The Roles of Children and Youth in Communicating Disaster Risk

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Abstract
Disaster management is dominated by top-down relief efforts that assume children and youth are passive victims with no role in communicating risks or preventing and responding to disasters. This article challenges these assumptions and critically assesses prevailing theoretical models of risk communication using two case studies that highlight the unique needs and potential roles of children and youth as resources or receivers of disaster management information. These studies in El Salvador and New Orleans used various participatory and qualitative techniques with young people, parents and policy makers. The findings suggest that the roles of children and youth as potential informants within informal and formal risk communication networks have been significantly underestimated, but their positive role in disaster risk reduction must also be seen in light of its possible burdens.

Keywords: child and youth-centered disaster risk reduction, risk communication El Salvador, New Orleans

Introduction

> *It was not easy for her to establish real differences between children and adults, but in the last analysis she preferred children, because their judgment was more reliable* (Marquez 1988, 267).

Disproportionate numbers of women and children are killed by disasters (Cutter 1995; Enarson and Morrow 1998; Fordham 1999). This grim fact is exemplified by the 2004 Indian Ocean Tsunami where the largest numbers of fatalities were women and those under the age of 15 (Synthesis Report of the Tsunami Evaluation Coalition 2006). Between 1991-2000, the lives of an estimated 77 million children were affected by natural disasters and conflict (Plan-UK 2002). However, while gender issues in disasters have enjoyed a higher profile in recent years (Fothergill 1996; Enarson and Morrow 1998; Fordham 1998; Fordham 2004), current research tends to assume children are passive victims with no role to play in communicating risks, participating in decision-making processes, or preventing disasters (Anderson 2005; Ansell 2005; Kirschke and van Vilet 2005). None of the more recent theoretical models (Ronan and Johnston 2005) or guidelines for good communication practice (Twigg 2004) single out the unique needs and potential role of children[1] and youth[2] as resources or potential informants within risk communication systems. This is despite the fact that almost all models detail the heterogeneous nature of those at risk and the wide socio-economic and cultural differences in the processing and filtering of risk information. Although some practitioners have implemented and discussed within the literature the merits of communicating and educating children about their risks of natural hazards for preparedness, only a small minority have evaluated the benefits of this approach for the family and wider community (Ronan and Johnston 2005). The ability of children and youth to act to reduce their risks has been completely ignored outside the development field (Anderson 2005). The vast majority of the literature on the role of children in disasters is devoted to the psychosocial impacts they endure (Norris, Friedman and Watson 2002; Ursano and Norwood 2003) and this has commonly focused on younger children, rather than older children and youth (Chen and Thompstone 2005).

Despite positive, yet unpublished, anecdotal evidence from child-centered disaster risk reduction (DRR) approaches pursued by development agencies (e.g., Plan, UNICEF and Save the Children), and recently published post-disaster recovery findings from New Orleans by Fothergill and Peek (2006), analytical research on the capacity of children and youth to reduce the impact of disasters is largely missing. In many developing countries, children form the bulk of the population and a high proportion of the death tolls in a disaster (Wisner 2006). Excluding children from the disaster planning process threatens their safety when disaster strikes and ignores a valuable resource for risk communication, education, advocacy, and practical risk reduction activities (Anderson 2005). Experience of working with youth volunteer teams in El Salvador and Haiti on community risk mapping and

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[1] 0-14-year-olds (UNICEF 2006).
[2] 15-24-year-olds (UNICEF 2006).

mitigation activities has shown that children and youth have a much greater capacity to participate in DRR than many people assume (Plan-UK 2002).

The idea of involving children and youth and encouraging their participation in risk reduction measures is in line with international commitments towards child rights. In particular, two international instruments deal specifically with the rights of the child: the Convention on the Rights of the Child (CRC), which is the most widely ratified international convention, and the Declaration of the Rights of the Child (DRC). Despite being merely declaratory, the DRC has played an important role in the recognition of children's rights. It reflected a change in the perception of children as merely "objects" or "little adults," to a view of children as persons who deserve not only equal protection to adults, but special protection due to their unique position of vulnerability.

The CRC takes this further and represents children as the subjects of rights, possessing fundamental entitlements that must be protected. They are recognized as having agency and as having a voice to be listened to. The CRC does not specifically mention the right of children to be protected from disaster or the right of children to disaster mitigation. Though the CRC has traditionally been interpreted to cover a political, legal and development context, it is evident that the CRC also deals with many matters relating to disaster mitigation. For example, Article 12 of the UN Convention on the Rights of the Child states:

- *the child who is capable of forming his or her own views has the right to express those views freely in all matters affecting the child*
- *the views of the child being given due weight in accordance with the age and maturity of the child.*

There are other international human rights instruments (such as the Universal Declaration of Human Rights (UDHR), International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social and Cultural Rights (ICESCR)), which may address the right to protection and relief from disasters in general. All these provisions are relevant to ensuring that people, which obviously includes children, are protected from natural disasters, that steps are taken toward disaster mitigation, that people's views (whether children or adults) have a right to be heard in these disaster mitigation processes, and that they are provided with the necessary relief should a natural disaster occur.

