12). Had a fairly orthodox analysis of social networks been conducted, this summary table below, might have been where one would have stopped. This, however, is only a partial picture of the social networks in Sumner.

Table 4. Summary of the visible social networks of some residents in Sumner

The <i>visible</i> social networks		
<p>Friends and Family</p> <p><u>Sports/Recreation</u></p> <ul style="list-style-type: none"> • Mountain biking with friends • Running with friends, family • Walks with friends, family • Boating with friends <p><u>Arts/Craft</u></p> <ul style="list-style-type: none"> • Knitting with friends • Seeing a film with friends <p><u>Leisure</u></p> <ul style="list-style-type: none"> • Coffee, lunch, dinners with friends, family • Parties with friends • Shopping with friends • Preserving/pickling with friends • Windsurfing with friends (mostly outside of Sumner) • Christmas/Birthday/Anniversary celebration events with friends, family • Talking to friends and family on the phone • Travel outside of Christchurch with friends and family • Walks with friends and family • Road-trips with friends. 	<p>Formal Networks</p> <p><u>Sports/Recreation</u></p> <ul style="list-style-type: none"> • Tai Chi and Yoga classes • Fitness Classes • Surf Life Saving Club (Taylors, Waimairi) • Ferrymead Bays Football • Gyms (outside of Sumner) • Ski clubs (outside of Sumner) • Fitness classes • Long Boarders Club <p><u>Arts/Craft</u></p> <ul style="list-style-type: none"> • Sumner Theatre Group • Two choirs (outside of Sumner) • Pottery group (outside of Sumner) <p><u>Community</u></p> <ul style="list-style-type: none"> • Sumner School Board of Trustees • Parent Teacher Association • Plunket Committee • Sumner Environment Group • Toy Library Committee • Mini Music • Play Group • Sumner Community Residents Association • Sumner Community Garden • Sumner/Redcliffs Historical Society • Church • Chatter Soup Social • Parent Representative at school • Sumner newcomers group <p><u>Age-related</u></p> <ul style="list-style-type: none"> • Mens Probus • Senior Chef <p><u>Other</u></p> <ul style="list-style-type: none"> • Italian cooking classes 	<p>Popular Networks</p> <p><u>Community</u></p> <ul style="list-style-type: none"> • Sumner Community Hub • Village Green/Greening the Rubble • Sumner Community Residents Association • Sumner Community Garden/Food Forest • Sumner Urban Design Group • Habitat Sumner

This study, unlike the picture painted above, also found a large selection of (in)visible social networks. These networks included groups of people that met on a somewhat regular basis such as the Crafternoon group (see Box 1), to more sporadic encounters which occurred around organised activities such as school pick up and drop off, as well as serendipitous social encounters that occurred as part of day to day life. Many of the networks were also based around shared interests in

things like books or yoga but also included aspects people had in common such as being dog walkers, or having children. The following section outlines the (in)visible social networks found in Sumner, in more detail.

Box 1: The case of the “Crafternoon”

“Crafternoon”

“Crafternoon” is a post-quake activity that formed approximately a year ago. The group was forged after desiring more quality time with friends in the context of an environment where “it is so much more difficult to get anywhere or do anything” and the knowledge that “togetherness is really important”.

Crafternoon is held roughly every six weeks at the home of a woman in Sumner. A “bunch of friends”, about six or seven, come over and there are three rules – “bring something really tasty to put on the table, some sort of music (either bring an instrument or a piece of music or come prepared to sing or whatever) and the third thing is to bring something for your hands – whether you’re painting or knitting or crocheting or whatever”. The group hang out for an undefined amount of time, beginning at 1pm and they have a “jolly great time”. Crafternoon is “stimulating” and full of “good conversations”.

4.2.1 (In)visible Social Networks

A more complete picture of social networks in Sumner would include many other networks – the (in)visible networks (see Table 5, below). These (in)visible social networks were informal in that they were mostly irregular, non-committal; often private and sometimes unplanned or unnamed coming together of people. Many of these comings together were based in the homes of local residents, the physical/natural environment or cafes and eateries, as opposed, for example to requiring a specific venue such as a hall for the Theatre Group.

The (in)visible networks consisted of education networks, work colleagues, fellow community group members, those with relational interests (e.g. sports/recreation, arts/craft, leisure), neighbours, “quake mates”, parent and school networks, social media/online, fellow church members and community members/locals/regulars. They also consisted of the informal dimensions of formal networks: informal training groups for the Taylors Surf Lifesaving Club, coffee catch ups associated with Yoga, Tai Chi and other fitness classes, house group and bible studies connected to Church and the parent interactions around formally organised Mini Music and Play Group events. Many friend and family networks were also identified and while I have included these in the ‘visible’ category in Table 5 below the overlap into the (in)visible networks and the level of detail provided by respondents on these networks has meant they are an essential part of the (in)visible networks too and are integrated into this section where relevant.

Table 5. Summary of the (in)visible social networks of some residents in Sumner

The (in)visible social networks		
<p><u>Sports/Recreation</u></p> <ul style="list-style-type: none"> • Informal training groups for Surf Life Saving Club in the off season • Dads indoor football group • Surfing, seeing people in the water, car park and on beach • Paddle boarding “boobs on boards” • After-match of rugby games <p><u>Parent Networks</u></p> <ul style="list-style-type: none"> • Parent interactions from coaching/ assisting with kids sports teams • Socialising with other parents at children’s sports and activities • Socialising with other parents at school functions • Mini Music parent interactions • Play Group parent interactions • Coffee catch-up Plunket group 	<ul style="list-style-type: none"> • Interactions with parents at school pick up and drop off • Dads’ indoor football group <p><u>Community</u></p> <ul style="list-style-type: none"> • Bumping into people as part of day to day life while in the village or beach/esplanade • Bumping into people while dog walking, walking, jogging or cycling • Development of “quake mates” • Neighbourly relationships - from saying hello to stopping in to going out and dinner parties or joining together in neighbourhood ‘fights’ • Attending community events such as the street party or picnic <p><u>Arts/Craft</u></p> <ul style="list-style-type: none"> • Crafternoon <p><u>Leisure</u></p> <ul style="list-style-type: none"> • 3xBook Clubs 	<ul style="list-style-type: none"> • Meditation group • Coffee catch up after Tai Chi class, Yoga class, Fitness classes • Music jam session • Socialising over coffee or food with education, work colleagues, fellow community group members, those with relational interests and recreation/sports group members. <p><u>Other</u></p> <ul style="list-style-type: none"> • Social media (Facebook) • House Group • Bible Studies

Of the networks identified above, parent networks, informal sports/recreation networks and community networks were especially common. While these social networks might be acknowledged in the literature, they are not often explored in any great depth, nor are they the prime focus. In this chapter, I explore – and add nuance – to social networks by looking at the (in)visible social networks in more detail.

Parent Networks

Parent networks appeared to have a strong presence in Sumner and many ways in which interactions occurred. Networks were formed around children, some of which were ‘formal’ such as attending Mini Music. Others were less formal but still routine and regular, and included parental interactions resulting from children attending play groups, preschools and school. Other networks were highly informal and often resulted from children making friends with other children with the parents often becoming friends too, children playing sports and being involved in other such activities and again, the parental interactions around that. Respondent 5 captures the social networks associated with attending their children’s sports games:

My son does rugby, my daughter does hockey. Going to training and matches, that’s really social, catching up with people and that’s probably a lot of the day to day life really. Social because when they’re actually playing, sometimes I’m helping but if I’m not then I can chat or I might take the dog for a walk but it’s a chance to chat and find out what everyone’s up to.

There are also formal events and evenings that schools and Parent Teacher Associations organise which provide opportunities for new engagements and further develop bonds already made as Respondent 11 commented:

The school activities, lots of fundraisers so opportunities to get together the kindergarten had one not long ago, it was a show and that was quite good. Fundraisers, go, see people you haven't seen for a while. They do seem to put on quite a good event. The snow ball is coming up, last year was really good fun.

When children are present, it appears there are ample opportunities for parents to connect. Many examples were primarily from mothers, but Box 2 below, highlights how some fathers with children at the same school also connected.

Box 2: The case of the Dad's indoor football group

Dad's indoor football group

This indoor football group was set up by a woman who saw a need for her husband and other dads to have something to do in winter to release from their daily stresses at work. While I did not speak to any of the men participating, I spoke to three women whose husbands/partners were involved.

The dads' indoor football group was set up approximately one year ago by a woman who was reflecting on her husband having sports during the summer but not in the winter and the impact this lack of sport had. She approached the principal of the school whose hall it is now held in and every Tuesday at 7pm a collection of dads from the school, play football for two hours. It has been running "really successfully" and hasn't needed to be promoted because word of mouth has been enough. The women reflected on the difficulty of working dads to socialise; "he's been talking to people all day, he doesn't want to catch up, he doesn't want to go to the pub, but he loves the idea of hitting some balls or kicking them around, you might say a few words, but you're doing something and I've realised for guys, that's really important".

Unfortunately the football group got "kind of shut down because of damage to the hall" caused at one of the game, but one woman's partner is adamant to get it back up and running because of the value of that activity, his attitude "is like 'I can fix up any damage, we'll just make sure we don't damage it!'".

The parents' networks appeared to be so strong that a stark difference was identified when children moved from primary school, where they have been based in the community for a great number of years, to high schools all over the city. The change manifested in the instant loss of ease of access to other parents as well as potential new connections due to the school network's geographic location. Respondent 4 summarised this well, noting that:

it's so different because you don't have that connection anymore ...I try to go to events like parent nights but trying to organise something with her friends' parents is quite difficult because everyone is spread out so people are coming from lots of different areas to go to one high school.

There was even mention of parents trying to get children to attend the same high schools to help alleviate this. The strength of the parents' network was identified by some of the respondents who were outside of it. For example, Respondent 12 whose children had grown up commented that "our kids have grown up, gone to school, left the district and when you're at that stage of life you know all the parents and the school and the community but with the aging you lose that". Similarly, Respondent 13 who does not have children commented "I'm not a mum, so what do you do if you're not a Sumner mum" when discussing connections in the community. Instead, Respondent 13 found they were heavily involved in sport and recreation activities, another commonly identified kind of network.

Informal Sports and Recreation Networks

Sport and recreation activities were a popular interest shared by many participants in this study. People went for leisurely walks, power walks, dog walks, runs, bike rides, mountain bike rides, they went paddle boarding, windsurfing, cliff jumping, played tennis, football and surfed. The sports and recreation networks identified by respondents were largely informal and only a handful were members of an official sports clubs or attended organised fitness classes such as Tai Chi or Yoga. With the natural coastal environment of Sumner, it is understandable why this is the case as Respondent 4 observed "we live in this gorgeous [place]...why not...let's walk to Taylors!".

