



## The application of “swift trust” to humanitarian logistics

Peter Tatham<sup>a,1</sup>, Gyöngyi Kovács<sup>b,\*</sup>

<sup>a</sup> Centre for Humans Systems, Cranfield University, DCMT Shrivenham, Swindon, WILTS SN6 8LA, UK

<sup>b</sup> Humanitarian Logistics and Supply Chain Research Institute (HUMLOG Institute), Hanken School of Economics, Helsinki, Finland

### ARTICLE INFO

#### Article history:

Received 22 January 2009

Accepted 6 October 2009

Available online 21 October 2009

#### Keywords:

Humanitarian logistics

Humanitarian supply chain

Swift trust

Disaster management

Hastily formed network

Temporary network

### ABSTRACT

Trust is essential to supply chain teams as it has a positive impact on team performance. Long-term relationships in supply chains have also emphasised trust as their key element. Yet traditional models of trust have a limited application in hastily formed networks that are formed on the spot without a long-term component. An example of such hastily formed networks is the humanitarian aid supply network, which consists of a number of individual logisticians from a variety of organisations, coming together to bring relief to a disaster-stricken area. The aim of this paper is, thus, to further the understanding of swift trust in hastily formed networks as a means of improving relief operations in rapid onset disasters. A model of swift trust is presented, and each of its conditions discussed to unearth potential facilitators of swift trust.

© 2009 Elsevier B.V. All rights reserved.

### 1. Introduction

Over the last three decades, the concepts of inter-organisational, intra-organisational and inter-personal trust have been studied in significant depth and from a range of perspectives, including economic, psychological and sociological (Rousseau et al., 1998), and in the relationship between trust and control as exemplified by a special edition of the journal *Organization Studies* devoted to this aspect alone (see Bachmann et al., 2001). Whilst it is premature to suggest that there is total agreement on a conceptualisation of the various forms of trust, a significant result of this interest has been a clearer understanding of their antecedents and outcomes. Not only have models been developed that link different antecedents to trust, but also, various evolutionary patterns for the development of trust have been studied.

Trust is a core concept in supply network management (Barratt, 2004; Mentzer et al., 2001), and particularly in the literature relating to supply chain collaboration (e.g. Skjøtt-Larsen et al., 2003). Apart from stressing information exchange, one of the cornerstones of the development of trust in supply networks is through cross-functional, and inter-organisational teams (Christopher et al., 2006). Fawcett et al. (2008) go so far as to call these “supply chain teams” and list a lack of trust as one of the most significant barriers to effective management of supply networks. Within such networks, external collaboration is considered to be important in two dimensions: in the supply

network itself, and with competitors (Barratt, 2004)—the latter becoming increasingly important in project-based industries such as the construction (cf. Beach et al., 2005). However, whilst such collaboration focuses on the “selected few” with whom one might aspire to develop or maintain long-term partnerships, inter-organisational teams in projects are developed *ad hoc* and without a long-term perspective. Relationships in teams like these are “determined by good faith rather than a formal contract” (Lu and Yan, 2007, p. 165), emphasising the importance of trust all the more—especially as it can be seen as acting as a substitute mechanism for control (Jarvenpaa et al., 1998). What is more, formal contracts and their transaction costs can be avoided in the presence of trust (breaching which would create demoralisation costs, cf. Ellickson, 1986).

Yet how is trust developed in such *ad hoc* relationships and projects? To date, there is a vast literature on trust in long-term relationships—in fact, most of relationship management literature focuses on trust in this context where it often seen as being the obverse of control (e.g. Knights, et al., 2001; Maguire et al., 2001) or interrelated with risk (Das and Teng, 2001). Studies on trust in temporary networks, on the other hand, are scant. What is more, different types of temporary networks exist, from planned ones in project industries (e.g. the construction industry), via the “minimal organizations” (e.g. of fire fighting teams, Weick, 1993), “emergent multi-organizational networks” or “emergent response groups” (cf. Majchrzak et al., 2007) to hastily formed networks (HFNs) (Ben-Shalom et al., 2005; Denning, 2006) in, e.g. disaster relief (Uhr and Ekman, 2008).

The concept of an HFN, as described by the HFN Research Group (2006) has five elements. It is a network of people: (1) established rapidly, (2) from different communities, (3) working

\* Corresponding author. Tel.: +358 40 3521 241; fax: +358 9 431 33287.

E-mail addresses: [p.h.tatham@cranfield.ac.uk](mailto:p.h.tatham@cranfield.ac.uk) (P. Tatham), [kovacs@hanken.fi](mailto:kovacs@hanken.fi) (G. Kovács).

<sup>1</sup> Tel.: +44 0 1793 785734.

together in a shared conversation space, (4) in which they plan, commit to, and execute actions, and (5) to fulfil a large, urgent mission. Contrary to Weick's (1993) minimal organisations such as fire fighters who may well share a common aim, background, approaches and working practices, the individual in an HFN, whilst sharing the same high level goals, may have not worked together previously nor have undergone the same training. For example, it is estimated that over 400 official international NGOs and over 5,000 associated staff were present in Indonesia in the immediate aftermath of the 2004 Southeast Asian tsunami (Völz, 2005). Other similar concepts to HFNs are those of "emergent (or emerging) multi-organizational networks" (NRCNA, 2006) or "emergent response groups" (Majchrzak et al., 2007). Head (2000) describes these as: (1) crisis driven, (2) task-orientated, (3) self-evolving, (4) time-sensitive, (5) composite and (6) temporary. Majchrzak et al. (2007) emphasise their self-evolving nature, going further by suggesting that their membership has no pre-existing structure, roles, tasks or expertise. In other words, an emergent response group develops, migrates and reorganises, gaining and losing membership in an unstructured way. The difference between such groups and HFNs in the humanitarian context lies in that the recognition that the aims, policies, doctrine and role of particular organisations in disaster relief are unlikely to change. In summary, the disaster response situation brings together organisations with their pre-fixed aims and policies, but individuals that do not know each other, do not belong to the same organisation, and have not undergone the same training. Therefore, the concept of HFNs is preferred to other, similar concepts in the humanitarian context—albeit the swift trust model is applicable to all of the above, as Majchrzak et al. (2007) suggest themselves.

In a humanitarian context, therefore, HFNs can be described as "co-located teams in short term local projects" with inter-sectoral partnerships (Fitzgerald, 2004) that link humanitarian organisations (i.e. aid agencies and humanitarian NGOs) to governments, local communities, business (suppliers and logistics service providers) as well as the military; all these together forming the humanitarian aid supply network (Kovács and Spens, 2008). But while project-based temporary networks are characterised by clear starting and ending dates (though the same companies including competitors can be involved in several projects in a row), the key characteristic of an HFN is its quick formation, lacking the potential for "prior arrangements including systematic mechanisms" that Lu and Yan (2007) would otherwise emphasise. Here the focus on trust, and the development of trust, turns to initial inter-personal relationships (Kasper-Fuehrer and Ashkanasy, 2001; McKnight et al., 1998). Thus, trust building in HFNs needs to follow a different pattern from trust in long-term relationships. Meyerson et al. (1996) therefore suggest that individuals within HFNs are tied together via "swift trust" (or "initial trust", McKnight et al., 1998).

The aim of this paper is, therefore, to further the understanding of swift trust in hastily formed networks as a means of improving relief operations in rapid onset disasters. Disaster relief has been chosen as the context for the paper, as it involves a number of different types of organisations (Kovács and Spens, 2008) that, when it comes to rapid onset disasters, need to deliver aid quickly at the same time as they need to co-ordinate their efforts and thus, constitute a broader response network. The humanitarian aid supply network in disaster relief is characterised both by its speed of inception and execution, as well as their relative impermanence. Furthermore, it serves a common goal (that of alleviating the suffering of those in need), an important characteristic in team formation (Fitzgerald, 2004).

The paper will first revisit hastily formed networks (HFNs) in disaster relief more in detail, before presenting different routes to

trust formation in HFNs. It then presents a model of swift trust, and discusses each of the conditions of trust formation in the context of humanitarian logistics. The concluding discussion suggests ways to facilitate swift trust in HFNs.

