

## A ‘Double Whammy’: Two cyclones in 5 years – How a Queensland Community Mobilized Social Capital in Response to Natural Disasters\*

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At 1 a.m. on February 3, 2011 Category 5 Severe Tropical Cyclone Yasi crossed the east coast of north Queensland wreaking widespread damage between Innisfail and Cardwell. The eye of the system passed over Mission Beach, 138 kilometres south of Cairns. The maximum sustained wind speed recorded was 205 km/hour, and the maximum recorded gust was 285 km/hour. The lowest central air pressure was estimated to have been 929 hPa (Bureau of Meteorology. Avail at: <http://reg.bom.gov.au/cyclone/history/yasi.shtml>).

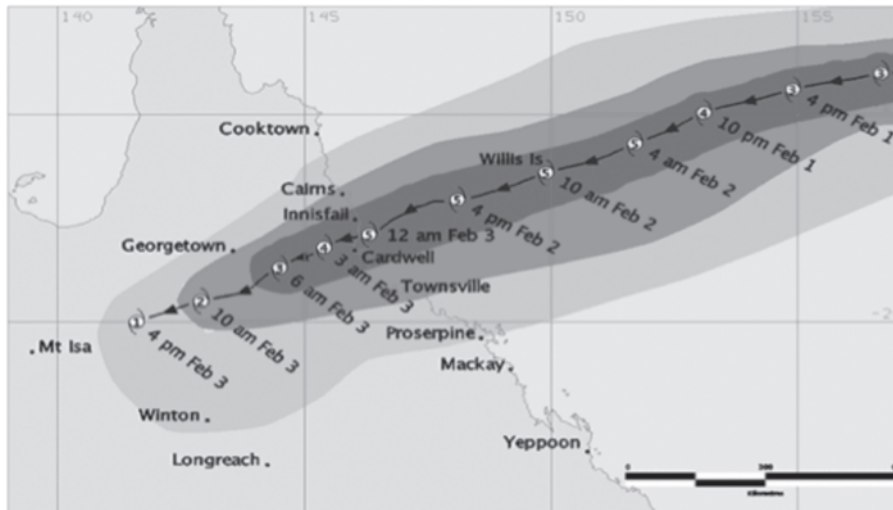
### Tropical Cyclone Larry



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## Tropical Cyclone Yasi



Yasi was the biggest cyclonic weather system Australia's Bureau of Meteorology had encountered, and the potential for it to cause severe damage to life, property and the environment was extreme. Beachside communities were evacuated from Cairns to Mackay; hospitals were evacuated; airports were closed to all except military and emergency aircraft; evacuation centres in shopping malls were prepared; all emergency services were put on high alert. Effectively the two main cities in North Queensland (Cairns and Townsville), and all the smaller communities between and around them, went into lock down.

Because of the recent experience of Cyclone Larry, a Category 4 cyclone that had devastated Innisfail and the nearby communities in March 2006, and had severely damaged the area around Mission Beach, the wider community took seriously the prospect that a major weather system was going to strike. Following state government warnings, and detailed Bureau of Meteorology warnings of the size and power of the incoming system, communities moved quickly to prepare for the cyclone. Stores from Cooktown to Mackay were inundated with people buying toilet paper, bread, meat, vegetables, frozen food, dairy products, batteries and matches; the perceived essentials for life. By Feb 2 shelves in supermarkets were mostly bare of these essential goods. Fuel supplies in all the major suppliers ran low as people bought as much fuel as they could store to run their generators and farming equipment.

Those who had experienced other cyclones were wary of the size of Yasi, and communities up and down the coast began to trade stories and tips about how to deal with the new threat. Social media became increasingly used; Facebook sites, Twitter feeds, and a range of blog sites appeared. The ABC radio and local talkback radio were consistently updated sources of reliable information too, as was the Bureau of Meteorology website, which offered a track map of the

cyclone's predicted route. People secured their properties, tying down loose materials, clearing up tools, tying down vehicles on farms, caravans and boats. Many took out their chainsaws and removed potentially dangerous branches from around their houses, and cut down trees where necessary. They taped and boarded windows, secured a safe room in the house, and got their cyclone kits ready, tested their generators, and got the tools ready for the clean up that would follow – machetes, chainsaws, knives, etc.

Many of those who lived in what they perceived to be insecure housing evacuated to safer locations. Within at risk communities those with houses rebuilt after Cyclone Larry offered shelter to the elderly, and to young families who were potentially in danger. Relatives pooled resources in many cases, particularly in the more isolated rural areas. Effectively those in the community who were at risk were initially taken care of by the wider community.

Following only five years after Cyclone Larry, and tracking a very similar path, Yasi proved a significant psychological threat to the communities of the north coast. Exacerbating the already increased tension associated with a massive and destructive weather system approaching were the memories and trauma associated with the events of only five years before. From Cairns to Mackay the population was galvanized and on cyclone alert.