While these activities were spurred perhaps by the interest in the activity itself - for example enjoying going for a run, having a dog that requires walking, or knowing that it is healthy and beneficial to exercise - they were seldom done alone. Walking the dog, or going for a run or cycle, inevitably meant participants bumped into other dog walkers, runners or cyclists as Respondent 14 found:

Yeah so we've got the dog now so we tend to go out quite a bit. Since having her the relationships that we've developed – it's quite interesting like we were just walking her along the beach before and there was a dog walking along but it was a different person walking it but I said is that Bob and she was like yeah how do you know Bob, and we see Bob and it's owner on the beach all the time and it's just kind of bumping into people like that and oh what do you do for a job, and you get to know these people where you wouldn't normally get to know them. And then there's regulars who you always see round.

The same kind of social network was identified with going out to surf. What might appear to be an individual pursuit is often inherently social as Respondent 3 found when reflecting on how many people were encountered while in the water, going to and from the surf, and even just nearby, when checking out the surf. The social and togetherness element of participating in sport and recreation activities was often as highly valued as the activity itself. This is illustrated well in Box 3, below, a case study on the "Boobs on Boards" group.

Box 3: The case of the "Boobs on Boards"

"Boobs on Boards"

"Boobs on Boards" is an informal paddle boarding group where I was lucky enough to speak to two of the women involved.

This paddle boarding group began two to three years ago (after the quakes, though unrelated to this). A woman's husband started doing it, she followed and all of a sudden "you meet more and more people that are doing it, it snowballs and there are so many women that are doing it now that X calls us "Boobs on Boards" so it's like you've got that kind of club thing going on".

There is a "community of people that paddleboard" and a "whole bunch of girls who will call each other and txt constantly when we want to go out". Luckily the activity is also quite family oriented, the children are able to head to the beach to surf and hang out, it's "easy and accessible" and the parents will "go out, have a wee play, come in and swap"; "it's a good family thing as well as a women's thing".

The group of women enjoy "getting together and having a hoot with each other. It's not all about getting good waves". They support each other's learning and provide advice when it comes to surfers. The "chats in between" waves are valued and the activity itself was a nice break away from the post-quake context and a place to have fun.

Community Networks

Interviews with respondents, along with some of my own observations painted a picture of the day to day encounters with each other, where this happens and with whom. The respondents interviewed all talked about bumping into other people in the community; "I find you can't go out here without bumping into someone you know" (Respondent 7). This seemed to be particularly the case for those who had grown up in Sumner, or those who had strong links (i.e. employment) in the community. Common places to bump into people included the village car park, the supermarket, the esplanade and the beach. Respondent 3 commented about their experience of bumping into people:

Every time I'm out and about I'll see people, I'll bump into people I guess the village centre is where a lot of that happens, on the esplanade, with neighbours, down in the community garden previously...Joe's Garage where I often go to meet people formally down in the village but inevitably run into other people as well.

People bumped into friends, neighbours, other parents, colleagues and familiar community members. They also encountered 'regulars' or 'locals', that is, people they did not necessarily know but who they saw regularly and had become friendly with. Respondent 7 summed this up well:

All the locals, from the people who run the supermarket, to the people that come into your work, that you see out running in the mornings, everywhere and everyone, people you grew up with, people's parents you grew up with, friends of your friend's boyfriend, all sorts.

Other community networks included neighbourly relations. These networks emerged from exchanging of pleasantries, the unification of neighbours for common purposes, intentionally seeking to get to know neighbours by hosting get-togethers or dinner parties as well as seeing them sporadically in the community and at community events.

We don't have many neighbours actually, but the ones that we have, we sort of have joint fights together over like boy racers going up the hill too fast and people wanting to put walking tracks opposite our houses like right opposite the bathroom window (Respondent 8).

After the earthquake, the formation of new friends within the community and the strengthening of existing community connections were identified as being common. Respondent 1 commented they have some “quake mates, who I’ve met as a result of the quakes”. Similarly, Respondent 9 commented that having to move house as a result of the earthquake meant that “there’s now a whole bunch of other people that will be neighbours that we will have never met otherwise...”. They also commented on the strengthening of relationships with others in the community in similar positions and facing similar problems:

Some of the people that we've met who we've got to know, maybe we knew a little bit who I wouldn't necessarily call close friends but we know a lot more – were people we met through going to red zone meetings³. Certainly people who were in the same situation as us, we had a year and a half of going to meetings without any answers so you did get to know a few people through that and some of those would probably be more people that are part of the community and you can see socially and have a conversation with.

In sum, the (in)visible social networks can be described as informal and often consisting of the day to day social relations and interactions people have. These networks – the parent, sport and recreation and community networks, as well as all those identified in Table 5, certainly exist and are worthy of further exploration.

4.3 Social networks are complex

While the results of my research are presented here in an orderly form, it is important to note that this ordering also represents a kind of cleansing. In practice, I found that these networks were not easily divided and categorised as many of them overlap. For example, Jack and Jill might go bike riding together but also be within the same parent network because they are on the Parent Teacher Association. Jack might also see Jill sporadically at the supermarket, or as part of their other capacity

³ The Canterbury Earthquake Recovery Authority held meetings for residents with red zoned properties to address and discuss various concerns.

as members of the Residents Association. Not only did they overlap, I also found that social networks tended to constantly cross the boundaries of any kind of classifications; Jack and Jill could be seen as friends, fellow parents, recreationalists, community members and members of formal organisations simultaneously.

This was also observed by a number of respondents who found they often interacted with the same people but in different contexts; there were “venn diagram” relationships at play (Respondent 8) and many “crossovers” (Respondent 11). This extent of overlap was highlighted well by Respondent 1 who was talking about the Sumner Theatre Group members:

Last week we went to the Chicago show in Rangiora because one of the girls was in it. My friend, our kids are the same age and we were in the same Plunket Group - that's how I roped her into joining - so we'll go away camping or 'what are you doing Saturday afternoon let's take the kids down to the beach, have an ice cream and a coffee' or whatever. We go out for girls' drinks as often as possible and then just the usual celebrations like birthdays and that. One of the guys in the group is in a band, he's also a member of another band which has another 6 or so members from my husband's soccer team. Our kids play sport together. Yeah there are overlaps...

The number of social networks that are listed in this short description is plentiful. A similar observable overlap can be seen in the way that one social network can provide multiple avenues for connecting. Connections were made within networks, but also, in some cases outside of networks, and with other networks. For example, the Sumner Theatre Group builds relationships and connections between members, but also between members and the audience, and members and other theatre groups, or singing teachers or dance groups that they come in contact with along the way.

Another complexity observed was that many of the networks outlined in Table 4 were formal but had informal components to them; they were visible and (in)visible at the same time. The Taylors Mistake Surf Life Saving Club, for example is a visible, formal social network but it had informal training groups that were organised outside of the club during off-season. The general involvement in the club while it was operating also contained many formal and informal social encounters as Respondent 7 found:

If you're at a competition and you've got to bring all your gear back to the club house at Taylors we'll all stop in here on the way home for lunch or something as a team and then we'll go back. Or if we win a big competition, we'll go out for dinner or something. You do a lot of informal things and spontaneous things. But there is a lot of planning as well, so a bit of both.

The Sumner Theatre Group (STG) is similar. It is a formal, organised community group with a President, a membership and a clear purpose: “to put on a professional show....(and) to support local community groups” (Group Representative 26) but it is exceptionally social inside and outside of its bounds. The STG is considered a “big part” of participant’s social lives (Respondent 6). There is much socialising during theatre time with rehearsals and meetings for the show, but there is also much socialising “out of ‘theatre’ time” (Group Representative 26) through birthday parties, coffee/wine catch-ups, Christmas functions and general catch-ups.

The same could be seen, though to varying extents, for the other visible, formal networks. The Sumner Community Garden has a morning tea break which is a “dedicated space and time for people to have a break and be with each other in a nice environment with a cup of tea” (Respondent 2). The yoga group goes for coffee after class and will also send “get well” cards if someone is ill and the Ferrymead Bays Football team will get together for the after-match. Other formal groups were described as less social in nature; “that environment was getting administrative and governance type business done” (Respondent 3). For the most part, however, there is an informal tier of social networks, within the formal social networks.

The complexity of social networks was also visible in their detail. Rather than simply identify a network, respondents talked in detail, for example, about the different friends that served different purposes or the family members in particular they were closer to. Respondent 8 commented about how they were most close to their sisters and a cousin who lived nearby and Respondent 2 talked about the role of different sets of friends while Respondent 15 categorised their friends – a “tai chi friend who’s great to talk politics with”, a “knitting friend who lives around the corner”, the “fun friend” and the “spiritual friend”. This level of detail, along with the overlaps identified above illustrate how dynamic social networks can be.

4.4 Concluding Comments

The purpose of this chapter was to illustrate the various social networks that are present in the day to day life of some residents in Sumner and, in particular, to make visible, and add nuance to, the informal networks beyond friends and family. When given the chance, respondents provided many details about their social networks and it became clear that even the most popular and simple of social network classifications, such as friends and family, were complex in their existence, arrangement and importance.

While this research is by no means exhaustive in identifying the full extent of social networks, it is evident that there are in fact a large variety of informal networks from book clubs, to “boobs on

boards” and dads football nights. This chapter also illustrated an important overlap and complexity attached to these networks. The following chapter will now explore some of the meanings attributed to these social networks, including in a post-quake context.

Chapter 5

The Importance of Social Networks

5.1 Introduction

In the previous chapter, I made visible some of the informal, day to day social networks because despite being recognised as important, these kinds of social connections are often neglected and poorly understood. Having added nuance, range and depth to our understanding of social networks, in this chapter I go on to address the second aim of this research: understanding the meanings attributed to social networks. This in turn will assist in answering the first and third research questions, understanding the implications of a more nuanced account of social networks and their significance in relation to disaster recovery.

Exploring the meanings attributed to social networks was achieved in two ways: in-depth interviews with residents of Sumner and interviews with group representatives in the community. The former enabled me to understand how different networks had meaning for individuals and the latter provided additional details about informal dimensions that existed within the bounds of some of the visible networks. These latter interviews also provided me with perspectives on social networks as a whole. Also incorporated into this chapter are comments specific to the post-earthquake context, though it should be noted that all the meanings identified are relevant to recovery, given they are occurring in a post-disaster context.