## 2. Hastily formed networks in disaster relief

There has been a significant increase in the focus on improving the response to rapid onset disasters following such high profile events as the 2004 Indian Ocean tsunami, 2005 Pakistan earthquake, Hurricanes Mitch (1998) and Katrina (2005), and recently, Cyclone Nargis (2008) and the earthquake in Szechuan (2008). Tsunamis and earthquakes are indeed rapid onset disasters in the sense of occurring with little or no prior warning—while, e.g. hurricanes are more predictable, and often cyclical in nature. But rapid onset disasters do not need to be natural; terrorist attacks (e.g. 9–11, or more recently, the 2008 Mumbai bombings) also fall under this category. Common to these disasters is their sudden occurrence (compared to, e.g. the evolution of a drought) and equal need for quick response; the effectiveness of the relief depending on the speed of logisticians to be able to "procure, transport and receive supplies at the site of a humanitarian relief effort" (Thomas, 2003, p. 4). It is indeed humanitarian logistics that contributes most to disaster relief, with most estimates suggesting that this represents at least 80% of the cost of disaster (cf. van Wassenhove, 2006). Humanitarian organisations can therefore be described as "logistics organisations" with the aim of assisting vulnerable people, i.e. the beneficiaries.

The speed notion of disaster relief is also reflected in the way of describing humanitarian supply chains as "agile" (Oloruntoba and Gray, 2006). At the same time, speed is not the only constraint disaster relief needs to take into account. Other constraints are a destabilised communications and transport infrastructure (Long and Wood, 1995), limited knowledge about the situation, and, in particular, about the location and numbers of affected people and their needs (Özdamar et al., 2004). In addition, humanitarian organisations are heavily scrutinised by the world's media (Tatham and Spens, 2008). Adding to this complexity is the sheer numbers of humanitarian organisations (and the individuals working within them) involved in disaster relief. The estimates are stunning: the UK alone prides itself with the presence of 3–4,000 internationally operating humanitarian organisations (Stoddard, 2003), whilst a relatively recent analysis suggested that over 30,000 such international NGOs exist world-wide (Roberts, 2001). As a result, a rapid onset disaster can be typified by the descent of many such organisations into the disaster area leading to huge co-ordination challenges—72 inter-agency co-ordination meetings were held weekly in Banda Aceh alone (Völz, 2005).

Smith and Dowell (2000) therefore call the humanitarian aid supply networks in rapid onset disasters "incident organisations"—quite in line with Fitzgerald's (2004) "collaborative entities", i.e. teams of previously independent individuals, groups and organisations that come together temporarily on the basis of a particular event only; in this case the event being the disaster. The new team works towards a common goal and needs to combine the resources of otherwise independent organisations (Smith and Dowell, 2000). Fitzgerald (2004), however, also speaks of the need of a "catalyst", an individual or organisation that co-ordinates (and ideally, leads and monitors) the entire team. In high-impact international disasters, this would be the role of the United Nations Joint Logistics Centre (UNJLC) (as part of the Logistics Cluster). As an example, UNJLC deployed to co-ordinate the overall relief to Cyclone Nargis in May 2008 including team members (seconded) from nine different NGOs (in two locations, Bangkok and Yangon; UNJLC, 2008). This was in effect a hastily formed

network (HFN) consisting of individuals of at least ten organisations whilst acting as the co-ordinating agency for the relief efforts of many more.

Interestingly for HFNs in disaster relief is not only the complexity of the humanitarian aid supply network, but also the calls for co-ordination (Oloruntoba and Gray, 2006; van Wassenhove, 2006) at the same time as humanitarian organisations indeed compete for financial and material resources (i.e. from donors) as well as media attention (Tatham and Spens, 2008; Oloruntoba and Gray, 2009). Were the aftermath of a disaster to reflect normal market economics, such competition might well be viewed as healthy, but in the humanitarian context, it results in a reduction in the propensity for organisations to co-operate and this, in turn, can lead to inefficiencies through duplication and overlap—or worse, through a failure to deliver aid to a community that has “fallen between the inter-NGO cracks” (Christopolos, 2006). Team theory, however, posits that teams would have identical interests, neglecting the fact that even in hierarchies, team members compete for resources (Williams et al., 2008). Notwithstanding issues of competition, the concept of trust is still emphasised in HFNs, where it can substitute more formal mechanisms of control (Jarvenpaa et al., 1998).

### 2.1. Trust in disaster relief

In discussing various models of trust, it is appropriate to begin with a definition of the concept—although, as observed by Rousseau et al. (1998, p. 72) in a cross-disciplinary review, it is a “...a ‘meso’ concept integrating micro level psychological processes and group dynamics with macro level institutional arrangements”. Indeed, McKnight et al. (1998, p. 474) go further by suggesting that “... the word ‘trust’ is so confusing and broad that it defies careful definition”, whilst Kramer (1999, p. 571) notes that “a concise and universally accepted definition has remained elusive”. On the other hand, there are many authors in this field who offer broadly similar definitions (e.g. Kumar, 1996; Lewicki et al., 1998; Zaheer et al., 1998; and Spekman and Sweeney, 2006) and these are reflected in the following definition which will be used within the paper:

Trust is present when the one party has a fundamental belief that the other can be relied upon to fulfil their obligations with integrity, and will act in the best interests of the other.

Importantly, this definition of trust focuses on inter-personal, rather than intra- or inter-organisational relationships. It is argued that decisions within organisations are made by individuals and, therefore, the level of intra/inter-organisational trust can be seen as the sum of those individual relationships. Thus, the extent of the intra/inter-organisational trust will be developed and shaped by the inter-personal components and, for this reason, this paper will concentrate on this latter unit of account. Indeed, inter-organisational trust in this paper refers to (inter-personal) trust between individuals from different organisations. Although, in doing so, the authors recognise the validity of the observation by Knights et al. (2001, p. 315) “... in practice, it is often impossible to disentangle trust invested in specific people from trust placed in institutional mechanisms”. That said, it is the nature of HFNs that such institutional mechanisms may at best be tenuous given the *ad hoc* nature of the organisation/network and, in a humanitarian crisis, the speed with which the crisis can unfold. Nevertheless, it is considered to be a reasonable assumption that all members of the HFN, be they located in the field, in a local subordinate headquarters or in the main (remote) headquarters, will be working to common goal or goal(s) set by the organisation, and in line with the philosophy and ideals of that

organisation. Thus instances in which members of the HFN are actively working against each other are perceived to be relatively limited. This latter point is important because the above definition does not imply bi-lateral trust. It is suggested that trust exists when A trusts B; the fact that this is not reciprocated (or is reciprocated at a lesser level) does not obviate the existence of the A→B relationship.

But how does such inter-personal trust develop? A vast swathe of literature discusses the concept of trust from a variety of perspectives (e.g. economics, psychology, sociology), focusing on trust as a function, the dynamics of trust, trust vs. distrust, the organisation of teams and its implications for trust, how to influence trust (mostly in the selection of team members), investments into trust etc. (Kramer and Tyler, 1996). Other approaches (e.g. Maguire et al., 2001) conceptualise trust as calculus based (reflecting a calculation of the predictability of others’ behaviour); knowledge based (in which the predictability has been conformed); and identification based (where trust reflects reciprocal and shared interpretive assumptions).<sup>2</sup> Crucial to HFNs is the achievement of a trusting inter-personal relationship in a very short time frame—hence the papers’ focus on this element of the trust debate.

For this reason, the work of Meyerson et al. (1996) has significant applicability and it has been expanded into a more general framework by Hung et al. (2004) who suggest that there are three different routes to trust: the peripheral, central, and habitual. If seen in sequence, the peripheral route refers to the early establishment of trust, the central route to its further development in relationships with a long-term perspective, and the habitual route to a next level where trust is based on patterns that have developed in long-term relationships. In other words, the peripheral route reflects the early stages of a relationship in which individuals meet either physically or virtually to form a team or organisation. Trust at this stage is based on (peripheral) cues such as those provided by third parties. Hung et al. (2004) suggest that this peripheral route to trust involves less cognitive effort than making one’s own judgments and is, therefore, the preferred route in the initial stages of a relationship. However, once teams or organisations have formed, individuals are able to cognitively engage in consideration of the other party’s perceived ability, integrity and benevolence, and this may lead to the development of trust through the central route. The final route is that of habitual trust which reflects the historical build up of successful trust transactions and often leads to strong emotional bonds (Hung et al., 2004).