### **Social Capital in Reconstruction and Recovery**

The above indicates that elements of social capital<sup>1</sup> have already been employed in the days leading up to the event. Bonding and linking social capital was generated, in the form of intra-community care and support for those whose lives were in danger, and in the form of information distribution systems that were focused on the need to prepare and demonstrate resilience in the face of what Donald Rumsfeld once referred to as 'the known unknown'. That is, the communities all knew that it was largely a matter of luck in terms of where the cyclone hit precisely, but they knew there was a 'big one comin''. Before, during and after a natural disaster social capital can be seen to play a role in community preparedness, response, rebuilding and resilience.

Yasi hit in the vicinity of Mission Beach at 1 in the morning on Feb 3. The township of Mission Beach was largely destroyed; the township of Tully Heads was reduced to rubble; and the town of Cardwell lost more than 70 percent of its dwellings (SES Bulletin, no. 6). No one was injured. No one died. Yet the event was of a magnitude that the Bureau of Meteorology had not experienced before. How was this possible? What role did social capital have to play in this?

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<sup>1</sup> The definitions of social capital we apply are extended on p.13 below.

A number of factors contributed to the positive outcome in terms of human life. The most obvious and overriding one was the advanced warning systems that were put in place by the state in the days preceding the event. Not only were local people prepared – and a bit fatalistic – they were also resigned to the fact that they were about to go into crisis mode, and that the true extent of the damage from the cyclone would not be clear until the day after it had crossed the coast. But just as significant was the communities' preparedness. All communities clearly remembered the previous cyclone, and were as prepared as they could be, both physically and psychologically.

All the preparations notwithstanding, the damage to property, to the environment, to local economies, and to the banana industry was enormous. In these circumstances, an ideal response would be for communities to quickly start rebuilding and attempting to normalize their lives. This is not so easily accomplished when one's house has no roof, or when the home has been completely destroyed. It is equally difficult when one's livelihood has been blown away, as in the case of most of the banana farmers in the region.

While the state is fond of the use of the word 'resilience,' in practice the concept of resilience requires considerable amounts of confidence, goodwill, and positive psychological reinforcement, available to local communities on a near full time basis for some months after such an event. Resilience also carries with it the implication that people build the capacity to withstand further such events with stoicism and bravery (Yamamura, 2010). Speaking as someone who has sat through two large cyclones in the past five years, I can honestly state that there is *no* stoicism experienced when the cyclone strikes. It is simply a matter of persevering, being pragmatic, keeping one's eyes and ears alert, and trusting that the preparations you've made will indeed work (and keeping the pets under control!)

In this particular instance, state intervention, and the allocation of state based economic capital was neither as intense nor as rapid as it had been in the period following Cyclone Larry in 2006. This was not because the state was uninterested; it was simply that the logistical support capacity of the state was stretched beyond its limits. Largely due to the Brisbane and Southeast Queensland floods, which had affected over one million people, the more standard response from the state that would involve sending in military, police, volunteers, and professionals from the public service, had to be truncated. This meant that there was a limited time with a limited logistic set of responses available to the state government. And people camping out in makeshift tents in the pouring rain were not impressed as the weeks wore on after the event.

The net effect of the limited state response was that local communities found themselves forced to be independent; having to rely on local volunteers to help clean up areas, re-house each other, and restore some semblance of normality to their own lives. It is certainly arguable that in the days after the cyclone, the limited state response had a powerful impact on the psychology of

local communities. In contrast to large urban centres though, these small communities were able to engage dimensions of social capital in order to improve their immediate circumstances.

### **Measuring social needs**

As Putnam (2000), Coleman (1988, 1990) and others have informed us, social capital takes many forms and can be employed to engage numerous social, economic and political issues. However, before the applicability of social capital can be measured in this case, it is important to first identify and attempt to measure what communities need in the event of a disaster, and then attempt to assess how social capital meets specific needs. In order to do this, we require a clear perception of first, community needs.

What is clear from the engagement of state governments, and official responses from governmental agencies, NGOs etc is that the concept of needs is largely *assumed*. This is genuinely problematic for those being ‘assisted’ by the state. That is, if the assistance provided fails to consider the needs of those to whom it is provided, it is arguably not doing its job.

What I am proposing in this paper is that specific needs exist within specific communities at specific stages in the post-disaster recovery, and that these needs can be identified and responded to by both official and unofficial sources. This effectively amounts to recognising how which types of social capital are mobilised in disaster-affected communities at certain stages in their recovery.