In this Chapter, I begin by providing some general findings on the meanings of social networks before then presenting the key themes that emerged. These key themes illustrate how social networks were found to be important as a source of support, structure and normality; enabled feelings of social connection and provided opportunities to learn, share, have fun, unwind and make new friends. Finally, some participants had difficulty expressing just how valuable social networks are to them. The distinction between visible and (in)visible networks is made where relevant and a series of miniature case studies again provide a more in-depth illustration of some of the meanings being discussed.

5.2 Social network meanings

This thesis has established so far that there are a selection of more informal and day to day social networks that are (in)visible in the literature, as well as a selection that are very visible. In terms of meanings, it was found on the most part, there was little difference across these forms of social

networks. The key themes found in this study, as outlined in the next section, were drawn from a variety of visible and (in)visible networks found in this study. This is a finding itself, as it illustrates that (in)visible networks share the same importance as visible networks and are thus, equally as important to investigate. To give an example, the support function that many social networks provided could be found in the (in)visible meditation group: “Somebody might have something they want to bring up that’s of concern or a check in of how things are going, catch up in that way” (Respondent 2) as well as the visible Sumner Community Garden: “There is something about gardening that people just know is therapeutic and I feel they are drawn to in a certain way - and doing that in a group environment adds to the impact of that activity” (Group Representative 25). Similarly, people made new friends through (in)visible networks such as at one of the book clubs: “I met a whole new group when I joined that” and Respondent 4 after moving to New Zealand immersed themselves in a number of visible networks in order to meet new people: “I knew it was important to meet people, so I joined committees...”.

The other main general finding when exploring the meaning of social networks is the characteristic of multiple meanings. This is another example of the overlapping and complex nature of social networks that the previous chapter concluded on. It was uncommon for a social network to provide just one kind of meaning to study participants. For example, the Sumner Theatre Group has a purpose of a show and fundraiser and inherently an opportunity for participants to be involved in their shared love of performing; but it also provided social opportunities, friendships and connections, support and fun. Alternatively, one of the Book Clubs can also be observed to have multiple values: a shared passion, a catch up, a time for relaxing and unwinding and a strong support function as outlined in Box 4, below.

Box 4: The case of the Book Club

Book Club

I came across three book clubs in Sumner but one in particular seemed a little bit special. I was lucky enough to be able to speak to a member of this book club as well as the woman who formed it.

Book Club was formed approximately 18 months ago and has ten members, all women aged between 40 and 50 who live in the area. Initially it was started to discuss and appreciate books but has morphed into a social gathering of friends with a common interest of literature. These women “come together to talk about life in our city, as wives, mothers and working women”.

Book Club happens once a month, for about three hours and it is hosted by members of the group on a rotating basis. The host provides the food and wine and once everyone has arrived, time is spent “catching up” and then discussion around the book is launched, though often “we probably spend quarter of the time talking about the book”. The group has been described as not very formal.

Most interestingly, the group appears to have been a vital outlet for post earthquake stresses. It

is a “nice way for this group of women to relax and unwind” and it’s a “no pressure group, meaning if you haven’t read the book, you won’t be lynched!” Conversation has often been more of a “processing” of the different experiences each of the women have gone through over the past few years. The group looks out for each other in “unspoken” ways and is really, much more than just a book club.

All forms and diversity of social networks are thus meaningful and valuable and the majority of these, in more ways than one. The following section outlines some of the key meanings attributed to social networks that emerged from the data.

5.3 Solving the world’s problems.....and talking rubbish.

Social networks provided many support functions for respondents. Respondents also recognised that others in their networks also needed support. While the term ‘support’ was commonly used, many respondents also referred to just being able to talk or get things off their chest. Having people to just “be really honest” with (Respondent 5) or talk “rubbish” to (Respondent 4) about any “issues going on” (Respondent 13) or have “female focused conversation” with (Respondent 8) was extremely important.

These support functions existed where friendships or close relationships were present and thus ran across all kinds of social networks depending where friendships had developed. Respondent 2, on discussing their relationships with some work colleagues, explained this well:

It wouldn’t be unusual for me to say ‘can I have your ear for a moment’ you know, it would be completely fine because you’ve already established through regular meetings, you’ve already established a certain sort of trust and culture of sharing together.

After the earthquake, it appeared these support networks were even more important, particularly for sharing experiences, processing what had happened and dealing with the trauma. The following quotations come from both an (in)visible and visible formal network, illustrating that it is relationships that underpin the support received. This first comment is from a participant who was part of a book club:

Lots of times the conversation is like a processing, because a lot of people have had different experiences....just the other night X was talking about going to hypnotherapy because she wasn’t sure if she could remember the whole day [of the February earthquake] and thought she needed to (Respondent 8).

And this second comment is from a participant in the Sumner Theatre Group:

They were all supportive as so far as just listening and it was reciprocal we were all there to talk. We just wanted to talk, didn't even necessarily want them to fix the problem because you couldn't fix the problem it was just someone to listen to....And again you just talk through the earthquakes for hours and everyone knows how everybody's feeling and that you're all in the same boat, some people are worse off than others but it was a supportive environment (Respondent 1).

Sometimes the support of social networks provided value and meaning beyond just the individual seeking that support. For example, Respondent 3 told a story of listening to a member of a community group receive reassurance that their approach to a parenting issue was reasonable and fair. This appeared to Respondent 3, to be beneficial for that member's family as the member was able to dispel their stress in that group, rather than at home. Another respondent talked of the stresses of their partner's work and the impact this had on their family life, but after the partner found recreational outlets (both formal and informal), this became less of a problem. Similarly, another commented that it was "much better bitching at your girlfriends and having a happy home life" (Respondent 1) in the context of post-earthquake stress. The representative of Mini Music captured this multi-value aspect well in their comment about the importance of the Mini Music group:

It's offering for families and carers of children a place to meet and music is quite therapeutic and it's just important for the parents and carers. The singing the dancing, the interacting the feeling good thing, it's good for the child, it's breaking down the barriers, it ticks so many boxes (Group Representative 27).

The salient point here appears to be that having people to talk to provides a significant form of support – even informal therapy – at any time. This is especially true in a recovery context where stress levels are elevated. This support function was visible across the social networks and appeared to exist more easily, where close friendships had been developed. The next section highlights the added comfort people felt in knowing that this support, among other things, is readily available.

5.4 Structure and normality

The existence of social networks brought respondents' comfort, knowing that there were opportunities to talk about the things that were bothering them if they needed to, or have some company, or some time out. The sense of stability and normality structured meets provided was important given the chaos and stress of the earthquake as the Representative of Mini Music and Playgroup found (Group Representative 27):

.... I've noticed the importance of having ,throughout the uncertainties of your house, job, the future, financial insecurities and things like that we've still been able to maintain some structure for children which has been really important. Somewhere to meet for them to get together, most of the parents too at this point – you could see they were quite upset perhaps children weren't sleeping or they weren't sleeping so having that weekly meet or playgroup meet, was really now more than ever important. You could really see that.

Respondent 2 on discussing their work colleagues also experienced this value:

I've also used those groups to download some of my own distresses for sure. There's been a value in having, at certain times in particular, around some of our big earthquakes about having those pre-arranged times to look forward to you know, oh well we're all going to get together next week, great.

Similarly, Respondent 4, on discussing the meaning of being involved in book club, commented that “it's nice to have that regular thing, meeting up once a month and doing something that is enjoyable and fun and just for you”.

In the context of earthquake recovery, where the very ground upon which lives are built becomes shaky, the relatively stable structure, reliability and predictability of social networks were also identified by some of the group representatives as comforting. The youth club, Fuse, for example, commented that having a dedicated space enabled friendships between children to be maintained because they “can come back, meet up and continue to build on those friendships, even while they are no longer at the same school” (Group Representative 18). The community garden was described as “a source of continuity (i.e. regular working bees give a sense of routine)...” (Group Representative 25) and fitness classes provided participants with something to do every week, where participants felt included and part of a group as Box 5, below highlights.

Box 5: The case of Heidi2Health

Heidi2Health

Heidi2Health is a post-earthquake business that supports health with fitness classes, healing, detoxing and hydrating.

On the surface Heidi2health provides fitness classes but when digging a little deeper it is evident much more than fitness is provided. After the day time fitness classes, the participants go for coffee as a “reward” but also to “catch-up with each other...” The Heidi2Health girls also get together and go to local events. When asked what participation in fitness classes meant to the people that went along, the following comment was made:

It means a life line- initially literally somewhere to go to feel normal again and connected ...it means somewhere to go, something to look forward to...it means feeling included, it means regular commitment and it means having fun.

It also appears that this comfort exists on another level whereby the actual environment, be it a cafe, the ocean, or the village, also provides a sense of both security and freedom. Participants identified these as spaces and times for people to “just be”. A number of the group representatives recognised this value. The community garden was described as “a safe place for kids and elderly alike to *just be*, belong and feel useful and contribute positively to the world” (Group Representative 25, emphasis added). Similarly, the coffee catch-ups after fitness class were described in a similar way “....to just “be” in that space for a while before the chores of running a family/house take over” (Group Representative 19).

While there were benefits of structured meeting times, some respondents also knew they could receive the same comfort from their habitual haunts. Respondent 3 commented “I also know there are places, having grown up in this community in Sumner and living here still, I know the places I can go if I want to see people”. The ‘community’ as identified here, was also commonly described as a source of social connection as the following section will outline.

5.5 Feeling socially connected

Respondents felt socially connected and liked that they belonged somewhere when they were part of specific social networks, but also when just bumping into other people as part of their day to day life. These chance social encounters, if examined along a scale, may not be the most important or crucial for support functions, but that non-committal, surface-level encounter, created a sense of familiarity, connectedness and belonging to the community that everyone related to. Respondent 11 captured this well when they commented that bumping into people “...makes you feel socially connected without being best buddies or anything but you’ve still got that social connection”.

Unplanned social encounters were “familiar...it’s nice being able to walk down the road and people will be like ‘hey how are you doing?’” (Respondent 7); they make people “feel good” (Respondent 4). Even simple waves exchanged with neighbours and passing greetings with unknown people on the street were considered positive; “A hi/hello – it’s warm, it’s positive and friendly” (Respondent 3). This social connectedness was identified as being particularly valuable if one was feeling a bit low -

if it’s a bleak old day and you’re sort of feeling a bit on your own it’s really quite important to just go out and then you meet someone. Living on your own I suppose you can go days without talking to anybody all day so you do that sort of thing (Respondent 10).

Dog walking was identified as being particularly social as the dog was considered an ice breaker; “if you were out just walking, you wouldn’t just stop and talk to people and ask them kind of personal questions, but when you have a dog...” (Respondent 14). Conversation would stem from initial questions and attention around the dog; “The dog was great because people would stop ‘ohhh dog’ and all the rest of it” (Respondent 15). This meant that respondents were being socially engaged and getting to know people they may not otherwise speak to.

