RECOVERY FROM THE STORM: RESILIENCE AND THE ROLE OF COMMUNITY CAPITAL IN LONG-TERM DISASTER RECOVERY IN REGIONAL WESTERN AUSTRALIA

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INTRODUCTION

At the local level, debilitating hazard events can result in developmental regression causing the collapse of local economies and/or threatening a community's very existence. Widely debated however, are the factors that contribute to differences in recovery both in terms of capacity and time (Sullivan, 2003). Certain communities can recover using various forms of internal resources or capital which promotes resilience and therefore a capacity to absorb shocks to the system and ultimately facilitate recovery. In order to achieve long-term sustainable recovery in hazard-prone settlements, the factors which contribute to internal community resilience need to be better understood (Rubin, 2010, Apan, et. al., 2010). Through an examination of 'community capital', this paper examines the actors and relationships involved in the flood recovery process of a regional community in Western Australia (Moora).

Community and Disaster Management

The term 'community' attracts a range of definitions from a variety of fields. Generally a community refers to a group that interacts based on a commonality of geography and shared experiences (Boughton, 1998). Phillips (2009) expands on the term by highlighting the fact that 'community' does not imply one group of similar people but a mosaic of groups that are organic in nature and represent a broader community through a sense of belonging and connectedness. Marsh (2001) makes the point that in disaster management and planning the term 'community' is used without much understanding of the internal conflicts and lack of cohesion in some locations and thereby certain strategies employed by councils or emergency managers fail during the recovery process. He goes further to say that it is vital to have up to date, precise information about the 'community profile' for any emergency manager or recovery committee handling a community's recovery (Marsh, 2001).

Furthermore, a number of commentators (Marsh, 2001; Boughton, 1998; King, 2007; Nakagawa and Shaw, 2004; Phillips, 2009; Edgington, 2010) have emphasized the importance of community involvement in disaster planning and recovery. Each community is unique and has a set of internal resources or 'capitals' which either help foster resilience or enhance vulnerabilities. Communities are varied and vibrant and can, if supported and included, bring a wealth of assets to the post-disaster process (Phillips, 2009).

For the purposes of this paper, a community is a group of people geographically affected by the disaster itself and is therefore bound by a shared disaster experience (Boughton, 1998; Phillips, 2009).

Community Capitals

Ritchie and Gill (2011) recently presented research on a framework which identifies and categorizes a community's assets or innate capital. The Community Capitals Frameworks (CCF) identifies that a community's capital consists of natural, built, financial, human, social, political and cultural resources from which a community can draw in times of crisis and in future planning. In examining recovery, an understanding of the assets of a particular community allows disaster managers, planners, city leaders and regional governments an insight into a community's well-being and resilience to the impact of hazard events. Within this framework each community is unique; and disasters affect the various forms of community capital in different ways and to varying degrees. Therefore, understanding the availability of various local capitals, how they relate to one another and how each may be impacted by a disaster event will help reduce the institutional gaps and shortfalls affecting efficient recovery (Ritchie and Gill, 2011).

Community capital is often used to describe all the various internal resources a community might possess. In this paper, the term 'Community Capital' will refer specifically to 'social', 'human' and 'political' capitals and the various types of relationships that they exhibit in our study community.

Social Capital

Social capital is not a new term and has been incorporated into various disciplines each attaching different meanings to the expression. James Coleman (1988) is considered to be one of the first sociologists to employ the term social capital, defined as a multi-dimensional expression which illustrates the social structure within a group. The social structure is formed through various relationships which can result in either constructive or destructive behaviour (Coleman, 1988). Whilst Woolcock and Narayan (2000) have

more recently defined 'social capital' as the 'norms and networks that enable people to act collectively,' the term has developed throughout the 1990s forming a bridge between the concepts of 'institutional capacity, social networks, and community participation' (Woolcock, 1998, 2001), and attempts to encapsulate the benefits of collective action which leads to mutual benefits within a community or group (Putnam, 2000; Woolcock, 1998, 2001). Recently, in the disaster recovery literature, Nakagawa and Shaw (2004) defined social capital as a 'function of trust, social norms, participation, and networks' that play a vital role in a community's recovery processes. As much as the term is controversial in its foundation and definition, Putnam (2000) identified that although varied in its use, a common thread exists where the quantity and quality of social relationships result in increased productivity, or conversely unproductive behaviour (Woolcock, 1998, Putnam, 2000).

