Evolving social capital and networks in the post-disaster rebuilding process: The case of Typhoon Yolanda

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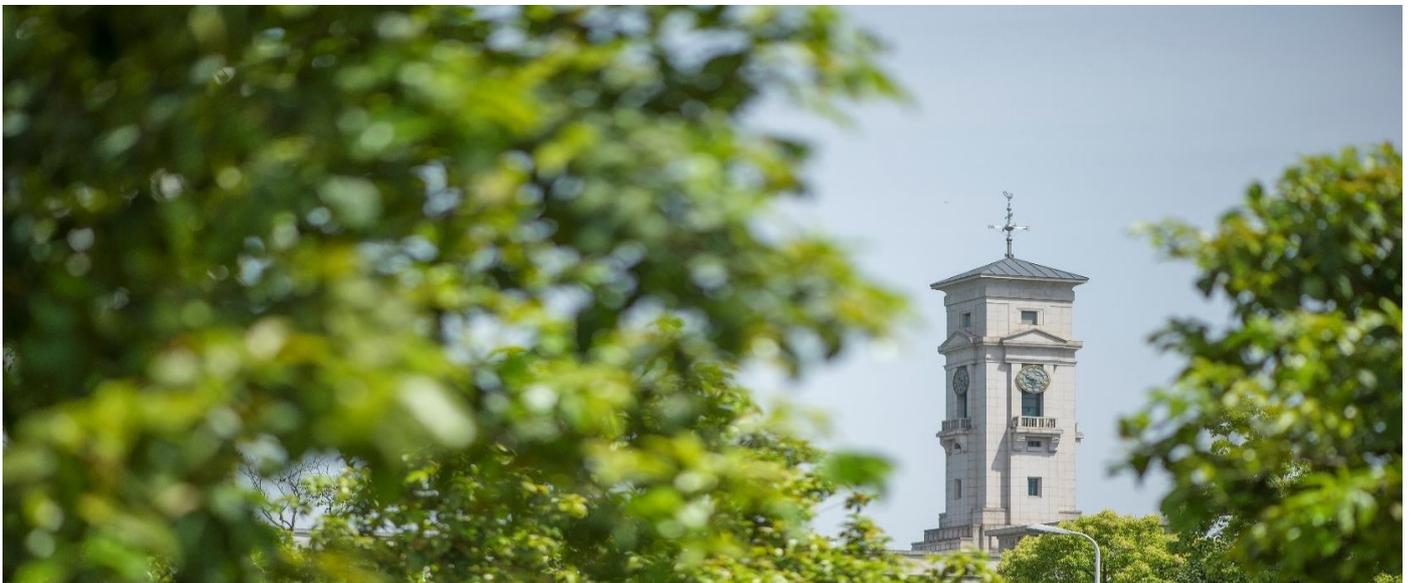
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First published 2020

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UK | CHINA | MALAYSIA

Title: Evolving Social Capital and Networks in the Post Disaster Rebuilding Process: The Case of Typhoon Yolanda

Abstract: Typhoon Yolanda brought major devastation to the local communities and infrastructure and also reshaped social structures and networks in the Philippines. During the immediate recovery process, bridging, bonding and linking social capital have had differential impacts and outcomes on how communities cope with the aftermath of the disaster. This paper investigates the interplay between the various types of social capital and their contributions to immediate coping strategies of Typhoon Yolanda communities. This paper also evaluates the complexity of defining social capital in a disaster context. In particular, it unpacks the blurring of the bridging and linking social capital at the immediate stage of rehabilitation in a post disaster context and its impacts on the social fabric of the communities. We deduce from this case study the social capital strategies necessary for a speedy recovery process both economically and socially for disaster-affected communities.

1. Introduction

Typhoons are deadly, expensive and a regular occurrence in the Asia Pacific region. In 2015 alone, nearly 50 percent (43 out of 90) globally reported storms hit Asia Pacific countries, of which 33 of them were high-intensity cyclones/ typhoons (Economic and Social Commission for Asia and the Pacific, 2015, p.1). Particularly, "Pacific typhoons are hitting Asia with more intensity, the proportion of storms that strike land as a category 4 and 5 in the Western Pacific is rising, because of warmer coastal waters" (Scientific American, 2016). The Philippines is located in the north western Pacific and is the first major landfall above the equator before continental Asia. This, with its warm waters and low-lying archipelagic coastline make it especially vulnerable to typhoons. With these factors, on average the Philippines suffers 20 typhoons annually.

On 8 November 2013, super-typhoon Yolanda hit the Visayas region of the Philippines, home to some of the poorest provinces in the Philippines.[1] The storm tide (which is the combination of the storm surge and the normal high tide) reached 4.5 meters high in places. Official figures indicate 6,193 individuals died, 1,061 went missing and 28,689 were injured (Philippine Statistics Authority, 2014). A vast area of agricultural land was devastated and whole towns were destroyed. Total damage was estimated at US$1,890,130,000 (National Disaster Risk Reduction Management Council, 2014) with the total number of people affected in terms of their livelihood, environmental and food security estimated at approximately 16 million. Of this number, nearly 4.4 million, or 30 percent, were displaced (National Economic and Development Authority, 2013: 3). Despite Philippine Foreign Aid Transparency Hub reporting that US$ 386,249,588.96 was received in international calamity aid and assistance[2] after Typhoon Yolanda, poverty and livelihood concerns in the Eastern Visayas remain a serious issue and the rebuilding of sustainable communities in the longer term is an ongoing concern. (Interview, UNDP, 17 June 2017)

The poor tend to be the most vulnerable to disasters as they are likely to live in vulnerable localities in insubstantial housing. It is also likely that financial or material safety nets will be limited or absent. Disasters like Typhoon Yolanda disrupt the fabric of community life and stress social systems (Fritz, 1961), and undermine the capacity "to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience" (Rodin, 2015: 3). The institutions and stakeholders tasked with devising mechanisms for resilience after environmental disasters must consider how social and environmental adaptations impact upon each other. Resilience is also difficult to measure as it often involves spiritual and social capital and relates to intangible "assets" such as trust, faith, mental health and familial and community cohesion. As such, the ability to recover is very much embedded in

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[1] A distinction can be made within the Visayas with Eastern, Northern and Western Samar provinces recording higher poverty rates than Leyte (most number of poor families) and being in the top ten poorest provinces of the Philippines together with Negros Oriental in 2012 (NAPC). However, in the first half of 2014, Eastern Visayas (Region VIII) became the poorest region in the country (National Statistical Coordination Board, 2015).