As a contrast, bumping into people was sometimes considered tiresome if one was not in the mood for socialising though ultimately these encounters were recognised as meaningful opportunities; “And obviously sometimes I drop and run because I don’t always want to see people. But I suppose they’re opportunities because a lot of the other times I’m working” (Respondent 5). Some social encounters were also identified as “passive” social interaction, just going out and being “amongst people” (Respondent 3).

Feeling connected with the community was highlighted frequently in the context of the earthquakes. The shared commonality of the earthquake experience and living in Sumner created a “real shaking together of the community that brought people out of their rabbit holes or whatever” (Respondent 12). In the immediate aftermath, there was a strong sense of togetherness:

Everyone was asking how are you, are you okay? We were all gathering in any place we could gather whether it was cafes or community meetings we were having to hear from Civil Defence or whatever. They were great social events you know just people were getting a lot of comfort from being together and having a common experience and I think that is ...how do we create situations where people can be having a common experience together as I think it’s been quite a unifying thing in our communities, certainly I’ve felt more connected to Sumner, having lived here for 25 years than I did before the earthquakes (Respondent 2).

This shared earthquake experience was described by a number of respondents as resulting in the community feeling more open, approachable or understanding; “I think people are a lot more open to expressing how they feel, because we’ve all been through so much and we’re in the same boat” (Respondent 1). The sharing of something in common heightened the feeling of social connectedness. The notion of sharing was also common outside of just the earthquake experience as the following section illustrates.

5.6 Learning and sharing together

Many social networks are based on relational interests; they are forged from shared passions. The Environment Group was described as bringing together “like-minded people across a wide range of

ages and backgrounds” (Group Representative 23) and the Long Boarders Club was described as being “a group of like-minded persons who share a common passion - while it's great to surf alone (uncrowded breaks) the need to share the experience and the 'stoke' of surfing is very strong” (Group Representative 20). The book clubs exist from a shared interest in books: “we all love reading so it's been quite nice to be involved in something like that”; and, the informal winter training group as part of the Surf Life Saving Club exists from a shared interest in staying fit during the off season. Sharing was also present in the form of sharing stories, advice or more practical things like the workload of a transport roster for children. The community garden representative summed this up nicely as “there is a lot of sharing - be it stories, the loan of a truck, food, ideas for home gardening, parenting - just loads of sharing!” (Group Representative 25).

Respondents also learned together. For example, the “boobs on boards” paddle boarder crew found that they supported one another in learning a new skill, especially one that is intimidating as it is in the open ocean. They also gave each other “advice, especially when you've got surfers around” (Respondent 11). The representative of the Long Boarders Club commented that members learned from one another and being out in the water is “less intimidating when you know people” (Group Representative 20). In a different context, the representative of fitness classes found her clients offloaded their earthquake problems with each other and were able to “share and gain knowledge and experience from one another” (Group Representative 19).

In a similar learning vein, being involved in social networks often gave respondents a sense of achievement as was noted by a number of the formal network representatives. Being involved in the Sumner Environment Group for example meant “doing something practical and do-able to improve the local environment” and gave participants a “sense of ownership through participation” (Group Representative 23). Similarly, learning “valuable gardening skills” (Group Representative 25) was gained in the community garden and a “sense of achievement, community and helping out” was gained when assisting with various events and activities as part of the Parent Teacher Association (Group Representative 24). Social networks not only provided opportunities for learning and sharing, but also opportunities to have fun and unwind together.

5.7 Opportunities to have fun and unwind

Many of the interactions that occur within social networks are considered fun and enjoyable, where laughs are shared; “A lot of laughs, local gossip....” (Respondent 10) was shared at one of the book clubs. Some of these catch ups appeared to be dedicated time for having fun; “We see each other

socially outside of the paddle boarding...but when we're out there we're just having fun" (Respondent 11).

Often these times were for "relaxing" (Respondent 1), an opportunity to "unwind" (Group Representative 16) and "a time for laughing" (Group Representative 17). Attending working bees at the local community garden, for example, was described as being "like regular catch-ups with friends" (Respondent 3). Respondent 2 on talking about their involvement in an informal meditation group, commented that it was "a time to slow down and get present, connect". Involvement, especially in sports, recreation and leisure groups provided opportunities for time out and "play" as opposed to "work". One of the formal social networks, the Sumner Theatre Group was able to provide for a lot of play and lots of fun as Box 6, below, outlines.

Box 6: The case of the Sumner Theatre Group

Sumner Theatre Group

The Sumner Theatre Group has been around for 52 years, has a membership of 30-40 people and a purpose of putting on a show for the community while also fundraising for the community centre. I spoke to three participants including the current President.

Theatre Group appeared to mean many things, a "supportive environment", an "outlet for skills and abilities" a "whanau", an "essential social outlet", a "bit of a giggle" and a "win-win" for the community centre. But when considered overall, "it's fun. Fun, laughter, and amazing friendships" and very social.

Participants have show rehearsals twice a week, but even outside of this there are various meetings to discuss scenes, rehearse lines, sort out particularly tricky songs and then there are the shows themselves, the celebrations after the shows and "social events throughout the year" to alleviate the sadness of when the show season finishes and the "post-show-slump" sets in.

After the earthquake, the need to have fun and unwind was heightened. Respondent 6 commented that the after match of their rugby games "got a bit more longer shall we say" and when asked why that was commented: "Enjoying company I suppose....Probably the need to have a laugh". Respondent 6 also relayed a similar sentiment when discussing the Sumner Theatre Group in stating "I was quite vocal in making sure we actually did something that year because I think we needed something, and I think other people needed a night out...take their mind off everything". The representative of the Community Garden identified a similar need in noting that "Pre-quake it was more about environmentally-driven transitions; now it is this as well as a very conscious social aspect - a place for people to work together, learn and just enjoy gardening with others" (Group Representative 25).

5.8 Making new friends

A number of respondents commented on how they met new people when joining various networks. For example, one of the book clubs began with five people who knew each other and they each had to bring along one other person, so that then widened the group out to ten people and “we’ve all got to know each other really well because initially we didn’t” (Respondent 5). Meeting new people was sometimes also an intention of joining a group as Respondent 8 commented about their involvement in another book club (different to the above one): “I forced myself to join so that I would meet more people and just have more of a social base”.

There were many other examples of this across the social networks. Respondent 1 commented that taking her child to dancing meant that “you’re waiting in there for an hour and you’re talking to the other mums, so it’s just an opportunity to meet new people and catch up”. Similarly, coaching a sports team has meant the broadening out of associations as Respondent 4 found:

X has been involved in the coaching which has been really nice for him, coaching the old girls – another social thing, an outlet and it’s all making friends with parents at schools you might not socialise with.

Many of the group representatives discussed seeing new friends and connections being made. Often this was between likeminded people where a common interest is shared for example, the Long Boarders Club was described as being formed specifically “to gather likeminded people with a focus on camaraderie, surfing and social” (Group Representative 20). Sometimes friendships formed were with unlike people, such as those found in the community garden: “many new friends have been made in that space, from old to young, across all types of background . I think notably between the more well-off and not-so-well-off” (Group Representative 25). The Mini Music and Playgroup representative also observed the development of friendships: “it’s great to see the parent make friends and start to have their own little group and you can see what it’s done, the playgroup does the same thing” (Group Representative 27). The earthquake also played a role in the forming of new social networks as noted in Chapter 4.2.1 and summarised by Respondent 11 who commented that “I guess part of that earthquake is that it can put you in a situation where you do need to make more friendships or broaden your scope of friends. Because you can get quite comfortable”.

5.9 “...and sometimes it’s beyond words and it just makes us smile”

With all of the meanings outlined above, and many social networks providing more than one of these, it was sometimes the case that Respondents had difficulty explaining just how important their social networks were to them. Respondent 2 on talking about an informal meditation group, described leaving that group as “going away feeling more replenished....you know, you feel more

replenished, more revitalised, more nourished". A similar sentiment was shared by Respondent 3 when talking about their relationships with others:

They're what support me, they're what define me in a way – in which I get ... I want to say the stuff of life but it sounds so cheesy. It's just a spirit and that's what connects things I think, ultimately. You get a physical relationship with a mate, you give them a handshake, or a connection with a neighbour is a wave, a connection with a loved one is a hug, it's intimacy but that's the physical level. There is something that is beyond that, we all know it, and sometimes it's beyond words and it just makes us smile. We feel it inside us. It's physical and that means it's real but it's a spirit and you can feel it in a place, you can feel it within you, and you share it and we're all connected by it.

For all the numerous examples in the first results chapter of the connections made in social settings that respondents provided, and all the meanings associated with them outlined in the sections above, these comments help to illustrate that social networks have depth beyond the more obviously tangible meanings outlined in this chapter.

5.10 Concluding Comments

This chapter sought to highlight the meanings attributed to the various social networks identified in the previous chapter, particularly in the context of disaster recovery. It was firstly revealed that social networks, regardless of their form mostly had the same kinds of meanings. This is significant given the (in)visible social networks are much less discussed in the literature. It was also noted that social networks overlap in terms of their meanings, with networks having much more than one value. The key meanings found across the social networks included: support, comfort, social connection and opportunities to learn, share, have fun and unwind together as well as make new friends. While these meanings are not new and may appear simple it did not appear this way when the interviews were carried out. Many of the connections discussed were done so with great reflection and seriousness on the part of the respondent. These values of social networks were observed to be present and in some cases, heightened in a disaster recovery context.

Chapter 6

Discussion

6.1 Introduction

The purpose of this research was to identify the form and diversity of social networks and explore their meaning in the post-disaster suburb of Sumner, Christchurch. As part of this broad objective, I sought to satisfy a curiosity around whether other social networks, like my own, were not easily catered for in the literature and what those social networks were as well as what they meant. More specifically I aimed to answer the following three questions:

1. Drawing primarily on social capital theory, what does a more nuanced understanding of social networks look like?
2. How can social networks be better captured in disaster recovery research?
3. What is the significance of this more nuanced understanding for disaster recovery?

In this chapter I address these questions by discussing the results of this study and my interpretation of them as they relate to issues identified in the literature review (Chapter 2). The post-disaster recovery literature frequently acknowledges, identifies and/or explores the role and value of social networks in a disaster recovery context but less frequently focuses in-depth on exploring the diversity and form that these networks take, particularly the more informal and day-to-day social networks. My results suggest that these have become (in)visible in academia; they are often acknowledged but not assigned enough significance. What this means is that there is much more to this phenomenon than what has been identified in the literature that is equally as deserving of recognition in the social dimensions of post-disaster recovery.