Investing and supporting the well-being of children and youth is also critical for achieving the Millennium Development Goals (MDGs). Recent trends show an increase in youth participation in civil society, indicated by the rise in youth-based organizations globally. In 2004, at the end of the 12th session of the UN Commission for Sustainable Development, it became apparent that the involvement of youth was necessary to meet the stated goals. An international group of young leaders from various NGOs held a three-week consultation with over 350 young people from around the world. The aim was to determine how development strategies framed by the MDGs can actively involve young people. The meeting led to the publication of the report, *Youth and the Millennium Development Goals:*

Challenges and Opportunities for Implementation (The Ad Hoc Working Group for Youth and the MDGs 2005). The report states that:

> *Investing in youth will provide a long-lasting and effective dividend towards meeting the MDGs through building social capacity for development to 2015 and beyond* (The Ad Hoc Working Group for Youth and the MDGs 2005, 14).

Youth have a special interest in the MDG project as these young people will be part of the decision-making adult population by 2015. Allowing and encouraging the voices, opinions, motivations, perceptions and knowledge of the youth of today to be voiced will ensure ownership of the goals and policies for tomorrow.

Recent studies show that youth advocacy has managed to link country-specific youth issues to national-level development planning; for example, the active consideration of youth affairs in the World Bank initiated Poverty Reduction Strategy Papers (PRSPs). These small, but significant initiatives suggest that institutions and agencies beyond those focused on children and youth alone, are beginning to see that young people may have the capacity to bring about change in their own lives.

This article aims to address a conceptual challenge in the study of children in DRR, namely that theoretical models of risk communication do not include children and youth as both sources *and* recipients of risk information. This is contrary to new insights that suggest that the role of children and youth as potential informants within informal and formal risk communication networks has been significantly underestimated.

The conceptual challenge of this research rests on critically re-evaluating theoretical models of risk communication and seeks to explore and answer the following questions:

- Are children and youth effective communicators of disaster risk, and do they have the power to persuade their families and communities to act?
- When compared to all other sources of risk information, what level of trust is placed in the messages and actions of youth groups?

The article begins by reviewing literature on disaster risk communication models and guidelines, examining how they characterize the role of children and youth. In doing so, the paper considers the role of children as effective communicators. The article then draws on research from case studies in El Salvador and New Orleans to challenge the assumptions made regarding children and disaster risk communication, and to explore whether risk communication models and guidelines should be recast with children and youth as key actors. The conclusion reflects on the implications for conceptual approaches to risk communication and how this might influence the design of early warning systems and community mitigation planning.

Models of Risk Communication

Child-centered disaster risk reduction (CC-DRR) is a new approach, and involves fostering the agency of children and youth both in groups and as individuals to work towards making their lives safer and their communities more resilient to disasters. Disasters are now so influential in blocking routes out of poverty that exploring all opportunities for proactive community-based risk reduction approaches is crucial. However, in traditional disaster management environments dominated by command-and-control response agencies like the police and the military, CC-DRR is a radical departure. Nonetheless, while there are convincing anecdotal reports confirming that children and youth can make significant contributions to reducing the impact of disasters and minimizing disaster risks, why and how their agency is best deployed and utilized remains a mystery.

Models of risk communication drawn from the public understanding of science literature have not mentioned the role of children and youth as either sources or recipients of risk knowledge (Douglas and Wildavsky 1982; Kasperson 1992). Risk communication theories can be clustered into five overlapping traditions:

- a systems tradition, with sources, messages, channels, and receivers (Lee 1986);
- a behavioral tradition, based on perceptions, attitudes, and cognitive mapping (Slovic 1986);
- a cultural tradition, where values, equity and rights determine viewpoints on safety (Rayner 1984);
- a vulnerability tradition where risk is understood in terms of people's day-to-day lives. Their capacity to respond is influenced by social, political and economic factors at a number of scales (Wisner et al. 2004);

and most recently, because of the movements within the cultural and vulnerability traditions:

- a participation tradition, which advocates early deliberation between publics and other "risk" stakeholders to determine acceptable levels of risk (Chilvers 2005).

This maturing research field has transgressed disciplines and epistemological viewpoints, from a linear communications systems approach to most recently becoming a topic embedded within cultural and development studies.

Two explanations can be offered for children and youth not figuring in these evolving traditions. First, risk communication has historically been associated with information flows from the top downwards, with scientific institutions at the top and the public at the bottom. These approaches assume an objective risk and an ignorant public whose knowledge "deficit" (compared to that of the experts) requires that they be provided with simple information. Though this has been challenged by many sociologists of risk (Jasanoff 1998; Wilbanks and Kates 1999; Wynne 1992; 1995) and despite recognition of the importance of social issues in the characterization of risk, as well as the increasing adoption of more equitable

and deliberately participatory approaches to managing risks, most emergency management practices and related communication campaigns are still dominated by positivist one-way learning and systems approaches. Experts are assumed to have knowledge and therefore should control knowledge (and risk) management systems, and in order to try to simplify explanations about the complexity of cause and effect, risks are usually quantified. This limited focus has prevented a more thorough analysis that would recognize and promote the capacities and risk protection interests within vulnerable communities.

The second reason relates to paternalism, and the commonly held belief that parents make decisions about the level of risk their child faces (Adams 1995). Carers and guardians are assumed to be able to pass this information on to their children and/or act to protect their safety. This leads to risk management practices that assume that parents make responsible and appropriate decisions and choices about risks their children face. This paternalistic view of children does not recognize either the child's rights, or, most critically, the value or utility of the child as an agent able to assimilate and manage information and to convey rational risk management choices among their families and wider networks.