[2] For the purposes of transparency the Philippine government set up the Foreign Aid Transparency Hub although critics (e.g. Orendain 2013) have questioned the accuracy and the efficacy of the Hub and the allocation of international donations. Social Watch Philippines has claimed that the 2016 government budget for the Yolanda Rehabilitation and Reconstruction Program lacks transparency as money allocated to Yolanda victims has previously been diverted to other calamities (Aquino, 2015).

communities and has to be examined through the "social norms, social capital and social networks in which individuals are embedded, [as it] will determine disaster behaviour and the outcomes of a disaster" (Alcayna et al., 2016) There are many factors that enable communities' abilities to rebuild more efficiently in a post disaster context, and social capital is one important and well-discussed component of this process (Aldrich, 2012; Aldrich and Meyer, 2015; Bankoff, 2007).

Bourdieu first defined social capital as the "aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (1985, p. 248). Social capital can only function through networks, be they ethnic, clan or village, and accumulate through common narratives and understanding such as historical legitimacy, cultural coherence and economic reciprocity between the members of the community. These common narratives then build trust between the actors through repetitive acts of reciprocity and strengthening the understanding between different actors and they enable the relationships to work.

For communities susceptible to natural disasters, three types of social capital are identified as important for short-term coping capacity and for long-term resilience building strategies (Rossing et al, 2010). These are bonding, bridging and linking social capital. Woolcock and Narayan (2000) define bonding social capital as ties among people who are closely connected, such as immediate family members, neighbours, and close friends. Bridging social capital relates to ties among people from different geographical, occupational and ethnic backgrounds who have similar political and economic status. This can exist in forms of remittance, migration and relief aid (from NGOs). Lastly, linking social capital are the ties between the community and people in positions of influence in formal organizations, such as schools, agricultural extension offices, the police, or local or national government entities (Rossing et al., 2010, 270). It has been argued by scholars that linking social capital has a more vital role in affecting the immediate and mid-term rebuilding process in a disaster context. (Rossing et al., 2010; Atkinson, 2014; Bhandari, 2014; Islam and Walkerden, 2015; Rubin, 2016; Nakazato and Lim, 2017; Vachette et al., 2017; Hillig and Connell, 2018)

However, the segregation of social capital into these three categories are at times unhelpful, especially in the immediate aftermath of a major disaster. Due to the disaster, institutions together with structures and networks, were fundamentally compromised. Government and security personnel lost their homes, possessions and relatives, and previously existing formal and informal structures of power and relationships were "washed away" by the typhoon, as many of the fatalities were occupants in positions of power or as patrons. At the same time, the lack of communication to the outside world and external communities in the immediate aftermath of disaster shuts down the possibility of activating bridging social capital. A major disaster with huge casualties and destruction to existing infrastructure and social structures, as observed with Typhoon Yolanda, reshapes the networks and actors supporting social capital in this context. This presents this case study with the question of how various types of social capital operate in a vacuum of networks and actors, and how they contribute to the immediate coping strategies of communities.

To address this question, this article draws from a three year research project completed in 2017 funded by the UK Economic and Social Research Council. The research team is comprised of academics from the University of Nottingham UK and China, and University of Philippines Diliman campus. The team draws knowledge from human geography, political science, sociology, development studies and disaster management studies, to assess how social capital is manifested through local structures and networks and its impacts in the immediate post-Typhoon Yolanda period. We argue that although bridging social capital plays a crucial role in the speed of response and recovery activities managed by the international NGOs, it is the linking social capital that is vital especially in the informal setting. In particular, we investigated the blurring of bridging and linking social capital by looking at how external NGOs exercise bridging social capital through disbursing aid relief, but this being manifested in the form of informal linking social capital in a form of clientism or patron-client relations in the Philippines. These new international actors, placed in a position of power and replacing formal institutions due to the destruction, prompted the blurring of formal and informal networks and institutions as well as between bridging and linking social capital. By a holistic of assessment of the various type of social capital at work and their interaction with each other, we then examined the

extent to which social capital helped to reinforce or hinder communities' resilience and abilities to rebuild in a post-disaster context.

Our findings demonstrate that there is high fluidity in the boundaries between the different types of social capital in a disaster context. This means the typologies are at times unhelpful in identifying immediate coping strategies in a major disaster. The research also shows that this fluidity in the Filipino context, is a result of the existing cultural milieu of clientism, coinciding with the entrance of international aid agencies. This entrance altered the local social trust, formal and informal networks, and subsequently the capacity and speed of local communities to rebuild. This paper concludes that in order for policy makers to formulate a sustainable and effective recovery strategy, they need to contextualise their policies by tapping in to the potential of these current and evolving local informal social structures and networks to support recovery strategies. The paper is divided into the following sections: the following section, section two, explains the background information on the research areas and the research design. Section three reviews the literature on bridging, bonding and linking social capital through concepts of trust, networks, and patron-client relationship in the context of Philippines and disaster management. In section four, we highlight examples of different types of social capital being activate in the immediate aftermath of the disaster, how one form of social capital fused into another, and its impacts (positive and negative) on the capacity of communities to rebuild. The concluding section discusses how this case contributes to the theoretical understanding of social capital in a disaster context and the implications of this research.

