

Where's the community in community resilience? A post-earthquake study in Kaikōura, Aotearoa New Zealand

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Abstract

Theories about what communities are have been constantly evolving in response to considerations about the complex and multi-faceted processes that shape them. While this has led to conceptual refinement in some areas of research, debates about the nature of community are often overlooked when the term is paired with other concepts such as resilience. In such pairings, more discussion is evident over the meaning of resilience than the nature of community. Studies that focus on the resilience of a community risk neglecting the complex dynamics that shape them and, as a consequence, tend to underestimate how these processes influence resilience. Framed by Paton's (2006) model of adaptive capacity, in this paper we argue that a more nuanced understanding of community which acknowledges the web of formal and informal relationships is required. These relationships give rise to "collectives" which, in turn, are integral to a community's resilience because they bridge the gap between the individual and "the" community. This paper uses qualitative methods to examine collectives in Kaikōura, Aotearoa New Zealand following a Mw7.8 earthquake to further our understanding of what is meant by community in community resilience. By examining the meso/collective level, rather than the micro/individual or macro/community level of community, a more nuanced understanding of community resilience emerges.

Keywords: Community, resilience, disaster, collective, earthquake

Rebecca Solnit's (2009) book "A Paradise Built in Hell: The Extraordinary Communities that Arise in Disaster" brought attention to how communities are conceptualised following disaster: how they emerge, engage, and thrive during times of significant disruption, often with positive outcomes. The ability to positively respond to significant disruption is often described as *resilience*, which Holling (1973) influentially defined as the capacity "to absorb change and disturbance" (p. 14). When applied to social systems, Paton (2007) explains that resilience can be a community's ability to anticipate and adapt to changes that occur before, during, and after major events. *Community* resilience has gained momentum in understanding how "community members" respond to "change, uncertainty, unpredictability, and surprise" (Magis, 2010, p. 402). There is, however, a demonstrable difference between community members and communities; who are these "community members", how do they belong and why, and how do these members aggregate to "a" community? To address these questions, key characteristics of community identified throughout Paton's work such as sense of community, collective efficacy, trust, and empowerment will be used to examine community resilience in Kaikōura following a major disruptive event. This paper will introduce the concept of collectives as a meso-level in community resilience in relation to Paton's (2006) adaptive capacity model.

The North Canterbury region of the South Island of Aotearoa New Zealand experienced a destructive M_w 7.8 earthquake on 14 November 2016 at 00:02, causing some of the most complex surface level ruptures ever studied (Cesca et al., 2017; Shi et al., 2019). The earthquake drove the land approximately 8 metres vertically and shifted areas of land more than 10 metres horizontally (Cesca et al., 2017), exposing large sections of the coast that had previously been under water (Hamling et al., 2017). In its immediate aftermath, the earthquake destroyed transportation and communication infrastructure (Liu et al., 2017; Stevenson et al., 2017). The loss of tourism also severely impacted economic stability (McDonald et al., 2017).

Since the earthquake occurred, there has been significant research on the physical systems but, in terms of the social sciences or *community* resilience, studies tended to focus on tourism aspects (Fountain

& Cradock-Henry, 2020; Wilson & Simmons, 2018), socio-ecological systems (Cradock-Henry et al., 2019), and psychological and economic processes (Fang et al., 2020; Kwazu & Chang-Richards, 2022; Neeraj et al., 2021). The social consequences for local “community members” have gone relatively underexplored. What was missing – and the gap our research sought to address – were the implications of the short- and long-term effects of the earthquake on residents *collectively*. Rather than considering how “the” community responds as an amalgamated whole, this paper highlights the importance of adopting a more nuanced understanding of *community* to consider how multiple collectives *within* community responded to the event. In doing so, we also note a shift in focus from outcomes (such as resilience) to the processes that promote or impede those outcomes.

In February 2017 a workshop was co-organised by Aotearoa New Zealand research institutions and collaboratives – QuakeCoRE, the Natural Hazards Research Platform, and Resilience to Nature’s Challenges – to identify gaps in disaster research that could be explored in Kaikōura. It was identified that the potential importance of “creating and empowering locally led recovery initiatives” (Hatton et al., 2017, p. 87) following the earthquake could provide a useful tool to better understand *community* resilience. However, there were also pre-existing initiatives in Kaikōura that contributed to the recovery efforts. This paper draws on Paton’s (2006) model of adaptive capacity as we present our findings of locally-led initiatives (collectives) to consider the processes within community that contribute to and hinder resilience.

Community

Whether through intimate, familial connections or as organisations with a shared special interest (Aitken, 2009), humans work together in groups (Delanty, 2003). Community definitions emerged roughly a century ago and focused on how people interacted with one another. Tönnies considered how people interacted, as close interpersonal connections reflected in community (*gemeinschaft*) and special interest organisations that emerge from society (*gesellschaft*). Regardless of their composition or purpose, both terms exist as a form of *groupness*. A contemporary of Tönnies, Durkheim also established early definitions of community. However, unlike Tönnies, Durkheim focussed on the composition of community, either as united through shared/collective identities or through unique/individual expertise. Both of Durkheim’s forms of community were rooted in the

idea that the “parts” (people) were not as important as the “irreducible whole” community; (Cohen, 1985, p. 23). Focusing less on community as a “whole”, Weber unpacked the role of the individual in community. However, rather than considering the “wishes, needs, and behaviours” of *the* individual, Weber considered how individuals *collectively* considered the “wishes, needs, and behaviours of others” (Day, 2006, p. 4). Combined, these three early theorists of community set the groundwork for contemporary understandings of how people interact as a group, or *collective*.

More recently, scholars have critiqued early definitions of community as being focused on a bounded, one-dimensional, and static entity (Titz et al., 2018; Winterton et al., 2014). This can be seen in Tönnies, Durkheim, and Weber’s work on community as a “whole”. In the last 100 years there has been significant evolution and variation of the term “community”; though imperative, acknowledging its complexity as both a theory and an entity can be daunting. Day (2006) argued that without recognising the intricacies of community and the complexity that emerges from how the characteristics of it interact, its overuse all too often “signifies something vague and ill-defined” (p. 2). Moving away from early definitions of community as a single bounded entity and acknowledging the dynamic characteristics within allows for increased consideration of the social complexities and processes that emerge from identity and interaction in community (Titz et al., 2018).

Räsänen et al. (2020) identified three types of communities often found in community resilience work: place-based communities, interaction-based communities, and communities of practice and interest. Place-based community theories can be useful to consider people, places, and organisations (Räsänen et al., 2020), yet these types of community do not consider the complex processes that exist between these characteristics. Interrogating the processes, interaction-based communities focus on how people engage with one another in everyday life (Day, 2006; Gilchrist, 2019). Finally, communities of practice and interest draw people together to engage in a common goal (Wenger, 2011) and can be comprised of workplaces, school groups, and hobby associations. These contemporary interpretations of community expand on early interpretations by moving beyond the micro- (individual) level and the macro- (community) level to consider the meso- (collective) level within *community*. However, the complex interactions *between* the groups must also be taken into account.

