HPG Working Paper

Network humanitarianism

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1 Introduction

We are all aware of how much the world has changed since the advent of the Internet, and most of us have experienced that singular moment of recognition when we suddenly realise that the assumptions that we previously relied on in our personal and professional lives no longer hold. For me that moment was 26 July 2007, when I read an article in *The Economist* entitled 'Flood, famine and mobile phones'. The article opened with a startling message from a refugee:

My name is Mohammed Sokor, writing to you from Dagahaley refugee camp in Dadaab. Dear Sir, there is an alarming issue here. People are given too few kilograms of food. You must help (The Economist, 2007).

What made this message startling was not its content, but the fact that it had been sent via SMS directly to the mobile phones of two UN officials, whose numbers Sokor had found by searching the web at an Internet cafe in Dagahaley. At that time I'd been working on technology projects in the humanitarian sector for about ten years, and I thought I understood the possibilities of these new tools. Yet when I read that article, I realised that something was happening that was going to change, not just humanitarian action, but the fundamental idea of humanitarianism.

In 2013, six years after Sokor sent his text message, an estimated 6.5 trillion text messages were sent. This was also the year that messaging apps overtook text messages in volume, and by 2017 a popular app such as WeChat could expect to process 38 billion messages a day. These apps were being used by over 5bn unique mobile phone subscribers – around two-thirds of the world's population – a figure forecast to rise to 5.7bn by 2020, with nearly 75% of those connections having mobile broadband access.¹ This is communication at a scale, density and speed that we have never seen before, and it is changing everything.

Building on earlier work on the impact of new information and communication technologies on society, the sociologist Manuel Castells has written extensively about the rise of the Network Society, in which 'the Internet is the technological basis for the organizational form of the Information Age: the network' (Castells, 2001). In this thesis, networked technologies drive a structural transformation of global society, away from the assumptions of the industrial era and towards the patterns of the information age, a transformation in which networks emerge as a significant (if not the predominant) form of collective action.

The Economist never reported if Sokor received a reply, and at the time it was clear that the individual capacity to send text messages would not by itself shift power in the system. However, for some of us his text was a sign that a new mode of networked humanitarian action would inevitably emerge. This paper refers to that mode as Network Humanitarianism, and attempts to describe its key characteristics, illustrated by real-life examples. Network Humanitarianism is the future of humanitarianism, but not necessarily the future of the humanitarian community; this paper is a contribution to the emerging discussion about what that means.

Sources: http://www.analysysmason.com/About-Us/News/ Insight/OTT-messaging-volumes-Jan2014-RDMV0/; http://www.businessinsider.com/tencent-wechat-q3earnings-2017-11; GSMA (2017a).

2 The nature of the humanitarian system

It is easy to become entangled in complicated discussions about what exactly constitutes the humanitarian community, but for the purposes of this paper the 'humanitarian community' is simply the core group of institutions that refer to themselves using that term. This includes key institutional donors, UN agencies, the Red Cross and Red Crescent movement and national and international NGOs.

Not included in this definition are the private sector, military actors or civil society groups, even though these latter organisations may partner with humanitarian organisations, and sometimes support or initiate relief work themselves. Yet civil society groups are frequently the first to respond to an emergency, long before the humanitarian community arrives; military actors are technically humanitarian actors, since they are the main subject of international humanitarian law; and the private sector has always been critical to the logistics of humanitarian action.

The explanation for this given by the humanitarian community rests on the belief that the difference between the two groups is not the type of work that they do, but the principles that underpin that work: 'to be classified as humanitarian, aid should be consistent with the humanitarian principles of humanity, impartiality, neutrality and independence' (OECD, 2007). Any actor whose work is not consistent with those principles – however well-intentioned – is not a humanitarian actor, while any actor whose work is consistent with them – however incompetent – is considered a humanitarian actor.