2. Background information of research area and research design

In this study, we focus on 20 barangays[3] of comparable size across three adjacent coastal Local Government Units (LGUs)[4]: Tacloban (8), Palo (6) and Tanauan (6) (see Map 1). All three LGUs suffered a similar degree of devastation as a result of

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[3] A barangay is the smallest administrative unit in the Philippines with elected officials.
[4] Local Government Units enjoy a degree of autonomy and decentralisation under the "Local Government Code of 1991". However they are still accountable to the state. (Local Government Code of the Philippines, 1991)

Typhoon Yolanda. In each LGU, we chose one least affected barangay as a control; the others were coastal and the most affected. Geography alone dictated our initial choice of barangays and we had no prior assumptions about the degree of social cohesion or effective leadership and capacity building within each barangay. The background information of these three LGUs are summarized in Table 1.

Table 1 Background statistics of research areas before Typhoon Yolanda

LGU	Barangays	Total Population	Estimated Poverty Incident	Economy
Tacloban	54, 54-A, 66-A, 67, 87, 88, 89, and Abucay (least affected)	242,089	9.8	Tourism, higher education, health care hub/centre, commerce and main air transportation gateway to Eastern Visayas banking and finance capital
Palo	Cavite, Cogon, Libertad (least affected), Pawing, Salvacion, and San Joaquin	70,052	17.9	Commerce and tourism, farming, buying and selling farm products, fermented coconut wine (tuba).
Tanauan	Bislig, Calogcog, Salvador (least affected), San Roque, Sta. Cruz, and Sto. Niño.	55,021	28.9	Agriculture, livestock, fishing, forestry and mining, trade and industry, tourism, clay and other handicrafts

Source: Philippine 2015 census available at: https://psa.gov.ph/content/highlights-philippine-population-2015-census-population; psa.gov.ph/content/psa-releases-2012-municipal-and-city-level-poverty-estimates; www. tacloban.gov.ph/about/city-profile/; field interviews and surveys.

Map 1: Research LGUS and barangays (Berja, 2019, p. 22 in Atienza (Ed), 2019)
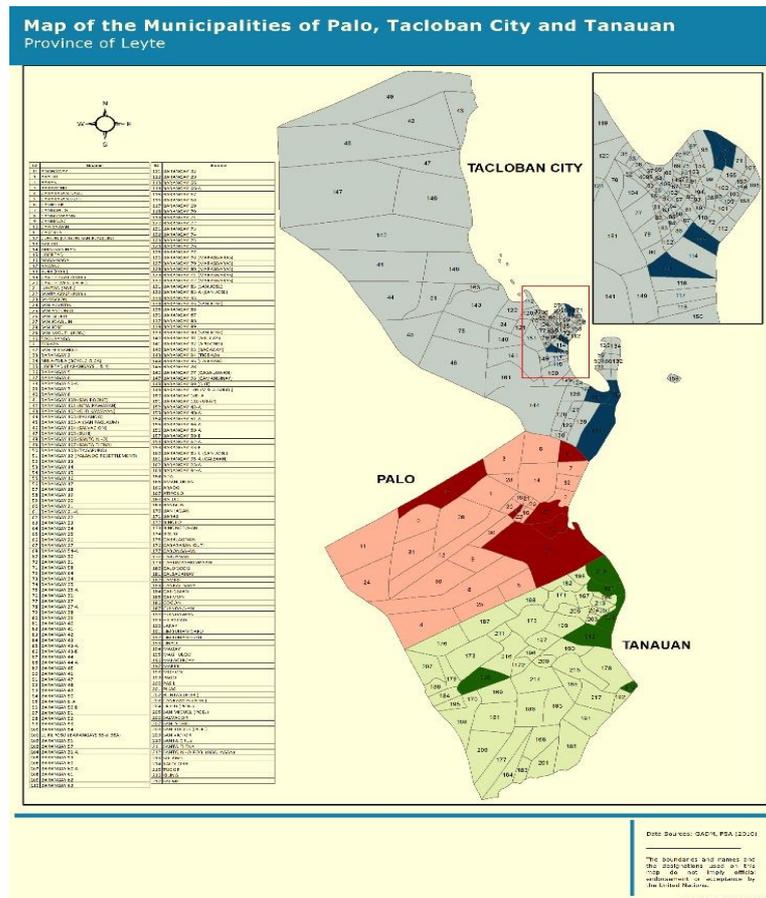
The region under study is also characterised by a growing population of increasingly impoverished households. Official poverty statistics show 24.9 percent of Filipinos rated as poor in 2013 (Philippine Statistics Authority, 2014), with self-rated poverty running at around 50 percent (Social Weather Stations, 2015). By 2014, based on the Annual Poverty Indicators Survey conducted by the Philippine Statistics Authority (PSA), the Eastern Visayas became the poorest region in the Philippines, reporting that "poverty incidence in the Eastern Visayas […] reached 54.9%, indicating that more than half of the region's 4.10 million residents have incomes that fall below the annual threshold set per person" (Business World Online, 2015).