CC-DRR approaches, by contrast, invest in children and youth and encourage them to understand and reclaim their rights, seeing young people both as effective recipients and as sources of risk information. To consider how children and youth might fit into risk communication models, attention must be given to relative levels of trust placed in different communication sources (Haynes, Barclay and Pidgeon 2007; Lindell and Perry 2004), and the decision-making processes people go through in receiving, verifying and acting on risk messages. Additionally, researchers have found that risk messages must have cultural and individual meaning to be effective, but these are neither obvious nor easy to achieve (Bye and Horner 1998; Handmer 2000). As they are not political or powerful actors, the benefit of child-centered risk communication approaches might be related to the child's willingness to trust information sources, their ability to convey messages with a meaning shared by their families and friends, and whether they are able to be trusted by recipients. In addition to trust, youth often have a greater capacity, willingness and opportunity to absorb new information. As the child is also embedded within the family, this relationship means risk information and mitigation actions may be continually re-affirmed, whereas external messages rely on small windows of opportunity to convey information and influence actions.

Parker and Handmer (1998) note the importance of unofficial or informal communication networks which evolve within the communities. Tapping new messages into these informal information mechanisms is a perpetual challenge for risk communicators and it is anticipated that utilizing the networking abilities of children and young adults will greatly improve the efficacy of this process. While this remains conjecture, this article provides us with an ideal opportunity to explore the role children can play in disaster risk communication, and critically evaluate and potentially modify existing risk communication models. If the findings show children and youth to be effective communicators of risk for the reasons described, then this

has repercussions for the management of risks in many different environments and sectors.

The two case studies presented below demonstrate the capacity children and youth have to make positive changes in their community. The El Salvador case study is facilitated by an international development agency as an intervention strategy, whereas the case of New Orleans has grown through the needs expressed by the community during a time of crisis, and the initiative of a group of children and youth to fulfill the need.

Case Study: El Salvador

El Salvador is high on the World Bank's list of disaster hotspot countries and is a country exposed to natural phenomena such as earthquakes, floods and landslides. For historical reasons and because of the distribution of fertile soils, El Salvador has the largest proportion of the national population (75 percent), and the greatest part of its productive infrastructure in regions with greatest risk to natural hazards. San Salvador, the capital, has been damaged more often than any other American capital. In the last three centuries, it has suffered 14 major earthquakes (one every 30 years) and its inhabitants do not doubt that the future will bring new disasters.

The inundations caused by Hurricane Mitch in 1998 directly affected more than 500,000 people (National Climatic Data Center 2006). In addition, two earthquakes hit El Salvador in 2001 affecting a total of 1.5 million people (European Commission for Humanitarian Aid 2006). This was followed by flooding and landslide activity associated with Hurricane Stan in 2005. These events did not have to lead to disasters, but because the population is physically and socially vulnerable, these threats turned into catastrophes. Children of poor families were, and continue to be, particularly vulnerable.

This brief case study considers the work of one international agency that focuses all its attention on the protection and rights of children. Plan International has been working in El Salvador for several decades, and in the four local government administrative departments where Plan operates, populations in over half the municipalities were affected by recent disasters. Children whose health, education and livelihoods Plan has been working to support have been killed, maimed, and traumatized, yet almost invariably treated simply as passive victims.

In addition to lives lost and the destruction of homes and social infrastructure, there were other hidden effects of the disasters, less tangible but nevertheless very serious, especially among children and adolescents. The Ministry of Health, for example, reported that during the period of the earthquakes of 2001, approximately 20 percent of the population required some type of direct or indirect psychological or psychiatric care. More cases of unstable mental health were attended during this period than in all of 2000. Consistent with the above official data, school teachers noted increases in the cases of intra-family violence, especially against children and adolescents.

Plan therefore decided to develop disaster management programs that would aim to raise awareness among children about the risks they face, while also positively encouraging the involvement of young people in risk management. By building this disaster management program on child rights principles and on the lessons of Plan's other work on child protection and vulnerability, it was a short step to devising a program that would deliberately aim to get children's voices heard beyond their own communities. The work began with encouraging the establishment of children's clubs within schools. In these clubs, children would learn about hazards and disasters and how to protect themselves and their peers when disasters threatened. This was classic disaster preparedness training of the sort that is conducted in schools throughout the world. It includes the standard range of information and skills development, from learning about early warning messages through to regular evacuation drills, first aid training and so on.

The nature of Plan's engagement with these youth groups is most clearly exemplified in the risk, vulnerability and capacity maps prepared by the participating children. Children were asked to create a map of their community and to identify the main risks they face. The risks identified were written onto cards and ranked by the children. Participants were then asked to think of actions through which these risks could be managed. This fed into the capacity mapping exercise where the dialogue shifted from risk and vulnerability towards the concept of resilience. Emphasis was placed on what the children and youth can do for themselves and how they can strengthen their capacities in the context of the identified risks (Twigg 2007).

Over several years of working with these groups, and as some of the children grew into adolescents and young adults, it became clear that the clubs themselves were extending beyond a preparedness role, into the action of risk reduction and even disaster prevention work. Plan observed that the children and youth were actually taking charge of their risk environment, acting to control it and through their actions were obliging not only their parents and peers to take notice, but also promoting changes in local government policies. For example, a children's group in Petapa in El Carrizal Municipality identified the unregulated quarrying of stone and sand from the river as a major risk, leading to increased erosion and vulnerability to flooding of houses near the river. Together—and initially without adult support, and despite many adults objecting, they devised a campaign of direct action and lobbying their parents and the local government authorities. They blockaded roads to the river, pleaded with lorry drivers, erected signs warning of the dangers, pressured their parents to stand up against quarrying and persuaded the local authority to enforce regulations that would stop illegal extraction. Quarrying along vulnerable stretches of river bank has now stopped.