This is of course not an accurate account of humanitarianism. The humanitarian identity is a tribal one – self-identification as an individual and acceptance by the collective make you a member of that community, and adherence to these principles is not its defining characteristic. There are divisions within the community, such as the distinction between Dunanist and Wilsonian traditions; multiple humanitarianisms, some coming from other traditions, not all of which claim to adhere to these principles;² and a range of alternative channels for life-saving assistance, such as remittances from diaspora communities, which the humanitarian community fails to consider (Donini, 2010). As a result of these blind spots, the community is ill-equipped to identify, let alone respond to, potential disruption emerging from outside its (admittedly contested) boundaries.

This does not mean that the humanitarian community is complacent; on the contrary, there is a long-running sense that humanitarianism is in crisis. In a footnote Barnett (2011) lists 18 publications discussing this crisis, and that list of publications has only grown longer since. Such discussions increasingly focus not on the challenges of the present, but of the future; a number of reports explore a range of 'megatrends' facing the world, usually including topics such as climate change, demographic transition, increasing inequality and the weakening of the nation-state. Technological progress is always discussed, but usually in terms of how technology might affect the operational environment of humanitarian action, rather than how it might render the humanitarian community itself obsolete.

The humanitarian community does not stand apart from the world, but is a system interacting with many other systems at global and local levels. Despite this, we often refer to the humanitarian system without really thinking through what the word system implies: 'a set of things – people, cells, molecules, or whatever – interconnected in such a way that they produce their own pattern of behavior over time' (Meadows, 2008). The critical insight is that it is impossible to understand how a system works without recognising the relationships between the structure of the system and its behaviour.

We therefore need to define the current structure of the humanitarian system before we can understand why

² HPG's project on the 'Global History of Humanitarian Action' has published a series of reports describing a range of these non-Western traditions. See https://www.odi.org/projects/2547global-history-modern-humanitarian-action-moving-forward-hpg.

Network Humanitarianism is different. Coase (1937) was the first to describe the nature of organisations in terms of governance, rather than in terms of production; his distinction between the two forms of hierarchy or market was expanded by Powell (1990) to include a third, the network. The trichotomy of hierarchies, markets and networks is of limited use in describing organisational structures, but it is extremely useful in understanding how modes of governance differ (Podolny and Page, 1998).

2.1 Hierarchy

While the structure of an organisation may change, its underlying governance may remain the same. This enables us to see that, while the humanitarian system might be described at least partly as a network (or, more accurately, a network of networks) in structural terms, the governance mechanisms of humanitarian organisations are clearly (if not explicitly) rooted in assumptions of hierarchy common to the historical period in which modern humanitarianism emerged – a world of 'international governance mechanisms, specialised agencies ... [and] legal framework[s]' (Davey, 2013).

Hierarchy is usually accompanied by bureaucracy, most obviously in UN agencies, but also by 'the assumption of a closed and bounded system with adequate control over the resources it needs to do its work' (Kantor, 1991). International NGOs share this latter assumption, possessing less bureaucratic but similarly hierarchical structures, although processes of 'organisational delusion' may prevent them from recognising this (Walkup, 1997). From an internal perspective, the humanitarian community may appear very diverse (Collinson, 2016); Médecins Sans Frontières (MSF) does not look much like the World Health Organisation. In terms of their fundamental structures, however, they are the same type of organisation.

Since the humanitarian system itself lacks a central authority, how can it be considered a hierarchy? Once again, we must differentiate between the structure of the system and its governance. Anyone who has worked in the sector recognises that there is a hierarchy governed, not by direct authority but by political influence and resource mobilisation through a chain of funding intermediaries (High-Level Panel on Humanitarian Financing, 2016), with a clear hierarchy between:

- Key institutional donors and smaller institutional donors, with 61% of humanitarian assistance provided by governments coming from five sources in 2014 (GHA, 2015).
- Multilateral organisations and other channels, with 92% of formal humanitarian funding going through UN agencies, international NGOs and the Red Cross/Red Crescent in 2015 (Development Initiatives, 2017).
- UN agencies and smaller international organisations, with 48% of this government funding channelled through six UN agencies in 2013 (GHA, 2015).
- International and national/local NGOs, with the latter receiving 1.6% of the total funding given directly to NGOs between 2009 and 2013 (GHA, 2014).