This paper uses a mixed-method research approach and draws on in-depth interviews, focus group discussions (FGDs), surveys (for macro indicators) and participatory observations. For qualitative methods, we interviewed the captains or chairs (elected executive official) from our chosen barangays and/or members of the barangay

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councils. We also interviewed all three mayors of our LGUs and the vice mayors of Tacloban and Tanauan. In total, we conducted over 100 in-depth interviews with barangay captains, local mayors, local government officials, and the staff of international and national aid agencies, local businessmen and household representatives. We also organised 18 FDGs[5] with local residents, asking questions about social interaction in the rehabilitation process. Through these questions, we teased out subtle values such as trust and norms, and how they manifest in various networks, which underpin the dynamics of how social capital works in a post disaster context. The information was additionally triangulated with quantities data from 800 household surveys on an annual basis from 2015-2017. 40 families were interviewed in 2016 and 2017 in order to monitor their progress and identify common factors that threatened or facilitated their recovery. An overall picture can therefore be built revealing how and why disaster relief strategies work better or worse in different administrative units under similar conditions.

3. Social capital, trust and norms in the Philippines disaster context

Social capital is generally conceptualised as the "aggregate or potential resources that are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition" (Bourdieu, 1985, p. 248). Meanwhile, Lin presents social capital as a simple "investment in social relations with expected returns in the marketplace" (2001, p. 19), with the marketplace being understood as economic, political, labour based or other exchanges within communities. Putnam defines social capital as "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions" (1993, p. 167). Trust, norms and networks are subsequently used to identify indicators for this social capital (Schuller et al., 2000).

"Trust can come from both generalized norms of morality and more personalized sources embedded in social networks" (Lyon, 2000, p. 664) and the employment of trust depends on the probability that other agents will behave in a way that is expected (Gambetta, 1988, p. 217). This expectation of certain behaviours could be defined as

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[5] Details of our focus group questions are available here: http://www.projectyolanda.org/project-yolanda/documents/project-yolanda-barangay-fgd-guide.pdf. Last accessed 6 June 2016.

norms and seen as the basis of building and maintaining personalized trust (Lyon, 2000, p. 665). To hone the focus, Rothstein and Uslaner (2005) note that there are many different types of trust in the Philippines. Thick trust is defined by Putnam as "trust embedded in personal relations that are strong, frequent, and embedded in wider networks" (2000, p.136). In contrast "thin trust" or generalized trust is a person's estimation of the general moral standards of the surrounding society, and in Filipino society, there is a scarcity of social cohesion and a lack of thin trust (Abad, 2005; Rothstein and Uslaner, 2005), however, thick trust in the Philippines is extremely strong, so much so that when members of one's family makes a request of them, it is almost impossible to refuse. That said, such forms of allegiance can also lead to negative forms of social capital such as the "in-group" acceptance of corruption and nepotism or criminal behaviour (Lin, 2001).

In order for groups to come together and function as networks, they need a commonality or a common understanding or identity based on norms and similar practices, which is usually referred as culture. Culture, as defined by Krüger et al., is "a constantly changing and shifting configuration of social practices, or as outcomes of experiences, social arrangement and situations that were inscribed into society" (2015, p. 4). This understanding could be based on family ties, community relations, race and ethnicity or clans. These networks could be formal or informal and are intertwined with social capital embodied in trust relations among individuals (Crawford, 2006). These networks, while manifested through local structures, could often stretch across a number of scales, from networks within the community, to those that span district or regional boundaries, or even beyond international borders. This is evident in the context of Philippines when family or clan members migrate to capital cities or other countries in search of better livelihoods. According to Moser (1998) the communities that have good social networks and associations will be in a better position to fight poverty and vulnerability.

Social capital has become a popular concept in development policy because it specifies a resource – a type of capital – to be tapped and strategically mobilized by individuals and groups to meet their needs (Cleaver, 2005; Fafchamps, 2006). As highlighted earlier, three types of social capital are identified as crucial for vulnerable

communities: bonding, bridging and linking. In the Philippines, recent studies based on national survey research have provided some valuable insights into the state of social capital in the archipelago (Abad, 2005; Porio, 2017). Both studies found that rich bonding capital among family and friends is pervasive in Filipino society, but most Filipinos lack bridging and linking capital, as well as lack associational ties. These findings confirm decades-old research about the strength of kin and friendship ties in Filipino society (Pal, 1966; Carroll, 1968; Morais, 1981). Exchanges of assistance within a network are often seen as acts of duty, love and care, and social capital in this country is usually a bottom-up phenomenon closely linked to social networks and notions of community and mutual labour; this is known in the Philippines as *bayanihan* (Gaillard, 2015, p. 78). This term originated in farming communities that were reliant on communal effort, especially during planting and harvesting times, and was based on mutual expectations, benefit and trust (Eadie and Su, 2018, p. 11). Bayanihan is also important amongst poor communities that lack other forms of capital. Abad (2005) found that cooperation, as a communal coping mechanism akin to bonding social capital, is based on cultural norms such as bayanihan as opposed to associational regulations. Although bayanihan was first referenced in relation to the communal effort in agricultural communities "the tradition has diffused throughout Filipino society and is an expression of team spirit and sharing of labour" (Beza et al., 2018, p. 142). However, with increasing migration and emergence of new social actors into communities, networks were diluted and trust eroded, resulting in the weakening of bayanihan. This is especially evident in cities, such as the understudied city of Tacloban, where the population expanded rapidly from 80,707 in 1975 to 242,089 in 2015 (Philippine Statistics Authority 2015, p. 1).