Plan has not been alone in having to reappraise its approach to child rights and protection. The dominant culture and laws of El Salvador (indeed, of most countries) establish that children are possessions of the adults and this is evident in the allocations and divisions of responsibility where the State's role in protection of children is considered "subsidiary" to parents, although this is not congruent with the Convention on the Rights of the Child to which El Salvador is a signatory. Plan

built on its experience with environmental protection work during which it supported communities through agriculture projects such as promotion of organic fertilizer use, vegetable diversification, soil conservation strategies and simple irrigation systems. Efforts were made to organize youth clubs who would carry out environmental protection campaigns, cleanliness campaigns in communities, reforestation, water source protection, construction and training on the use of energy efficient stoves, the implementation of compost pits, and the formation of micro-enterprises for the management of animal and bird species in danger of extinction, such as marine turtles.

To better understand the impact of Plan's child and youth groups, fieldwork was conducted in El Salvador from April 23-30, 2007. The core research team included researchers from the Institute of Development Studies, the Universidad Centro-Americana José Simeón Cañas, and Plan El Salvador. The study focused on a children's group in Petapa in El Carrizal Municipality in the Department of Chalatenango where Plan has a strong presence and has already developed their CC-DRR work. The children's group in Petapa known as the Children's Emergency Committee was originally established following the 2001 earthquake and has further expanded under the guidance of Plan. A disaster committee for the adults in the community has also been established with assistance from the municipal authority.

A participatory approach was employed with methods including transect walks, community mapping, risk identification, risk ranking and visioning exercises to determine the risks present in the community and which were deemed significant by the participants. Plenary sessions were conducted with the children and with the adults and children combined to evaluate the difference, if any, in perceived risks between adults and young people and to gain an understanding of the lines and forms of communication between children and other actors. Sessions were recorded using a digital voice recorder, video, photographs and notes. Approximately 22 children and youth including six males and 16 females aged between 11 and 18 years participated in the organized sessions. Seven adults including six females and one male aged between 30 and 50 years participated in the joint plenary sessions.

In addition to working with the children and youth in Petapa, stakeholders and policy makers at the regional and national levels were also interviewed to gain their perspective on risk and disaster management and the role children can play. Focus group discussions, visioning exercises and in-depth interviews were conducted. These used a set of guiding questions to facilitate discussion that included the causes of disasters, past disaster events and their consequences, and current response and coordination. The sessions were recorded on tape to help the analytical process.

The results of the work with the Children's Emergency Committee are most clearly expressed in what the children and youth themselves described during the risk mapping exercises. In the village of Petapa, the risk maps showed that children understand and can respond constructively and communicate effectively about the risks they recognize. Beyond this, they have also been able to identify actions

necessary to reduce these risks and to articulate these needs in different local policy spaces to generate concrete actions. Examples of the interview questions and the children's responses are included below.

What are the hazards facing your community?
- Physical things: the weather, the river, steep slopes, fires, wind
- Human-made things: bars (alcoholism), flimsy houses
- Important things: lack of love, untimely death or injury, rape

What would you say to other children about disasters that may occur within their community?
- Disasters are not natural, get yourselves organized
- Learn to be able to warn others
- We've got rights that should be protected
- We've expressed ourselves and we respect ourselves
- We've become comfortable talking in public
- Do everything with love
- This makes our parents happy
- Together, we stopped people excavating the river banks
- We were told as children we couldn't make a difference, but we can
- We've done lots of emergency drills; we learned about helping
- We can draw risk maps

What would make you safer?
- Physical things: strong houses, retaining walls, safe shelters
- Human-made things: fire brigade, telephones, knowledge
- Important things: trustworthy police, trust in young people, getting organized

Almost every one of these bullet points warrants explanation, but from a risk management and communication perspective, several points stand out.

First, children have a clear and uncluttered view about risks. They recognize environmental hazards alongside social and economic threats, and are able to understand both the logical linear links between cause and effect and the more complex interplays between hazard and vulnerability. For example, in saying that some of the most vulnerable children were, "children that lack love," from broken homes or with inadequate parents, they intuitively adopted an "all risks" approach to disaster management.

Second, children themselves recognize their own value and power as risk communicators: as one child remarked, "We were told as children we couldn't make a difference, but we can." A range of both official and unofficial pathways were identified for children and youth to communicate information about risks and risk reduction actions. Informal pathways focused on talking with family members and friends, and with teachers and the priest. Formal pathways included links between the Young People's Committee and teachers, the Adult Emergency Committee and local leaders from various bodies. The children expressed pride in their involvement

in the Young People's Committee and their achievements to date. By identifying risks and working with others, this children's group created tangible changes that were seen to bolster self-belief and enthusiasm.