Figure 1: Hierarchy, Market, Network

Source: https://databigandsmall.com/2016/04/07/hierarchy-market-or-network-the-disruptive-world-of-the-digital-platform/

- International and national staff, in what Fassin (2012) calls 'hierarchies of humanity'.
- And, most clearly, between organisations and beneficiaries.

The number of international NGOs which raise sufficient funds from the public so that they can avoid institutional funding is negligible, and those that do survive on fundraising from the public, such as MSF, are outliers rather than a meaningful alternative to this hierarchy. The priorities of donor governments are therefore the priorities of the humanitarian system overall, setting incentives that substantially (although not exclusively) shape the behaviour of humanitarian organisations, regardless of whether they are in direct receipt of funding from a specific government. Furthermore, since 'the personal experience of individuals is closely bound up with larger-scale social structure' (Granovetter, 1973), individuals instinctively understand themselves to be in a hierarchy – and act accordingly.

2.2 Market

One of the reasons why some do not view the humanitarian system as a hierarchy is because the incentive structures put in place by donors have embedded a quasi-market structure within that hierarchy (Krause, 2014), in which implementing organisations compete for market share (Smillie and Minear, 2003). The extension of market mechanisms into an endeavour that historically was not seen as a marketplace is of course the key characteristic of the neoliberal economics that has shaped the global economy - and consequently the humanitarian industry - since the end of the Cold War. Rather than leading to greater efficiency and effectiveness, however, this 'marketisation' frequently creates incentives that produce 'dysfunctional organizational behaviour [as] a rational response to systematic and predictable institutional pressures' (Cooley and Ron, 2002).

This is the source of many of the tensions within the sector: donors focus on value for money rather than on humanitarian principles; humanitarian organisations pursue size of operations rather than depth of relations; aid workers attempt to realise their philanthropic motivations in corporate structures; and aid recipients are treated as consumers rather than rights-bearers (Fiori et al., 2016). The assumption that the private sector should be more involved in humanitarian response can also be seen as a result of the assumptions of neoliberalism: how better to succeed in this marketplace than to partner with organisations that have already succeeded in another marketplace?

Regardless of whether that underlying assumption is correct – and the private sector clearly has an important role to play in response and reconstruction - the logic of institutional isomorphism through which organisations 'behave similarly to other organizations, internalizing the values, goals, and methods of their institutional environment' (Cooley and Ron, 2002) has meant that the humanitarian community - and particularly the largest implementing organisations - has become increasingly corporate, particularly through mechanisms of external branding (Quelch and Laidler-Kylander, 2005) and internal professionalisation (Walker and Russ, 2011). This is not in itself a bad thing, but it does raise the risk that, 'by creating large-scale administration or by copying the multinationals, [the humanitarian sector] will come to identify itself through its structure rather than its humanitarian mission' (Bernard, 2011).

This isomorphism can also be seen in the way in which 'the pursuit of the good project develops a logic of its own that shapes the allocation of resources and the kind of activities we see independently of external interests but also relatively independently of beneficiaries' needs and preferences' (Krause, 2014). Control over the flow of resources is once again key: Carbonnier (2015) points out that the growth in the humanitarian marketplace is mainly the result of the humanitarian community being used as a foreign policy instrument. As a result, humanitarian organisations are often accused of being unfit for purpose, where misaligned incentives mean that 'saving lives now becomes an operational choice and not a moral imperative' (Stoianova, 2017). Moreover, the assumptions of the market have been so widely accepted that the prevailing wisdom is that, if only the humanitarian community was adequately funded, it would be able to deliver the necessary services, i.e. supply would rise to meet demand. Yet this is a market where demand is not correlated with need; even in situations in which there is adequate funding, coverage and quality are still inadequate (Healy and Tiller, 2014).

This is the hybrid structure in which the humanitarian community presently operates, combining the worst of both hierarchy and market (Seybolt, 2009). For convenience, we shall refer to this as Market Humanitarianism, in contrast to the subject of this paper: Network Humanitarianism.