Understanding the complicated web of characteristics and social complexities that make up community offers a glimpse into how a community functions in day-to-day life as well as during times of uncertainty. Characteristics can often be considered as the visible or tangible aspects of community. Buildings, people, and groups are often the markers for place-based communities; however, these types of communities often follow closely in line with early definitions of community in being too rigid (Räsänen et al., 2020; Titz et al., 2018; Winterton et al., 2014). Therefore, it is necessary to go beyond the identifiable characteristics of community to consider the less tangible aspects. The characteristics that are more difficult to distinguish or examine include practices, interests, trust, power, social connections, inclusion/exclusion, and (in)equality (Barrett, 2015; Liepins, 2000a, 2000b). Despite being more complex than physical places, people, and groups, these other characteristics, once acknowledged, can strengthen and enrich the community mosaic. Additionally, these complex characteristics can offer insight into realising the social complexities within community and how they are constantly shifting and in a state of flux, especially during times of heightened unpredictability or change.

The social complexities that exist in community can be explored through everyday life (Perkins & Thorns, 2012; Sztompka, 2002). Everyday life can emerge from the interactions that people engage in on a regular basis such as attending work, school, or regularly scheduled recreational activities (Sztompka, 2008). There may be slight variations in everyday life, but there is a general expectation that things will remain relatively routine. Ways to assess everyday life can emerge from the same characteristics that are identified in types of communities such as place, interactions, and practices. Yet, in community resilience research, it is often the place-based community that is explored in-depth rather than the interactions and practices that enable resilience. Collectives, as they operate in everyday life and bring people together for various reasons, can provide a window through which to explore how the *interactions* and *practices* within community contribute to resilience.

While the processes of everyday life may seem stagnant or repetitive, the process of engaging in everyday life demonstrates how community is constantly shifting (Sztompka, 2002). The casual connections people have with one another through their interactions in everyday life builds a togetherness that binds people to a “community” (Gilchrist, 2019). Identifying these connections at a meso- (collective) level, rather than micro (individual)

or macro (community), can help to interrogate how collectives can be drawn on as a resource during times of uncertainty. A large disruption such as a disaster or significant environmental event disrupts the status quo of the “community”. Therefore, understanding the unique characteristics and social complexities at the meso-level and how these shift following a major event can contribute to a more nuanced understanding of *community* resilience at the macro-level.

Community Resilience

Much like community, community resilience has undergone a significant transformation in theory since its inception. Srivastava (2017) proposed that:

Eventually, the community, be it rural or urban, must respond to disasters as one entity. It is true that individual resilience plays a role, however, it is the resilience of the community as a whole that determines the capacity of a community to regain social and economic functioning (p. 29).

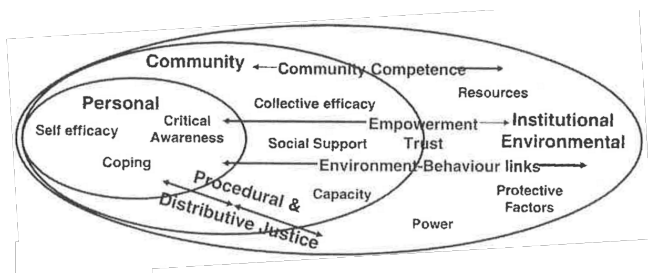
However, this assumption of community existing as a singular entity mimics issues with defining community and does not correlate with the above conceptualisations of community as being made up of numerous interconnected characteristics and social complexities. Furthermore, the above definition moves away from Magis’ (2010) early definition of community resilience, described as the ability of communities to respond to the challenges and changes brought on by disasters by drawing upon existing resources (Paton & Johnston, 2001; Paton et al., 2006). Social capital is often considered to be a useful resource in understanding social dynamics of community resilience (Aldrich & Meyer, 2015; Uekusa et al., 2020; Vallance & Rudkevitch, 2021) and it sits within the wider capitals framework approach to community resilience (Callaghan & Colton, 2008; Wilson, 2012). While social capital can be a useful resilience indicator for individuals, organisations, and levels of decision making, how characteristics of community can influence and be influenced by collectives should also be considered.

Previous research has considered multiple approaches to community resilience; this paper continues this reasoning by focussing on the heterogenous characteristics and interactions within them, but from a meso-level. Community can no longer be seen as homogenous in disaster research and practice. Exploring the features of community can help to determine how resilient it can be (Berkes & Ross, 2012; Paton & Johnston, 2001), rather than whether it is resilient or not. Paton (2017) highlights the important influence individuals and collectives can

have on community resilience. Through their conscious decisions, people can determine the resilience and recovery outcomes following a disaster – whether these outcomes are positive, negative, or a blend of both (Paton, 2017). Yet, the level of influence people have on community resilience is determined by the status of the characteristics within the community.

Emerging from a collection of works on disaster resilience, Paton (2006) developed a model of adaptive capacity (Figure 1) that considers the individual, community, and institutional/environmental levels of resilience. Paton's model demonstrates that within the three levels there are characteristics such as factors, linkages, and resources that influence adaptive capacity. Understanding the complexity between the levels and how the characteristics influence community resilience at different stages, including impact, response, and recovery, is a key aspect in adaptive capacity (Paton, 2006).

Figure 1
Paton's (2006) Adaptive Capacity Model



Paton (2017) argued that the multiple ways people can respond to and manage environmental events is determined through their various interactions and is influenced by multiple factors including where the event is, who is involved, and when it occurs. Yet, the *how* and *why* of these interactions should also be taken into account; collectives and their ability to contribute to and influence decision making can reveal insight into these processes. The numerous ways people can be involved in community resilience can be attributed to a “shared (and complementary) responsibility” (Paton, 2017, p. 10), a concept that is not dissimilar to the notion of *collectives*. Paton (2007) identified the important role empowerment can have on community members, and that when their ideas are supported by decision makers it builds trust between them. It was also identified that engaging with local community groups can help build empowerment in preparing for and responding to disasters (Paton, 2007). This raises important questions about the qualities and characteristics of these community groups

(i.e., collectives) that sit between the individual and the community. The aim of this paper is to outline how collectives contribute to resilience and adaptive capacity. Collectives act as a conduit between the micro- (individual) level and the macro- (community) level and contribute to the development of the characteristics identified by Paton.