The intention of this study was to be illustrative; to make the (in)visible visible, the mundane magnificent and to not lose sight of some of the simple aspects of our social life which can too easily be lost to abstraction in the research process. Through in-depth interviewing techniques, participants were able to discuss and reflect on their social life and it was using this methodology that I was able to begin to grasp the fullness and richness of peoples' social lives thus adding important depth and nuance to the understanding of social networks.

I begin this chapter by contrasting the outcome of my exploration of social networks to the literature and therein illustrate what a more nuanced account of social networks looks like. I then discuss how achieving this account helped to reveal shortcomings and barriers in the literature, both from a theoretical and a methodological perspective. This in turn answers my second research question of

how social networks might be better measured. Finally I discuss the significance of a more nuanced account of social networks in relation to post-disaster recovery.

6.2 Making the (in)visible, visible

And you meet more and more people that are doing it, it snowballs and there are so many women that are doing it now that X calls us "Boobs on Boards". So it's like you've got that kind of club thing going on if you know what I mean (Respondent 11).

The value of social networks in a disaster recovery setting was highlighted in the literature review and my results (Chapters 2 and 6 respectively). It is thus important to have an understanding of what exactly these social networks represent: disaster recovery is, after all, people helping people. The purpose of this section is to compare and contrast the outcome of my exploration of social networks, with some key themes and debates drawn from the literature. As identified in Chapter 2, the disaster recovery literature easily identifies *some* forms of social networks and acknowledges other, more diffuse and informal social networks but struggles to define, describe or establish the importance of them. These are what I have termed the '(in)visible' social networks. My research identified more than 60 different social networks alluded to by 15 interview respondents and 9 group representatives. The details of these networks were provided in Table 1 and throughout a series of small case studies across Chapters 4 and 5. These networks are indicative of what exists overall and include both *visible* and *(in)visible* networks. In my results, there was ample discussion on family and friends networks, identification of a large selection of formal organisations and groups people were involved in, as well as handful of popular networks. More interestingly, however, were the *other* kinds of informal social networks outside 'family and friends' that defied easy categorisation.

6.2.1 Informal, densely interlaced and fleeting networks

A great number of social networks found in this study can be described as informal, densely interlaced or fleeting - descriptions used by Putnam (2001) to illustrate the diversity of social connections. Informal networks are frequently referred to in the literature though their measurement is often limited to exploration of family and friends networks, sometimes neighbours and less often all the other kinds of networks (see Table 1 in Chapter 2). One reason this could be, is because of the multiple ways of understanding 'informal'. Informal could mean "personal relationships" (Gordon, 2003, p. 3), or a "nodding acquaintance" (Putnam, 2001, p. 2) or could be seen as simply the opposite of formal: unofficial, unstructured, irregular, or casual linkages between people. The personal relationships or a nodding acquaintance have differing degrees of *closeness* in

terms of how well people might know each other or the depth of their relationship but both still fall entirely within the realm of informal networks.

Many of the (in)visible networks identified in this study could also be called informal, understanding this as meaning mostly irregular, non-committal, sometimes private, unplanned or unnamed coming together of people. They include both personal relationships, as well as networks consisting of nodding acquaintances. The point of difference from the other forms of networks in this study (the visible networks) is that they are not easily identified, categorised or measured.

Outside of family and friends networks, I came across many of the less frequently identified social networks such as neighbours, colleagues, hobby/interest groups, parent networks and religious groups. The networks in this study were not just, 'hobby' groups however; they were identified in their own right. I came across three book clubs, though rumour had it there were more. There was an informal meditation group, a music jam session and the 'boobs on boards' paddle boarding crew. There was also a multitude of parental interactions that occurred in a variety of ways, from an informal seven year down the track plunket group and an informal dad's indoor football group to social interactions between parents at school or activity pickup and drop off and organised events and meetings hosted by schools. There were also a number of informal social interactions and activities that stemmed from formal networks, but one would not necessarily know they existed at a surface level examination. They were more subtle, such as coffee-catch ups after yoga, tai chi and fitness classes or informal off-season running and swimming groups for the Surf Life Saving Club. Other social opportunities for networking were also more officially part of some of the formal networks, but still overly informal by nature. For example, house group and bibles studies connected to the Church; the after-match of a Rugby game; potluck dinner meetings for the Sumner Community Garden and the festivities surrounding the Sumner Theatre Group shows and Surf Life Saving Club competitions.

Some of the participants of this study identified their own networks as "informal". The crafternoon group for example was described as "not a highly rigid thing" (Respondent 2) just a small group of people who meet roughly every six weeks from 1pm and "it doesn't have to stop until when we go to bed really, it just evolves into what it evolves" (Respondent 2). Similarly, one of the book clubs was described as "not very formal. We try and establish rules but nobody follows them" (Respondent 8). These social networks are very lively and liveliness should not be rendered inert (Lorimer, 2005).

Social networks were also commonly, as Putnam (2001, p. 2) put it, "densely interlaced" and interconnected, or conversely, "very casual" and fleeting. The interconnected, overlapping nature of social networks was a theme of this study as Chapters 5 and 6 identified. Social networks were noted by respondents to overlap and often involved the same people in different contexts: "Some of us are

in that book club, plus our kids are friends...and a few of us did the St Claire half-marathon last week so we trained together as well” (Respondent 8). Social networks also interrelate in that they are not often entirely separate entities. Respondent 10 noted “most of my friends are people who I paddleboard, mountain bike or windsurf with, or have children around the same age” thus a recreation network or a parent network can simultaneously make up the friends network –there are individual threads within these networks. Social networks were also commonly casual, or fleeting. Participants of this study regularly “bumped” into other people, be they friends, faces in the community that have become familiar over the course of time, or complete strangers.

It was difficult to compare these findings of informal, interlaced and fleeting networks to the literature for a number of reasons. Surveys measuring social networks prescribed the networks for the participant to tick box which ones were relevant to them thus findings were limited to a percentage of people involved in a set number of categorised networks. For example, the Quality of Life Survey in Canterbury which asked what networks and groups people belonged to, found that 49 per cent of respondents belonged to an online network, 47 per cent work or school, 28 per cent a hobby/interest group, 26 per cent a sports club, 18 per cent a church or spiritual group, 12 per cent a community or voluntary group, 2 per cent friends and 15 per cent none of the above. It also means that the specific qualities of social networks, such as ‘crafternoon’ is forced into a ‘hobby/interest’ group. These kinds of quantitative findings are different to the descriptive networks found in this study.

Other disaster-recovery literature addressing social networks tended to focus on the visible social networks: family and friends as noted earlier, formal networks such as community groups, or popular/emergent social networks. Pelling & High, (2005, p. 314) discuss the temptation to use formal organisations as a proxy indicator for social capital but go on to comment that while it may be a good entry point:

...without other contextualising data it can lead to an incomplete and potentially inaccurate picture of social capital. It neither says much about who is excluded from and who potentially controls or resists such surface level of expressions of social capital, nor does it unearth the tensions of compatibilities between the formal and informal.

These concerns are consistent with the findings of this research. Largey, (2005, p. 2) also comments that there is a “focus on analysis of formal organisation membership and neglect of analysis of other types of networks to which individuals belong and from which resources can be derived”. While these comments were not made directly in relation to the disaster-recovery literature, they are analogous and just as relevant and applicable in this context. Yanicki (2013) explored civil society in two suburbs in Christchurch, including Sumner with a focus on the “role of local churches,

community groups and non-governmental organisations...” (Yanicki, 2013: p.5). Consequently, while questions were asked around informal networks such as neighbours, relatives, work colleagues, school and other associates, the focus of the Sumner section covers little of this content and is largely on the formation of the Sumner Community Hub, the reconfiguration of the Sumner Residents Association and the Sumner Urban Design Group. That is, it is focused on the *visible* formal and popular/emergent social networks. Similarly, Nakagawa & Shaw, (2004, p. 17) identify a selection of community groups in Kobe, Japan, though these are primarily formal networks such as Parent Teacher Association, neighbourhood associations, sports clubs and youth groups with just one informal group – a middle-aged group that exists for “get together” purposes.

Furthermore, in a case study series highlighting community resilience in Canterbury released by the Ministry of Civil Defence and Emergency Management, the same focus on visible networks can be seen. There are case studies on the Sumner Community Hub, the Grace Vineyard Church, the New Brighton Community (from the perspective of the police), the Student Volunteer Army and Lyttelton’s Grassroots response (from the perspective of Project Lyttelton) (Ministry of Civil Defence and Emergency Management, 2012). These emergent, or retrofitted community groups that are responsive in a post-disaster situation are invaluable, but the other social networks that are in existence and perhaps have played less immediately obvious or relevant roles, are again less recognised or discussed.

Had I approached my research on social networks in a similar vein as other studies, I might have discussed the multiple community groups identified on the Sumner Community Residents Association website and Facebook page and the eight social and community development organisations and groups, 23 sports/recreation/leisure groups and three church groups identified by the Christchurch City Council (Christchurch City Council, 2014). By doing this, however, it would have been unlikely that I found as many of the informal, interlaced and fleeting social networks this study has richly identified. These kinds of social networks are more difficult to identify because of their informal, unstructured, irregular, unnamed or more private nature. It is these kinds of connections, however, that make up a significant part of peoples’ social lives and lubricate the more visible workings of formal groups. The informal winter training groups for the Surf Life Saving Club for example were commented as having the effect of “keeping everyone motivated and together...so come summer it’s not an effort to build up your fitness. It just keeps everyone in the loop of what’s going on, together and in the same circle” (Respondent 7). Without these informal training groups, participants of the Surf Life Club might “fall off the grid” or lose their fitness which is detrimental to the success of the Surf Life Club. Based on the results of this study, it is arguable that formal organisations are not a good proxy indicator for social capital, because they neglect to identify these *other* important networks.

To summarise thus far, more nuanced accounts of social networks can help us explain the interlaced and fleeting nature of social networks Putnam (2001) described. Such an approach also allows cleverly named ‘crafternoon’ and ‘boobs on boards’ networks to be identified as their own social network without amalgamating them into less meaningful ‘hobby’ and ‘recreation’ categories. Importantly, it reveals the threads *within* these prescriptions of social networks. In the following section, I go on to explore the theoretical and methodological reasons why the current literature is not yielding the same, more nuanced account of social networks as this study has found.