It is important to appreciate, however, that the three routes can also be separate from each other. The central route, for example, can be pre-conditioned in networks where the motivation (and ability) to trust is high, which is why Hung et al. (2004) refer to this route as the traditional one. In the supply chain context, such traditional trust is seen as the fundamental “ingredient” leading to stable relationships (Yeung et al., 2009). In general, the components of trustworthiness (the assessment of the other parties’ ability, integrity and benevolence) lead to trust and later, trusting behaviour (Hung et al., 2004), which is then linked to an outcome expectation such as higher network performance (cf. Laaksonen et al., 2009).

More interesting for networks that are formed with little or no prior warning, and where the members are not clear from the beginning, i.e. HFNs, is the peripheral route of developing trust. Hung et al. (2004, p. 5) list some application areas of the peripheral route (which they also call “presumptive trust” while

<sup>2</sup> A more detailed analysis of these forms of trust and control is found in Maguire et al. (2001) with summary at Table 1 of that paper.

Meyerson et al., 1996, would call it “swift trust”): temporary and virtual teams, and initial encounters in organisations. In the context of humanitarian logistics, the peripheral route to trust is of particular significance, as disaster relief is characterised by the arrival of a large number of individuals from a variety of organisations (each with their own organisational culture) that come together on short notice. The composition of the network is further complicated by the presence of people on the ground (i.e. in the disaster area) as well as members from headquarters who are virtually connected to the network and manage (part of the) network remotely (ALNAP, 2008). Such virtual vs. face-to-face members of networks are also prevalent in other industries (e.g. the automotive industry, cf. Bal and Gundry, 1999). Yet whilst other industries can still develop long-term relationships in such mixed virtual—face-to-face networks, the hasty formation of the network in disaster relief calls for a closer investigation of the peripheral route of trust in the network.

## 2.2. A model of swift trust

The suggestion that trust can be formed by the peripheral route stems from the work of Meyerson et al. (1996) who coined the term swift trust to describe the need to manage the issues of vulnerability, uncertainty, risk and expectations that surface with the formation of a HFN. Such networks “exhibit behaviour that presupposes trust, yet traditional forms of trust—familiarity, shared experience, reciprocal disclosure, threats and deterrents, fulfilled promises and demonstrations of non-exploitation of vulnerability—are not obvious in such systems” (Meyerson et al., 1996, p. 167).

Swift trust, according to Hung et al.’s (2004) peripheral route, has five antecedent conditions that influence trust formation: (1) third party information, (2) dispositional trust, (3) rule, (4) category, and (5) role (see Fig. 1). Whilst Kramer (1999) also see historical trust as another condition, Hung et al. (2004) purposefully exclude this antecedent in the peripheral route, as trust formation in this route is based on limited prior interaction among the members of the network.

The other routes to trust, the central, and habitual, result from the maturation of the trusting relationship. HFNs, however, are by

definition not drawing on previous trusting relationships, thus the focus here is on the peripheral route to trust, i.e. swift trust (see Fig. 1). A later possible maturation of the trusting relationship from that obtained through the peripheral route to habitual trust reflects the level of trust itself and the trusting behaviours and subsequent outcomes that are generated. Importantly, it is argued that, in addition to the simple feedback loop generated by improved knowledge of the others in the relationship, the process is mediated by the perceived level of risk which, in turn, reflects the communications environment within the network.

The remaining conditions lead to the formation of trust, yet trusting behaviour is still mediated by the perceived risk of the possible gains and losses of any interaction in the network. A high perceived risk may even lead to the deliberate withholding of relevant information. However, Hung et al. (2004), whose research in on virtual teams, also see the communication environment as means to exercise social control. Importantly, in the HFNs of humanitarian logisticians the network as a whole, and therefore the associated communication environment, is composed of both face-to-face elements (of logisticians of different organisations on the ground) and virtual ones (with remote headquarters).

The literature also indicates that trusting behaviour leads to specific outcomes, e.g. better network performance, and it is on this basis of the expectation of an improved outcome that investment into the development of trust in relationships can be justified. Furthermore, Laaksonen et al. (2009) show that trust can decrease the transaction costs of a relationship. This thought is captured in the model at Fig. 1 as it is anticipated that the nature of the trust will change as the relationship matures with, ultimately, the level of habitual trust being reached. Individuals who trust each other in this way (i.e. habitually) need expend little mental or emotional effort (i.e. low transaction costs) as they are happy to accept the judgement of their colleague even if this may appear to be unorthodox. Unsurprisingly, however, betrayal of such habitual trust is catastrophic and is likely to lead to an irrevocable breakdown in the relationship. Having said this, arm’s length transactional relationships pay little attention to the implications of inter-firm trust (or lack thereof) but are an essential part of purchasing portfolios when it comes to non-critical items that can be provided by an abundance of alternative

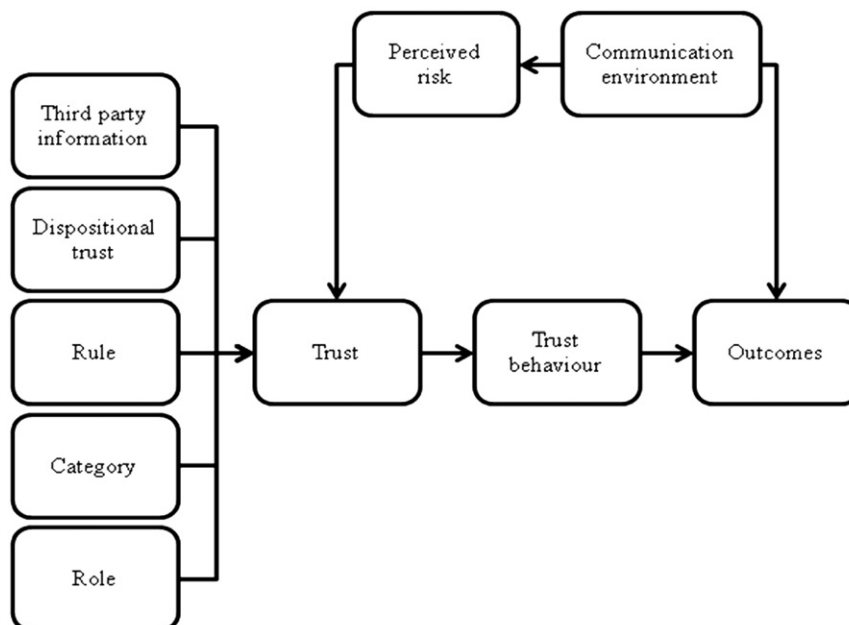


Fig. 1. The route to swift trust (based on Hung et al.’s, 2004, p. 4, peripheral route to trust).

suppliers (cf. Kraljic, 1983). In essence, the importance of a trusting relationship depends on the availability of suppliers as well as the criticality of items to an operation. When it comes to a humanitarian HFN, the provided items are of critical nature to the operation, and even if suppliers are in abundance, the extremely short delivery times required in disaster relief decrease the number of alternative suppliers. Nonetheless, individual humanitarian organisations may already have mature trusting relationships with potential suppliers. The nature of the HFN, however, is of importance when it comes to trusting other individuals and organisations that are also active in the same disaster response. These relationships are not mature, thus the peripheral route to trust is in place.

### 3. Swift trust in humanitarian logistics

Given the plethora of actors within the humanitarian logistics system in the aftermath of a disaster, it will be appreciated that issues of the development and maintenance of inter-personal trust will apply both within an organisation (such as an NGO) and between organisations. Furthermore, the strategic approach to the response will differ from country to country for, as Drabek (1985) noted, the United States has a much more decentralised system than other countries. Nevertheless, whilst some disaster response staff within an NGO are permanent employees, many are drawn from a wider network of logisticians who form an “on call” roster such as those held by Oxfam, RedR and the Red Cross movement in many countries (ALNAP, 2008). Clearly the influx of staff from many sources and backgrounds will lead to problems of distrust (which can be even more emphasised in disaster areas where different ethnic groups are at war, cf. Scheper et al., 2006). In addition, given that such on call staff typically only remain for a relatively short period (2–4 weeks), in effect the humanitarian aid supply network has to repeatedly re-form and, hence, re-develop the required inter-personal trust with staff turnover depleting institutional memory (Weick, 1988), even in the case of HFNs.