Collectives

Essentially, collectives are individuals coming together as a group with a direct intention or common purpose such as faith-based organisations, weekly “stich ‘n’ bitch” meetings, working groups, sports clubs, government departments, NGOs, steering committees, and event planning committees (Gilchrist, 2019; Mann et al., 2021; Marquet, 2015; Rudkevitch, 2022; Scherzer et al., 2020; Sztompka, 2008; Wenger, 2011). Understanding how collectives operate and interact can provide greater insight into what community is. Collectives both constitute and emerge as a property of community; without them, larger aggregations (e.g., communities, societies) would not exist. Therefore, to understand *community* resilience then *collectives* must be examined. We draw upon fieldwork conducted in Kaikōura after the 2016 earthquake to explore the role and contribution of collectives in community resilience.

Kaikōura Context

Kaikōura is the second smallest district in Aotearoa New Zealand by population, with 3,912 residents (Stats NZ Tatauranga Aotearoa, 2017). The area has been occupied by Māori for approximately 800 years; the tribal council is Te Rūnanga o Kaikōura and the hapu is Ngāti Kuri (Kaikōura District Council, 2017; Te Rūnanga o Ngāi Tahu, 2020). Settled by Europeans in the 1830s for whaling, Kaikōura (*kai*-food and *kōura*-crayfish) has long had a connection to the sea. Primary industries such as agriculture and fisheries emerged as important industries in Kaikōura (McAloon et al., 1998); both were impacted by the earthquake. Yet the ocean has also provided significant economic stability in the form of tourism, as visitors come from around the world to engage in nature-based tourism experiences such as whale, dolphin, and seal viewing and adventure tours (Moore et al., 1998).

When the earthquake struck, thousands of tourists as well as locals became trapped in the district due to significant slips cutting off all roads in and out of Kaikōura. After an extensive rescue effort to evacuate tourists, elderly, and injured, the residents remained to rebuild and recover from the devastating earthquake (Stevenson et

al., 2017). While the road repairs were quickly underway, the economic impacts proved to be substantial. Inaccessibility, harbour damage, and destruction of seal habitats meant there was an estimated \$21 million loss in domestic and international tourism spending in Kaikōura (McDonald et al., 2017; Simmons et al., 2017; Stevenson et al., 2017). However, these losses were cushioned through the increase in revenue from an influx of workers contributing to the North Canterbury Transport Infrastructure Recovery (McDonald et al., 2017).

In order to better manage the recovery efforts in Kaikōura, a Social Earthquake Task Group (SETG) was formed to guide the community recovery, with the first meeting held on 22 November 2016 (Kaikōura District Council, 2017). Key focus areas for SETG included health and wellbeing, elderly support, housing, community facilities, and promoting a greater sense of community through interaction (Kaikōura District Council, 2017). The other task groups focussed on the natural and built environment, the economy, and the future (Kaikōura District Council, 2017). While the other task groups were equally important, this research sits firmly within the Community Recovery Programme, represented by SETG. Even more specifically, this research closely examines the “encouraging positive community interaction” opportunity set out in the Reimagine Kaikōura Recovery Plan (Kaikōura District Council, 2017). To evaluate the success of the opportunity, the Kaikōura District Council (KDC) highlighted key areas to monitor:

- 1) a strong sense of community;
- 2) strong community participation and a thriving volunteer sector; and
- 3) the number and range of activities provides for the diversity of the community including arts, culture, recreational, sporting, and social activities.

These three areas are explored in this paper through the identification and assessment of collectives in Kaikōura. The first key area to be monitored is strongly rooted in Paton’s (2006) model of resilience as sense of community. The two other key areas to monitor can offer units of evaluation as collectives were used in this work to examine community resilience. When combined and evaluated, collectives can reveal both the unique characteristics of community as well as social complexities. Assessing how collectives are influenced by four of Paton’s identified resources in community resilience can reveal whether the three key areas to monitor were achieved, but also what they can reveal about *community* following a major environmental event.

Method

This research used a case study approach with exploratory inquiry and abductive reasoning. Qualitative methods, such as participant observation and interviews, were utilised to collect data. The data collection process began in July 2018 with document analysis, followed by interviews and participant observation commencing in September 2018 after receiving ethics approval from the Lincoln University Human Ethics Committee.

Case Study

Case study research often examines a phenomenon in a “real-life context” (Scholz & Tietje, 2002, p. 9) using a single unit analysis or multiple units of analysis to understand that phenomenon (Payne & Payne, 2004; Yin, 2014). This research considered multiple collectives within Kaikōura. Due to the nature of this research being focused on *community* it seemed pertinent to engage in a case study approach where Kaikōura is the case study, the collectives are the units of analysis, and the *community* resilience process is the phenomenon. As this research aimed to explore the phenomenon of community resilience from the inside-out, exploratory inquiry was used to assess broad concepts before eventually narrowing around themes (Stebbins, 2001; Wellington & Szczerbinski, 2007). This approach can be equated to a process of discovery where researchers “must intentionally put themselves in a position to make discoveries” (Stebbins, 2001, p. 4). Given that the research was focussed on discovering the facets of community in everyday life and during unexpected times, exploratory inquiry was appropriate.

Data Collection

Document analysis, semi-structured interviews, and participant observation were the methods used in this research. Document analysis of media articles, websites, and newsletters was initially used to establish which collectives would be examined in this research. As interviews were undertaken it was discovered that the initial collectives identified through document analysis needed to shift due to some collectives no longer existing and others emerging. Rather than focussing heavily on *community* collectives it was found that the research needed to shift to look at some collectives that were initiated by the local government. The types of collectives examined in this paper included community gatherings such as dinners and gardens, environmental stewardship projects, and volunteer groups. Many of the collectives existed prior to the earthquake, although some emerged

following the earthquake. It was common for key contacts in collectives to be listed on the documents, which enabled a short list of initial interviewees. From there, snowball sampling provided additional participants up to a total of 22. Most participants were involved in some capacity in the collectives that were examined, either as the head of a collective, or a participant in a collective, or were involved in local government as an elected official or employee. The semi-structured interviews were centred around how collectives operated prior to, during, and after the earthquake and how that impacted their perceptions of community following the earthquake. Some of the themes that were examined in the interviews were the individual's involvement in the collective, how the earthquake may have changed the collective, and what the future expectations were for the collective. Participant observation included attendance at some of the organised activities and events put on by collectives as well as attendance at wider community activities such as earthquake anniversary efforts that were not directly related to the collectives but were linked to the earthquake recovery efforts. The purpose in attending the events was to capture how the locals engaged in the community, both within collectives and outside of them.