It is apparent that while governments pay lip service to hearing what people in disaster-affected communities have to say about their immediate and longer term needs there is a perception held by government officials that communities themselves don’t understand what their needs are. These are, however, understood by government departments and relate to specific mandates of each department. For example, the State Emergency Service (SES) focuses on providing immediate and temporary solutions for local issues; the Department of Community Services (DOCS) has a focus on families and in particular children’s security and needs; Centrelink provides employment, welfare, and special payment services; the Department of Employment, Economic Development and Industry (DEEDI) focuses on providing jobs for newly unemployed, and channelling funds to industry bodies. In short, there is consensus that communities need help, but the lack of coordination between governmental agencies leaves significant gaps in the recognition of specific needs, and the subsequent ability to meet those needs.

Part of the issue revolves around the perceived jurisdiction of specific agencies within Australia, and the disconnect that exists between them. For example, DOCS flies in staff from around the state to administer state-based relief programs that provide local people with means to access

funding, financial support, temporary housing, food in emergencies etc. However, these services are independently provided; DOCS has no means of communicating with and coordinating other relief efforts that are beyond its brief. It responds to the community reporting their needs, and attempts to link individuals to appropriate agencies that can help meet specific needs: the SES for tarps to put on damaged roofs, Centrelink for Cyclone relief funds, Canegrowers for advice for sugar cane farmers, DEEDI for information on cyclone debris removal, Terrain on matters of financial support for agricultural businesses, the Red Cross for clothing and temporary housing needs, Lifeline for counselling, Women's shelter for gender-specific problems, and so on. But these are all based on community initiatives; that is, people from affected communities need to approach DOCS or other government agencies in order to access services. And it is clear that people in this part of Queensland are not keen to ask for help from outsiders, whether they be government officials from Brisbane or SES people from Cairns. The needs of this sector of the population are of necessity then overlooked.

Systemically too, there is limited information sharing between agencies. The Army is instructed by the State in how to respond, and while it does engage local government through governance boards, it is controlled by external agents and agendas; the Police do not connect directly with DOCS (but do connect with SES); Centrelink and DOCS are in inconsistent communication. This lack of coordination reflects the wider governmental orientation that is disaggregated; these agencies rarely engage each other with any level of genuine cooperation, regardless of the location. In this sense the networks of hierarchical cooperation do not function in clear and unambiguous ways.

This systemically disaggregated approach to disaster management has serious weaknesses, not just in that the relief effort is often uncoordinated at the grass roots level, but also in that the needs of the communities affected by the disasters are effectively reduced to a simple, materialistic set of needs that foreground shelter, food, and income. These are critically important in the days following disasters, but diminish in importance as community recovery gets more intense, and as needs alter over time.

Without reliable longitudinal data about community needs, responding to disasters in effective ways is difficult, and this is because understanding of real, grass roots community needs is often assumed. That is, assumptions replace knowledge; generic knowledge replaces local knowledge; group needs are seen to replace individuals' needs; and material responses are seen to be more important than responses that address more significant but less tangible issues – psychological impacts, trauma, depression, hopelessness etc. Culture, age, language, disabilities and physical health are all significant determinants in addressing how it is that communities respond to disasters. There are recognised 'at risk' demographics, but these are often essentialised, with little recognition of the individual's needs.

So, how do these factors above relate to the concept of social capital building and its role in disaster relief?

Let us turn to definitions of social capital at this juncture. The term has been used increasingly over recent years in the social sciences to refer to a range of human behaviours that incorporate three components – networks, norms and sanctions. These components are then scaled – that is, they are measured at different levels such as the individual, community, state or nation. Then their ‘character’ or ‘function’ is assessed – that is, whether the capital being investigated is bonding, bridging or linking capital (Halpern, 2005: 7-21). These three categories of social capital are germane to the current case. Bonding social capital is seen as the relationships between similar people within a network (Putnam, 2000). Bridging social capital is seen as the relationships between obviously dissimilar people, extra-community (it reduces race, class, gender to individual variables in this scheme). And linking social capital is seen as the means by which individuals build relationships with individuals and institutions who/which have power over them (Szreter and Woolcock, 2004). While the term ‘social capital’ is used – arguably over-used in contemporary social science research – in a wide range of contexts that include divorced parents’ influences on separated children, diamond merchants’ buying practices, and Italian election preferential selections, for example, in this paper we are specifically concerned with the more sociologically constructed perceptions of social capital.

My understanding of the term follows Bourdieu’s; that is, it is the sum of the resources and activities of a group or groups of people – a network – who produce something collectively that they couldn’t individually (Bourdieu and Wacquant, 1992:119). This social capital then has value as a form of capital. Bourdieu’s idea was produced in response to the orthodox economics of 1980s France. He demonstrated that there were forms of capital that lay beyond the economists’ and hence the state’s ability to describe, and that these factors contribute significantly to the economic welfare of the state. Social capital, in this context, was a foil to economic capital and cultural capital. The types of social capital described above, while slightly mechanistic and a little reductionist, do provide us with an elementary framework with which to assess the value of networks in meeting people’s needs.