In addition, each organisation involved in the humanitarian aid supply network must form appropriate relationships with other actors, may they be competitors (e.g. NGO and NGO) or even different types of organisations (NGO and military, NGO and government etc.). But do such inter-organisational relationships lie within the spectrum to which the model of swift trust applies? For example, Zolin (2002, p. 4) suggests that “an initial condition for swift trust is that participants perceive that they belong to a team, i.e. that they perceive a shared goal”. Humanitarian organisations indeed share the overall goal of alleviating the suffering of beneficiaries, yet at the same time they also compete (cf. Telford and Cosgrave, 2007) for funding and media attention (Kovács and Spens, 2010). The competition aspect is an unfortunate, but inevitable, outcome of the funding regime in which donors provide the majority of support after a disaster had taken place (Oloruntoba and Gray, 2009). Apart from the fact that this is unquestionably inefficient in the longer term (Tatham and Kovács, 2007), it also leads to a desire on the part of humanitarian organisations to be seen to be delivering aid. The subliminal message being that success breeds success, and that a given humanitarian organisation should be favoured above others in terms of donor funding. Notwithstanding elements of competition, humanitarian logisticians engaged in operations relating to the same disaster can develop a sense of belonging to the same team even though relationships between their organisations may not be formalised.

Nevertheless, at the operational level there seems to be broad agreement over the need to support the beneficiaries, to operate within the humanitarian charter and follow minimum standards

of the Sphere Project which lays down a set of values and behaviours that are designed to guide humanitarian response (Sphere, 2004). In short, whilst humanitarian organisations do see themselves as part of a broad community responding to a disaster, it is argued that a greater measure of inter-personal and inter-organisational trust will improve the efficiency and effectiveness of that response. In this regard, Denning (2006, p. 18) notes: “The more overwhelming the event, the more likely turf-asserting tendencies will occur and interfere with the effectiveness of the network.”, although it is unclear whether any research has been conducted that can substantiate this proposition. On the organisational and inter-organisational level, a lack of risk-sharing, credit- and cost-sharing essentially inhibits collaboration; yet inter-personal trust can still develop in the absence of these mechanisms.

A second key point is, again, the interdependence of the trusting relationships. In essence, there is no one trustor or trustee, but each member of the network engages in a relationship with the other members. What is more, the outcomes of any interchange between the parties will affect each party but, potentially, in different ways. Thus, to the extent that the concept of swift trust incorporates certain antecedents (see Fig. 1) and that these are capable of promotion and/or maintenance of trust, the actions proposed in this paper should apply to all actors in the humanitarian aid supply network.

Thirdly, the level of trust within a relationship is by no means static. Indeed, as Hung et al. (2004) argue, the peripheral route to trust can give rise to the central route in a next stage. Over time, the relatively fragile swift trust can thus develop to the robust habitual form. On the other hand, trust can also decline, and the different routes to trust are not necessarily forming a direct sequence. Furthermore, there is no absolute level of trust at any given time in a relationship, rather, parties may trust each other in relation to one issue, but not another.

Finally, there is good evidence to suggest that, subject to any negative impacts of the perceived success of prior alliances (Gulati, 1995), individual members of a network often act as if trust were in place and this leads to self-fulfilment (Jones and George, 1998). The very act of forming a network may of itself trigger an initial level of trust, where a positive assumption about the trusting behaviour of others becomes the baseline position (Meyerson et al., 1996). However, Coppola et al. (2004) and Ben-Shalom et al. (2005) suggest that this baseline is also affected by the expectations of trust that members import from other settings with which they are familiar. In the HFN of the humanitarian aid supply network similar familiar settings include previous interactions with other organisations and their logisticians in other disasters.

With the above discussion in mind, in the following sections we will revisit the antecedent conditions of swift trust in such HFNs before drawing a number of conclusions for those engaged in humanitarian logistics.

#### 3.1. Third party information

Third party information enables the formation of trust based not on the, as yet, unidentified capabilities of an individual, but on their prior reputation and/or the reputation of their employing organisation. Information about reputation is important to mitigate the risk of unreliability or incompetency of the other party. The role of third parties is important because of their ability to diffuse relevant trust information (Kramer, 1999). Interestingly, even gossip does not necessarily lead to mistrust but can amplify the probability of trusting behaviour (Burt and Knez, 1996). Whilst incomplete and/or skewed accounts may be communicated,

Kramer (1999, p. 577) quotes Uzzi (1997) that third parties are “go-betweens [that can] transfer expectations and opportunities of embedded relationships to newly formed ones”. As for the HFN of humanitarian logisticians in a particular disaster (or, indeed, the fire fighting teams described by Weick, 1993), whilst the very HFN itself does not have a shared history, rather the individuals within it may have carried out similar roles under different circumstances (in different disasters), adding to their reputation in regard to how they behaved and are, thus, expected to behave in the new HFN. In such a case, third parties play a crucial role in substantiating the effectiveness of such individuals and organisations.

Within the existing community of humanitarian logisticians (as with all such communities of shared interest), it is inevitable that third party information will be exchanged and, depending on its content, it may have a positive impact on the development of swift trust. Moreover, databases on humanitarian logisticians on call (that various organisations draw their staff from) can also include such third party information about each individual. There is thus potential for an organisation to provide a repository of individuals’ names, qualifications and experience. Were such a central data-base to be developed and maintained, it could provide useful and neutral third party information to inform the development of HFNs.

More broadly, it is suggested that humanitarian organisations have a responsibility to “advertise” the skills of their employees (or teams of employees) both within the organisation itself and between organisations. The aim here is, obviously, not to develop an elitist mentality, but rather to support the formation of trust by emphasising that individuals are likely to have the appropriate skills in advance of their demonstration of these.

Such a suggestion raises the issue of the competence of a particular organisation to achieve its mandate. As discussed earlier, there is a vast number of relief organisations world-wide with even a relatively small country such as Nicaragua has as many as 350 different NGOs (Bradshaw, 2001). Notwithstanding the assertion by most (if not all) that they adhere to the Sphere standards, informal discussion with those active in the field would indicate that there is a considerable degree of variability in the levels of competence displayed. That such concerns have not been formally documented is unsurprising, but it does raise the question of whether some form of certification of humanitarian organisations should be introduced. From the perspective of this paper, such an approach would inform the development of swift trust on the basis that a particular organisation has been judged competent and, by implications, so too are its staff. On this basis, an assumption of trust can be made.

### 3.2. Dispositional trust

Dispositional trust is another antecedent condition to trust that exists prior to the very meeting of the HFN. This condition refers to the general disposition of an individual to trust other people, in other words, some people are more trusting than others. There are ample differences between individuals’ general predispositions to trust (Fukuyama, 1995; Kramer, 1999; Weber and Hsee, 2000; Zak and Knack, 2001; Hung et al., 2004), even though similar differences in the propensity to trust are unlikely to be exhibited on an organisational level. As trust in HFNs is developed between individuals, each individual member’s predisposition to trust impacts on trust formation in the HFN in the round.

In order to enhance the development of swift trust in the HFN of humanitarian logisticians in a disaster, there is little that can be recommended to overcome the problems of dispositional distrust.

It would, for example, be totally impractical to attempt to select individuals on the basis of their trusting disposition. Perhaps the simplest and most obvious prescription is to ensure that individuals and team leaders are aware of the differences in personality and, indeed, between cultures, so that they can take this aspect into consideration when organisations are forming up and trust is being developed.

### 3.3. Rule

The presence of rules, under which heading one can include processes and procedures, is deemed by Kramer (1999) to be of significance in supporting the development of swift trust. Put simply, the suggestion here is that, by following such rules, individuals are deemed by their peers to be trustworthy (Greenberg et al., 2007). More explicitly, Kramer (1999) suggests that “explicit and tacit understandings regarding transactional norms, interactional routines and exchange practices provide an important basis for inferring that others in the organization are likely to behave in a trustworthy fashion”. In short, the present of rules, and the adherence to them, is a guard against maverick behaviour which has the potential to destabilise an organisation and reduce the level of inter-personal and inter-organisational trust. Indeed, this perspective has considerable resonance with the work of other researchers such as Grey and Garsten (2001) and Maguire et al. (2001) who conceptualise trust as enabling individuals to behave in a predictable way.