Human Capital
Ritchie and Gill (2011) define human capital as the level of individual skill, education, health and physical ability of a community possesses. In 2010, Gary Banks, the Chairman of the Productivity Commission, emphasized the importance of expanding Australia's human capital. He was quoted stating that 'like physical capital, human capital requires investment of both resources and time' and having high quality education, training and health services will foster human capital in all aspects of towns and cities (Banks, 2010). Human capital in communities allows for collective attitudes and abilities to promote productivity, growth and development. It not only exists in individual processes but also in organisations where the level of skills of the people in the organisation dictates the effectiveness of the roles that they play in the community as well as their ability to cope with shock (Ritchie and Gill, 2011). Human capital is therefore a pillar in the recovery process where the ability to recovery is increased and often driven by the availability of human resources. Therefore, communities that lack human capital might lack the knowledge and skill to facilitate an effective recovery.

Political Capital
Edgington's (2010) study of reconstruction after the Kobe earthquake of 1995 revealed the importance of local government leadership. Having a strong local government leader who is trusted and respected by the community, and can act as a link between the community, emergency authorities and state governments is vital to a rapid, effective recovery process. In Australia, local government is ultimately responsible for the long-term recovery of the community and therefore needs to be actively involved from the very beginning in order to give the recovery process a face. Ritchie and Gill (2011) define political capital as the ability to access and distribute resources, and gain the support of external authorities to further the local agenda. Political capital is often considered the more formal component of social capital important in fostering a rapid recovery by giving a voice to the affected community, highlighting their unique needs (Edgington, 2010; Ritchie and Gill, 2011).

Community Capitals and its role in Disaster Management
When considering the various schools of thought (Ritchie and Gill, 2011; Woolcock 2001; Putnam, 2000; Edgington, 2010), identifying and assessing the level and development of a range of capitals within a community contributes to effective and sustainable growth strategies (World Bank, 2011). Through disaster discourse, research has identified that social capital significantly contributes to the resilience and vulnerability of at risk communities (Nakagawa and Shaw, 2004; Ritchie and Gill, 2011). Social, human and political capital can either be undermined or enhanced by the involvement of community leaders and their connection to the political hierarchy, the level of internal knowledge and skill a community possess and the social networks that exist between the various groups in the community. Having both internal trust between the community leaders and community as well as external connections, networks and individuals linking the community as a whole into the broader political landscape increases access to resources and can increase adaptive capacity and resilience in the face of a disaster. Not only does the level of internal knowledge and skill possessed by individual members of the community facilitate a rapid recovery but the internal relationships between community members and the external relationships between the community and various stakeholders (Woolcock, 2001; Nakagawa & Shaw, 2004). Fostering community capital in regional communities could contribute towards building more resilience and absorptive capacity to future events.

The nature of 'Bridging', 'Bonding' and 'Linkage' Relationships
Putnam (2000) and Woolcock (2001) explored the multi-dimensional characteristics and associations of various capitals as 'bridging' and 'bonding' (horizontal relationships) or 'linkages' (vertical relationships). Woolcock (2001) defines a 'bonding' relationship to be between 'family members, close friends, neighbours' and a 'bridging' relationship is between 'more distant friends, associates and colleagues'. A 'linkage' relationship is defined as the ability to tap into official organizations and gain access to resources, information and intellectual capital which are usually beyond the geographic extent of the community (Woolcock, 2001; Putnam, 2000; Putnam et.al, 2003).

Nagakawa and Shaw's (2004) developed a model to assess the 'bridging', 'bonding' and 'linkage' relationships in Kobe using reconstruction from the 1995 earthquake as a platform to examine the level of social capital in four different communities in Gujarat. Results identified that local community's internal bonding and bridging relationships played a number of roles in the different stages of the disaster management cycle (specifically response and recovery in this case). During the response phase, communities were often at the heart of the operation, doing most of the evacuations and relief efforts themselves as they were first on the scene. Helping family members (bonding relationship) and surrounding neighbours and colleagues (bridging relationship) ensured an effective response. Once the recovery efforts started, the local community's focus shifted to the household, repairing what had been lost on a personal level, exhibiting mainly strong bonding relationships which pulled family members through.

During post-disaster planning, rezoning and re-developed lacked a sense of political capital and linkages with the community, in that those communities were not consulted, resulting in a dramatic slowing of the reconstruction process with mass protest and legal action. Weak local leadership illustrated a weak 'bridging' relationship with the community and a lack of external linkage with the authorities at the time. Therefore strong local government leadership was also shown to be a vital aspect of effective and efficient post-disaster reconstruction as trust and faith in local leadership allowed for more cohesive and collective action, and decisions which helped speed the recovery process. The study concluded that although the building of social and political capital were the responsibility of the local community, policy makers and governments need to acknowledge the importance of local resources and harness the innate social capital in each community during all phases of the disaster management cycle. Communities who exhibited high levels of social capital and leadership were found to recover more effectively, increasing their level of sustainability and resilience (Nagakawa and Shaw, 2004).