2.3 Network

The network is 'any collection of actors that pursue repeated, enduring exchange relations with one another and, at the same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange' (Podolny and Page, 1998). The word 'network' is sometimes used in a more colloquial way to describe the humanitarian system itself (ALNAP, 2015), but just because the humanitarian system contains networks does not mean that the humanitarian system itself is a network; even if it has developed network characteristics, it is not and is unlikely to become a network in the technical sense (Seybolt, 2009).

While the humanitarian system does contain many networks (Collinson, 2011), this colloquial use of the term leads to clearly hierarchical organisations being sometimes described as networks (Ramalingam, 2009), and to service delivery organisations adopting a 'network-esque' way of working (Hearn and Mendizabal, 2011) as a means to distinguish themselves in the quasi-market. This is a failure to distinguish between *networks* – which emerge as a result of increasingly formalised links between organisations and network structures, which 'may require separate actions on the part of the individual members, but the participants are transformed into a new whole' (Keast et al., 2004). When this paper refers to Network Humanitarianism, it is referring to humanitarianism carried out through network structures.

Despite this confusion, the value of networks has clearly been recognised: they 'bring multiple points of view of the situation, enabling it to be better understood ... include elements that are closer to the situation, and so able to respond to changes more rapidly. And they will often create multiple responses to a situation, some of which will fail, and some of which will be successful' (Knox-Clarke, 2017). While this captures the added value that network approaches can bring, especially in fast-changing and unpredictable situations, treating networks purely in terms of their added value to existing approaches overlooks the transformative nature of the Network Society. The 2013 OCHA publication Humanitarianism in the Network Age identified three forms of adaptation that would enable humanitarian organisations take advantage of the opportunities of the network age: adapting to work with new data sources, new partners and new techniques (OCHA,

2013). But subsequent policy discussion has still tended to focus more on adopting instrumental technologies than changing foundational structures.

The 2015 *Disaster 2.0* report took the 2010 Haiti earthquake as a historical inflection point 'when the level of access to mobile and online communication enabled ... thousands of citizens around the world [to collaborate] in volunteer and technical communities (V&TCs) to help make sense of a large-scale calamity and give voice to an affected population' (UN Foundation, 2015). Yet the report's conclusion revealed its fundamental conservatism: the result of this revolution would be that the humanitarian community would improve its access to information, and subsequently make faster, better decisions. Once more the focus was on bureaucratic efficiencies in the system (particularly how it could work with V&TCs more effectively), rather than the potential for transformation of that system.

The 2017 publication *United Networks* got closer to the mark by asking how the UN can adapt its methods to the Network Age without compromising its values, but still focused on how technology could 'increase UN effectiveness and efficiency, build public trust, mobilise opinion and action, and weaponise compassion' (Fletcher, 2017). These are all valid questions, but while the document pointed out that the UN can build networks that might compensate for institutional failure, it failed to ask whether those institutions were failing at least partly because of the impact of the Network Society – and whether the UN itself might be made irrelevant by that impact.

Humanitarian reform rests on the assumption that the survival of the humanitarian community is what we are aiming for, but our discussion should not be about how to ensure the survival of specific institutions. If institutions are 'radical ideas cast in concrete' (Polak, 2010), and those institutions are no longer fit for purpose, then our challenge is to release the radical idea of humanitarianism from its institutions and to ensure its survival in the new institutions of the Network Society. Since the Network Society has been enabled by networked technologies, there is a tendency to focus too much on those technologies; but Network Humanitarianism is not about technologies, but about the new types of institutions, relationships and behaviours made possible by that technology. The next section explores what that looks like in practice, drawing on real-life examples and describing potential implications for the humanitarian system.

3 Describing Network Humanitarianism

Any description of Network Humanitarianism must start by addressing a topic that the humanitarian community generally avoids: power. In the context of this paper, power can be defined as the capacity to exercise individual or organisational will despite resistance (Weber, 1921), and this power enables resources distributed in a set of actors to be transformed into a network of influence (Burt, 1977). The exercise of power in a network need not be coercive or authoritative (as power was traditionally understood to operate in a hierarchy), but can instead be achieved 'not from an act of collective decision-making, but through the accumulation of decentralized, individual decisions' (Grewal, 2008).