However, when it comes to initial the development of swift trust, rule-based behaviour refers to issues such as the normality of the situation and, potentially, the assurance of organisational structures (cf. Hung et al., 2004). But whilst the normality of the situation may, for humanitarian logisticians well be the situation of disaster relief (albeit this is, by definition, a highly fluid and uncertain situation), there is no “one” organisational structure they can be assured of in their HFN. Having said this, the general concept of “structuration”, i.e. the development of common approaches, sets of rules, etc., has clear relevance to HFNs as it would help to ensure that individuals who join the network from different organisations can make the transition with the minimum of effort. In this respect, co-ordinating initiatives such as the Logistics Cluster (the successor to the UN Joint Logistics Centre, UNJLC), and the work of the UK’s Chartered Institute of Logistics and Transport (CILT) in the development of a common “Need Assessment” template are clearly important. Such initiatives, and especially that of the Logistics Cluster, points towards the long term possibility of developing organisational structures that can assure the rule-based development of swift trust in the HFN of humanitarian logisticians in any given disaster.

Rules in the business context can refer to both pricing mechanisms and contracts—leading to the rise of “contractual trust” as a type of trust in the commercial context (cf. Fynes et al., 2005). Humanitarian organisations indeed employ contracts with their global suppliers and logistics service providers, but cannot employ such mechanisms for other members of the humanitarian aid supply network such as other humanitarian organisations, governmental organisations, the military or even suppliers local to the disaster region. Thus, in a post-disaster humanitarian HFN, the fluid nature of the evolving scenario would, unquestionably, make the prior-development of a contract a massive challenge. The alternative approach of attempting to write a contract post-disaster is perceived to be equally challenging as it would doubtless (and, arguably correctly) be viewed by the members of the HFN as a bureaucratic sideshow that detracted individuals from the time-sensitive business of saving lives. Secondly, a typical post-disaster HFN is formed of staff from many countries and, by

implication, cultures and legal systems and it is operating in yet another country (and cultural and legal system), and with the organisation's headquarters almost certainly in yet another country. Furthermore, the staff turnover within the HFN can be very high—for example, secondees drawn from on-call rosters are, typically, only present for some 3–4 weeks before being replaced. Thus questions of contractual jurisdiction are bound to be complex even if individual employment contracts doubtless will specify certain provisions in this regard. In short, using a formal contractual mechanism to provide the rule basis for trust is considered unlikely to be successful. Therefore, in the absence of such an approach, HFNs have to resort to other types of rules. Here, Greenberg et al. (2007) note that rules, processes and procedures need to relate not just to the management of a particular office (i.e. the underpinning bureaucracy of the organisation), but also to inter-personal communication. Thus, it is communication rules individual members of HFNs can target when establishing their network. It is, therefore, not surprising that the UNJLC, as part of its original coordinating mandate, focused to a significant extent on the development of forms and standards of communication among humanitarian organisations in addition to its role of operational coordination in the event of a disaster. Yet, in the humanitarian context, the development of well documented processes and procedures (i.e. “rules”) is counter-cultural. Those working within humanitarian organisations are, understandably, output and outcome focussed; their *raison d'être* is the relief of hardship and suffering of those affected by a disaster and adherence to “bureaucracy” is seen as a diversion from this real objective. On the other hand, when responding to a major disaster, NGOs almost universally are forced to use staff who are not part of their core teams, i.e. those from “on call” rosters and other augmenters. In all probability these additional resources will have had limited experience of working within the particular NGO and, therefore, will have even more limited exposure to that organisation's rules. This results in the potential for inadvertent maverick behaviour with its concomitant negative effect on the development of inter-personal trust. There is a balance to be struck here, as it could be argued that such behaviour in the guise of strong leadership could be valuable in cementing relationships within a team. However, from the perspective of the “swift trust” model there is clear benefit in the advance development and exposition of clear simple and easy to follow rules that will help ensure new comers can fit into the organisation and become effective both speedily and with the minimum of effort.

Arguably, the same situation applies to the inter-organisational scenario. Ideally, the rules followed by different organisations should be broadly similar in order that those who need to co-operate can do so with the minimum effort. Unfortunately, to date there are still innumerable templates in use by different organisations to perform the very same task (for example, that of Needs Assessment, see HELP, 2007), leading to clear inefficiencies. As this example shows, NGOs may have their own organisational rules (including templates) but be reluctant in co-operating with others and thus develop joint rules and procedures. This behaviour can be justified for NGOs working in substantially different areas (e.g. humanitarian organisations providing medical services may need different categories in their needs assessment, and different expertise to perform the assessment from organisations that provide food or shelter), yet it is also evident across organisations in the same sector (or UN “cluster”—such as the shelter cluster etc.). The negative predisposition of humanitarian organisations towards the development of common rules is, in turn, reflected in the behaviour of individuals representing such organisations. Thus, whilst a standardised set of rules would appear to have benefit in terms of the development of trust, this is an area in which progress is likely to be slow.

### 3.4. Category

Further peripheral cues of trust are given by the membership of individuals in social groups or categories. Hung et al. (2004) refer here to organisational categories such as gender or race. Within the context of disaster relief, this is potentially a highly divisive area—indeed, evidence of the negative effects of such categorisation has been noted by Zolin (2002, p. 7) who observed: “difficulties in establishing interpersonal working relationships between [US Military] and [NGOs] due to perceived differences in organizational goals, strongly held negative organizational stereotypes and perceived ideological differences”. Apart from trust judgements based on stereotypes on the basis of gender, ethnicity, religion, race, or age (to name but a few of potential categories), organisational culture also forms a category in itself. For example, Frosdick (1995) suggests that such cultures can be described in terms of their “grid” and their “group” structure. Grid structure refers to the connectedness of organisational entities, with isolated or hierarchically graded entities on the one extreme and networks on the other. Group structure, on the other hand, categorises organisational culture in terms of individualism vs. egalitarianism (at least within the same hierarchical level). As an example, military organisations are categorised as highly hierarchical organisations, though following the principle of egalitarianism on the same levels of hierarchy, whilst NGOs contrast this with prizing individualism. Unsurprisingly, therefore, they represent a clash of cultures. Interestingly, the location of an organisation within such a categorisation must be seen in relative rather than absolute terms. Thus, within the broad humanitarian family, one might anticipate a UN agency being seen as more isolated and hierarchical relative to a NGO that is a network of individuals. This, in turn, helps to explain the potential tension between such organisations within the wider humanitarian aid supply network. Indeed, Frosdick's (1995) categorisation has been used to good effect by Dowty et al. (2006) to help explain not only the cultural dissonance between a number of organisations (e.g. FEMA and the US Coast Guard service) in their response to Hurricane Katrina, but these authors go further by suggesting that the propensity to take risk is link to culture. Thus, not only there is a potential clash between the approaches and *modus operandi* of organisations in different categories but also their approach to the management of risk. In a disaster response scenario, it seems that this aspect might have a particularly negate effect on the building of trust between members of different organisations.

Given that such stereotypes undoubtedly exist, the implication of the swift trust model is that when the trustor and trustee belong (or perceive that they belong) to different categories, this will have a negative impact on the development of trust. To the extent that both are, say, logisticians or both belong to the same humanitarian organisation, this negative impact is more likely to occur in inter- rather than intra-organisational trust situations. The challenge is to develop mechanisms to overcome this issue through advanced dialogue and understanding. Excellent examples of this can be found in the ongoing exchanges between the Irish Defence Forces and Irish NGOs in which the latter present to the former on a regular basis, and the former conduct training and education courses for the latter. It is not just the content of the discussions that is important, but the associated knowledge and understanding of each others' perspectives and concerns that will help to break down potential “category” barriers.

### 3.5. Role

In the context of the formation of swift trust, using roles as the basis for making initial assumptions has the benefit of being

de-personalised. In other words, the trustor can make assumptions about an individual's ability based on the fact that they are fulfilling a particular role rather than through specific knowledge about their competence, motives etc. (Kramer, 1999). A typical example of role-based trust is the positive predisposition of individuals to trust a medical doctor for her/his medical expertise even in their first consultation based simply on the fact that the doctor holds the relevant professional qualifications. Role-based trust can therefore, be seen as "competence trust", as it is based on the confidence that the other partner carries the competence to perform her/his task (cf. Fynes et al., 2005).

In the HFN of humanitarian logisticians, the fact that a particular humanitarian organisation is employing an individual in the role of, say, a logistician leads others to assume that the individual has been judged to have the relevant competencies and capabilities, and can therefore be trusted. For this means of developing trust to be effective, there is a very clear onus on humanitarian organisations to fulfil their side of this notional bargain—in other words only to employ staff who do, indeed, possess the relevant competencies etc. In this context it is understandable why the UK case of Dr Harold Shipman, who is conservatively estimated to have murdered 215 patients, was so horrific. As a doctor, those consulting him made the entirely reasonable prior assumption that he was competent and trustworthy—not least because he was accredited by relevant professional body. With the benefit of hindsight, it was clear that the oversight regime was unacceptably lax.