Abductive Reasoning

Abductive reasoning was employed to assess the data. Abductive reasoning formulates a new way of thinking that emerges from the act of discovery or an attempt to disprove previously accepted theories (Hanson, 1958; Reichertz, 2011, 2013). Often abductive reasoning is undertaken by first assessing theory and then using experiential and observable data to reassess the theory (Reichertz, 2013). In the research onset, literature and document analysis were used to investigate and assess current understandings of community resilience. Following on from the primary assessment, fieldwork was completed and analysed. Both theories and observations were assessed independently and then compared.

Results

The Role of Collectives in “Community” Resilience

Through the analysis of the literature and interviews, a complex conceptualisation of community emerged. Paton and Johnston (2001) outlined how active participation by community members in community activities and events can promote increased resilience, regardless of whether these activities and events are directly related to disaster risk reduction. Understanding characteristics within the groups that community members engage in

can offer a unique perspective on *community* resilience. However, how community members interact with decision makers and vice versa can influence the development and existence of trust and empowerment, and in turn influence how they can enact collective efficacy (Paton et al., 2017). Paton et al. (2017) also explain, however, that these qualities of community are unlikely to be affected by the “mainstream risk management process” (p. 134) and that they can only be influenced through community development and engagement strategies. It can be determined, as will be demonstrated below, that unless sense of community, collective efficacy, trust, and empowerment can be fostered through the risk management and recovery process then community resilience may diminish.

Sense of community

Understanding sense of community can lend insight into “how [community] becomes a resource for people, particularly in times of stress” (Pooley et al., 2006, p. 165) and how it can be drawn on to encourage action during times of uncertainty. Norris et al. (2008) highlighted the important role a strong sense of community had on forming community resilience. Furthermore, having a strong sense of community prior to an event can allow for swifter recovery as those social connections are pre-existing (Chamlee-Wright & Storr, 2011). These strong connections were often discussed by local residents, both in connection with the environment and to each other.

One participant recounted how:

[The] community is a tight community. It is very self-protective. There is a lot of connections. Family connections. School connections. Everyone is intertwined one way or another. When you come to this community it kind of doesn't take that long to get intertwined if you really want to get yourself involved.

Another local community member stated that:

Community is sharing. That's basically it. Give and take. Share. Friendship. Support. Solidarity. Coming together. Working together for a common goal. There's lots of examples of that here. They have events here that bring the community together.

These two participants felt a strong sense of community that emerged from connections between people and general reciprocity of resources, both tangible and intangible. However, this was not the case for all participants. One participant explained that:

The community is as fractured as it has ever been. Our Rūnanga isn't working with our council. Our schools are not working with our community. Our businesses are all... some of them are struggling. We need to actually stop, get our house in order and actually try to move on together collaboratively because we are not doing it right now.

In comparing the comments made by participants it emerged that while some community members believed there was a strong sense of community, others felt the disconnection was too strong between collectives, which negatively impacted the sense of community. But not everyone was considered to be a part of "the" community. When discussing the new leadership team at the council that was brought in following the earthquake, one participant explained that:

My personal opinion is that there are too many people that are not connected with our community and the team leadership of the council. They are just not connected. They just don't have any idea what our community is about.

Another community member stated that "We seem to have a lot of people with hidden agendas on council too, which I don't think helps". These two quotes represent how some community members did not consider the senior leadership team at KDC to be part of "the" community and there was some frustration directed towards council regarding the diminished sense of community in Kaikōura. This disconnection between collectives and senior leadership at KDC impacted the potential for collective efficacy.

Collective efficacy

For Mannarini and Fedi (2009), sense of community emerges from social/civic participation such as volunteering, involvement in community programming, and people coming together to protect their neighbourhood. The idea of social/civic participation is not dissimilar to collective efficacy. Collective efficacy can be defined as a "sense of collective competence shared among individuals when allocating, coordinating, and integrating their resources in a successful concerted response to specific situational demands" (Zaccaro et al., 1995, p. 309). In a sense, collective efficacy can be broken down to consider how people work together to effect community change, a concept that has been assessed previously in community resilience research (Kwok et al., 2016; Rapaport et al., 2018; Sherrieb et al., 2010; Tidball et al., 2010). Collective efficacy was demonstrated in the creation and continuation of social/civic participation in

Kaikōura prior to and following the earthquake, such as through the engagement in collectives, collaborative events, and cross-organisation co-operation. Within collectives, efficacy emerged as individuals connected with one another through routine engagement and interaction. The more people engaged with one another, the stronger the connections, further enabling collective efficacy. Being able to organise as a collective prior to the earthquake allowed collectives to organise effectively following the event. As one collective's leader explained:

When you're looking at community groups or community post-earthquake, I think for us we've been connected all the way through, and it is not just because we have a building to act out of, it is actually about our holistic space.

While this participant identified that they were able to have high levels of collective efficacy in terms of organising their collective, it was noted that this was not the case for the "whole" community. They then went on to explain that:

Whether it is pre- or post-earthquake, although I can see little bubbles of the community interacting a lot and being more engaged than they ever have been in the last probably decade, there is still people struggling. There still isn't a community voice into the higher-level decision making.

In terms of collectives collaborating, one participant said "I still don't think that [organisations] are all working towards one vision. But I do think we are working together more than we ever had. So that is kind of a step in the right direction". Despite collectives as singular organisations being able to contribute a great deal of resources to building strong social/civic participation through volunteering, community programming, and developing the neighbourhood/town, this did not translate to having strong efficacy in cross-collective collaboration or higher-level decision making. Difficulties in creating cross-collective efficacy could be attributed to low levels of trust.

Trust

Trust can be built from community members being involved in the decision making for risk assessment and management. High levels of trust can prevent emergency management advisors being blamed for issues arising from disaster planning (Paton et al., 2006). However, following the earthquake in Kaikōura there was diminished trust due to staffing changes at the KDC. As stated by a community member and KDC employee:

The fact that the council [employees were] . . . so new we didn't have that well of trust and the kind of [social] credit. . . If you have worked with someone for a long time there's ups and downs and you acknowledge them but when you just met someone. . . it just wasn't there, the staff loyalty.

The low levels of trust in the incoming senior staff within council following the earthquake led to disconnection in the overall recovery efforts and planning. However, low levels of trust were not permanent. Feelings of distrust were able to be reversed when KDC actively listened to and worked with local collectives to avoid the closure of a building out of which many collectives operated. This building was set to be moth-balled by KDC, but collectives came together to rally against its closure. This meant that the collectives went through a submission phase, raised funding to fix the building, and developed mitigation solutions. Through the process of the collectives working with KDC the general tone went from "we don't trust the council" to "hey let's work with them and see if we can get a partnership" (Participant). This demonstrates that while there may have been low levels of trust following the earthquake, it did not extend across all collectives and was not permanent.