The level, type and associations of capital in the internal or external sense can result in a range of outcomes for a community, both positive and negative. A community with internally strong 'bonding' and 'bridging' relationships but without strong external 'linkages' may result in a strong community, collectively involved in the acquisition of external resources (Woolcock, 2001, Nakagawa & Shaw, 2004). On the negative side, Putnam (2003) and Nakagawa and Shaw (2004) have identified that in some cases high levels of social capital have resulted in increased crime or violence. Gang violence provides an example where high levels of influential relationships promote where social networks to partake in deconstructive behaviour.

In a recovery context, strong social capital can also result in emergency workers being viewed as outsiders and evacuation instructions by those personnel may not be adhered to. In the institutional sense, the lack of capital can result in inefficiencies increasing the length of the recovery process especially when strong external linkages do not exist (Woolcock, 2001, Nakagawa & Shaw, 2004; Putnam, 2000). However, if harnessed correctly during the prevention and preparedness phases of the disaster management cycle, social capital can become a strong risk management tool helping communities absorb hazard related shocks avoiding negative outcomes such as economic collapse (Woolcock, 1998, 2000, 2001; Putnam, 2000; Putnam, et.al, 2003; Nakagawa & Shaw, 2004).

Community involvement and buy-in is vital in achieving the desired outcomes in disaster recovery, and to improve resilience and decrease vulnerability (Ritchie and Gill, 2011; Nakagawa and Shaw, 2004). Both the Japanese earthquake and Queensland floods provide a stark reminder that authorities are easily overwhelmed, requiring communities to become self-reliant and absorptive in nature. Understanding and harnessing community capital provides governments an additional resource for responding to disasters of all kinds (Buckle, 2001; Sullivan, 2003; Nakagawa and Shaw, 2004).

The Long-term Recovery Stages
The nature and use of community capital over the entire recovery period has received little attention from disaster researchers. Kates and Pijawka's (1977) seminal work is one of the only empirical studies to examine the recovery of four disaster struck cities and model their processes. Their research resulted in a chronologic model of long-term recovery identifying sequential stages (and often overlapping phases) of recovery activities. According to their model, stage one, the 'emergency period', lasts for approximately 2-3 weeks and involves mainly survival related activities. Stage two, the 'restoration period', occurs over a 1-20 week period and involves the refurbishment of buildings, streets and services. Stage three, the 'replacement reconstruction period', occurs over an extended period of time and can take up to 200 weeks or 4 years for the affected community to achieve a strong sense of recovery. During this stage the affected area returns to either a pre-disaster state or exceeds pre-event levels. The final stage (stage 4), the 'commemorative, betterment and developmental reconstruction period', includes projects to memorialise the event and further improve or develop the affected area and its community taking up to 500 weeks. In their model, each stage ran sequentially and historically took ten times longer than the preceding sub-phase (Kates and Pijawka, 1977).

Edgington's (2010), recent work on recovery from the Kobe earthquake of 1995 builds upon the notion of recovery as a long-term process. Having followed the 10 year reconstruction plan (1995-2005) for Kobe, Edgington (2010) identified that the spotlight is often placed on the affected area at the time of the event and most research tends to focuses on the success and failures of the initial recovery process which takes place during the first 1-2 years after the event. Long-term planning needs to incorporate a holistic and comprehensive understanding of community relationships and resources during the whole recovery process. To this end, it is important to understand the various Community Capitals and their relationships throughout a community's recovery to help planners and disaster managers foster an effective and efficient process. Examining the relationships among individuals and organizations during each phase of the recovery process provides an understanding of how a community uses human resources in the aftermath of an extreme natural event.

METHOD

Case Study Site
Moora, a regional town in the Moore River Catchment approximately 200 kilometres, to the northeast of Perth Western Australia has exhibited a long history of flooding. Moora has always been and is still a strong farming and regional centre in Western Australia.

On the 18th and 19th March 1999, Cyclone Elaine developed over the Timor Sea eventually reaching the NW Australian coast. Though downgraded to a tropical low, the storm dropped 150-250mm of rain on the Moore River Catchment. By 3am on Sunday 21st March, a silent flood entered the town catching the residents off guard. With over a metre of water inundating much of the town, 55 percent of residences and 95 percent of the town's businesses were flooded (Shire of Moora, 2011; Walsh, 2006). Most residents were moved to higher ground with over 600 families and elderly residents evacuated to Perth. The infrastructural damage was extensive but no lives were lost. With a level of complacency influenced by an extended period without flood, the town was unprepared as no recovery plan or organisational structures were in place. A further two flood events were experienced in May and August 1999 but despite this, Moora recovered remarkably well.