In the disaster response context, this leads to the prior question of what are the appropriate attributes and competencies required of a humanitarian logistician and it should be noted that this remains an under-researched question (Kovács and Tatham, 2008). Indeed, whilst there have been a number of models developed (e.g. Mangan and Christopher, 2005), the linkage between such proposed competencies and the logistics performance of an organisation has yet to be demonstrated (Tatham and Kovács, 2008). Nevertheless, to the extent that humanitarian organisations are clearly embarking on a series of programmes designed to improve the competence levels of their staff, there is clear potential for swift trust to be based, in part, on the possession by an individual of the relevant qualification. It is therefore suggested that humanitarian organisations should continue to press ahead with their training and certification schemes and that, whenever possible, individuals with the appropriate qualifications should be employed as permanent or on call team members. It is, of course, recognised that there are significant dangers associated with such international certification schemes including ensuring the achievement of a common standards and, indeed, that any examination accurately tests for the existence of the right skills. However, it is argued that such hurdles are not insuperable, and that the balance of benefit lies with pursuing such an approach. Such a scheme might, for example, be based on existing schemes such as those provided by the UK Chartered Institute for Logistics and Transport (CILT) which are delivered in concert with the NGO RedR. In any event, successful anchoring of skills and experience on an internationally recognised framework would provide a valuable underpinning for the antecedent of role within the swift trust model and, hence, support the development of the desired inter-personal trust.

#### 4. Trusting behaviour in humanitarian HFNs

In considering the swift trust model, it is not only important to note the five antecedent conditions that give rise to trust, but also to distinguish between trust, and trusting behaviour. Hung et al. (2004) depict trusting behaviour as mediated by the perceived

risk of potential gains (or losses) of acting on the basis of inter-personal trust (see also Meyerson et al., 1996; Kramer, 1999; Hung et al., 2004; Ben-Shalom et al., 2005). In the humanitarian context, perceived risks can encompass physical danger as well as the loss of reputation as a result of depending on the behaviour of other members of the HFN. In essence, the act of trusting is one in which the trustor is prepared to increase their vulnerability to the actions of others. It follows, therefore, that if level of perceived risk is greater than the level of trust, the individual is less likely to engage in trusting behaviour (Hung et al., 2004).

This aspect of the model is related to various streams of literature on the psychological, physiological and organisational aspects of perception. For example, Laaksonen et al. (2009) argue that rules such as contracts or pricing mechanisms help to codify the level of risk and ensure a mutual perception in a business context. In the absence of contracts and pricing mechanisms, e.g. in the swift trust model, the communication environment takes their place (cf. Hung et al., 2004). The scenario surrounding HFNs precludes lengthy contractual discussions and associated understanding of financial and reputational risk. Rather, an assessment is made by an individual of the impact of trusting his or her colleague but, critically, it is suggested that this is heavily impacted by the effectiveness of the communications environment. The two extremes of such a communication environment might be characterised as a face-to-face office conversation, and a telephone call on a poor line between an operator in the field and his or her headquarters located in another country, away from the various mental stimuli of the operational situation. Put simply, through the ease of communication and the presence of additional non-verbal clues in the former scenario, it will be easier for an individual to determine whether or not to trust their informant than in the latter. Furthermore, the effect of the communications medium in virtual environments operates in both directions and so, from the headquarters perspective, perceived risks are increased due to a reduction in the degree of control individuals from within the headquarters can exert (Jarvenpaa et al., 1998). Other examples for increasing the perceived risks in virtual environments include role ambiguity and role overload (Jarvenpaa et al., 1998) as a result of a lack of face-to-face communication.

The importance of communication is also emphasised by Weick (1993) in his analysis of the Mann Gulch disaster in which 13 US fire fighters lost their lives, where one of key organisational failings was the near absence of communication between the team members and consequential reduction in the level of intra-team coordination. In short, the lack of communication in the early stages of the development of this temporary group heightened its vulnerability to disruption. When stressed by the advancing wild fire, the inter-team ties (which, in part, reflect the level of inter-personal trust) were insufficient to prevent fragmentation of the group and a reversion to self-interest (or perhaps more accurately, self-preservation). This point is equally emphasised by Drabek (1985) whose analysis of emergency response organisations in the United States indicates that cross-agency communication was perceived to be the greatest weakness and the source of most difficulties. In summary, there would appear to be broad support for the proposition that the clarity of the communications environment has an effect on the formation of trust and, by extension, the view of Hung et al. (2004) that computer mediated communications environments increase the perceived risk and, hence, reduce the propensity to convert trust into trusting behaviour.

Once again, in terms of mitigating these problems and difficulties, the key would appear to lie in an understanding of the problem (i.e. the effect of the perception of risk) on the actions of individuals, and the role that the effectiveness of inter-personal communication has to play as an antecedent. Clearly a number of



technological (such as the use of video-conferencing) may help overcome the inherent defects on simple computer-based interaction (e-mails etc.), but there would also appear to be support for attempting to achieve face-to-face communication (e.g. visits to the field by HQ staff) wherever possible as well as ensuring that team members are aware of this facet of the problem through appropriate guidance, training and education.

## 5. Conclusions and further research

The humanitarian aid supply network in any particular disaster relief operation includes a number of logisticians from various organisations and organisational types that are confined to the geographical region of the disaster upon its occurrence. Together, they form a hastily formed network with a common aim, alleviating the suffering of vulnerable people. They show all characteristics of an HFN: (1) their network is established rapidly, (2) they come from different communities, in fact different organisations, countries and cultures, (3) they work together in a shared conversation space, with a need to co-ordinate their activities, (4) in which they plan, commit to, and execute actions, and (5) to fulfil a large, urgent mission. Their ability to work together has far-reaching consequences for their aim and ultimately, for the success or failure of the disaster response.

Trust, both inter-personal and inter-organisational, has been argued to have positive consequences for the success of a relationship—even reducing transaction costs (cf. Ellickson, 1986, Laaksonen et al., 2009). Not surprisingly, supply chain collaboration literature draws on trust as a key success factor for collaboration, though mostly in combination with long-term relationships (Skjøtt-Larsen et al., 2003; Barratt, 2004; Christopher et al., 2006; Fawcett et al., 2008). Such trust is developed over time in each relationship. Time being the essence in HFNs, this paper focused on the aspects of developing trust when a network is formed. Meyerson et al. (1996) suggest the model of swift trust for such initial contacts. The aim of this paper was to further the understanding of such swift trust in HFNs as a means of improving relief operations in rapid onset disasters. In order to do so, each of the antecedents of swift trust (see Hung et al., 2004, and Fig. 1) has been discussed in the humanitarian context.

The swift trust model seems indeed highly applicable to this context, and its consideration leads to a number of important conclusions. It shows that the central and habitual routes to trust that supply network management traditionally considers are important aspects in the collaboration between humanitarian organisations and their global suppliers and logistics service providers, yet other models of trust are in place among the logisticians that carry out the operation in a region. Reconsidering the antecedents of swift trust, it is important to note that third party information about humanitarian organisations, and the individuals they send to the disaster response, are crucial to develop trust in the humanitarian HFN. Information on which individuals have been part of a successful operation can help in the formation of (parts of) inter-organisational teams that can be co-deployed to the same operations. It is in the interest of humanitarian organisations to provide information about the individuals they send to a particular disaster area to other humanitarian organisations in the disaster area, thereby helping to facilitate the individual-individual interaction on the ground even in absence of historical encounters. Yet in light of third party information about humanitarian organisations being an antecedent of trust in the humanitarian HFN, a further strand to such research would be to understand, from the perspective of the humanitarian logistician, how one might identify a successful organisation (i.e. that in which a high level of inter-personal trust exists) from an unsuccessful one. In the case of the latter, not only

would it be instructive to understand the nature of the perceived failings, but also the implications for the beneficiaries. It would be hoped that such an analysis, which reflects the reverse of the obvious line of enquiry, would help to triangulate the practical development of this model.