Third, and perhaps most importantly, the children in Petapa organized themselves to take action intended to prevent future disasters, and they used their power as influential agents and communicators within their community to pursue this action. For example, the children's group in Petapa identified the everyday dumping of litter as the highest priority risk due to the spread of disease, contamination of air, soil and water, and the potential to block waterways. The Young People's Committee has consequently undertaken clean-up campaigns coordinated with the Adult Emergency Committee. In addition, an environmental education program in Petapa has targeted awareness-raising regarding tree felling and the burning of vegetated slopes for cultivation. The children have also identified risks within the school grounds. These included potential damage to classrooms from earthquakes and the presence of steep drops next to walkways. With Plan's assistance, children lobbied for installation of railings for these walkways.

While the children's group was found to be active at the community level, there has been limited engagement to date within policy spaces outside community boundaries. Such engagement is vital if children are to affect policies and processes shaping development necessary for DRR, rather than actions based only around hazard prevention, disaster mitigation and preparedness. Research with actors outside the community suggests that this limited engagement may be due to a variety of factors. Not least among these was the limited awareness of the existence of children's groups. Generally, adult focus group participants acknowledged a major shortfall between the potential role of children in a normative framework for disaster reduction and their current limited engagement with policy and decision-making processes outside their communities. Children were candidly acknowledged as playing no current role in DRR, but there was enthusiasm for including them in the future. This highlights the importance of the role a facilitating agency can play in targeting individuals in strategic positions in order to prepare an enabling environment that allows children to initiate and sustain dialogue with them in the longer term.

Research with both children and stakeholder focus groups revealed a number of barriers to risk reduction practices embedded within national development processes. Despite the well-developed understanding of DRR among focus group participants, organizations and institutions remain geared largely towards emergency activities and preparedness at best. Coordination mechanisms between organizations are largely ad hoc and based on interpersonal relationships rather than formal structures. The language and terms used within the disaster field and literature was also an issue raised by focus group participants. Frequently changing terminology, definitions and emphases have the potential to cause confusion for practitioners and policymakers alike.

Resource constraints and limited wider awareness on disaster risks were cited as factors limiting capacities to work beyond emergencies and preparedness

measures, and to proactively include children within disaster risk reduction activities at the regional and national levels. The differentiated access to and distribution of resources based on political allegiance and religious affiliation was also cited as a problem, providing perverse incentives for relief and rehabilitation rather than preparedness or risk reduction. Cultural factors also create barriers, in part instilled by widespread poverty, and often causing a disconnect between identified risk priorities and everyday actions. These include a reticence to relocate away from high-risk areas even when assistance is provided and the continuation of traditional but vulnerability-enhancing cultivation practices in the absence of alternative practices or livelihood options. While litter was identified as a top ranking problem, for example, many participants in the exercises regularly dropped their litter during breaks as part of normal cultural practice.

Importantly, the research highlights a fundamental disconnect underlying the discussions with adults and children. The prevailing understanding of policy makers conceptualized the role of children as passive participants and recipients across a range of potential policy spaces. Stemming from a view of children primarily as a vulnerable sector of society, children's voices are thereby contained and constrained, largely operating in the context of emergency systems. Their role is therefore one of receiving instructions and adding value to the efforts of externally generated activities, for example through community brigades under local government systems. This is in stark contrast to the vision of Plan as a facilitating agency and that of children's groups themselves, where children take the lead and present their own vision of risks and risk reduction actions. In this model, they are empowered to act as the protagonists, seeking and generating internal and external policy spaces, linking with adults in a horizontal dialogue on risks and priorities.

Case Study: New Orleans

Hurricane Katrina made landfall on August 29, 2005, taking with it well over 1,000 lives and flooding approximately 80 percent of the city within 18 hours (U.S. White House 2006). Over two years later, the most devastated neighborhoods bearing the brunt of the levee failure remain in disarray. The most striking observation is the lack of residents and minimal rebuilding and reconstruction activities. The recovery situation in New Orleans is complex. There is a majority African-American population living close to, or below the average U.S. poverty line, a plethora of non-profit organizations, private sector developers, undocumented Latino laborers, and little direction or leadership from city, state or federal governments. Federal disaster management processes and procedures under the responsible arm of the Federal Emergency Management Agency (FEMA) were not executed with diligence and there is now a severe lack of trust among residents of government officials and formal disaster recovery and emergency services.

By mid-October 2005, members of the Vietnamese community within New Orleans East had acted collectively to petition private utility companies to turn on their electricity by proving that there were over 300 customers in need of and able to pay for the utility (Hill 2006). At this time, the majority of the Vietnamese community's dwellings had been rebuilt and local businesses were beginning to trade again.

To better understand what makes the Vietnamese community in New Orleans East particularly resilient and the role that youth play in this process, fieldwork was conducted from June 18-July 14, 2006. Documentary analysis prior to the fieldwork identified two key community leaders: the acting head pastor of the local Catholic Church and the youth leader of the Vietnamese American Young Leaders Association (VAYLA-NO). These contacts enabled access to an otherwise isolated migrant community. Research aims were explained to community leaders who then encouraged the active involvement and participation of the researcher within the community. The methodology employed was qualitative and of an ethnographic style. The researcher (Choong) lived with members of the community in their homes, and became involved in their lives by actively participating in day-to-day activities at the Church and Youth Center. Invitations were extended to attend weekly youth meetings and social gatherings where the group, VAYLA-NO, encouraged active participation in all their community-based activities.