Contrastingly, one department within council helped to bridge connections and build trust between collectives and the wider council through their ongoing support of community members and collectives. As a community member and KDC employee recounted "I think that we have represented council really well. In some instances we've brought the community closer to the council as opposed to what they were before because of their belief in the lack of support from council". Furthermore, by creating a group of dedicated volunteers, this department was able to work closely with the community members on the ground. Building a dedicated team that was focused on working *with* the local community and collectives helped to build strong levels of trust. Collaboration between KDC and collectives proved to be a strong contributor to high levels of trust.

Not only was collaboration important in building trust between KDC and collectives, it was also important to build trust between collectives. Yet, the collaboration between collectives did not always come easy. In Kaikōura, collaboration across collectives seemed to be a struggle as a member of a collective stated that:

It is interesting because we've tried lots of collaborative things and the message [that] keep[s] coming back- really clearly- and particularly from [another collective]

is that there is just not enough trust. I guess to build trust it's time. It's relationships. It's being reliable. It's being consistent. It's doing what you say. It's all these things that build trust.

According to this participant, the trust might have existed between their collective and others previously, but it had deteriorated over time. Building strong collaboration through participation, practice, knowledge sharing, and learning is an important aspect of resilience and adaptive capacity (Folke et al, 2003), but if these are not fostered through empowering collectives to work together resilience can diminish.

Empowerment

Ineffective collaboration and diminished trust can help or hinder a collective's power in decision making and community resilience. Special interest groups can be formed with the intention of accessing power and especially political means (Johnson, 1995). Power can be influenced through levels of (dis)trust that result from varying levels of recovery (Barrett, 2015). Yet, for those who are not part of an impacted "community", such as external advisors, it can become difficult to identify "who has the authority to define who is, or may become, a member of a given 'community' and who will be left out" (Titz, 2018, p. 18). As a result, attempts to empower "the" community run the risk of misidentifying who should be contributing to the decision-making process. By misidentifying key players it can result in distrust and decreased efficacy. One participant explained that the council was:

Not employing people who are there to help you and get back to normalcy. They are there to put roadblocks in the way . . . It just adds to the strain and the stress of the people that are trying to come out of the shock. It is a big disconnect. There is a total lack of historical knowledge. There is a lack of understanding of cultural values of the Rūnanga. There is certainly a disconnect between the council and the Rūnanga and there used to be a huge connection between those organisations.

Another community member commented that:

I am not sure a lot of groups know who the leadership team are and what their jobs are. I don't know whether they know that they don't live here on the weekends. I think that they don't know about that. Because I don't think that our leadership go out into the community to be involved for our community to get to know them. But a lot of the decisions . . . don't make sense a lot of the time.

This demonstrates that while there were shifts within the council to improve resilience and recovery in Kaikōura following the earthquake, there was a significant disconnect in empowering the collectives that should have been involved.

Yet, despite the disconnection between KDC and the collectives, there was still some hope that there might be opportunities for increased empowerment coming from within the community. One community member stated that:

My hope is that it will at least be better than it was, and I think it will be. My gut feeling is I think it will be. But I think it will be because there's going to be some new people within the community starting to really shine and they will bring with them some new ways of communicating.

Increasing empowerment by the community for the community was an important aspect that emerged from the interviews. For instance, there needed to be "community consultation to see what [locals] see the Kaikōura community as" and while it is important for KDC to be involved, "it really has to have that buy-in from the whole community of where they see it going". Yet there were barriers to this:

Individually, people are really passionate but it's often passionate in a minority voice and you've got lots of people that are just . . . eventually against everything. Whereas you are getting more frustration from people who want to see [it] develop. Who want to see that come through. That's why it is important to find avenues for them to have a voice because they won't come out and necessarily do it on their own. But if they have a way to speak up and be a part of the conversation, that is really important. I think it's probably a minority that speaks up most of the time than the larger voice.

Building empowerment within Kaikōura was a strong desire for many in the community as they engaged in collectives. However, the ability for them to engage in decision making was hindered, despite the collectives already existing as strong pillars of social/civic efficacy through their ongoing involvement in community activities and events. Due to collectives' deep understanding of community needs through their ongoing work, had they been brought to the table as partners in decision making and been able to provide increased communication on recovery in Kaikōura it may have helped build stronger trust and therefore better outcomes through empowerment.

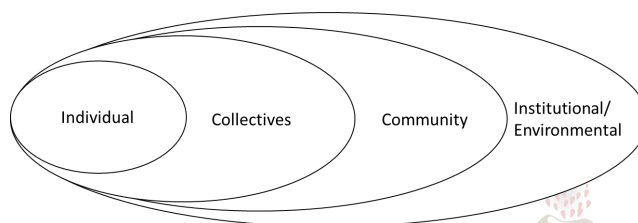
Discussion

This paper explored Paton's (2006) model of adaptive capacity which considers the various levels of community and the resources needed to facilitate adaptation, in the context of recovery following the 2016 Kaikōura earthquake. Paton's model considers the individual, community, and institutional/environmental (societal) levels relevant to resilience. The model attempts to outline many of the characteristics of adaptive capacity in community resilience, yet because the model considers community at the macro "high level", it does not unpack a more nuanced, meso-level of resilience. Therefore, in this research we chose select characteristics of community resilience identified by Paton to interrogate the role of collectives in community resilience for Kaikōura. By narrowing the focus more specifically on collectives, a more nuanced meso-level image of community resilience can emerge. It should also be noted that while it has been identified that community *is* complex, attempting to examine *every* aspect of community overcomplicates it. Therefore, it is important to consider certain characteristics that can exist between the individual and the community.

We propose that there is another level that must be considered *within* community: the meso- (collective) level. The model presented in Figure 2 draws on Paton's (2006) early adaptive capacity model to provide an alternative version in considering *community* resilience. Within the model, three levels exist: micro (individual), meso (collective), and macro (community). Oftentimes in community resilience research, it is either the micro- or macro-level that is considered; however, our findings have shown that there are constraints around the extent to which individuals can be involved in "community" resilience, despite their willingness and commitment, that emerges from examining the meso-level.

The findings from this research show that while the characteristics at the meso-level influenced resilience, this was not always in a positive way. For instance, due to differing senses of community, the community was not

Figure 2
Levels of Resilience



Note. Adapted from Paton (2006)

working together as effectively as possible in recovery. Similarly, despite there being pockets of collective efficacy in Kaikōura, this was not always done in conjunction with other collectives. Trust and empowerment were also diminished as a result of decision makers not working alongside the collectives which hampered the collectives' ability to engage in collaborative recovery.