In the case of disasters, I am focusing not just on the materialistic value of social capital, however. I extend the definition to include the relational integrity, or trust, that exists between people and communities. In the event of a crisis, the integrity of a community – the bonds between people, and their capacity to act in a mutually beneficial way – is a critical factor in surviving the event, enduring the cleaning up, and rebuilding – or not.

### **Hierarchy of needs**

In establishing a hierarchy of needs, we must be aware of the many conditions under which

these needs emerge and are expressed. Certainly in the context of recent natural disasters, Cyclone Yasi became simply one of many disasters, contributing to what friends referred to as 'disaster burnout' in the mainstream media. It followed a major earthquake in Christchurch, floods in Toowoomba and Brisbane, and preceded the devastating earthquake, tsunami and nuclear meltdown in Japan. More significantly for the local community, it followed closely on the heels of Category 4 Cyclone Larry, which had occurred in 2006. Such contexts are significant and strongly influence how communities prepare, engage, respond and recover.

I have identified three stages of need in the communities impacted by cyclones. Each of these stages requires different engagements from different agencies, but each also has a strong component of social capital involved. That is, the integral trust between aiding agencies and those receiving the aid is a crucial, and often unrecognised value that facilitates recovery and the production of resilience in affected communities.

Stage 1 involves, following Maslow, physiological needs, and safety and security needs (Maslow's Second Level). These are immediate, and they take priority in responses to disasters. The provision of shelter, food, water, warmth etc is crucial for the physiological functioning of individuals and communities. Different agencies participate in different activities: the military provides emergency food and leads rescue and recovery operations; State Emergency Service, Police, Ambulance, Fire Service attend local emergencies, establish crisis or evacuation centres; in Queensland, Ergon, the regional electricity supplier restores power supply; local telecommunications companies (Telstra, Optus, Vodaphone) re-establish cellular phone networks; local councils ensure adequate drinking water and the establishment of sewerage lines, and also establish support networks with state and federal government relief agencies; stores, fuel suppliers, tradespeople, heavy machinery operators open services to provide emergency relief to communities. These needs are unambiguously framed, and responses are clearly articulated. They are short-term, immediate needs and are relevant for the first month or so after the event.

Stage 2 involves psychosocial needs. This stage begins usually from around week four after the event; it tends to last through the next few months. Based on interviews with residents, it is apparent that this phase is characterised by depression, a sense of isolation, neglect, hopelessness, disorientation, and difficulty in making decisions; all these characteristics are exacerbated by a growing realisation that 'normalisation' after the event is not going to be possible. This is reinforced by the constant visual and other visceral reminders of the event; the smells from rotting vegetation, the accumulated building wreckages, the tarps on houses and sheds, and perhaps most significantly, the environmental mayhem. Rainforests are stripped bare, banana fields razed, greenhouses shattered, trees down all over properties.

While the infrastructural and immediate economic capital needs of the population are largely



met by the state, the second phase generates chronic, though in some ways less tangible needs amongst the community. Most common and effective responses from the state to these issues have been offering counselling services, and re-establishing community services. However, the need to generate and rely on social capital in these encounters is also significant.

Stage 3 involves increasingly complex factors. Starting some months after the event, and often lasting years it is characterised by the need to normalise one's world, to re-establish contacts, to open one's world view, and to 'get on with it'. Confusing these emotions typically are the embedded negative emotions of the disaster, the cost in physical and emotional terms on the individuals, the impact on children's psychological health, and the overwhelming and uncontrollable sense of depression that intermittently overwhelms many. Suicides increase during this phase, and the need for the communities to be internally vigilant is extreme.

The engagement between the individual and the community in this phase is crucial, and it is through renewed participation in social networks, business and recreational networks, sporting and religious clubs, and community and ratepayers associations, for example, that people in affected communities attempt to resume their pre-disaster lives. In short, most of the problems experienced by people in these communities need to be addressed through the social capital matrix.

In terms of need, then, there is an ascending order of needs required at different stages of disasters such as those mentioned above. In the pre-disaster stage, social capital is crucial as it aids preparedness and helps promote community resilience – bonding social capital in the sense that families and friends within communities work together to prepare for the event; bridging social capital in that the community needs to work together as a group to prepare properties, share resources with others, and so on; and linking social capital in that the state infrastructure – in particular the emergency services – are mobilised and ready to intervene, shelters are made ready, and emergency back-ups for essential services are in place. In the immediate post-disaster phase, economic capital is a priority, and emergency services respond to specific physical needs. It is in the two subsequent phases that the needs of the community can be seen to be highly dependent on levels of social capital investment. It is to these forms of investment I will now turn my attention.

### **Social capital in post-disaster recovery and resilience**

In the literature on post-natural disaster recovery, there has been an emphasis on the length of time that such recovery takes, and on the range of long term impacts experienced by communities (Bolin, 1982; Shaw and Goda, 2004; Yamamura, 2010 for example). Increasingly there is an understanding that psychosocial factors (Stage 2 above) are of great importance in developing means to help facilitate communities' capacity to rebuild and reconnect (Mathbor,

2007; Elliott et al, 2010).