Through these interactions, the researcher was able to hold informal discussions, conversations and interviews with a large number of youth, residents, community development officers and the church congregation. The researcher informally interviewed 30 people, mainly youth aged between 16 and 26 years old, all of whom lived in the neighborhood and were connected to the church or youth center either directly or indirectly. Informal discussions were conducted with groups and a few anonymous individuals spoke apart from the group to give personal accounts of their experiences. This allowed the researcher to collect more personal accounts and build a complementary narrative of events. The strings of anecdotes formed a narrative that the researcher qualified with structured interviewing of key adult informants such as the acting Father and members of the congregation (some parents of the young people participating in informal interviews).

Questions covered the broad topics of how they had been affected by Hurricane Katrina, with particular interest in their short- and longer-term recovery processes, focusing on assistance from within and outside their Vietnamese community and the role of youth in this process. Discussions also focused on hurricane early warnings and evacuation messages, in particular, where the messages came from (medium), the language used to disseminate the messages, by whom the messages were sourced, and whether they were acted upon.

At the time of the fieldwork, the VAYLA-NO was holding weekly meetings in a space provided by the Catholic Church. Participant observation with this group demonstrated the agency of young people in their ability to create a therapeutic environment for children and youth impacted by disaster. For example, the group organized youth social events which were designed to boost the morale of children and youth living in the neighborhood. The group organized a Youth Day for the neighborhood, featuring basketball tournaments, dance competitions, raffles, food stalls and prizes. The group also worked to assist the vulnerable in surrounding communities by organizing a Christmas dinner for the homeless, maintaining media outreach with youth radio, community TV and newspapers, and keeping the

Vietnamese culture alive by promoting events such as the Moon Festival and New Year events.

This Vietnamese community in New Orleans, which has a population of over 7,000, has a unique history that stems from the Vietnam War, which may help to explain their resilience and the agency of their children and youth. They predominantly came from two villages in the North of Vietnam, fleeing the war and arriving in the U.S. with few assets. In consolidating the community, the parents and grandparents appear to have transferred the qualities of resourcefulness and self-organization to their children, qualities that Dovers and Handmer (1992) consider important for resilience.

During the hurricane, many adolescents and children assisted in evacuation, relief and recovery as they were able to translate information from formal English sources (i.e., FEMA and American Red Cross) to their non-English speaking family members in order to pass on important messages such as the location of evacuation safe places, relief supplies and food distribution centers, and registration for FEMA assistance. In the recovery period, they have been instrumental in boosting morale among the younger children and bringing attention to other risk issues affecting their community. For example, youth members have been participating in the political arena to ensure the community is aware and involved in formal recovery mechanisms, relaying information about processes discussed in City planning meetings and other new initiatives. In terms of direct action monitored through participatory observation, the youth group organized a protest and advocacy campaign to bring attention to plans by a private Waste Management company to locate a debris landfill in the middle of their neighborhood (also see Soong 2006).

Prior to the impact of Hurricane Katrina on New Orleans, a small organization known as the Vietnamese American Association of Louisiana had been investing in youth by targeting young, active, and intelligent future community leaders and providing them with the opportunity to attend university and expand their capacity as agents within the community. This investment was intended to ensure the next generation of community leaders would be able to uphold the traditions and history of earlier generations of Vietnamese communities in Louisiana. Facilitated by the Church (Mary Queen of Vietnam—MQV), their investment resulted in the formation of the VAYLA-NO.

The group, consisting of self-motivated youths who are proud of their Vietnamese-American ethnicity, has a vision to improve their community by encouraging the participation of children and youth in its development. At the time this research was conducted, there were six members on the executive board, two staff members, and approximately 20 youth members. The group has since expanded and grown, with the aim of being a link between the older generation and participation in the political, social and economic life of New Orleans.

Since the Hurricane, VAYLA-NO has been financially supported by the MQV Church, and has been active in raising awareness among older members of the community on issues such as mobilizing against the landfill site. They have also organized

hurricane clean-up days and information nights for specific recovery issues such as small business recovery, direct action training and leadership training. Some youth are being targeted for a warnings and evacuation campaign that places them in the role of messenger through cellular phone text messages informing them of early warnings and evacuation route changes. This idea has been suggested by adult community leaders and supported by the Church. The fact that they have been designated greater responsibility by community leaders and the Church is an indication that the Vietnamese youth in New Orleans East are valuable conduits of information and knowledge brokers, acting as trusted agents.

Analysis of the fieldwork material indicates two key reasons why the voice of the youth is so strong in the Vietnamese community. First, they are bilingual, securing their role as the community's greatest asset for communicating information at the most crucial time. Second, they are trusted as kin, family, and friend in a tight-knit community that distrusts outsiders (Gold 1992). This trend is not uncommon among most newly arrived migrant communities, particularly if English is not their first language (ibid.)*.* Trust of formal systems is difficult to gain in an inward-looking migrant group that has never trusted government officials and survived through their ability to access informal networks to develop their own strategies to achieve livelihood security. Historical experience of escaping a war has shaped the community's trust in their kin, family, and friends, and in particular their children.

When the community trusts the messenger, delivery of services and formal authority, they will become more active in responding to preparedness planning, relief and recovery, particularly if they can foresee the benefits in participating in these risk counter-measures. The Vietnamese community has a strong sense of cultural and social capital that ensures the traditions, rituals, structures, and hierarchies that guide their behavior and relationships are upheld within the community. There is a strong cultural understanding of mutual support and obligation that begins with the structure of the family and extends beyond to the outward community. It is fostered by the strength of the Catholic Church in this community, as well as traditional Confucian ethic and the common collective conscience of being a minority migrant group with shared experience, history and memory. The Catholic Church and the extended family are trusted within this community as the bearers of information, decision-making, and initiatives involving the community. In most non-English speaking migrant communities, children and youth become the link between their immediate community or neighborhood and the world beyond.