Whilst the Moora floods occurred over 10 years ago the location provides an exemplar location for examining long-term recovery and the involvement of community capital in rural Australian communities. Moora provides an excellent opportunity to examine the relationships and associated community capital that produced a positive recovery experience from a community-based perspective.

Research Methods
This research employs a case study approach consisting of face-to-face qualitative interviews and historical research to develop an understanding of the recovery processes in Moora. In order to understand the complexities of the recovery processes, a case study methodology was best suited.

The Moora flood event was initially reconstructed using newspapers, media, government reports, the Fire and Emergency Services Authority of Western Australia (FESA) reports and historical archives. Periodicals identified many of the stakeholders involved in the recovery process which was augmented by recommendations by the Shire of Moora and the Moora Historical Society.

Interviews were conducted over the month of February 2011 extending between 1-2.5 hours and were recorded and transcribed for further analysis. Snowballing identifying additional participants resulted in 21 interviews, three of which incorporated two people's inputs at the same time, representing a cross section of the various stakeholders in the Moora Shire. An in-depth manual analysis of the interview transcripts and notes establish the key factors of recovery as well as various individuals and organisations influential in the recovery process. Content analysis was used to identify common and reoccurring themes.

To examine the nature of the relationships in the community capital of Moora the Putnam's (2000) concept of 'bonding', 'bridging' and 'linkage' were employed to define the various connections between different actors involved in Moora's recovery. The strength of each relationship was graded as strong, medium or weak based on the perspectives of the community members interviewed. To provide temporal structure to the analysis, interviews were guided by the four stages of recovery identified by Kates and Pijawka (1977). The resulting diagrams illustrate the various relationships and actors involved in each phase of the Moora's recovery process.

RESULTS
Moora's demographic consists of a strong farming, local government and small business community. In order to gain a broad range of perspectives on the recovery process, a cross section of the town's business,

local government and local organisational members were chosen as interviewees. Fourteen women and seven men resulted in a sample of twenty-one respondents ranging in age from 30-75 years. Many had dual perspectives as they worked in local businesses and were part of the farming community of Moora. Broadly speaking, respondents can be divided into the following groups: farming community members (n=5/21), small business owners or employees (n=6/21), local government representatives (n=5/21) and representatives of local government organisations (n=5/21). Each respondent was asked to tell their story of the flood events in 1999 as they remembered, after which a series of questions developed around the four stages of recovery (Kates and Pijawka, 1977) were asked.

Emergency Period

> The following Saturday, one week after the floods, it really started to clear – we were in full swing cleaning that first Tuesday, Wednesday, and Thursday after the flood. There were trucks going to the local IGA and grocery stores and cleaning out the fridges – people tended to forget about that – rotting goods in broken fridges.
>
> (Interviewee 12)

Results from the interviews suggest that the 'emergency period' took a little over one week to conclude with some activities overlapping with the 'restoration period'. Clean-up of the town commenced as soon as the water receded. Figure 1 illustrates the various institutional actors and their relationships during the emergency period. A multitude of 'bonding' and 'bridging' and 'linkage' relationships existed, however the strength of these relationships during this phase highlighted that strong 'bonding' and 'bridging' relationships were identified primarily between actors within the community. Relationships with local institutions such as utility providers and government entities (Agricultural Department and Main Roads) were strengthen by the fact that employees were also members of the community. This formed complex 'bonding' and/or 'bridging' relationships where employees often went above and beyond their job descriptions to help their community. Many interviewees sited utility agents as working tirelessly to reconnect resident's power, water, and sewage infrastructure even if it meant putting themselves in danger. Due to greater involvement in the community, bureaucracy was often sidestepped to provide a rapid restoration of services.

> […] all local agencies that were based in the town. This was one of the advantages of Moora – being in a small regional centre has its own departments. We know them and we played football together for instance so it was a lot easier to say to someone "go get Joe Blogs because he knows about the towns power, and so on". So it was easy.
>
> (Interviewee 12)