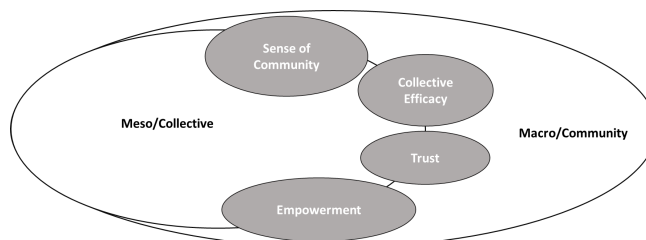
This research demonstrated that the desire and ability to promote collective efficacy does not always translate into a "likelihood of the success of mitigation strategies" (Paton & Johnston 2001, p. 274). There are varying levels of influence that are constantly shifting and contributing to how resilient a community can be, not only across the individual, community, and society levels, but within the collective level as well. This speaks to Vallance's (2011) observations of recovery after the Canterbury earthquake sequence of 2010-12 which highlighted the need to "interrogate the assumption that recovery agencies and officials are both willing and able to engage communities who are themselves willing and able to be engaged in accordance with recovery best practice" (p. 19).

Recent readings of community recognise their complex and dynamic composition. While resilience literature is useful, it often fails to adequately recognise this complexity. Various models have been proposed to add some nuance to the idea of resilience, with Paton proposing that there are a multitude of characteristics that can influence resilience. However, Paton's model in its attempt to cover all aspects of community resilience risks not critically evaluating the role of the meso- (collective) level in community resilience.

While Paton's work promotes attention towards characteristics of community, our results suggest a need to look at collectives rather than individuals (too micro) or communities (too macro) to fully appreciate characteristics such as sense of community, collective efficacy, trust, and empowerment. The examination of community at the meso-level allows us to see how these characteristics are unevenly distributed, sometimes aligned and sometimes in conflict. Our work contributes to explaining how and why these fractures within the community can slow recoveries and undermine resilience.

Based on the above model and the findings presented in this paper, we propose characteristics are in a state of perpetual flux and therefore exist at varying stages of effectiveness, both positive and negative. To address these fluctuations in resilience, Figure 3 demonstrates how the characteristics within collectives shift overall

Figure 3
Shifting Characteristics at the Meso/Collective Level



community resilience. In our model, sense of community, collective efficacy, trust, and empowerment span both the meso- and macro- level as these characteristics emerge from the meso-level yet influence the macro-level.

The model in Figure 3 provides a general representation, however it should be noted that there are multiple collectives within a community that will have their own fluctuating characteristics and therefore will exhibit their own influence on community resilience. Understanding the messiness of resilience that exists within the meso-level can lend greater insight into how researchers and practitioners approach community resilience work. Not only will the examination of collectives identify the possibilities that can arise during times of uncertainty, it may also assist with identifying potential gaps in how the community functions in everyday life and during times of uncertainty.

Conclusion

By examining a diverse range of collectives a dense mosaic of community emerges. Formed from a sense of community, contributing to collective efficacy, grown through trust, and impacted by empowerment, *community* resilience exists as a complex web of processes that are constantly shifting, as highlighted by Paton (2006). However, what also emerged in our research was an understanding that social recovery is not relegated to these aspects of community. Rather, through the examination of collectives, we discovered that while it may appear that community is a bustling patchwork of volunteers and activities, there are influencing factors that may promote or impede positive outcomes. This paper has revealed a picture of a shifting sense of community, collective efficacy, trust, and empowerment in everyday life following a major environmental event. Consequently, we suggest that amendments can be made to Paton's (2006) model, namely the addition of a layer between "individual" and "community" that reflects the role that *collectives* have to play in the process of

community resilience at a meso-level, as reflected in Figure 3.

The case study presented in this paper illustrates that community resilience needs to consider more fully the dynamic complexities of the meso-level of community. Only by recognising its complex nature can we deliver on the potential of recovery and resilience, while also avoiding the harm rendered by ignoring conflict between collectives and with decision makers. In a practical sense, bridging connections across collectives that consider the social complexity before an earthquake, while important, is not the only solution. Maintaining these connections following an event and building on the characteristics through multiple collectives will help create stronger community resilience both in recovery and into the future.

Authors' Note

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References

- Aitken, S. C. (2009). Community. In R. Kitchin & N. Thrift (Eds.), *International encyclopedia of human geography* (pp. 221-225). Elsevier Science.
- Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist*, *59*(2), 254-269. <https://doi.org/10.1177/0002764214550299>
- Barrett, G. (2015). Deconstructing community. *Sociologia Ruralis*, *55*(2), 182-204. <https://doi.org/10.1111/soru.12057>
- Berkes, F., & Ross, H. (2012). Community resilience: Toward an integrated approach. *Society & Natural Resources*, *26*(1), 5-20. <https://doi.org/10.1080/08941920.2012.736605>
- Callaghan, E. G., & Colton, J. (2008). Building sustainable and resilient communities: A balancing of community capital. *Environment, Development and Sustainability*, *10*(6), 931-942. <https://doi.org/10.1007/s10668-007-9093-4>
- Cesca, S., Zhang, Y., Mouslopoulou, V., Wang, R., Saul, J., Savage, M., Heimann, S., Kufner, S.-K., Oncken, O., & Dahm, T. (2017). Complex rupture process of the Mw 7.8, 2016, Kaikōura earthquake, New Zealand, and its aftershock sequence. *Earth and Planetary Science Letters*, *478*, 110-120. <https://doi.org/10.1016/j.epsl.2017.08.024>
- Chamlee-Wright, E., & Storr, V. H. (2011). Social capital as collective narratives and post-disaster community recovery. *The Sociological Review*, *59*(2), 266-282. <https://doi.org/10.1111/j.1467-954X.2011.02008.x>
- Cohen, A. P. (1985). *Symbolic construction of community*. Routledge.
- Cradock-Henry, N. A., Buelow, F., & Fountain, J. (2019). Social-ecological inventory in a postdisaster context: The 2016 Kaikōura earthquake, Aotearoa-New Zealand. *Ecology and Society*, *24*(3), 1-16. <https://www.jstor.org/stable/26796976>
- Day, G. (2006). *Community and everyday life*. Taylor and Francis.
- Delanty, G. (2003). *Community*. Routledge.
- Fang, S., Prayag, G., Ozanne, L. K., & de Vries, H. (2020). Psychological capital, coping mechanisms and organizational resilience: Insights from the 2016 Kaikōura earthquake, New Zealand. *Tourism Management Perspectives*, *34*, 100637. <https://doi.org/10.1016/j.tmp.2020.100637>
- Folke, C., Colding, J., & Berkes, F. (2003). Synthesis: Building resilience and adaptive capacity in socialecological systems. In F. Berkes, J. Colding, & C. Folke (Eds.), *Navigating social-ecological systems: Building resilience for complexity and change* (pp. 352-387). Cambridge University Press.
- Fountain, J., & Cradock-Henry, N. A. (2020). Recovery, risk and resilience: Post-disaster tourism experiences in Kaikōura, New Zealand. *Tourism Management Perspectives*, *35*, 100695. <https://doi.org/10.1016/j.tmp.2020.100695>
- Gilchrist, A. (2019). *The well-connected community: A networking approach to community development* (3rd ed.). Policy Press.
- Hamling, I. J., Hreinsdóttir, S., Clark, K., Elliott, J., Liang, C., Fielding, E., Litchfield, N., Villamor, P., Wallace, L., Wright, T. J., D'Anastasio, E., Bannister, S., Burbidge, D., Denys, P., Gentle, P., Howarth, J., Mueller, C., Palmer, N., Pearson, C., ... Stirling, M. (2017). Complex multifault rupture during the 2016 Mw 7.8 Kaikōura earthquake, New Zealand. *Science*, *356*(154), 1-10. <https://doi.org/10.1126/science.aam7194>
- Hanson, N. R. (1958). The logic of discovery. *The Journal of Philosophy*, *55*(25), 1073-1089. <https://doi.org/10.2307/2022541>
- Hatton, T., Kipp, R., Brown, C., & Seville, E. (2017). Assessing research priorities and practices following the 2016 Kaikōura Earthquake. *Australasian Journal of Disaster and Trauma Studies*, *21*(2), 83-89. https://trauma.massey.ac.nz/issues/2017-2/AJDTS_21_2_Hatton.pdf
- Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, *4*, 1-23. <https://doi.org/10.1146/annurev.es.04.110173.000245>
- Johnson, A. G. (1995). *The Blackwell dictionary of sociology*. Wiley Blackwell.
- Kaikōura District Council. (2017). *Reimagine Kaikōura: A sustainable future for the Kaikōura District*. www.kaikoura.govt.nz/assets/Recovery/Reimagine-Kaikoura-Kaikoura-Recovery-Plan-WEB.pdf
- Kwazu, G. C., & Chang-Richards, A. (2022). A tool to assess livelihood preparedness for disasters: A study of Kaikōura earthquake in New Zealand. *Natural Hazards*, *113*, 745-766. <https://doi.org/10.1007/s11069-022-05322-x>
- Kwok, A. H., Doyle, E. E. H., Becker, J., Johnston, D., & Paton, D. (2016). What is "social resilience"? Perspectives of disaster researchers, emergency management practitioners, and policymakers in New Zealand. *International Journal of Disaster Risk Reduction*, *19*, 197-211. <https://doi.org/10.1016/j.ijdrr.2016.08.013>
- Liepins, R. (2000a). New energies for an old idea: Reworking approaches to 'community' in contemporary rural studies. *Journal of Rural Studies*, *16*(1), 23-35. [https://doi.org/10.1016/S0743-0167\(99\)00042-X](https://doi.org/10.1016/S0743-0167(99)00042-X)