These factors contribute to the strength of this group of young people. However, the urban context of New Orleans East is greatly influencing the direction and attitudes of this generation of youth. The influence of mainstream African-American hip-hop culture and the white gun culture of the South has permeated into this neighborhood. There has been a significant increase in crime since the hurricane and there is a fear in the community that this current generation of youth is at risk of becoming involved in gang activity, drug trafficking and other crimes. There is a risk, and a fear, that youth will be led wayward by the many opportunities to escape the difficulty of the recovery process, such as the lucrative underground

economy. The Church actively discourages criminal and gang activity among its parishioners. However, boredom may contribute to youth delinquency, and this is where VAYLA-NO has stepped in to fill the space with wholesome activities that foster a positive alternative for youth.

Their actions during the Katrina crisis indicate that children, and youth in particular, have an important role to play in this community. As the children of migrant families from non-English speaking backgrounds, for many this means growing up quickly and taking on the role of protector of siblings and information deliverers to their parents, battling different cultures, and asserting independence. Therefore, to initiate a youth group and step into the important role of community leadership during a desperate and difficult time is not surprising in this community. The formation of VAYLA-NO filled a need within the community that was exposed during a disaster, and promptly filled by the appropriate leadership required. The impact of VAYLA-NO since the hurricane has only been positive. They now raise their own funds to sponsor activities and conduct weekly meetings. Membership is growing and they are very well-respected among not just the immediate community, but also the small business community, environmental groups, City Council and other neighborhoods in New Orleans.

Discussion

These case studies present different ways in which children and youth have managed to recognize their ability and capacity to persuade policy makers both within and outside their community, organize themselves to take action, and ultimately reduce the risk of disasters in their community. Where the case of El Salvador was a project instigated by Plan International, the case of New Orleans is one of an emergent youth group. Yet, both cases highlight that investing in children and youth has clearly paid off as they have been able to successfully mobilize advocacy campaigns and bring awareness of issues that could severely affect their communities.

The question that remains is how children and youth fit into the dominant risk communications models and how their participation can be further encouraged to promote effective risk-reduction strategies.

Both case studies have shown that children and youth can become effective conduits, vehicles and bridges as they are embedded within the household and community and can act as trusted two-way "translators" and communicators. Overall, children and youth were found to be effective communicators of risk when:

- language barriers exist increasing the agency of young people;
- an outside agent has helped support the organization of youth groups;
- the community has strong social cohesion; and
- there is a level of distrust in political sources (such as police impunity).

However, success in communicating risk to the wider community and influencing external policy spaces was found to be more limited due to a nationwide preoccupation with response and recovery and limited preparedness. This was

blamed on debilitating poverty, a lack of resources and a limited wider awareness of disaster risks and the practice of disaster risk reduction.

No research to date has assessed factors related to children's risk perceptions and preparedness prior to a hazard's occurrence (Ronan and Johnston 2001). Indeed, theoretical perspectives and research in this area are adult-based. However, such findings can often inform and may have a beneficial influence on theoretical perspectives related to childhood-based risk perceptions, preparedness, and community-level education programs (Mileti and Fitzpatrick 1993).

On the other hand, children are not adults. Importantly, they often do not have the same level of independence of action that can allow for consistent, ongoing, and adult-based risk mitigation. As a salient example, preparedness in the home or school setting is more often a function of adult activities (e.g., how to handle warning systems, evacuation plans, provision of needed resources, shelter). While children can take individual protective actions (e.g., becoming a "turtle" during an earthquake, emotional "stress inoculation"), adults necessarily have more systemic control over important environmental contingencies.

Consequently, when educating children about natural and other hazards, it may be important to include information that helps a child understand what he or she can do relatively independently to be prepared physically and emotionally and those areas where soliciting or receiving information from adults (e.g., parents, teachers) may be more worthwhile (Ronan and Johnston 1996; Ronan and Johnston 2005). Related to these issues, the more a child is aware of hazards and the realistic risks associated, the more potential there is for important adults (particularly parents) to be better educated through the child sharing this newly learned information.

As youth develop they will acquire more sophisticated perspectives on the causality and prevention of natural disasters. In addition to being age-dependent, this development is heavily reliant on the interaction with family, friends and the wider community (Towers, forthcoming). Although this article focuses on the communication abilities of young people, these cognitive findings demonstrate the importance of these formal and informal two-way communications. It is also important to recognize the age-specific abilities of children and youth to interpret, reason and take responsibility and action on salient issues.

The findings from the research undertaken in El Salvador and New Orleans have demonstrated that youth are often a trusted information source. Trust is a prerequisite for many important functions within a society and has been shown to be a crucial factor influencing effective risk communication and attitudes to risk management policy (Renn and Levine 1991; Kasperson 1992; Slovic 1993; Breakwell 2000). Earle and Cvetkovich (1995) describe trust as a social bond between the communicators and those at risk. In this case, trust judgments are more intuitive than based on carefully reasoned arguments and evidence. Thus, as Poortinga and Pidgeon (2004, 1476) state, "Trust links people together who share social identities and/or have a similar understanding of a specific situation." It is therefore no surprise that people often cite friends and family as their most trusted

resource for information on risks (Haynes, Barclay and Pidgeon 2007; Ronan and Johnston 2001).