The local government authority's (LGA) took the lead in initiating Moora's recovery as well as some of the emergency and response duties. A recovery committee, led by the President and Vice-President of the Moora council, was established alongside the departmental head of the Agricultural Department and other local leaders. The local leadership and the community believed that the capacity of the various mandated emergency bodies to adequately respond was sorely lacking. They had no trust or belief in the ability of the formal emergency response agencies that, in the community's opinion, lack manpower and knowledge on the ground and therefore no 'linkage' or 'bridging' relationships existed. This led to the formation of a community-based, local government led recovery process with the external actors or agents shown in figure 1 in a more supportive role. Many of the emergency tasks usually reserved for the Fire and Emergency Services Authority of Western Australia (FESA) and the SES were directed by the local Moora Shire, through a small sub-committee selected by the shire president on the day of the event. The regional LGAs had a strong 'bridging' relationship with the Moora community as a regional centre but also in a 'bonding' relationship which materialised through various social and sporting events. They aided Moora through clearing debris from the surrounding road networks and providing additional waste removal equipment. Moora's local government was not only respected locally by the community but also had a medium linkage relationship with the state government. This allowed them access to external funding and support as well as the power to deal with the distribution of the grants from a local level.
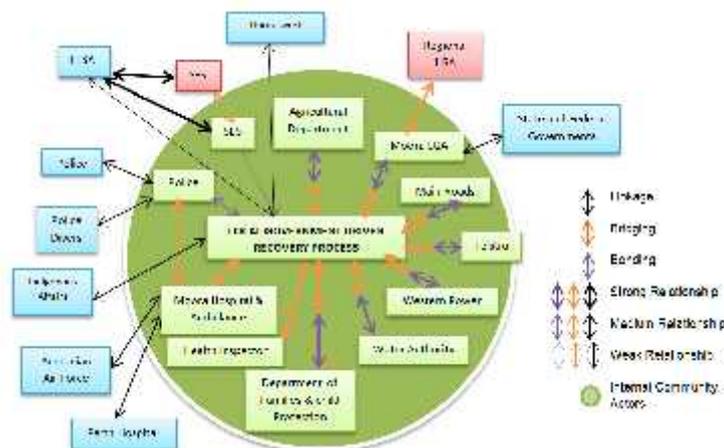
Figure 1: Emergency and Restoration Period: Government Institutional Community Capital Networks
(Green Box: Local, Red box: Regional, Blue box: State)

The networks and relationships illustrated in figure 2, show how the various organisations outside of government formed bonds, used existing relationships, working together to support the recovery process. These relationships had medium to strong bonds and show how in a regional context, if networks are built, surrounding communities and sister organisations will come to the aid of a disaster regardless of whether they are mandated to do so. A local Red Cross agency was also identified as instrumental during this period with their services being supported by regional and state chapters. Volunteer tradesman, especially electricians were identified as originating from the surrounding region whilst the Salvation Army and the Red Cross were said to have been instrumental as a state level nongovernmental organisations bringing food and clothing donations to the town and manning hot drinks stalls.

> The only thing that really cheered me up as I was cleaning our house was the Salvation Army and their warm cups of tea which they brought over to us.   (Interviewee 18)

Moora's actions strengthened the belief that recovery starts from the second the disaster occurs and includes various relationships which can help boost the initial recovery (Sullivan, 2003; King, 2007; Nakagawa and Shaw, 2004; Edgington, 2010). Moora's initial response to the disaster presents further evidence to support the CCF proposed by Ritchie and Gill (2010, 2011) where the community assets and resources were fully utilised in the recovery process and main control and involvement lay locally from the start which catapulted the recovery process off to a rapid and constructive start. Funding was mainly provided by the state, whereby Centrelink and various emergency grants were provided to people who were evacuated to Noalimba. The Red Cross and Salvation Army released goods free of charge and general donations from the public started to flow into the community in various forms.
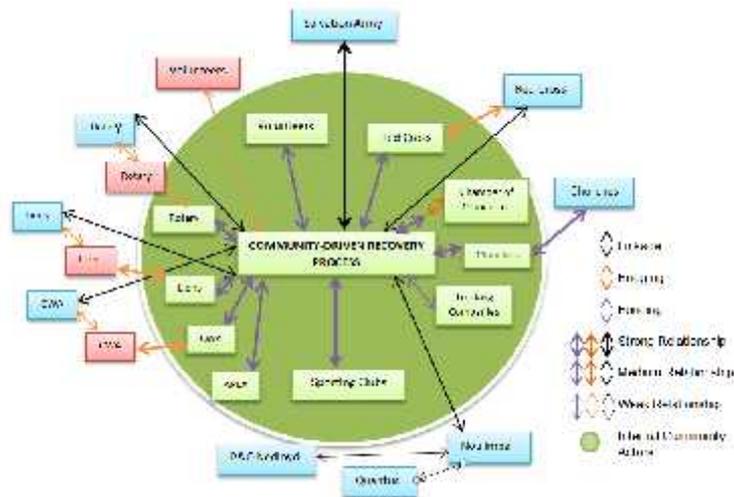

Figure 2: Emergency Period: Voluntary, Community and Private Organisations Community Capital Networks
(Green Box: Local, Red box: Regional, Blue box: State)

Restoration Period
The majority of respondents estimated that the 'restoration period' began one week after the flood event with the general clearing of debris requiring approximately two weeks. Patching of homes and business, refurbishment of services, and the return of normal social and economic activities took several weeks more.