- Liepins, R. (2000b). Exploring rurality through 'community': Discourses, practices and spaces shaping Australian and New Zealand rural 'communities'. *Journal of Rural Studies*, 16(3), 325-341. [https://doi.org/10.1016/S0743-0167\(99\)00067-4](https://doi.org/10.1016/S0743-0167(99)00067-4)
- Liu, Y., Nair, N.-K., Renton, A., & Wilson, S. (2017). Impact of the Kaikōura earthquake on the electrical power system infrastructure. *Bulletin of the New Zealand Society for Earthquake Engineering*, 50(2), 300-305. <https://doi.org/10.5459/bnzsee.50.2.300-305>
- Magis, K. (2010). Community resilience: An indicator of social sustainability. *Society and Natural Resources*, 23(5), 401-416. <https://doi.org/10.1080/08941920903305674>
- Mann, R., Dallimore, D., Davis, H., Day, G., & Eichsteller, M. (2021). *Local civil society: Place, time and boundaries*. Policy Press.
- Mannarini, T., & Fedi, A. (2009). Multiple senses of community: The experience and meaning of community. *Journal of Community Psychology*, 37(2), 211-227. <https://doi.org/10.1002/jcop.20289>
- Marquet, M. (2015). *Making the (in)visible, visible: A post-disaster case study of social networks in the suburb of Sumner, Christchurch*. [Master's thesis, Lincoln University].
- McAloon, J., Simmons, D. G., & Fairweather, J. R. (1998). *Kaikoura: Historical background*. Lincoln University.
- McDonald, G., Smith, N., Ayers, M., & Kim, J. H. (2017). *Economic impact of the 2016 Kaikoura earthquake: A report prepared for the Ministry of Transport*. Ministry of Transport.
- Moore, K., Simmons, D. G., & Fairweather, J. R. (1998). *Visitor decision making, on-site spatial behaviours, cognitive maps and destination perceptions: A case study of Kaikoura*. Lincoln University.
- Neeraj, S., Mannakkara, S., & Wilkinson, S. (2021). Evaluating socio-economic recovery as part of building back better in Kaikoura, New Zealand. *International Journal of Disaster Risk Reduction*, 52, 101930. <https://doi.org/10.1016/j.ijdr.2020.101930>
- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41, 127-150. <https://doi.org/10.1007/s10464-007-9156-6>
- Paton, D. (2006). Disaster resilience: Integrating individual, community, institutional, and environmental perspectives. In D. Paton & D. Johnston (Eds.), *Disaster resilience: An integrated approach* (pp. 306-319). Charles C. Thomas.
- Paton, D. (2007). Preparing for natural hazards: The role of community trust. *Disaster Prevention and Management*, 16(3), 370-379. <https://doi.org/10.1108/09653560710758323>
- Paton, D. (2017). Co-existing with natural hazards and their consequences. In Paton, D., & Johnston, D. M. (Eds.), *Disaster resilience: An integrated approach* (2nd ed., pp. 3-17). Charles C. Thomas.
- Paton, D., & Johnston, D. (2001). Disasters and communities: Vulnerability, resilience and preparedness. *Disaster Prevention and Management*, 10(4), 270-277. <https://doi.org/10.1108/EUM0000000005930>
- Paton, D., Kerstholt, J., & Skinner, I. (2017). Hazard readiness and resilience. In D. Paton & D. Johnston (Eds.), *Disaster resilience: An integrated approach* (2nd ed., pp. 114-137). Charles C. Thomas.
- Paton, D., McClure, J., & Bürgelt, P. T. (2006). Natural hazard resilience: The role of individual and household readiness. In D. Paton & D. Johnston (Eds.), *Disaster resilience: An integrated approach* (pp. 105-127). Charles C. Thomas.
- Payne, G., & Payne, J. (2004). Case study. In G. Payne & J. Payne (Eds.), *SAGE key concepts: Key concepts in social research* (pp. 32-35). SAGE.
- Perkins, H., & Thorns, D. C. (2012). *Place, identity and everyday life in a globalizing world*. Palgrave Macmillan.
- Pooley, J. A., Cohen, L., & O'Connor, M. (2006). Links between community and individual resilience: Evidence from cyclone affected communities in north west Australia. In D. Paton & D. Johnston (Eds.), *Disaster resilience: An integrated approach* (pp. 161-173). Charles C. Thomas.
- Rapaport, C., Hornik-Lurie, T., Cohen, O., Lahad, M., Leykin, D., & Aharonson-Daniel, L. (2018). The relationship between community type and community resilience. *International Journal of Disaster Risk Reduction*, 31, 470-477. <https://doi.org/10.1016/j.ijdr.2018.05.020>
- Räsänen, A., Lein, H., Bird, D., & Setten, G. (2020). Conceptualizing community in disaster risk management. *International Journal of Disaster Risk Reduction*, 45. <https://doi.org/10.1016/j.ijdr.2020.101485>
- Reichertz, J. (2011). Abduction: The logic of discovery of grounded theory. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 214-228). SAGE.
- Reichertz, J. (2013). Induction, deduction, abduction. In U. Flick (Ed.), *The SAGE handbook of qualitative data analysis* (pp. 123-135). SAGE.
- Rudkevitch, A. (2022). *Shaking ground and shifting collectives: Understanding community resilience in Kaikōura, Aotearoa New Zealand*. [Doctoral thesis, Lincoln University].
- Scherzer, S., Berg, N. G., Lein, H., & Setten, G. (2020). The many faces of local community: Exploring lay conceptualizations of the Norwegian lokalsamfunn. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, 74(3), 152-164. <https://doi.org/10.1080/00291951.2020.1791245>
- Scholz, R. W. & Tietje, O. (2002). Types of case studies. In R. W. Scholz & O. Tietje (Eds.), *Embedded case study methods* (pp. 9-14). SAGE.
- Sherrieb, K., Norris, F. H., & Galea, S. (2010). Measuring capacities for community resilience. *Social Indicators Research*, 99, 227-247. <https://doi.org/10.1080/15575330.2019.1574849>
- Shi, X., Tapponnier, P., Wang, T., Wei, S., Wang, Y., Wang, X., & Jiao, L. (2019). Triple junction kinematics accounts for the 2016 Mw 7.8 Kaikoura earthquake rupture complexity. *Proceedings of the National Academy of Sciences*, 116(52), 26367-26375. <https://doi.org/10.1073/pnas.1916770116>
- Simmons, D., Wilson, J., Doscher, C., & Hutchinson, A. (2017). *Kaikoura: Tourist travel behaviour and recovery framework*. Ministry of Business, Innovation and Employment. www.mbie.govt.nz/assets/320b9705da/kaikoura-tourist-travel-behaviour-and-recovery-framework.pdf
- Solnit, R. (2009). *A paradise built in hell: The extraordinary communities that arise in disasters*. Viking.
- Srivastava, N. (2017). Urban resilience: The need for a new context in South Asia. In D. Paton & D. M. Johnston (Eds.), *Disaster resilience: An integrated approach* (2nd ed., pp. 18-32). Charles C. Thomas.
- Stats NZ Tauranga Aotearoa. (2017, September 21). *Kaikoura District*. www.stats.govt.nz/tools/2018-census-place-summaries/kaikoura-district
- Stebbins, R. A. (2001). *Qualitative research methods: Exploratory research in the social sciences*. SAGE.