In the Philippines, patron-client relations is a category of linking social capital, which can connect people from different background and economic status, and it is a form of "thick trust". It is comprised of informal ties between people and figures in position of influence and is based on a strong element of inequality and of differences in power between patrons and clients (Eisenstadt and Roniger, 1984, p. 48-49; Rossing et al., 2010, p. 271). This relationship basically indicates a reciprocal relationship in which the patron will reward the client (monetarily, perhaps) to gain their loyalty or obedience (Wolf, 1966, p. 10). Historically, patron-client relations in the Philippines have been rooted in patterns of land holding and ownership. The upper classes, or

patrons, enjoyed a monopoly over landownership in the Philippines whilst the lower classes, or clients, were dependent on them for wage labour or access to land. Clientelism in the Philippines is long standing and entrenched, as "debt peonage and share cropping fostered over time the growth of an inequitable agrarian social relationship in which the tillers of the soil were locked into dependency with the landlords" (Doronila, 1985, p. 100). Subsequently the landlord class diversified into industry and became government officials, this relationship evolving from between the landowner and tenant to become one between politician and voter (Anderson, 1988; Simbulan, 2005). Sources of wealth diversified but remained concentrated within a few elite families who then later became powerful political families.

To complicate matters, it is not fixed if a person is a patron or a client in the local context, but varies and alternates depending on who is the engaged actor in the network. This fluidity of this positioning is best illustrated at the barangay (village) level. At the local barangay level, a barangay captain may be the client when he needs help from the governor, mayor or national officials; or the situation may be reversed at other times where villagers need help from the captain. Thus, in the barangay context, the patron-client relationship is a highly fluid social relationship that allows power to shift from one actor to another, and with multiple power centres, which coexist in the barangay structure. The hierarchical top down nature of the government structure also hints that most of the power-holders (i.e. patrons) in the communities have either control of modes of production, the distribution of resources, or are the head of a government unit. Further compounded by the cultural traits of deference to authority, the poorer segments of the population rarely hold the status of a patron. At the same time, the barangay captain also holds positions of power in informal structures. For example, some barangay captains are also pastors and lead in the religious sphere of the community. This means they also hold positions of power in the informal realm, empowered by their knowledge of the sermon. However, this power balance has been altered by the remittances from overseas Filipino workers, which represent about 10 percent of the Philippines GDP, and these monetary flows increase after disasters. For example in "a year-to-year comparison, remittances to Philippines rose by $600million in the first three months following Haiyan" (Su and Mangada 2018, p. 67). As such, this reduced the reliance of families on these local patrons and subsequently altered the political control of these patrons.

To summarize, there has been a substantial amount of literature written about social capital and patron-client relationships and how they play out in the Filipino context (Doronila, 1985; Lande, 1964; Sidel, 1999; Quimpo, 2005). Recently scholars have also began to investigate how the different types of social capital and networks could affect and be altered by the emergency management of disasters in both short and long term periods (Ackinson, 2014; Bhandari, 2014; Islam and Walkerden, 2015; Rubin, 2016; Nakazato and Lim, 2017; Vachette et al., 2017; Hillig and Connell, 2018). However, very little research looks at the difficulties of typologising social capital, the interaction between the types of social capital, or how communities utilise different social capital at the immediate stage in an event of a major disaster. More crucially, there are gaps in the analysis of how categories of social capital transcend and evolve when mapped onto the local informal structures and networks such as patron-client relations. Hence, in the following sections this paper will investigate the above in the case of Typhoon Yolanda.

4. Social capital at work- immediate aftermath of Typhoon Yolanda

When Typhoon Yolanda struck, tasks such as burying the dead, clearing the streets of debris, tending to the injured, and the provision of food and water were major challenges. The scale of disaster dictated that primary responsibility for response and recovery was escalated to the national level. This was due to several reasons. First, the LGUs tasked as first responders were wounded themselves. Formal local institutions such as government agencies were partially destroyed, both physically and the human resource supporting it. Because of these things being absent, bridging social capital was dominant, which opened up "spaces of opportunity" for new stakeholders such as international Non-governmental Organisations (NGO). Support and capital flows from these and other external communities were felt strongly in the immediate aftermath of Yolanda. This was verified by the accumulative survey data from 2017 as listed in Table 2 responding to the question of 'Which are the top (three) organizations that helped you the most?' International NGO ranked first in all three LGUs.

Table 2: Which are the top (three) organizations that

	Palo	Tacloban	Tanauan
Self/Family	25.0	24.8	37.6
Municipality/City government	28.3	28.0	39.2
Barangay government	11.7	2.8	44.7
National government	76.3	63.2	27.0
Provincial government	1.7	1.3	0.4
International NGO	90.8	87.7	87.8
Local NGO	31.7	3.9	3.0
Foreign Government	22.9	15.7	0.8
No response	0.8	0.0	1.7
Other	4.2	1.6	1.3
Number of respondents	240	318	237

This huge influx was not surprising, given the disaster's scale and severity, and survivors were reliant on outside help. This was because the typhoon triggered an international outpouring of donations to the affected communities. The large flow of NGO actors into the region is also due to the compromised core government functions at the local and provincial level. Although the national government is listed as the second most helpful organization in the immediate aftermath of the disaster, very little linking social capital was activated in this context as there were no prior direct contact between the national level actors with the local actors to allowing the building of networks and accumulation of social capital. Additionally, bonding social capital does not have a huge role to play as most family members or relatives were in similar situation of vulnerability (see table 2 for more information).

Although bridging social capital, embodied by the numerous NGO institutions, was prominently at work at the formal level in the immediate aftermath of Typhoon Yolanda, a parallel and more subtle type of social capital was also evident at an informal level. In the immediate aftermath of Typhoon Yolanda and in instances where pre-disaster networks were still partially active, informal linking social capital within existing networks was immediately reactivated and reinforced. The surviving patrons, such as the barangay captains who were working with NGOs, were heavily involved in compiling lists of residents in their barangays that qualified for aid. Some captains used this position of power to prioritize aid to their allies/families. By

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tapping in to the bridging social capital, these captains reactivate their linking social capital and their relatives or friends were prioritised on the beneficiary list.