6.3 Capturing social networks in disaster recovery research

High on the research priority list in the area of social capital, as far as I am concerned, is developing the theoretically coherent and empirically valid typologies or dimensions along which social capital should vary....I don't think we are anywhere near yet a kind of canonical account of the dimensions of social capital (Putnam, 2001, p. 2)

In the context of social networks, Putnam (2001) makes a clear statement about the shortcomings and barriers in the use of social capital as a theoretical framework in identifying diversity. Following this he goes on to describe some of the range of connections people might have, as outlined above - the very networks that have been revealed richly in this study, but are otherwise (in)visible in the literature. Having provided greater detail to the diversity and form of social networks, the following section delves further into the research on disaster recovery, focusing on theories of social capital. It then discusses the methodological constraints apparent in this same body of literature.

6.3.1 Social Capital and its bonding, bridging, linking framework

Social capital is a commonly used theory in disaster recovery research, having been stated to be the best predictor for population recovery in post-earthquake Tokyo (Aldrich, 2012b, p. 399). The bonding, bridging, linking framework, in particular, has been frequently applied in disaster recovery research (see for example, Hawkins & Maurer, 2009; Islam & Walkerden, 2014; Nakagawa & Shaw, 2004). This framework, however, is problematic for understanding a “canonical account” of social capital (Putnam, 2001, p. 2). This is because the framework is lacking clarity in its meaning (Pelling & High, 2005) but is also, arguably limiting because it neglects the way recovery might rest on the blending of bonding and bridging social networks.

Bonding networks are commonly described in the literature as tightly connected, made up of strong ties and consisting of relationships between homogenous groups of people (Hawkins & Maurer, 2009; Islam & Walkerden, 2014; Newman & Dale, 2005; Patulny & Svendsen, 2007; Putnam, 2000). Bridging social networks are described as weak ties (in terms of the strength of association) between

dissimilar people (Aldrich, 2011; Hawkins & Maurer, 2009; Nakagawa & Shaw, 2004; Putnam, 2000; Woolcock & Narayan, 2000). The third, linking social capital is used to describe relationships that cross vertical boundaries such as social class and power structures, connecting individuals with those in positions of authority (Aldrich, 2011; Hawkins & Maurer, 2009; Pelling & High, 2005). While these are commonly addressed as separate dimensions, overlap is common and as Putnam (2000) suggests they are not mutually exclusive and can exist in tandem for the same relationship. Stallard, (2012) gives an example of this as members of a community garden bonding over gardening but otherwise bridging across different ages and personal circumstances.

Hawkins & Maurer (2009, p. 1785) in their study on how social capital operated in New Orleans after Hurricane Katrina, found “in many cases, bridging and linking social capital began to overlap as the socio-economic strata became blurred in the heart of the aftermath of the floods; the distinctions were no longer as socially important as in everyday life”. Another example of overlapping bonding and linking social capital can be identified in the study of Nakagawa & Shaw (2005) where an informal, loosely connected middle-aged group was found to have considerable influence on decisions made by a key community development authority after the earthquake in Kobe, Japan.

This same overlap can be found in this study. The way social networks are described using social capital language would lead me to have categorised the (in)visible social networks found in this research primarily as *bonding* social capital – interactions between similar individuals, often in the same geographic area, or those who are close family, friends or neighbours (Aldrich, 2011; Woolcock & Narayan, 2000). Some of the networks in this research, however, might be made up of similar people but have bridging or linking qualities. Respondent 8, a member of a book club, for example, described the group as being made up of women in their 40s-50s living in the area but at the same time noted the “eclectic” nature of the group and how members were linked to leaders and decision makers, as well as those in professional services. A member of another book club, which might be understood as bonding for the same reasons as above, commented “we’re all quite different, but we all love reading”. The Sumner Theatre Group has a “core cast... who are your friends” (Respondent 1) indicative of bonding qualities, but the group also pulls in other members from outside of Sumner as well as anyone with an interest in performing arts thus could include dissimilar people in terms of age, socioeconomic status or ethnicity. In a similar sense, members of the group describe having “...really tight bond(s) between us”, but also note the forging of “friendships with other theatre groups / singing teachers / dance schools and others we come into contact with” (Respondent 26). Suffice to say, networks found in this study display bonding, bridging and linking qualities of social capital simultaneously. There is seldom a clear-cut distinction and networks are difficult to assign to any one particular dimension of social capital.

The findings of this study go further than the constraints of overlap outlined above and illustrate the challenges of assuming friends and family networks are synonymous with bonding social capital.

Social networks of friends and family cannot all be described as close and tightly connected.

Respondent 1 on describing some of their friendships in the context of the earthquake, noted “they were all supportive as so far as just listening and it was reciprocal we were all there to talk” but commented that other friends (those outside of Christchurch) “wouldn’t have a clue. You’d sit there going oh it’s raining, house is leaking and they sit there going, can’t you just get it fixed....They don’t get it, they have absolutely no comprehension”. Other participants of this study would identify specific friends, or specific family members they were close to, and note others they were not close to. One cannot, therefore, assume that bonding social networks are closely connected networks.

Using the social capital framework, or more specifically the bonding, bridging and linking tripartite, has the potential to limit the way social networks are examined or may not adequately reflect the nature of the network that exists. There is also the risk of oversimplifying the setting of a study, for example, by taking bonding social capital to exclusively mean ‘close friends and family’; or bridging social capital to simply mean involvement in formal networks. The framework itself has theoretical weaknesses – overlap is inconsistently acknowledged, and there are problems with the assumptions that bonding is equated to ‘strong ties’, and bridging with ‘weak ties’. To better capture social networks in a disaster recovery context, researchers need to be mindful of these weaknesses and subsequently the risk of failing to accurately identify and capture social networks. The following section discusses some similar barriers identified within the methodological approaches taken in research focused on social networks in disaster recovery.

6.3.2 Social networks through the qualitative looking glass

How we understand something, to some degree, depends on the way we measure it. Part of the reason so many of the same kinds of social networks were examined in the literature is because of the research methods being applied. As noted in Chapter 2 (Literature Review), the disaster recovery literature primarily utilises quantitative research methods in the form of surveys and questionnaires with prescribed networks to select from and discuss. Even where qualitative research methods are used, the line of inquiry was also often prescriptive. For example, interviews are utilised but the questions are based on the same categorisations of social networks used in surveys. Population level census data was also commonly used to illustrate social networks.

In this study, I utilised qualitative research methods to more adequately capture social networks. Instead of prescribing the kinds of networks I wanted to investigate, I chose to conduct in-depth interviews that began by asking respondents broadly what it is they do to feel socially connected, or to talk about their social life. This meant that participants identified and defined their own

connections and it was then up to me to make sense of the connections described, rather than make their connections fit within prescribed categories. My results were rich in the 'other' category of social networks which highlights the value in this *inductive* approach to research (Bryman, 2012).

One study that was focused on investigating social networks, utilised interviews and was not overly prescriptive in the way social networks were questioned had notably similar findings to my research in terms of the sheer number of networks identified. Carpenter (2013) conducted interviews with residents in four different community case studies and asked participants to name and discuss the different organisations, networks and associations both formal and informal they or their family members were involved in. The total number of networks identified in each of these communities were: 82, 67, 67 and 78 (Carpenter, 2013). The author stated participants typically described formal networks and then their core informal groups of family, friends and neighbours. Carpenter (2013) then classified these networks – 294 in total – into broad categories and provided a percentage for those involved in each category. However, there was no further detail provided in terms of the specific groups that made up each category. The portrayal of information is important. The participant in my research who referred to a group of paddle boarding friends as “boobs on boards” could possibly be categorised into “hobby”, “friends”, “sports/recreation” or “leisure” groups, but that abstraction would have diluted those connections, denied their essential qualities, and taken those real life details for granted.

By beginning interviews with simple questions asking people what they do to feel socially connected, or to talk about their social life meant that the participants had an element of control as they could focus on explaining various social connections that *they* considered important. As part of wanting to avoid being overly prescriptive, when interviewing respondents, I generally avoided the terminology associated with my research topic such as 'formal', 'groups', 'informal', 'belong'. I chose to do this out of personal experience of being uncertain how my own social networks fitted into questions asked in surveys. This meant participants did not have to think about whether their connections were relevant, rather they defined what mattered to them. In one instance, while interviewing I unconsciously used the term 'community group' and the respondent immediately picked up on this and stated “we have lots of relationships but we don't necessarily *belong*, like for me personally I don't *belong* to the football club but through my family we have a lot of social interactions through them” (Respondent 1, emphasis added).

The other way social networks were represented in the literature was through use of population level or census data. This was stated to be more readily available to use and easy to access though the same issues that have been identified, apply here too. It can also be noted that “communities and their populations are too complex to be reduced meaningfully to indicators or generalised and

absolute classifications of vulnerability” (King, 2001: p. 153). While this is the context of indicators for community vulnerability to natural hazards, it also applies when trying to deduce meaningful indicators of social networks from population level data.

The focus of this research was on more purposefully capturing the diversity of social networks that might have otherwise been missed. The effect of this was manifold but specifically, it resulted in a much greater range of networks discussed than what one would ordinarily find in similar studies. Genuine qualitative social research methods were essential in “lifting the veil” on the form and diversity of social networks (Blumer, 1969: p. 39).

6.4 The value of social networks post-earthquake

The individual’s need for social connectedness is probably never greater than in times of disaster (Reich, 2006, p.7).

The somewhat simple point of people relating to one another has exceptional value, particularly in a disaster recovery context. This value was recognised more generally in the Literature Review (Chapter 2) but also in the second results chapter in this study (Chapter 5). The Literature Review set out a number of benefits of social networks in post-disaster settings, primarily for wellbeing, practical and recovery related reasons. The results of this study were consistent with these, though benefits to one’s wellbeing was primarily spoken about. The (in)visible networks in this study were found to share the same values as the visible social networks, indicating they are just as important. This is a significant finding, given the lack of exploration of these networks in the literature and the evidence in Chapter 5 that these are just as valuable as any other social network. This section will draw examples from (in)visible networks in particular, to illustrate this point where appropriate.

The supportive nature of social networks has been identified as being beneficial for post-disaster mental health (Norris & Kaniasty, 1996; Tse et al., 2008; Wind & Komproe, 2012). Wind & Komproe (2012) found that drawing upon one’s social networks instead of one’s own resources was important in preventing post-traumatic stress. The presence of stress and impacts on mental health was identified by a number of Respondents as being present among some people they knew.

I have noticed in the last year and a half, two years, some of our friends or friends partners have suffered the onset of slight depression, feeling down or not getting anywhere and that becoming apparent and not sharing it instantly but you becoming aware that they’re not quite as social (Respondent 4).