While much literature focuses on class and ethnicity in framing responses to natural disasters (Dyson, 2006; Elliott et al, 2010; Hartman and Squires, 2006; Hawkins and Maurer, 2010, for example), the more recent (2011) disasters globally have all impacted on developed societies with few of the extreme class divides so prevalent in Southeast and South Asia – areas in which so many of the most horrendous natural disasters take place.

Natural disasters occurring in developed countries represent a scenario that will become more common as development and human settlement continue at their current pace. As towns and cities become more vulnerable to natural disasters, how populations learn to manage resources in the face of disasters becomes critically important. It is clear from the literature that those communities that frequently experience natural calamities are the most likely to be able to withstand further disasters (see Mathbor, 2007; Norris et al, 2008; Yamamura, 2010).<sup>2</sup>

Interviews with residents of the cyclone affected area two days after Yasi hit, in February 2011, demonstrated that for the most part the communities were satisfied with the speed and type of responses from the agencies listed above (source: ABC News Feb 6, 2011; interviews with local residents). Their immediate needs were being met:<sup>3</sup> food and temporary shelter had been provided and there were no deaths or serious injuries in the immediate aftermath. Some reports in the mainstream media emphasised looting and other criminal behaviour in the wake of the cyclone (*Sydney Morning Herald*, Feb 4, 2011:1; news.com.au – front page, etc), but such incidents were few and minor. Indeed, these alleged looting offences took place in Cairns, well away from the eye of the storm, and from the most severe impact zones. But public order was not a significant problem in the days following the storm.

What did become a short-term problem for the community of Tully Heads though, was their desire to be ‘left alone’ to sort through the destruction of their community without tourists and other prying eyes watching over them (<http://news.ninemsn.com.au/national/yasi/8206913/tully-heads-closed-to-the-public>). The community, collectively, asked the police to enforce a ‘no-go’ zone. This was done; roads were closed, residents’ were issued special wristbands, media and all other persons except residents were prohibited from entering the township. This enabled residents to get on with cleaning up the remains of their inundated community undisturbed, but it also put residents in the awkward space of having no provision of services – telephones, electricity, water, sewage, etc. With the restrictions in place, no one was able to enter the area to deal with

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<sup>2</sup> In Australia, following this logic, communities in the tropical Northeast of Queensland, the Northern Territory, and Northwest West Australia (cyclones), Brisbane and southeast Queensland (floods), and in the flood and fire prone areas of Victoria should be the most prepared to deal with natural disasters.

<sup>3</sup> These needs are Stage 1 needs.

any of the more immediate needs of the community.

This left the community largely to its own devices. However, the need for essential services eventually outweighed concerns for privacy, and the town was reopened, the wristbands put away. In terms of outcomes, though, the closing of the township led to the solidifying of what could be framed as 'bonding and bridging social capital'. Faced with common issues, their possessions strewn over a square kilometre of swamplands, their houses either completely destroyed, or the shells standing, the community engaged its own resources in sharing labour, planning, ideas, compassion, sympathy, and arguably most importantly trust.

As Errol Eadie, a resident of Tully Heads, and a leader of the community rebuilding campaign said in June, 2011, some four months after the cyclone:

"We're going alright. We're in the recovery phase still, there's no doubt about that... We're all in the same boat. I think [Yasi] brought everyone together much, much closer than what we had ever been anticipated." (source: ABC local radio, June 3, 2011 available at: <http://www.abc.net.au/local/audio/2011/06/03/3234508.htm>)

As the community struggles to find its identity, and retain its resolve to rebuild and re-energise itself, the links between members who share the same doubts, and desires become essential in maintaining a positive overview of their circumstances.

These links can also, of course, simultaneously foster negative capital, and lead to conflict with authorities, and with each other over the speed of, and kinds of assistance offered by the state for those affected. Symptomatic of such forms of social capital emerging are the following extracts from the *Townsville Bulletin*, Townsville's daily newspaper:

We lost 80% of possessions in cyclone Yasi, we were in the middle of moving from Bilyana to Cardwell at the time of the cyclone. The roof and all the doors and windows had been blown in on the house at Bilyana our house in Cardwell had the tidal surge go through it and yet we have been rejected for the premier relief appeal. Apparently we weren't affected by cyclone Yasi... Did I mention that we lost our cafe too and can't afford to reopen....So thanks to the government I too will be one of the many that can no longer afford to live here..... And I am one of the lucky ones... There are a lot more people that are worse off than us.