Residents that participated in focus group discussions (FGDs) for this research confirmed that those who were perceived to oppose the barangay captains politically were excluded from the lists of recipients of aid while other residents noted that those known or favourable to the barangay captains were identified as beneficiaries, even when they did not need much help (FDGs, Tanauan, 12 December 2016; Tacloban, 12 September 2016). This meant that some members of the communities did not qualify for aid from government and international organisations. Some residents attending the FGDs also complained that barangay captains and even municipal officers skimmed off the best goods (imported goods were regarded as premium) for themselves, whilst others still reported that their captains were scrupulously fair. There were also reports from interviews and FGDs that barangay captains who were allies of the mayors got more assistance for their barangays than those who were not.

Hence, both bridging social capital (at formal level) and linking social capital (at informal level in patron-client form) were observed to be at work simultaneously and mutual beneficially during this immediate period of chaotic aid allocation. However, information, often controlled by social capital, resulted in some areas not receiving aid while others received too much. On the one hand, this inequitable distribution of aid had and will have a knock-on effect in terms of trust, thus affecting bridging social capital between the NGOs and the local communities. On the other hand, the entrance of NGOs into Filipino society as new patron, a "giver" of goods and favours, has reinforced the patron-client relations and has enforced the informal linking social capital of these NGOs in the middle of the recovery process. The blurring of these social capital and parallel processes at work will be illustrated in the following paragraphs.

In the immediate aftermath of the disaster, the allocation of aid became a chaotic, complex and a political process, especially as there were 515 organisations involved in the relief effort (out of which 178 were international organisations, 98 were national agencies, 165 were regional organisations and 74 were local units) (Saban, 2015, p. 1503). Aid agencies implemented their own criteria to identify the neediest

and undertook their own surveys to distribute aid independently. Table 3 illustrates a non-exhaustive list of government agencies, IO and NGOs involved in aid distribution in the immediate and mid to long term period of the disaster. In the barangays, tools, equipment, and sanitation products were among the first items to be distributed to cope with the trauma and insecurity that were evident in the immediate post-disaster period.

Table 3 Organisations and activities

Type of Organisations	Name of Organisation	Immediate Activities (first six months)	Mid to Long-Term Activities
Government	Dept. of Social Welfare and Development (DSWD) (regional, provincial and municipal)	Food, water and shelter assistance, clearing of debris, rebuilding communications	Cash for work; national KALAHI-CIDDS livelihood program for barangays
Government	Bureau of Fisheries and Aquatic Resources (BFAR)	Assessing damage, supporting clearance	Boats
International NGO	Catholic Relief Services (CRS)	Food, water, shelter, sanitation, medicine assistance, rebuilding temporary shelters	Shelter, livelihood programs, WASH programs, DRRM
National NGO	Women's Education, Development, Productivity and	Limited food, water, shelter, medicine assistance, psychological counselling	Livelihood programme

	Research Organization (WeDpro)		
Government	Dept. of Labour and Employment (DOLE)	Limited food, water and shelter assistance, clearing of debris, documentation for compensation	Cash for work
National NGO / International NGO	Center for Emergency Aid and Response, Inc. (CONCERN) / Change des Vies (CECI)	Food, water, shelter, medicine and sanitation assistance, clearing of debris, enhancing the rebuilding of communication channels, temporary shelters	Livelihood programme
International NGO	Active Citizens Foundation (ACF)	Food, water, shelter, medicine assistance, clearing of debris	Livelihood for fisherfolk
International NGO	Oxfam	Food, water, shelter, sanitation, medicinal assistance, clearing of debris, enhancing the rebuilding of communication channels, temporary shelters	Livelihood programme and cash for work
Government	Dept. of Interior and Local Governments (DILG)	Limited food, water and shelter assistance, clearing of debris, documentation for compensation	Boats
International Government	US Government	Food, water and medicinal assistance, clearing of debris, rebuilding shelters	Livelihood programmes
International NGO	Ministry without Borders	Food, water and medicinal assistance, clearing of	Boats

		debris, rebuilding shelters	
Local NGO	Magsaysay transport	Food, water and medicinal assistance, clearing of debris	Boats
International NGO	Tzu Chi	Food, water and medicinal assistance, clearing of debris	Cash for work
International Organisation	United Nations Development Programme (UNDP)	Food, water and medicinal assistance, clearing of debris, building temporary shelters	Cash for work
International government agency	United States Agency for International Development (USAID)	Food, water and medicinal assistance, clearing of debris, rebuilding communication, building temporary shelters	Start-up funds for sari-sari stores and food stalls

Both the influx of aid agencies and the independent assessments of the need of aid have implications that were driven by the lack of coordination between some of the agencies listed in Table 3, and the involvement of numerous stakeholders led to the fragmentation of the strategic and operational resilience building processes (Vachette et al., 2017, p. 315). This fragmentation has resulted in the duplication of aid and projects, which is common in the chaotic immediate aftermath of a major disaster. This was also cited in an interview with an anonymous international NGO worker, who confirmed that coordination within and between different NGOs is a major issue in terms of effective aid allocation. Another example was from captain of Barangay 88 in Tacloban, reported that:

> 60 percent of livelihood pre-Yolanda was fishing. There were 600 fishermen pre-Yolanda. There were more than 200 boats pre-Yolanda, some big enough to accommodate 10 men, others only two men. Some donors did not cooperate with us, so even those who are not fishermen received boats. Because they [donors] went directly to the people. There

are more than 300 boats now [an increase of 50 percent). Some who
received boats are not even fishermen and did not use the boats (2015).