At the same time, the selection of individuals on the basis of dispositional trust, while important for swift trust in the HFN, is not deemed practical. More important is the development of common rules such as standard operating procedures and common forms, to ensure the inter-operability of logisticians from different humanitarian organisations. Needs assessment templates are a good example of such rules for inter-operability, in particular given the absence of a common organisation in humanitarian HFNs. Rules of communication can be set in co-ordination meetings and by the establishment of a joint website for a particular disaster relief operation—such as the current websites of the Logistics Cluster. The “category” antecedent is usually more an impediment than an enabler to trust. Again, establishing a communication environment that breaks down preconceptions of other individuals and their organisations helps to overcome categorical barriers. Arguably, the most important conclusion can be drawn from the “role” antecedent of swift trust. Considering that there is no clear picture of the “role” of the humanitarian logistician, nor what makes a “good” humanitarian logistician, more research is needed on the skills of humanitarian logisticians. What is more, unlike, e.g. fire fighters, there is currently no common training for humanitarian logisticians of different organisations. Recent joint training efforts in the Logistics Cluster are envisaged to overcome this problem—and may indeed lead to the development of inter-organisational teams that can be deployed together to a particular disaster relief operation. Certifications of humanitarian logisticians are also on the rise, and some educational programmes have been added to this list. These are certainly positive developments, which will be interesting to follow. The potential benefit of such a professionalisation programme, in terms of the saving of life and improvements in the efficiency and effectiveness of the disaster planning and response, is enormous. Whilst it would clearly not be limited to the relatively narrowly bounded issue of swift trust, this does appear to be of considerable importance in the achievement of a successful logistics response to a rapid onset disaster.

## References

- ALNAP, 2008. Cyclone Nargis: lessons for operational agencies. At: <<http://www.alnap.org/publications/pdfs/ALNAPLessonsCycloneNargis.pdf>>, accessed 14 September 2008.
- Bachmann, R., Knights, D., Sydow, J., 2001. Trust and control in organizational relations. *Editorial for Special Edition of Organization Studies* 22 (2).
- Bal, J., Gundry, J., 1999. Virtual teaming in the automotive supply chain. *Team Performance Management* 5 (6), 174–193.
- Barratt, M., 2004. Understanding the meaning of collaboration in the supply chain. *Supply Chain Management: an International Journal* 9 (1), 30–42.
- Beach, R., Webster, M., Campbell, K.M., 2005. An evaluation of partnership development in the construction industry. *International Journal of Project Management* 23 (2005), 611–621.
- Ben-Shalom, U., Lehrer, Z., Ben-Ari, E., 2005. Cohesion during military operations. *Armed Forces and Society* 32 (1), 63–79.
- Bradshaw, S., 2001. Reconstructing roles and relations: women’s participation in reconstruction in post-Mitch Nicaragua. *Gender and Development* 9 (3), 79–87.
- Burt, R., Knez, M., 1996. Trust and third-party gossip. In: Kramer, R.M., Tyler, T.R. (Eds.), *Trust in Organizations: Frontiers of Theory and Research*. Sage Publications, Thousand Oaks, CA, pp. 68–90.
- Christopher, M., Peck, H., Towill, D., 2006. A taxonomy for selecting global supply chain strategies. *International Journal of Logistics Management* 17 (2), 277–287.
- Christopolos, I., 2006. Links between relief, rehabilitation and development in the tsunami response. *Tsunami Evaluation Coalition (TEC)*. At: <[http://www.tsunami-evaluation.org/NR/rdonlyres/01E8DB26-7306-4B30-B6D3-F6272D0ECF3A/0/Irrd\\_final\\_report.pdf](http://www.tsunami-evaluation.org/NR/rdonlyres/01E8DB26-7306-4B30-B6D3-F6272D0ECF3A/0/Irrd_final_report.pdf)>, accessed 3 September 2008.
- Coppola, N.W., Hiltz, S.R., Rotter, N.G., 2004. Building trust in virtual teams. *IEEE Transactions on Professional Communications* 47 (2), 95–104.