*Posted by: kaylea chard of cardwell 03:45pm Saturday 14th May*

100 day of hell! We live in a shipping container now after living in tents since the cyclone. Our kitchen is under an open sided shed. We stay because we have 16 animals, which we now live in the great outdoors with. We were on tank water, which was contaminated by

the cyclone so we carry water from town, we bath in a bucket. And we still run a generator for power. Both of us lost our jobs because of and since the cyclone. My husband got a job with a painter doing insurance work. Helping others get their homes fixed (and listening to them complain about how tough it is)

*Posted by: Kristin & Nichole of El Arish Nth Of Tully 09:04pm Saturday 14th May*

People from FNQ are now over it. Yes 100 days has now passed and indeed very little has been done. All one needs to do is turn off the Bruce Highway and what you see is very distressing. People up here are doing it tough and all we get is hollow rhetoric from insurance companies and the state government is useless. We have been promised constant help, and didn't our so called prime minister say she would stand shoulder to shoulder with us and help us through this disaster. What has happened to all the money donated from people around Australia. The interest must be mounting for a lavish Christmas party. Oh dear how can I be so negative for not believing in what the government tells me

*Posted by: Bundy of FNQ 06:10am Monday 16th May*

Such narratives, of dissatisfaction with the state's responses to their needs, and of outrage at the greed of insurance companies become valid forms of expression and gain momentum among local populations until either government or non-government authorities intervene to settle the issue at hand. These issues are usually engaged by senior, high profile politicians, who offer publicly funded solutions in public forums. In effect, then, the creation of demand, reinforced by the rise of social capital leads to the mobilisation of political and economic capital. The complaints above can also be seen as symptomatic of the breaking down of linking social capital, the type of social capital that enables individuals to engage with the wider social and economic network.

It is important to note that these needs are now beyond the Stage 1 needs I identified above. These needs indeed straddle all three stages: shelter is not available for these people three months after the cyclone, and is not forthcoming, but the psychological impact of being assessed and told that one is not eligible for relief funding also hits hard. Moreover, the potential to return to what they had before the storm does not appear on their horizons; little compensation, and little future. In short the social and economic capital required to restore the most basic conditions of these people's lives is not forthcoming from the state, nor it appears from the community.

As the needs of the communities then shift upwards and become more sophisticated and complex in their forms and their specificity, the type of social capital that is deployed must also reflect this sophistication. Recently sociologists and social workers have written about Hurricane Katrina's impact in New Orleans, and about the stratified forms of bonding social capital within specific race-class modelling in the city (Brunsma et al, 2007; Elliott et al, 2010; Hawkins and Maurer, 2010; Moyo and Moldovan, 2008.). In the literature on social capital in general, Hallberg

and Lund, amongst others have noted that social capital as a concept has some difficulties in incorporating diversity into its functionalist modelling capacity (2005). That is, models of how social capital is formed seem to work better for relatively homogeneous communities; racial, cultural, economic, linguistic, sexual heterogeneity serve as individual variables in the modelling and can confuse outcomes of social capital building.

Notwithstanding the above, in the case of Tully Heads, Stage 3 needs were met through the formation of the small, relatively homogeneous group of landowners which was able to provide a set of skills and incentives to enable the group to reconnect with each other and to share in the dream of rebuilding their lives. It is important here to acknowledge that while such functional and pragmatic responses to the destruction of the cyclone are not the norm, the capacity of communities to re-imagine themselves, and the capacity of individuals to restore a sense of normality in their lives should not be underestimated. For example, fifteen minutes away from Tully Heads, Tully itself was in a state of disarray; the army had visited, cleaned up much of the main structural and vegetation damage in town and on the highways, and returned to Brisbane to continue the work rebuilding the capital's infrastructure. Awaiting insurance claims, many whose houses were in different states of disrepair were disillusioned about their futures, their incomes lost, but not clear on where to go. After the floods that followed Yasi, a handful of Tully residents had had enough, but others chose to stay, evincing one positive manifestation of social capital – resilience:

“Sharing a bedroom with up to six other people is not uncommon in the Cassowary Coast,” volunteer Michael Smith, who looks after the Tully Heads community centre, said.

“People are talking about leaving but so many are committed to staying,” he said. “There are people literally camping out in their garages, cooking on one burner cookers with tarped roofs – they are roughing it.”

(Cairns Post online. Avail at: [http://www.cairns.com.au/article/2011/03/26/156121\\_local-news.html](http://www.cairns.com.au/article/2011/03/26/156121_local-news.html))

One Tully Heads woman who had been ‘roughing it’ in the garage of their destroyed beachside home said: “I am over it but we keep going, bit by bit, day by day,” Ms de Zwaan said (*ibid*). These connections to the place and to people are significant in terms of social capital formation. They can be read as social responses to economic needs in the first order. They can also be seen as collective engagements with the need to re-establish a sense of ‘normality’ – the ideal that is life before the storm. In this sense, the Tully Heads response, where the community works together to attempt to provide direction and support for each other engages many of the stage 2 and 3 needs that affected communities require. The psychosocial elements of belonging, awareness, and planning are to some extent catered to in such support groups.