Meanwhile the captain of barangay Sta. Cruz in Tanauan also reported that:
Marsman was the first group to give boats (36 units). Other groups
followed in giving boats to residents. However, not everyone received
boats from NGOs. Sometimes, one fisherman got about three to four boats,
which were not used. These groups did not coordinate with the barangay
council and gave the boats directly to the residents (2015).

With multiple organisations and initiatives happening concurrently with haphazard
coordination, it is not surprising that in 2015, 49.7 percent of our surveyed
respondents reported that they were given duplicate aid (more of the same thing)
(Berja 2015, p. 14). Although there was some institutional coordination, not all
agencies subscribe or are part of this centralised process. At the same time, due to
limitations of national coordinating mechanisms and the sheer number of
organisations coming in, it was difficult to keep track of everything. More worryingly
78.9 percent of the communities interviewed reported that they did not receive any
training or equipment for livelihood (Berja 2015, p. 15)[6].

One inevitable question is why certain places/ sectors are more effective in capturing
aid than others. In our research, fishermen tended to be favoured recipients of
equipment and aid, and in some cases across the three localities, individual fisherman
were given up to three boats by different donors (interviews with barangay captains
November 2015). This is because boat donations create positive public relations for
the donor agencies, which could encourage more donations to that particular agency.
(Tan-Mullins et al., 2007) What this means for social capital is that aid distribution
between NGOs and local recipients (fishermen) exhibits traits of reciprocal patron-
client relations. Fisherfolk are particularly prioritized as "recipients" as they are able
to benefit the organisations in a certain way, in this case, positive publicity for the
organization. However, this unequal relationship does not only result in disintegrated

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[6] Our interviews were conducted during working hours so it is possible that those who did receive
livelihood training were at work.

social relations within communities, it often results in greater competition among the original fisherfolk, with boats also having been given to non-fisherfolk. More importantly, the increase in fishing boats and subsequent fishing activities depletes fishery resources and threatens the long-term sustainability of their environment and livelihoods. In addition, this is also destroying trusts within communities and subsequently the social networks that gel communities together.

As alluded to earlier, the uncoordinated outpour of donations and huge influx of aid and cash during the immediate period, combined with a lack of coordination, had created duplication and unequitable distribution of aid. This in turn affected trust between the different members of the communities. What was also destructive in the process is that it also created a "dole out mentality", introduced during the Marcos years[7] and further strengthened by patronage politics. In a disaster context, it could be termed as "dependency mentality" in which relief undermines initiative' (Harvey and Lind, 2005: 5). One of the barangay captains in Palo, Darina Romero from Libertad, reported to our Singaporean researcher on 9 November 2015, that aid dependency was a problem and she noted that "people will not attend meetings unless there is some kind of aid to be distributed. There are still people who are jobless and waiting for handouts". Our Tacloban-based researcher reported that even before Yolanda, people were not interested in attending meetings or activities unless they got something from it. What is observed here is that the local informal patron-client relations have been transposed onto NGOs as patrons and givers of aid, while the local communities see themselves as clients and reinforce informal linking social capital in the local context.

Indeed, our findings indicate people "invest" in social capital/relationships because they have the expectation of some sort of return (Brisson and Usher, 2005, p.644). These returns may be uncertain after the shock of a disaster, and the inability of governments or relief agencies to set up credible flows of information or manage the distribution and use of resources inhibits bonding social capital. As alluded to above, some households will not attend meetings if there are no "gifts" or "aid" given out

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[7] Tacloban is the hometown of former first lady Imelda Marcos. The Marcos family has been particularly critical of the Aquino government in their handling of the Yolanda relief effort. The Mayor of Tacloban during Haiyan, Alfred Romualdez, is Imelda Marcos' nephew (Antiporda and Tolentino, 2015; Pangue, 2015).

during or after the meetings. These expected acts of reciprocity were further confirmed by our last round of interviews with barangay officials, repeating that those who are constantly present in barangay assemblies are the recipients of the conditional cash transfer program and livelihood programs (DSWD's KALAHI-CIDDS) of the Philippine government. If that return is uncertain, the investment will not be made. We also discovered that the manner in which goods were distributed by some governmental and non-governmental relief agencies was dictated by programme time limits and the need to be "seen" doing something meaningful by donors, the public and those in charge. This meant that, in some cases, the distribution of "visible" materials goods was prioritised over less visible tasks such as the comprehensive monitoring of the equitable allocation of goods and services.

In some instances, the situation was worsened by particular practices of certain NGOs. For example, the Taiwanese Buddhist organization Tzu Chi Foundation is very popular among many Typhoon survivors. Based on the interviews with barangay captains and FGDs, people remember Tzu Chi fondly because they gave away cash instead of cash-for-work programs, vouchers or equipment. Tzu Chi simply asked people to put their names on a list and gave cash to people who were in line. During the relief phase, Tzu Chi gave more generous amounts of cash than their counterparts which distorted the standard rates agreed upon by the other agencies (Thin, 2014). In some cases, the Foundation paid PHP 500 per day cash for work but also distributed cash for relief of "PHP 8,000 to families with 1-2 members, PHP 12,000 to those with 3-4 members and PHP 15,000 to families with 5 members and up" (Nadal, 2014) with no checks on where it was being spent (Brondiale, 2013). As late as 2015, Tzu Chi was one of the few organisations left who still disbursed aid with dedicated recipients. Furthermore, there were reports that they were still giving away cash even when the focus should have been on rehabilitation instead of relief.