Figure 3, similar in structure to Figure 2, highlights that during this phase relationships between local organisations such as the local Chamber of Business, the Lions Club, Apex, Rotary, Country Woman's Association (CWA) and sporting groups were the strongest, primarily categorised as 'bonding'.

> The local footie clubs were amazing. The footie clubs got together very quickly. There was very quick decision making […] I remember a couple of other community leaders [local government, business leaders, sporting leaders] dividing people up and saying go – you do this street, and you do this street and just get everything out really quickly. I think that this is why a lot of the houses were actually saved because they got everything out of them and opened them up…   (Interviewee 6)

The sporting groups affiliated with local teams came to help their fellow players. A 'bridge' between sporting teams (especially football) transcended rivalries resulting in assistance from regional competitors. In addition, regional organisations and individuals had become aware of the situation and came to the community's aid,

volunteering in various capacities and joining sister organisations within Moora. Some of these organisations were further reinforced from the state level such as the Apex, Rotary and Lions Clubs.

This internal existing network between community and sporting provided Moora with a vital and strong backbone which enabled it to pick itself up and get the recovery process moving at a rapid pace. Some evidence exists in transcripts that the 'bonding' relationships were so strong that individual members neglected their own homes in order to help the community at large. This type of community capital had an adverse effect on the individual household but benefitted the community massively.
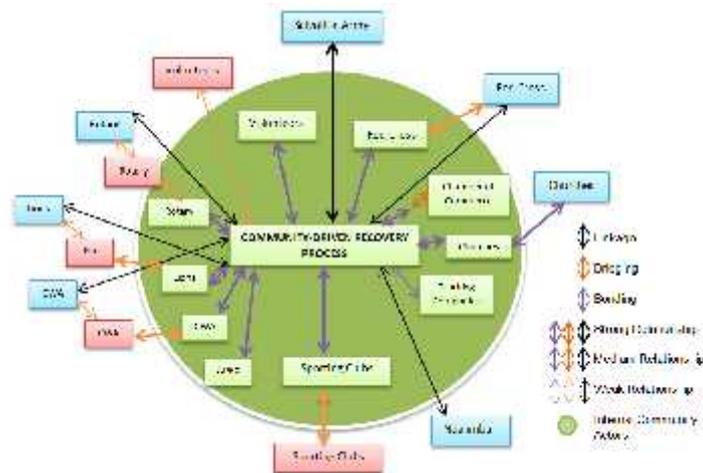

Figure 3: Restoration Period: Voluntary, Community and Private Organisations Community Capital Networks
(Green Box: Local, Red box: Regional, Blue box: State)

Replacement/Reconstruction Period
Ninety percent of the respondents felt that the town took between 12 months and 2 years to physically replace what it had lost, barring a few exceptions like the re-development of the town hall which was upgraded into a Performing Arts Centre. This is shorter than the timeframe of over four years suggested by the Kates and Pijawka (1977) for this period of recovery. After state and regional organisations left the town at the beginning of the restoration period, the reconstruction was very much left to the local community (Figure 4).

An interesting transition was observed during this phase with regards to utility providers and government organizations where strong 'bridging' relationships continued. Local offices were still responsible for restoration of damaged infrastructure, however some state and regional support was provided in the form of service follow ups. This interaction was identified as 'short-lived' and interview respondents concurred that the local departments continued the repair and replacement of damaged utilities until the job was complete. A difference between Figures 1 and 4 is the type of relationship between individuals moved from a combination of 'bridging' and 'bonding' in the emergency phase to one of 'bridging' in the Replacement/Reconstruction Period where more formal aspects of the job were performed by local agents. Many still went beyond the call of duty by repairing the town's infrastructure before they attended to their private properties.
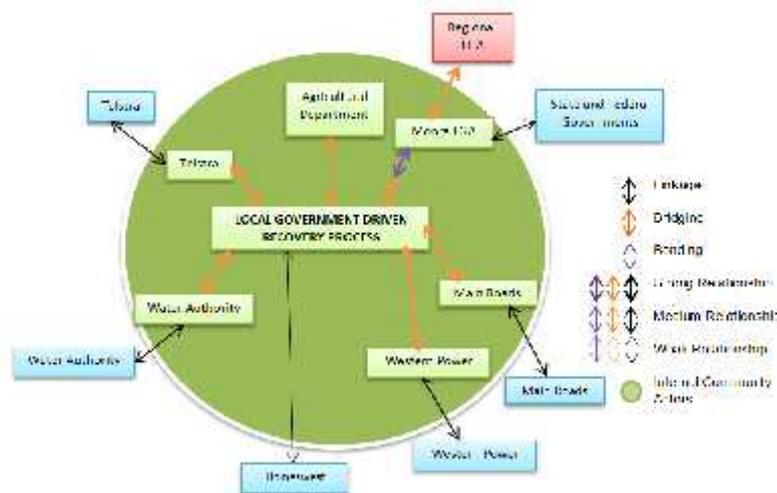
Figure 5 shows how in this period respondents felt that the majority of the voluntary, community and private organisations came from the local level, with just over 20 percent emanating from the regional and state level. These relationships were identified as strong 'bonding' connections as respondents identified the factor of time as a reason for mainly local involvement, where certain outside individuals who had volunteered their services could not continue to provide services due to alternative commitments.