While this was not identified personally by respondents, its potential was observable through descriptions from Respondents about looking out for friends who were showing signs of distress, in

turn providing a kind of informal therapy (Hosted, 2013). For example, some of the members of one of the book clubs were described as coming together in an “unspoken” way (Respondent 8) to ensure the wellbeing of one of its members. Similarly a member of the coffee catch-up Plunket Group described looking after their members:

it's a comfortable environment to do that so I think we do tend to just talk through all the shit that's going on and talk things through. I think post-quake, certainly to start off with I think, being supportive to people who were hit hard was especially important. It's just, whoever needs it the most type thing...we end up just counselling each other so I suppose because we've got that close thing, anyone who was pretty stressed with EQs was looked after (Respondent 9).

Outside of the earthquake context, but still relevant, Respondent 5, on speaking about catching up with other parents at children's sports activities, commented that it was often an opportunity for “a bit of a release if I'm having a really bad day, or talk about some idea you've got – discuss it with another parent and see what they think, mull it over, help each other with advice”. This support function was present where friendships, trust, familiarity and frequency of contact was present; the *form* of the social network was thus less relevant here. Work colleagues, members of Theatre Group, Plunket group, the Community Garden, school mums, recreationalists all provided an ear for one another.

The literature found that participation in social networks can also assist in achieving control, positivity and normality which is important for psychosocial recovery (Collins et al., 2011; Mooney et al., 2011; Paton et al., 2013; Reich, 2006; van Zomeren et al., 2008). My results concur as respondents commonly found comfort in knowing there were opportunities to engage with others, as well as a sense of normality having something to do, somewhere to go, and people to talk to. The representative of the Music Group, a group that is a visible network in the sense that it is organised and structured, but also has (in)visible components in the way that parents interact and get to know each other, commented on its support mechanism post-earthquake:

The music group itself was social, it was also important for new parents to make friends but after the earthquake more so because it was a place for people to get together to discuss how things were going at home and people could relate to it so there was that real support mechanism as opposed to being on the phone to someone (Respondent 4).

Other values of social networks found in this study included learning, sharing, having fun, unwinding and opportunities for making new friends. These all occurred within visible and (in)visible social networks. For example, all of these qualities could be found in the boobs on boards paddle boarding crew. The participants learn to paddle board from one another as well as learn about being in the

open water and interactions with other water users; they have a “hoot” with each other (Respondent 11) and “you meet more and more people who are doing it” (Respondent 11).

The literature focused on the role and value of social networks in disaster recovery often found value in social networks for practical reasons: information, assistance with critical recovery related tasks and physical, financial and logistical help (Dynes, 2005; Thornley et al., 2013; Yandong, 2010). Some participants made comments about the physical assistance they received – mainly from family, friends and neighbours, such as help with moving heavy furniture, assisting with children minding, and financial assistance such as supermarket vouchers. One of the members of the Plunket coffee catch-up group hosted the others at her place immediately after the earthquake. In terms of information and logistical support, a number of Respondents identified the Sumner Community Hub, a visible popular network, though one that was found to be formed through many existing local networks (Yanicki, 2013). The hub was identified as providing information, resources and connections. This was captured well by Respondent 2:

Well I think the hub has been a really important development. I think that's been incredible – having a place that people can go to that's coordinated information and increasing numbers of people that have used it. Initially it was just a bunch of us who all knew each other. But folk go by and see the notice boards on the outside and I think that's been incredibly useful you know lost and found, accommodation available, accommodation wanted. And the sort of people that have popped in there slowly over time. Elderly people that have popped in there or people who have had no connection to any of us who you know were connected to the time bank or the community residents association.

Overall, the meanings of social networks found in my study appear to be consistent with the literature, particularly the values expressed around wellbeing. While the literature is clear that social networks promote wellbeing, this is often limited to family and friends networks whereas this study identifies a much broader range of networks that are providing this same support. Ultimately, the layer of networks this study has unveiled tend to have the same value of the visible networks found in the literature, thus consolidating its legitimacy as a dimension of social networks that deserves attention.

It is also worth noting, that the (in)visible social networks, in the context of the earthquake, may be of particular value because of their geographic and more flexible, informal nature. One participant commented that “some of that formality, those more organised groups stopped happening during quake time, because we were all so preoccupied with getting through...” (Respondent 2). Others noted their involvement in various formal groups stopped because of issues of access or venue damage. The more informal networks, appeared to not be as affected “once everybody was back, probably within two weeks, everybody continued [attending]” (Respondent 5 on discussing the

coffee catch-up Plunket group). The (in)visible networks are thus arguably a core, easily accessible form of social network available post-earthquake during a critical time – where a formal network might fail, others are available.

Understanding the detail of social networks is a worthy exercise, particularly as they are linked with a multitude of benefits to individuals and communities and are of interest to local authorities in terms of policy and planning for disaster preparedness, mitigation and recovery. If the understanding of social networks is incomplete, then the application of such policy and plans will, too, be deficient. This is consistent with Thornley et al., (2013) who found that understanding community complexity and diversity is important for increasing community resilience.

6.4.1 The significance of social network overlap

One of the key findings of this research can be described simply as ‘overlap’. The overlap identified in the first instance was across the different networks, with participants frequently referring to catching up with the same people but in different contexts. For example, seeing the school parents at school pick up or drop off, then running into them in the village later that day or seeing them at book club or theatre group the following week. This finding of overlap is significant because it illustrates diversity; when one connection might fail for some reason or another, it can be backed up by another connection thus enabling a resilience capacity for a social network, or particular social connection, to withstand shocks and change. Overlap, also known as the redundancy principle is one of Wildavsky’s six principles of a resilient system (Pelling, 2003: p.8):

The redundancy principle: A degree of overlapping function in a system permits the system to change by allowing vital functions to continue while formerly redundant elements take on new functions.

This overlap is also important because it means that relationships can be strengthened and grown. On talking to a resident about their involvement in the Theatre Group, I asked whether they had made new friends from the group – to which they had, but they also commented that “some of the members may have another connection, say through the kids or sports or something....it’s just overlapping and strengthening those relationships” (Respondent 1). These overlaps, while also being potentially valuable in terms of diversity and resilience, are also valuable in the sense of strengthening and developing relationships which will then have spin off benefits in terms of meaning and value.

The kind of overlap that was discussed in the literature relating to social networks, tended to be at a broader scale – relating to interconnectedness between sets of groups such as public, private and community or non-profit organisations (Carpenter, 2013). This kind of overlap has been recognised as being valuable for community resilience as well as disaster recovery more generally as it can assist

in providing sources of information, assistance and resources (Aldrich, 2010; Carpenter, 2013; Dynes, 2006; Reich, 2006; Thornley et al., 2013). Carpenter (2013: p.23) comments that “establishing and maintaining strong, redundant, interconnected local networks that interface with external and national groups will improve future resilience”.

As a contrast, the more individual-based overlap, like Putnam’s (2001) use of the term ‘densely interlaced’ and like the descriptions of overlap found in this study above, are not discussed in any great detail. Thornley et al., (2013) found the residents they interviewed were also involved in community organisations; “categories often overlapped as people had various roles”. It is important to observe this kind of overlap at the level of the subject matter itself – people, as they relate to other people. This is another important finding about social networks, for the purposes of gaining a more complete understanding of the role and value of social networks in disaster recovery. Arguably, the roots of resilience values and how they are formed in communities need to be understood at the personal level, as well as at group level.

6.5 Chapter Summary

A more nuanced understanding of social networks in disaster recovery means that the informal, densely interlaced, fleeting social networks are counted. It means that these networks are also understood as just as valuable in general and in the context of disaster recovery, as any other form of social network. A more nuanced understanding of social networks means social networks are understood as overlapping and multi-meaning and ultimately, that all of this has relevance for planning and policy relating to disaster preparedness, mitigation and recovery as well as concepts around community resilience and recovery.

Chapter 7

Conclusion

This study both identified the form and diversity of social networks and then explored their meaning in the post-disaster suburb of Sumner, Christchurch. Initially, I wanted to see if my personal experience – where my own social networks did not readily fit into current methods of social network exploration – resonated more widely. I found this was in fact the case. In something of a departure from the literature, I discovered there were many more social networks than were typically identified, and that these held a variety of meanings for Sumner residents. The diversity of these networks can be seen again in Table 6 below. These (in)visible networks tended to be informal, densely interlaced and sometimes only fleeting by nature.

Table 6. A summary of the (in)visible social networks

The (in)visible social networks		
<p><u>Sports/Recreation</u></p> <ul style="list-style-type: none"> • Informal training groups for Surf Life Saving Club in the off season • Dads indoor football group • Surfing, seeing people in the water, car park and on beach • Paddle boarding “boobs on boards” • After-match of rugby games <p><u>Parent Networks</u></p> <ul style="list-style-type: none"> • Parent interactions from coaching/ assisting with kids sports teams • Socialising with other parents at children’s sports and activities • Socialising with other parents at school functions • Mini Music parent interactions • Play Group parent interactions • Coffee catch-up Plunket group 	<ul style="list-style-type: none"> • Interactions with parents at school pick up and drop off • Dads’ indoor football group <p><u>Community</u></p> <ul style="list-style-type: none"> • Bumping into people as part of day to day life while in the village or beach/esplanade • Bumping into people while dog walking, walking, jogging or cycling • Development of “quake mates” • Neighbourly relationships - from saying hello to stopping in to going out and dinner parties or joining together in neighbourhood ‘fights’ • Attending community events such as the street party or picnic <p><u>Arts/Craft</u></p> <ul style="list-style-type: none"> • Crafternoon <p><u>Leisure</u></p> <ul style="list-style-type: none"> • 3xBook Clubs 	<ul style="list-style-type: none"> • Meditation group • Coffee catch up after Tai Chi class, Yoga class, Fitness classes • Music jam session • Socialising over coffee or food with education, work colleagues, fellow community group members, those with relational interests and recreation/sports group members. <p><u>Other</u></p> <ul style="list-style-type: none"> • Social media (Facebook) • House Group • Bible Studies

Conversely, in terms of meanings, I found good resonance between my findings and the literature in that social networks and, more importantly, the (in)visible networks, provided informal therapy, normality, connection and opportunities to learn, share, have fun, unwind and make new connections. It can be concluded that (in)visible networks are a valuable form of social network in disaster recovery, and worthy of our attention.

The finding of a diverse selection of informal social networks, as part of the first aim of this study, has implications for theory, method and practice as well as for future research. Theoretically, this finding affects the use of formal organisations as a proxy indicator for the social network component of social capital. By using only formal organisations to represent social networks, the perhaps mundane, but mostly magnificent informal networks that exist as part of everyday life are excluded. The exclusion of some forms of networks results in an incomplete picture of social networks and their role in recovery, which in turn has implications for practice in relation to the end users of that research. These end users could be local authorities who may use the research for their planning and policies around disaster preparedness, mitigation and recovery; or, institutions who may use it to help shape various campaigns or projects. It is also important to note that the informal, interlaced and sometimes fleeting nature of the (in)visible social networks means that they are held together in different ways thus may require different resources and support to work well. This is again relevant for practice.