It is clear, though, that all groups are not so well supported. While there is an obvious reliance

on re-connecting the essential services in the first instance, the connections between people, and between those families who have been displaced or whose homes have been made uninhabitable, or damaged in the event are more difficult to develop or redevelop. It is in this area that the idea of social capital is particularly important. The state, to its credit, acknowledges the significance of mental health among the affected communities, and in the post-Yasi recovery package has offered free counselling services to victims, often delivered through agencies such as DOCS or DEEDI. However, the normalisation of one's life is not easily achieved when the physical centre of one's life has been destroyed. This affects education and commerce, and also the community groups, where people stay in touch with the wider community; centres for elderly, disabled, women, Aboriginal culture, sports clubs, cultural and religious activities. The reliance by people in the community on each other is exacerbated in such stressed circumstances. People need to feel supported and welcomed in a formerly benign environment that has been rendered inhospitable literally overnight.

It is important to note too that while social capital may have positive impacts as described above, it may also reinforce and reproduce inequities within communities (see Hallberg and Lund, 2005, Dyson, 2006, for example). In the community I've described, there is considerable capital available to individuals: not simply social capital, but also economic, educational, and experiential capital. The socio-economic circumstances of Tully Heads residents are reflections of their accumulation of different forms of capital. Hence the production of social capital, through developing a network of like-minded individuals to act in both concert and individually was achieved largely around the activities of a small group of committed residents who were ethnically, culturally, linguistically, and economically relatively homogeneous. In other environments where there are few shared values, and where communities are relatively isolated such spontaneous forms of social capital are more difficult to unearth.

However, when we talk about social capital at large within the rural small communities of North Queensland, it is noticeable that there is a considerable amount of goodwill available. Services are often performed on the basis of trust – 'we'll pay you later' – and possessions are lent with the appropriate beer weighting in the so-called 'slab economy'. That is, if one hires a neighbour's backhoe for the morning, the onus is on the borrower to return the machinery in the same condition as when it was initially borrowed, and give the lender a single slab of his favourite beer (24 cans, usually of XXXX brand). Houses are routinely left unlocked, there is little crime to report either in the small towns or in the more rural areas, and apart from dealing with emergencies such as cyclones, life is generally simultaneously both community-oriented and self-centred.

But according to Bourdieu (1986) and Carpiano (2005), social capital is more than simply about networks; it also involves how power and status are distributed in society. Bourdieu proposed that people's connections to those with economic and cultural power gave them reflected status,

increasing their store of social capital. In the context of disasters, and in the absence of pre-existing external networks (the bridging capital), communities resort to their own internalised means of dealing with crises. Some are well organised around individuals or small groups of people with status; others are more spontaneous in their evolution. Regardless, in the absence of external support and almost always without any formal governance structures in place locally, small vulnerable communities act incorporating existing social capital in order to minimise damage to property and lives.

### **When Yasi Met Larry**

One obvious context in which to locate Cyclone Yasi is as the second of two extreme storms in 5 years. This almost unprecedented pair of strikes, hitting almost the same geographical area, provides us with some excellent data about how the same group of people (in many cases) were able to deal with the disaster and the aftermath. It also provides us with an opportunity to see how the local communities, doubly affected, perceive the importance of social networks, state intervention, and other non-governmental interventions.

When Larry crossed the coast just north of Innisfail on March 20, 2006, the town of around 9,000 people was ravaged. Buildings disintegrated, houses collapsed, roofs were flung from buildings, power and phone pylons and services were down, and communications were poor. From Babinda (pop. 1000) in the north, to Mission Beach (pop. 3000) in the south, a 100 kilometre wide swathe of damage was inflicted on the region. It was the major news story of March in the metropolitan newspapers in all the capital cities. Appeals for victims of Larry were started, government departments mobilised to flood the region with well-meaning officials seconded to emergency duties, volunteer agencies sent in people, and the military was mobilised under the redoubtable General Peter Cosgrove to oversee the relief operations and instigate the rebuilding program. Millions of dollars were spent in short order; roads were resurfaced, infrastructure repaired, building work commenced, and community organisations formed to address specific local issues that the generous government funding allowed them to consider. In Mission Beach, for example, how to restore the cassowary habitat was discussed in light of the severe devastation to the rainforest. In other areas, how to reestablish the banana, tropical fruits, or sugarcane industry was discussed.

The five years since the previous big cyclone seemed a long time, at the time. But lessons learned from Larry were important factors in how the community responded to the threat of Yasi. The memories of Larry's impact returned with their own force to residents in the path of the 'mother of all storms', and as noted above, there were effectively zero casualties from this system. Social capital was a significant factor in the wholesale survival of this range of communities, it can be argued. Preparedness, awareness, experience, communications, networking were all involved as communities acted to preserve what they could of property and life. Although the damage to

Silkwood, Tully, Tully Heads, Cardwell and environs was devastating, Innisfail and communities to the north fared relatively comfortably. Building damage was minimal; vegetation that was down was a problem, and the banana industry was temporarily wiped out. But compared to Larry, the damage to property and homes was significantly less, mostly because it was so narrowly geographically constrained, and because the rebuilt buildings in the previously affected areas were able to withstand the 250 km/hr winds.