> People were amazing it still makes me want to cry just thinking about it. They came from down South, from Albany and just arrived. They would get a group of friends together and come in a car with four to Moora for the weekend; they brought blankets and slept in their car. They would just rock up and say – what do you want us to do? And I thought 'WOW' - this is amazing.   (Interviewee 6)

'Bridging' relationships between the local and regional organisations allowed fund raising to occur through events organised to rebuild damaged facilities. Moora Promotions, conceived during this phase, help rebuild the town hall through a series of fundraising endeavours including a yearly music festival called the 'Country Campout'. The types of relationships at this stage in the community were still very strong 'bonding' connections which prompted people to see the benefit of rebuilding and upgrading the town's infrastructure. The Replacement/Reconstruction Period quickly moved into the Betterment and Commemorative stage of the recovery process with the town looking to further economic development.

Figure 5: Replacement/Restoration Period: Voluntary, Community and Private Organisations Community Capital Networks (Green Box: Local, Red box: Regional, Blue box: State)

Commemorative/Betterment Period

This period saw the community move into a new era of pride in what the town had achieved throughout the recovery process. Although conflicts had existed, the town had achieved a new, refreshed and improved main central business district when compared to pre-disaster levels. Through strong 'bonding' and 'bridging' relationships within the community, Moora used the flood event opportunity and strengthened their regional community standing. 'Bridging' relationship occurred where internal actors played a more formal role in fund raising, planning or providing for new infrastructure whilst strong 'bonding' relationships continued between individuals and social and sporting organizations. Almost all connections within the community were considered strong as the experience of the event built new relationships as well as strengthened old bonds and professional ties.

> … but I know how the community felt when it was given the 2001 Australian Community of the Year – it was a huge amount of pride and having the Shire go to Canberra to collect the award on the community's behalf – it was a big thing.   (Interviewee 8)
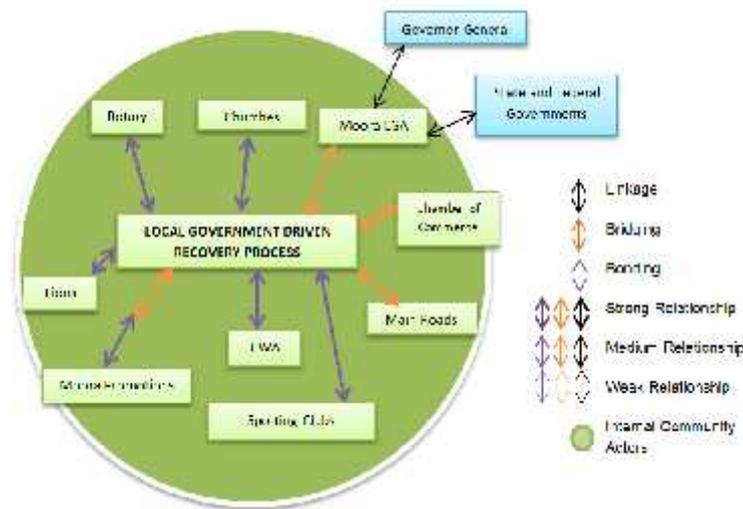
Figure 6: Commemorative/Betterment Period: Government and Voluntary, Community & Private Social Capital
(Green Box: Local, Red box: Regional, Blue box: State)

It should be noted that by this phase nearly all connections with state and regional actors had ceased. Those that remained included the local shire, community and sporting groups with strong regional bonds to sister organisations and clubs. Most of the funding was now due to the various fund raising campaigns led by various local groups with state disaster funding concluded. As expected, the local Moora community was responsible for seeing the recovery process through.

DISCUSSION

The Nature of Recovery Relationships

Respondents placed considerable emphasis on community spirit with a strong sense of belonging, shared beliefs with the foundation laid by founding fathers still existent in town. Some of the respondents interviewed were 3rd or 4th generation families that had been in town since the opening of the railway in Moora. Transient population is minimal and most residents had various members of their families living in the area, in agreement with current resilient communities' literature (Apan, et.al. 2010, Cottrell, 2007; Shaw, et.al. 2003). Marsh (2001) identified that the concept of community is most strongly felt in a regional sense and Moora present evidence to verify this notion.