Another theoretical contribution of this thesis is the finding of the overlapping complexity of social networks and its potential importance for disaster recovery in terms of resilience in the form of the redundancy principle. Measuring overlap, or the quality of overlap is thus an important part of understanding social networks and recovery. How this is achieved is a difficult question. Social capital and its bonding/bridging/linking framework is not explicitly set up for illustrating overlap, and to incorporate it into quantitative surveys would be difficult, given its fluidity (as opposed to the predominantly static nature of survey methods). It is possible that social network analysis, which involves looking at social connections ('nodes') and the relationships between them ('ties') to understand a social network structure, may be a valuable future line of inquiry for measuring or understanding overlap.

Alternatively, identifying the diversity of social networks, their meaning, and using these to promote recovery may require the use of both quantitative and qualitative research. 'Recovery experts' with generic skills and knowledge could work with, and enable local researchers, who have a better understanding of the context, including the makeup of social networks in a community. The relative embeddedness of local researchers would need to be carefully managed for bias. However, this may be a useful way of identifying the form, diversity and overlap of social networks, as well as both their needs and their potential contribution to recovery.

In terms of a methodological contribution and future research, it was found that qualitative methods at each key stage of the research process: data collection, analysis and the presentation of results was important in revealing a broader diversity of social networks. This is important as it appeared to be common practice, even in qualitative research, to prescribe networks at the data collection stage

and/or use classification frameworks at the analysis and presentation stages. These had the effect of limiting the diversity and form of social networks being explored. Future research needs to be mindful of this if the intention is to understand social networks.

Other future research could include a comparative study of another area to get geographic diversity and see if the kinds of networks found in this study are present elsewhere, and to validate the meanings identified in the Sumner case study. Further, as this study did not set out to explore gender/age/ethnicity roles within social networks, it may also be of future interest to see if these play a role and how this might be so. For example, a number of the (in)visible networks discovered in this study consisted of parent networks, which could have interesting relationships and correlations with gender or age.

The second aim of this research was to gain an insight into the meanings attributed to social networks. Importantly, I found that (in)visible social networks tended to have similar meanings attributed to them as visible networks; this legitimises their value and role in disaster recovery. Where this work digresses somewhat from the literature, is in its emphasis on the importance of networks in terms of their wellbeing. While the literature is also clear that social networks promote wellbeing, those social networks are limited to networks of friends and family. This study therefore contributes to the literature on social networks and disaster recovery by identifying a much broader range of networks that also provide this value. As a result of this emphasis on wellbeing, it may be valuable to explore the role of informal networks in relation to functions outside of wellbeing to confirm or better understand the primary role of informal networks. Finally and more broadly, a measure of the health of informal networks may be a useful indicator to include in understandings of social recovery. This measure, for example, could be an exploration of the diversity of informal networks, their overlap, or a self-reported rating on the quality of particular relationships or networks.

In summary, and speaking to my three research questions, a more nuanced account of social networks includes informal, interlaced and fleeting networks as well as the more visible. It also recognises that social networks are complex and not easily divided and categorised as many of them overlap. These networks are also understood as being just as meaningful in disaster recovery as the visible networks. A richer picture of social networks is best achieved using qualitative research methods for data collection, while being mindful of the risks of being too prescriptive and categorical when using a classification framework in data analysis and presentation. Lastly this richer picture of social networks is important to understand as it has implications for local authorities and institutions who use disaster recovery research to help shape plans, policies and campaigns. It also has relevance for understandings of community and disaster resilience.

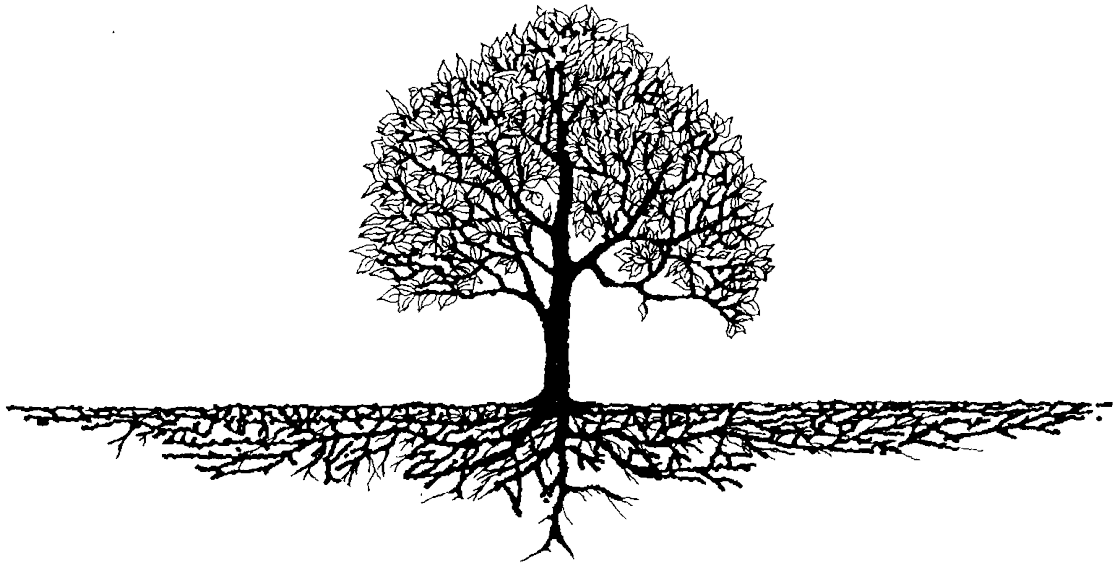


Figure 5: "Roots Underground" (n.d.)

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Appendix A

Interview Guideline for in-depth interviews

A.1 Question Schedule

Opening

Start broad, take notes of each network indicated, follow each of these up

1. What do you do to feel socially connected? / Talk about your social life
 - a. Prompts: family, friends, sports, parents, what do you do with these people

Social Networks

For each network identified earlier, and any others that emerge during interview.

2. Can you tell me more about this network
 - a. Formation/why/how they came to join, purpose, frequency of contact, location
3. Do you do things with the people in this group outside of the group?
 - a. Outline these as per above
4. What does this network mean to you?
5. Has the role or meaning of this network changed pre/post the earthquakes?
 - a. If yes, how so?

Closing

6. Do you have any other comments about your social life pre and post the earthquake?

Appendix B

Short open-ended questions via email

B.1 Question Schedule

Depending on answers – ask for any necessary elaborations

1. Can you tell me a bit about _____ (its purpose, any other more secondary purposes, when it began/how long it has been operative for, how often you meet, roughly how many people are involved)?
2. A tailored question re: earthquake depending if the network existed prior to earthquake or not:
 - a. Did you notice any changes pre/post earthquake (pre-existing network)
 - b. What role (if any) did the earthquake play? (post-earthquake network)
3. What do you think participation in _____ means to the people that come along (can you think of specific examples - things that you see)?
4. How do you think the _____ contributes to the social life of those who are involved (can you think of any specific examples)?
5. Please make any other comments about the social role of the _____

Appendix C

Human Ethics Committee confirmation letter

Research and Commercialisation Office

T 64 3 423 0817
PO Box 85084, Lincoln University
Lincoln 7647, Christchurch
New Zealand

www.lincoln.ac.nz

Application No: 2014-03

27 February 2014

Title: The role of community interest groups in social recovery: Sumner Case Study

Applicant: Michelle Marquet

The Lincoln University Human Ethics Committee has reviewed the above noted application.

Thank you for your response to the questions which were forwarded to you on the Committee's behalf.

I am satisfied on the Committee's behalf that the issues of concern have been satisfactorily addressed.

I am pleased to give final approval to your project. Please note that this approval is valid until three years from today's date at which time you will need to reapply for renewal.

May I, on behalf of the Committee, wish you success in your course.

Yours sincerely

Grant Tavinor
Chair, Human Ethics Committee
cc: Dr's Suzanne Vallance & Emma Stewart

PLEASE NOTE: The Human Ethics Committee has an audit process in place for applications. Please see 7.3 of the Human Ethics Committee Operating Procedures (ACHE) in the Lincoln University Policies and Procedures Manual for more information.

Appendix D

Research Information Sheet and consent form

Social Recovery in Sumner: a Case Study

You are invited to participate in a project entitled *Social Recovery in Sumner: A Case Study*.

The aim of this study is to understand the kinds of social involvement residents of Sumner have had since the February earthquake and whether this has been important for post-earthquake recovery. This includes involvement in formal or informal groups, as well as other kinds of social interactions or activities which might occur as part of one's day to day life, or by pure chance. Of a particular interest, is understanding the role of community-based interest groups in contributing to social recovery.

Participation in this research is voluntary and will involve an interview which will take between 20 and 40 minutes. If you are willing to participate in this research, you will need to sign the attached consent form and return it to me. Please let me know if you are not comfortable with the interview being recorded, and I will take short hand notes instead.

There are no major risks envisaged from participating in this survey though the topic is somewhat earthquake related which may cause some stressful memories. If this is a sensitive topic for you, you may wish to consider not participating or if you find it becomes stressful please let me know and we can stop.

The results of the project may be published, but your identity will not be made public, or made known to any person other than the researcher and supervisors without first obtaining your consent. To ensure anonymity the following steps will be taken:

- *Names and contact details will not be used*
- *Pseudonyms or code names will be used instead in any written or oral material*
- *No individual identifying information will be presented in public*

You may withdraw your participation and the information you have provided for the research by informing me prior to June 1st 2014 by telephone or email.

The research is being carried out by: Michelle Marquet who can be contacted by telephone: 326 6927 or email: Michelle.Marquet@lincoln.ac.nz. She will be pleased to discuss any concerns you have about participation in the project. Alternatively, you may contact either of her supervisors:

Dr Suzanne Vallance, Supervisor

tel: 325 3838 extension 8105 or email: Suzanne.Vallance@lincoln.ac.nz

Dr Emma Stewart, Associate Supervisor

Tel: +643 4230500 or email: Emma.Stewart@lincoln.ac.nz

Thank you for your time and participation – it is much appreciated.

Consent Form

Project name: Social Recovery in Sumner

I have read and understood the description of the above-named project. On this basis I agree to participate as a subject in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved. I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided.

Name: _____

Signed: _____ Date: _____