If we propose that NGOs have assumed positions as patrons in the local structure, then one should question why Tzu Chi seemingly did not act like a patron and "demand" any forms of "returns" from the communities. One possible explanation is that Tzu Chi is a Buddhist religious organization, with a very different ethos for aid disbursement compared to professional international and local aid agencies. The organisation sees aid as a way of giving back to society with no request for returns in

order to accumulate karma, which will lead to positive elevation in the afterlife. However, our Singaporean researcher also found many printed materials on Buddhism in the Tzu Chi office during the interview that are generally distributed to the recipients to spread the faith. However, this very subtle expectation of spreading the faith without demand of actual conversion leads to a confusion of cultural expectations, as no returns are required because conversion is not demanded. This further erodes the trust within the communities, as they could not comprehend why certain people were getting aid and how.

5. Conclusions

In the immediate period after disaster struck, the ability to secure resources through various types of social capital nested in existing networks was evident and provided access to various resources in disaster situations. Research has shown that a strong embeddedness into the lower social network with high level of trust will enhance the ability of communities or households to rebuild better and faster in times of disasters or crisis (Elliott, Haney, & Sams-Abiodun, 2010; Hurlbert et al., 2000; Kaniasty and Norris, 1993, Nakagawa and Shaw, 2004, and Tobin-Gurley et al., 2010). Additionally, Vachette, King and Cottrell (2017, p. 328) found in a disaster context of the Cyclone Pam in Vanuatu, that bonding and bridging social capital are vital to the success of managing the diversity of stakeholders involved through effective communication pathways and continuous bonding and bridging strategies. This is also partly due to the possible negative impacts of linking social capital in the post-disaster context, due to key differences in power or social relations. According to Rubin (2016), linking social capital is often subordinated to the previous two related social capital concepts and is often exclusively defined and operationalized based on expressions of organizational trust and participation, especially in disaster settings.

However, our evidence indicates that linking social capital in the immediate post disaster context is more complex, as it exist in both formal settings and informal setting. In the three LGUs, it is the formal bridging social capital and informal linking social capital that plays a vital role in the immediate aftermath of a major disaster, especially when pre-existing structures are partially or fully destroyed. This is partly due to the high number of fatalities in the local context which dismantle the bonding

social capital structures, and also the high influx of external informal agencies in providing aid relief reinforced by bridging social capital. Subsequently, these external aid agencies who are prominent in the formal structure, easily shifted into the informal local structure, exercising linking social capital and by replacing the positions of patrons. Through their aid giving activities, the presence of NGOs further destabilised the pre-existing social networks and reinforce the patron-client mentality in the Filipino society.

Furthermore, the existing social networks and cohesiveness of communities were affected by unequitable distribution of aid, which created distrust in the communities. In some cases, this led to simmering resentment within communities, and whilst this can be dismissed as petty jealousy, the perception of unfairness or exclusion can have a "profound effect on people's self-confidence and civic and political connectedness" (Ong et al., 2015, p. 42). As such, the impacts of inequitable distribution (intentional or unintentionally) undermined the growth of resilient and cohesive communities by destroying trust and existing social capital networks.

Finally, the entrance of new agencies into the Typhoon Yolanda context has transfigured the social networks and capital in the local communities in the immediate and mid-term recovery period in the local context. According to Robles and Ichinose (2016, p. 84), the presence of emergent groups with no existence prior to the crisis will affect the trust within communities due to the change in social connections. Compounded by the embedded mind-set of clientelism in the Philippines in this post-disaster context, where the roles of local and national government officials and politicians were disrupted due to the sheer scale of the disaster, some humanitarian agencies replaced "patrons"; whilst locals were grateful for their help, they also expect to be "bought", in other words receive a "dole out". This patron-client relationship also means that communities that received help from international agencies are less likely to be critical of those agencies as this would be akin to disloyalty to the patron (Ong et al., 2015).

In terms of policy implications, our research demonstrates resilience-building strategies in post-disaster context must be crafted with reference to specific local socio-economic contexts if they are to be sustainable, effective and properly

understood. Disaster resilience is often related to the management of change or disturbance with the aim of sustainable material wellbeing. Put another way, the Department for International Development (DFID) refers to resilience as "maintaining or transforming living standards in the face of shocks or stresses" (2011, p. 6). Disasters inform resilience as they are the moment when "the public and its problems are brought into clear view" (Chandler, 2014, p. 147), and the "natural" order of things is tested. Resilience-building strategies are seldom linear and often context-dependent. Indeed, as indicated by Rigg et al., "natural events may appear cruelly random but their impacts, who they affect and how, the degree of resilience that societies and individuals exhibit, and the trajectories of recovery, are far from random" (2008, p. 138).

The cultural and social context of a disaster is therefore important, and post-disaster situations can cause rapid change in social and material terms. Our findings indicate that the poor management of much-needed material aid, sometimes inevitable during a disaster of the scale of Typhoon Yolanda, can undermine community cohesion and the social fabric of these communities in the long term by eroding trust in these communities. Moreover, aid agencies become regarded as patrons in a highly unequal power relationship, further constraining local people in expressing their views. An acceptance of hierarchy is central to clientelism and this undermines "bottom up", community driven rehabilitation strategies as people are less willing to speak up against their "patrons". Moreover, the transient nature of the aid agencies, i.e. they leave between six month to two years after the disaster, also means this new relationship is temporary, which again will inhibit the rebuilding process in these communities, as households and individuals will need to rebuild their social network and capital when these agencies leave. This can potentially have a long-term detrimental impact on communities' ability to rebuild and can also distort the data that researchers and aid agencies gather. This finding was confirmed by Ong et al. (2015), saying that communities' relationships with aid agencies are also animated by the patron-client culture that pervades Filipino politics, especially at the local level. As such, the importance of this research is its delving into the social structures and relations, such as the patron-client relations, to better co-create rebuilding strategies for the affected communities in post disaster context. Otherwise, vulnerability will remain, rehabilitation will be compromised, and adaptation may only be partial or

ineffective, thus stymieing the social as well as physical reconstruction of communities.

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