- Das, T.K., Teng, B.-S., 2001. Trust, control, and risk in strategic alliances: an integrated framework. *Organization Studies* 22 (2), 251–283.
- Denning, P.J., 2006. Hastily formed networks. *Communications of the ACM* 49 (4), 15–20.
- Dowty, R.A., May, P.J., Beech, C.E., Wallace, W.A., 2006. Responding to chaos: organizational cultures and the Katrina response. Paper presented at the 28th Annual Conference of the Association for Public Policy Analysis and Management (APPAM). Madison, WI, November 4, 2006.
- Drabek, T.T., 1985. Managing the emergency response. *Public Administration Review* 45, 85–92.
- Ellickson, R.C., 1986. Adverse possession and perpetuities law: two dents in the libertarian model of property rights. *Washington University Law Quarterly* 64, 723–738.
- Fawcett, S.E., Magnan, G.M., McCarter, M.W., 2008. Benefits, barriers, and bridges to effective supply chain management. *Supply Chain Management: an International Journal* 13 (1), 35–48.
- Fitzgerald, S.P., 2004. The collaborative capacity framework: from local teams to global alliances. *Advances in Interdisciplinary Studies of Work Teams* 10 (2004), 161–201.
- Frosdick, S., 1995. “Safety cultures” in British stadia and sporting venues: understanding cross-organizational collaboration for managing public safety in British sports grounds. *Disaster Prevention and Management* 4 (4), 13–21.
- Fukuyama, F., 1995. *Trust: The Social Virtues and the Creation of Prosperity*. Free Press, New York.
- Fynes, B., Voss, C., de Búrca, S., 2005. The impact of supply chain relationship quality on quality performance. *International Journal of Production Economics* 96 (20), 339–354.
- Greenberg, P.S., Greenberg, R.H., Antonucci, Y.L., 2007. Creating and sustaining trust in virtual teams. *Business Horizons* 50 (4), 525–533.
- Grey, C., Garsten, C., 2001. Trust, control and post-bureaucracy. *Organization Studies* 22 (2), 229–250.
- Gulati, R., 1995. Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal* 38 (1), 85–112.
- Head, C., 2000. *Sound Doctrine: A Tactical Primer*. Lantern Books, New York.
- HFN (Hastily Formed Networks) Research Group, 2006. HFN defined. At: <<http://www.hfncenter.org/cms/node/117>>, accessed 28 May 2009.
- Hung, Y.-T.C., Dennis, A.R., Robert, L., 2004. Trust in virtual teams: towards an integrative model of trust formation. In: *Proceedings of the 37th Hawaii International Conference on Systems Sciences, Track 1, vol. 1*.
- Jarvenpaa, S.L., Knoll, K., Leidner, D.E., 1998. Is anybody out there? Antecedents of trust in global virtual teams. *Journal of Management Information Systems* 14 (4), 29–64.
- Jones, G.R., George, J.M., 1998. The experience and evolution of trust: implications for cooperation and teamwork. *Academy of Management Review* 23 (3), 531–546.
- Kasper-Fuehrer, E.C., Ashkanasy, N.M., 2001. Communicating trustworthiness and building trust in interorganizational virtual organizations. *Journal of Management* 27 (2001), 235–254.
- Kovács, G., Spens, K., 2008. Humanitarian logistics revisited. In: *Arlbjørn, J.S., Halldórsson, Á., Jahre, M., Spens, K. (Eds.), Northern Lights in Logistics and Supply Chain Management*. CBS Press, Copenhagen, Denmark, pp. 217–232 (Chapter 13).
- Kovács, G., Spens, K.M., 2010. Knowledge sharing in relief supply chains. *International Journal of Networking and Virtual Organisations*, 7 (2/3), forthcoming.
- Knights, D., Noble, F., Vurdubakis, T., Willmott, H., 2001. Chasing shadows: control, virtuality and the production of trust. *Organization Studies* 22 (2), 311–336.
- Kovács, G., Tatham, P.H., 2008. Gender, skills and logistics performance. In: *Proceedings of 13th International Symposium on Logistics (ISL)*, Bansaen, Thailand, 6–8 July 2008.
- Kraljic, P., 1983. Purchasing must become supply chain management. *Harvard Business Review*, September/October.
- Kramer, R.M., Tyler, T.R. (Eds.), 1996. *Trust in Organizations: Frontiers of Theory and Research*. Sage Publications, Thousand Oaks, CA.
- Kramer, R.M., 1999. Trust and distrust in organizations: emerging perspectives, enduring questions. *Annual Review of Psychology* 50, 569–598.
- Kumar, N., 1996. The power of trust in manufacturer-retailer relationships. *Harvard Business Review* 74, 92–106.
- Laaksonen, T., Jarimo, T., Kulmala, H.I., 2009. Cooperative strategies in customer-supplier relationships: The role of interfirm trust. *International Journal of Production Economics* 120 (1), 79–87.
- Lewicki, R.L., McAllister, D.J., Bies, R.J., 1998. Trust and distrust: new relationships and realities. *Academy of Management Review* 23 (3), 438–458.
- Long, D.C., Wood, D.F., 1995. The logistics of famine relief. *Journal of Business Logistics* 16 (1), 213–229.
- Lu, S., Yan, H., 2007. A model for evaluating the applicability of partnering in construction. *International Journal of Project Management* 25 (2007), 164–170.
- Maguire, A., Phillips, N., Hardy, C., 2001. When ‘silence=death’, keep talking: trust, control and the discursive construction of identity in the Canadian HIV/AIDS treatment domain. *Organization Studies* 22 (2), 285–310.
- Majchrzak, A., Jarvenpaa, S.L., Hollingshead, A.B., 2007. Coordinating expertise among emergent groups responding to disasters. *Organization Science* 18 (1), 147–161.
- Mangan, J., Christopher, M., 2005. Management development and the supply chain manager of the future. *International Journal of Logistics Management* 16 (2), 178–191.
- McKnight, D.H., Cummings, L.L., Chervany, N.L., 1998. Initial trust formation in new organizational relationships. *Academy of Management Review* 23 (3), 473–490.
- Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D., Zacharia, Z.G., 2001. Defining supply chain management. *Journal of Business Logistics* 22 (2), 1–25.
- Meyerson, D., Weick, K.E., Kramer, R.M., 1996. Swift trust and temporary groups. In: *Kramer, R.M., Tyler, T.R. (Eds.), Trust in Organizations: Frontiers of Theory and Research*. Sage Publications Inc, Thousand Oaks, CA, pp. 166–195.
- NRCNA (National Research Council of the National Academies), 2006. *Facing Hazards and Disasters: Understanding Human Dimensions*. Committee on Disaster Research in the Social Sciences: Future Challenges and Opportunities, Division of Earth and Life Studies. The National Academies Press, Washington, DC.
- Olorunoba, R., Gray, R., 2006. Humanitarian aid: an agile supply chain?. *Supply Chain Management: an International Journal* 11 (2), 115–120.
- Olorunoba, R., Gray, R., 2009. Customer service in emergency relief chains. *International Journal of Physical Distribution and Logistics Management* 39 (6), 486–505.
- Özdamar, L., Ekinci, E., Küçükyazici, B., 2004. Emergency logistics planning in natural disasters. *Annals of Operations Research* 129 (1–4), 217–245.
- Roberts, A., 2001. NGOs: New Gods Overseas. *The World in 2001*. The Economist Publications, London, p. 73.
- Rousseau, D.M., Sitkin, S.B., Burt, R.S., Camerer, C., 1998. Not so different after all: a cross discipline view of trust. *Academy of Management Review* 23 (3), 393–404.
- Scheper, E., Parakrama, A., Patel, S., 2006. Impact of tsunami response on local and national capacities. *Tsunami Evaluation Coalition (TEC)*, London. At: <[http://www.tsunami-evaluation.org/NR/rdonlyres/8E8FF268-51F0-4367-A797-F031C0B51D21/0/capacities\\_final\\_report.pdf](http://www.tsunami-evaluation.org/NR/rdonlyres/8E8FF268-51F0-4367-A797-F031C0B51D21/0/capacities_final_report.pdf)>, accessed 4 September 2008.
- Skjøtt-Larsen, T., Thernøe, C., Andresen, C., 2003. Supply chain collaboration. Theoretical perspectives and empirical evidence. *International Journal of Physical Distribution and Logistics Management* 33 (6), 531–549.
- Smith, W., Dowell, J., 2000. A case study of co-ordinative decision-making in disaster management. *Ergonomics* 43 (8), 1153–1166.
- Spekman, R.E., Sweeney II, P.J., 2006. RFID: from concept to implementation. *International Journal of Physical Distribution and Logistics Management* 36 (10), 736–754.
- Sphere, 2004. *Humanitarian Charter and Minimum Standards in Disaster Response*. The Sphere Project. At: <<http://www.sphereproject.org/handbook/pages/navbook.htm?param1=0>> accessed 4 September 2008.
- Stoddard, A., 2003. Humanitarian NGOs: challenges and trends. HPG Briefing, 12 July, pp. 1–4. At: <<http://www.odi.org.uk/HPG/papers/hpgbrief12.pdf>> accessed 16 September 2008.
- Tatham, P.H., Kovács, G., 2007. The humanitarian supply network in rapid onset disasters. In: *Halldórsson, Á., Stefánsson, G. (Eds.), Proceedings of the 19th Annual Conference for Nordic Researchers in Logistics, NOFOMA 2007*, Reykjavík, Iceland, pp. 1059–1074.
- Tatham, P.H., Spens, K., 2008. The developing humanitarian logistics knowledge management system—a proposed taxonomy. In: *Proceedings of POMS 2008*, San Diego, 9–12 May.
- Tatham, P.H., Kovács, G., 2008. Logistics skills and performance. In: *Proceedings of the Logistics Research Network (LRN) 2008*, Liverpool, 10–12 September.
- Telford, J., Cosgrave, J., 2007. The international humanitarian system and the 2004 Indian Ocean earthquake and tsunami. *Disasters* 31 (1), 1–28.
- Thomas, A., 2003. Why logistics?. *Forced Migration Review* 18, 4.
- Uhr, C., Ekman, O., 2008. Trust among decision makers and its consequences to emergency response operations. *Journal of Emergency Management* 6 (3), 21–37.
- Uzzi, B., 1997. Social structure and competition in interfirm networks: the paradox of embeddedness. *Administrative Science Quarterly* 42 (1), 35–67.
- UNJLC (United Nations Joint Logistics Centre), 2008. *Logistics Cluster Myanmar: Cyclone Nargis Emergency Response 10 May–10 August 2008, End of Mission Report*. At: <<http://www.logcluster.org/logistics-cluster/meeting/global-logis-tics-cluster-meeting-3-4-octobre-2008>> accessed 20 October 2008.
- Völz, C., 2005. Humanitarian coordination in Indonesia: an NGO viewpoint. *Forced Migration Review, Special Issue*, July, pp. 26–27.
- van Wassenhove, L.N., 2006. Humanitarian aid logistics: supply chain management in high gear. *Journal of the Operational Research Society* 57 (5), 475–589.
- Weber, E.U., Hsee, C.K., 2000. Culture and individual judgement and decision making. *Applied Psychology: An International Review* 49 (1), 32–61.
- Weick, K.E., 1988. Enacted sense making in crisis situations. *Journal of Management Studies* 25 (4), 305–317.
- Weick, K.E., 1993. The collapse of sense making in organizations: the Mann Gulch disaster. *Administrative Science Quarterly* 38 (4), 628–652.
- Williams, Z., Lueg, J.E., LeMay, S.A., 2008. Supply chain security: an overview and research agenda. *International Journal of Logistics Management* 19 (2), 254–281.
- Yeung, J.H.Y., Selen, W., Zhang, M., Huo, B., 2009. The effects of trust and coercive power on supplier integration. *International Journal of Production Economics* 120 (1), 66–78.
- Zak, P.J., Knack, A., 2001. Trust and growth. *The Economic Journal* 111 (April), 295–321.
- Zaheer, A., McEvily, B., Perrone, V., 1998. The strategic value of buyer-supplier relationships. *International Journal of Purchasing and Materials Management* 34 (3), 20–26.
- Zolin, R., 2002. Swift trust in hastily formed networks. *The Hastily Formed Networks Research Group*. At: <<http://www.hfncenter.org/cms/files/swiftrus-tinHFN10-03-02.pdf>>, accessed 4 September 2008.

### Further Reading

- Kramer, R.M., Cook, K.S. (Eds.), 2007. *Trust and Distrust in Organizations: Dilemmas and Approaches*. Sage Publications, Thousand Oaks, CA.
- Mohr, J., Spekman, R., 1994. Characteristics of partnership success: partnership attributes, communication behaviour, and conflict resolution techniques. *Strategic Management Journal* 15 (2), 135–152.
- The Hastily Formed Network Research Group, 2007. HFN defined. At: <<http://www.hfncenter.org/cms/node/117>>, accessed 3 December 2008.