Prior natural hazards research has demonstrated that competing messages or superstitious beliefs will often circulate among a community, undermining official communications (Haynes, Barclay and Pidgeon 2007; Parker and Handmer 1998). For example, villagers in Kinnaur District of Himachal Pradesh in the Indian Himalaya attribute earthquakes and landslides to the movement of giant snakes below the ground (Pilgrim 1999). These views will often reinforce distrust in official information sources, beliefs of lower risk and or transfer blame to a higher power over which we have no control (Harmsworth and Raynor 2004).

However, research has shown that certain key individuals within a society can be utilized as "translators" (Haynes, Barclay and Pidgeon 2007) to reduce the competing "noise" of messages to one trusted source. If these individuals are trusted and influential they can be utilized to bridge cultural and technical gaps. The case of New Orleans demonstrates the power of children and youth to play this role, particularly in their ability to cross linguistic barriers in this relatively closed Vietnamese community. However, some messages and information can still be lost if not supported by other trusted groups or key actors in the community. Further findings from New Orleans highlight the abilities of the children and youth to recognize other vehicles (e.g., the local church) trusted by the adult community through which they could transmit their message.

While the case studies presented here do not provide enough evidence to be conclusive, we contend that informed children and youth can network among a community as a highly trusted and politically neutral resource dispelling competing beliefs, convincing adults of new risks, and instilling more balanced views (also see Plan-UK 2007). However, it is also well understood that knowledge and comprehension do not necessarily lead to risk reduction activities and actions based on a rational translation of this knowledge (Kirschenbaum 2005; Sims and Baumann 1983).

As the case studies have demonstrated, risk communication should be more than a conversation about the risk itself. Rather it forms part of a wider process of community development and social engagement, and covers risks beyond those normally considered within the disasters literature. These risks are part of everyday life and form an intrinsic part of why people choose or are forced to live in the areas they do. The risks posed to livelihoods, health, governance regimes, and political stability are continually renegotiated through formal and informal channels. Children and youth acting alone as both successful recipients and informers oversimplifies this complex renegotiation process, where often a rational processing of risk information and perceptions is low on the hierarchy of factors affecting decision-making. For this reason, one-way risk communications, whether through teachers or NGOs, via children, or even directly from child to child are unlikely to create change when considered in isolation.

Building on this, evidence from the El Salvador case study suggests that children themselves can recognize the wider nature of risk reduction, for example, how seemingly unrelated external factors such as abuse and lack of love can greatly influence their vulnerability. Thus, children and youth should be considered as dynamic agents of change rather than simply vehicles for risk communication. If their livelihoods can be integrated into different sectors such as health, environment, education and religion, then CC-DRR strategies can be addressed as a holistic part of their daily lives. These case studies have highlighted the need for a driver to motivate children and youth to act—whether this is initiated by the community by financial investment and catalyzed by a crisis, as was the case in New Orleans, or supported by international conventions that bring the needs of children to the forefront of risk reduction initiatives, as was the case in El Salvador.

However, the positive role that children and youth can play in disaster risk reduction activities must be viewed with caution. Is it too much to ask children to take on a responsibility that is generally afforded by adults alone? Their innocence, which is a powerful tool for message delivery, can also be exploited by others with competing agendas. By facilitating children to realize the powerful positions they hold in society we may be in fact, contributing to their vulnerability. There is a need to ensure that national policies and legislations can protect the Rights of the Child (as per the UN Convention). For example, children and youth of many migrant families who take on adult roles (as translators and carers), tend to grow up very quickly and miss out on being children. The responsibility of having to make decisions for the family at a young age arguably robs young people of their desire to just be children. Further investigation is therefore needed to determine both the positive and negative impacts such roles may have on children and youth.

Conclusions and Research Recommendations

In conclusion, this paper has demonstrated the unique role that children and youth can play in communicating risk information. Given the case studies and issues raised, the following research gaps should be prioritized:

- Children and youth as trusted communicators— are they more trusted? Why? How can this be encouraged and promoted?
- The role of children and youth in informal communication networks within the family and community.
- Emergent youth and children's groups— the balance between intervention and organic growth and how CC-DRR can be made sustainable.
- The influence of culture on the way communities perceive the value of children as communicators.
- How children and youth can influence policy change in risk management.
- Addressing the complementing national policies and legislation that protect children and youth engaged in risk reduction activities.
- The role played by children and youth in other risk communication activities within different sectors (e.g., HIV/AIDS). What are the impacts (both positive and negative) of their inclusion?
- Age-specific development of youth for successful communication and action.

Creating a balance between intervention and emergent group formation is difficult. Further research and time is needed to better understand the sustainability of these initiatives, and also how young people's roles will change. The role of the outside investor or supporting agency must be equally dynamic and tuned into the needs of not just children and youth, but how their roles within the community can and will change.

In a similar fashion to those fighting gender inequalities (Fordham 2001), any new communication practices that mainstream youth-focused initiatives will have to challenge many boundaries. These most notably include: 1) the diverse epistemological paradigms within which practitioners and academics from different disciplines frame disaster management or risk reduction activities and research (e.g., development versus the behavioral and natural sciences); and 2) the formal and informal structures controlled by institutions and society and guided by the political systems in place.

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