> Moora is a great place to live – it's a good community. It's just big enough to be a little invisible but also small enough to know everyone. (Interviewee 10)

Due to this strong sense of community and the various internal relationships that so evidently drove the recovery process forward for Moora, a very strong case is made in favour of Ritchie and Gill's (2011) CCF. Communities that possess very strong 'bonding' and 'bridging' relationships which then form networks of support and skill allow for a disaster event to be seen as an opportunity to better develop themselves and strengthen the internal bonds that exist. The level of social capital that presented itself in Moora's case was very high due to the various relationships the community exhibited. Having a local skills and knowledge base of utility providers, businesses and engineers provided human resources which, when coupled with the social capital structure, provided the town with a strong support structure.

The second most emphasized factor was the tenacious local leadership that Moora Shire had at the time. The political capital was not only well respected and connected but it also possessed the skill, knowledge and vision to take the town forward into a brighter future highlighting Edgington's (2010) comments concerning the importance of local government leadership in post-disaster recovery. Through the linkages the Moora Shire had with state and federal actors, funds and support were released into their hands to be distributed to the community as the local leadership saw fit. Frequent community meetings kept the town informed and created opportunities to strengthen social bonds and provide a renewed sense of spirit. Community members were given an opportunity to voice their concerns allowing for individual participation in the town's recovery. Unlike Kobe (Edgington, 2010), Moora's local authority ran transparently, attempting to address all needs that arose from its community. This relationship not only allowed for quick funding action but also community trust in their elected leaders to distribute the funds fairly. The local government's relationship with the community cut through issues identified in communities affected by the 1995 Kobe Earthquake.

Strong political capital is not without its conflicts and certain local business and community leaders felt excluded from the process but could not fault the results of the recovery none the less. There was also reported role conflict between the emergency services and the local government although this too did not hinder the recovery process. Two of the respondents worked directly with the shire president during the recovery and described the shire president (who coordinated the recovery) as driven, dedicated, inspirational and visionary possibly explaining why certain conflicts that arose did not derail the process. Various studies (Edgington, 2010; Pelling, 2003; ALNAP, 2010) agree that local government should have the institutional authority and power partnered with the responsibility of leading the recovery in the communities and argue that this is one of the best methods to redevelop sustainably.

Further 'community capital' in Moora came from the connections with sporting, social and business organisations within the community and regionally. Whilst local connection were either strong 'bonding' and or 'bridging' connections during each phase of the recovery process, such as strong 'bridging' relationships with regional actors, provided additional support when needed. Without these relationships, Moora's rapid recovery would not have been possible. Not only were the connections with regional actors strong, the level of skill and human-power as well as local knowledge gave a level of capacity that would have been difficult to achieve from the state or national level.

Moora has a very strong level of community capital which in essence produced an efficient and effective recovery. Even with formal arrangements in place, respondents identified that the sense of community and strong personal bonds underpinned the town's rapid and progressive recovery.

> Moora is our home and will always be no matter what… we will always have floods, dust storms, droughts, etc., and that doesn't destroy us as a community, it only makes us stronger – it makes us who we are.
>
> (Interviewee 6)

CONCLUSION

The above case study provides an example of strong community capitals, especially the sorts of social and political capitals that can result in progressive recovery from a seemingly disastrous event. Moora's recovery process highlights how a local community can effectively leverage their own resources as well as those from outside the community or region. Understanding the link between factors of innate resilience and a community's ability to recover from a natural disaster is vital to that community's long-term sustainability. In Moora's case a combination, of political, social and human capitals provided a resilient foundation on which the community could rely throughout the recovery process. Having strong capitals and linkages allowed for a shift in the burden of recovery between individuals, stakeholders and organisations when one became over whelmed, increasing the community's ability to absorb the impact of the flood events.

Whilst the recovery process was not perfect, Moora provides an example to state and regional governments that helping to facilitate a bottom up recovery process can provide a better result than traditional top-down processes. By making use of community capital through the develop of strategies that allow a community to internally absorb shocks and provide support once a shock has occurred, the burden of response on state agencies is reduced. Furthermore, without understanding the various factors that form the social and political capitals available within a community, external organisations that plan and respond to disasters might hinder, rather than help the recovery process.

Not all communities are the same and some will possess more community capital than others. Marsh (2009) identified that a regional setting is vastly different to that of an urban one where there is more reliance on authorities. The various responsible agencies need to be aware of this and tailor their response and support to reflect the internal capital of each community they are dealing with. If community capital is not recognised, the resilience and the absorptive capacity to handle a shock can be lost in an institutional power struggle (Ronan and Johnston, 2005). Therefore, a more multi-disciplinary approach needs to be developed by which authorities place community at the centre of any disaster recovery.

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