- Stevenson, J. R., Becker, J., Cradock-Henry, N., Johal, S., Johnston, D., & Seville, E. (2017). Economic and social reconnaissance: Kaikōura earthquake 2016. *Bulletin of the New Zealand Society for Earthquake Engineering*, 50(2), 343–351.
- Sztompka, P. (2002). *Socjologia*. Znak.
- Sztompka, P. (2008). The focus on everyday life: A new turn in sociology. *European Review*, 16(1), 23-37. <https://doi.org/10.1017/S1062798708000045>
- Te Rūnanga o Ngāi Tahu. (2020, September 5). *Te Rūnanga o Kaikōura*. <https://ngaitahu.iwi.nz/te-runanga-o-ngai-tahu/papatipu-runanga/kaikoura/>
- Tidball, K. G., Krasny, M. E., Svendsen, E., Campbell, L., & Helphand, K. (2010). Stewardship, learning, and memory in disaster resilience. *Environmental Education Research*, 16(5-6), 591-609. <https://doi.org/10.1080/13504622.2010.505437>
- Titz, A., Cannon, T., & Krüger, F. (2018). Uncovering 'community': Challenging an elusive concept in development and disaster related work. *Societies*, 8(3), 71. <http://doi.org/10.3390/soc8030071>
- Uekusa, S., Matthewman, S., & Lorenz, D. F. (2020). Conceptualising disaster social capital: What it is, why it matters and how it can be enhanced. *Disasters*, 46(1), 56-79. <https://doi.org/10.1111/disa.12470>
- Vallance, S. (2011). Early disaster recovery: A guide for communities. *Australasian Journal of Disaster and Trauma Studies*, 2011(2), 19-25. https://trauma.massey.ac.nz/issues/2011-2/AJDTS_2011-2_Vallance.pdf
- Vallance, S., & Rudkevitch, A. (2021). *Post-disaster recovery and social capital*. Oxford Research Encyclopedia of Global Public Health. <https://doi.org/10.1093/acrefore/9780190632366.013.311>
- Wellington, J., & Szczerbinski, M. (2007). *Research methods for the social sciences*. Continuum International Publishing Group.
- Wenger, E. (2011). *Communities of practice: A brief introduction*. University of Oregon. <https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/11736/A%20brief%20introduction%20to%20CoP.pdf?sequence=1&isAllowed=y>
- Wilson, G. A. (2012). *Community resilience and environmental transitions*. Routledge
- Wilson, J., & Simmons, D. (2018). *Building resilience in transient rural communities – a post-earthquake regional study: Fieldwork report*. Resilience to Nature's Challenges and Lincoln University. <https://core.ac.uk/download/pdf/186363038.pdf>
- Winterton, R., Hulme Chambers, A., Farmer, J., & Munoz, S.-A. (2014). Considering the implications of place-based approaches for improving rural community wellbeing: The value of a relational lens. *Rural Society*, 23(3), 283-295. <https://doi.org/10.1080/10371656.2014.11082071>
- Yin, R. (2014). *Case study research: Design and methods* (5th ed.). SAGE.
- Zaccaro, S. J., Blair, V., Peterson, C., & Zazanis, M. (1995). Collective efficacy. In J. E. Maddux (Ed.), *Self-efficacy, adaptation, and adjustment: Theory, research, and application* (pp. 305-328). Plenum Press.