The response from the state – the linking social capital – to the damage caused by Yasi in 2011 was certainly less enthusiastic than the response to Larry had been in 2006. Fewer relief packages were offered, there was less money available for affected families, the military were in town (Tully) for only a short period comparatively, and there was less sustained media interest. This has led to the need for social capital generated within communities to be foregrounded. As we saw in the example of Tully Heads, communities have had to take the initiative in developing their own forms of bonding social capital in order to meet the needs that have become apparent over time. These needs are potentially predictable, as I have noted above, and it is clear that while the state and volunteer organisations can meet most of the physiological needs of communities affected by disasters in the short term, the longer term impacts require more information, and more significant, community-based responses, from both government and communities. The state is increasingly aware of the psychosocial impacts of disasters, and is providing counselling services for affected communities. However, most of the longer-term responses from the community need to be dealt with by the community. This is consistent with Mathbor's perspective (2007), who argues that the most important single consideration in dealing with disasters at the community level is understanding what the affected communities need, and mobilising structures within communities to enable them to take control of their own healing and rebuilding processes.

One ongoing and difficult issue to solve remains how to develop and maintain systems that encourage the development of social capital in vulnerable regions. In the absence of formal government – most of the regions affected by the recent cyclone have no elected government officials – communities rely on networks of people to survive. Establishing systems of reporting, information distribution, emergency support etc require coordination at local levels; they also require that trust exist within communities. US examples of attempts to encourage social capital formation in the wake of disasters have had variable success, it appears (Dynes, 2006; Moyo and Moldovan, 2008). It is one thing to ensure that people are educated about disasters; it is another thing altogether to coordinate responses that have at their base the importance of the wider community. Organisations like ratepayers' associations, Country Women's Associations, Lions and Rotary Clubs, Returned Servicemen's Leagues, industry associations, church groups, SES, volunteer organisations etc all have a role to play in establishing bridging social capital. These organisations can all bridge local communities and can be briefed with providing information, services and support for specific communities with specific needs.



Lessons from Larry concerning social capital are that in the absence of state support, for whatever reasons, communities must act to ‘take up the slack’, and this is arguably best done through provisioning of social capital. In Far North Queensland’s case, the existence of bonding social capital within communities is variable, as is the relative homogeneity of communities. Indeed, while social capital, conceptually, appears to have difficulty in dealing with diversity – especially class, race, gender – there are certain characteristics of bonding social capital that can cross these divides. In particular the health and welfare of a wider community are such characteristics that can be addressed by the social capital matrix.

Lessons from Yasi are too soon to articulate, but it is clear that there are increased pressures placed on communities this time around. Rather than being simply educated about the impact of cyclones, people in North Queensland have had to rely on recent memories and on past experience in dealing with this most recent event. But their memories of help following Larry differ from their memories after Yasi. Cynical about state assistance many in the communities this time are actively seeking to re-establish the rhythms of their lives; clubs, social groups, community advancement committees, environmental protection groups, anti-development lobbies, industry groups, church groups, etc have all reconstituted themselves in the wake of Yasi. These groups provide links between people within and outside the community, effectively developing bonding as well as bridging capital.

The ‘double whammy’ from cyclones Larry and Yasi has had, then, numerous impacts on communities that allow us to see the emergence of the importance of social capital in post-disaster communities. Unlike communities in the United States (Beaudouin, 2007; Hartman and Squires, 2006; Hawkins and Maurer, 2010) or in South Asia (Mathbor, 2007; Rowlands and Tan, 2008), where specific socio-cultural and class-race divides contribute to strong socio-cultural stratification, in north east Australia many communities affected by the cyclones are not dominated by such divisions. Many people share values about the importance of community, and the agricultural industries in particular share information about growing conditions, markets, fertilisers etc. People share goods and services amongst themselves in an informal reciprocity that is built on trust. Adversity is a common theme for many in rural Australia, and it is largely through cooperative enterprises that both individuals and communities remain intact and functioning.

The combined effect of two large cyclones in a short period of time though has stretched these communities’ resources. Facing incursions into their lives, their livelihoods, their social, physical and environmental ‘scapes’, the people of the far north have been forced to either rely on rebuilding their lives cooperatively in ways that allow them to be more resilient – through existing bonding and bridging social capital – or to attempt to restart their lives elsewhere. The fact that so few people have left after two cyclones signifies the extent of social capital in operation in the region. The challenge facing vulnerable communities, and governments of such

communities in the region is how to maintain stores of social capital in the periods when they are not faced with immediate potential natural disasters.

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