In Market Humanitarianism, power operates primarily (but not exclusively) in a hierarchy in which resources, in the form of finance, flow from the donor downwards. In Network Humanitarianism power circulates between nodes, in the form of information. This is of course a simplification – power in the humanitarian community is considerably more complicated – but it serves to highlight the difference between the two models. Networked technologies are changing the types of resources that are important and changing the way in which those resources flow, which will in turn affect power relationships within the sector.

This does not mean that Network Humanitarianism will solve all the problems associated with inequalities of power within the community; power can still be distributed unequally within networks (Galloway and Thacker, 2007), but incumbent humanitarian actors are likely to lose power to other actors that work more effectively in that networked environment. In this section we will examine what this might mean in practice. Each of its five sub-sections begins with a quote (given in italics) describing one of the specific changes which Seybolt (2009) proposes we should expect if the humanitarian system were to develop into a true network.

Some of these changes have begun within the humanitarian community, and the paper will give

examples of how parts of that community are moving towards more active engagement with network approaches. But even those working on these projects are likely to agree that progress so far has been piecemeal, and that policy lags far behind practice. Taking each of these points in turn, however, we will see that this form of humanitarianism is mainly developing at the periphery of or completely outside the humanitarian community.

3.1 Modular not mammoth

The structure should become more differentiated. Specifically, similar organizations, such as NGOs, should develop specialized expertise in one or two functional areas, such as nutrition or housing. Such specialization would reduce domain overlap and encourage interdependence.

During the 2015 onset of the Mediterranean refugee crisis, the absence of effective interventions by either national governments or the humanitarian community left space for new actors to move into. As usual, local communities were the first to respond, but they were quickly joined by at least 200 volunteer groups across Europe, most of which were formed during 2015 or early 2016 (Borton, 2016). The humanitarian community began to arrive in the autumn of 2015, and '[f]or the established groups already working in Greece, the sudden influx [of international NGOs] was both welcome and destabilizing' as INGOs poached local staff with higher salaries (Howden and Fotiadis, 2017). According to one volunteer, 'Seeing the agencies stand around, still waiting for the solution to yesterday's problem to be approved, while a bunch of young people were working together, moving mountains with less funding ... it's what made me realise direct democracy can work' (Pope-Wiedemann, 2016).

It was not direct democracy but Network Humanitarianism that appeared during the European refugee crisis: more agile than traditional humanitarian actors, and relying on networked technologies such as social media and messaging apps. Multinational groups (such as the WorldWide Tribe) and national groups (such as Refugee Aid Serbia and Train of Hope Vienna) are potentially great assets to humanitarian response, but only if incumbent humanitarian organisations develop the capacity to engage with them. While the non-hierarchical nature of these new groups can make coordination problematic, particularly across borders, specific sites such as the reception centres established in Vienna (Train of Hope Vienna) or Belgrade (Refugee Aid Serbia) show that a network of multiple organisations can successfully provide a range of services in a single location without traditional funding or coordination - what we might term a modular approach.

Modules are small, specialised units that can be combined in different ways to meet the specific requirements of a situation in a temporary network - of 'small pieces, loosely joined'.³ Some parts of the humanitarian community, such as the UN Disaster Assessment and Coordination (UNDAC) teams, do operate in this way, but they are seldom looked at as models; a 2011 review identified UNDAC's approach as having unique utility, but also noted that its role was poorly understood even within its host organisation (Groupe URD, 2011). The H2H ('Humanitarian to Humanitarian') group of smaller, more agile organisations providing services such as joint assessments, geographic information systems and translation offers a glimpse of how the humanitarian community could embrace networked ways of working by differentiating themselves on the basis of their specific expertise.

The incentives in Market Humanitarianism work against modular approaches; donors prefer to fund a small number of large organisations ('mammoths') rather than a large number of small ones ('modules'), since transaction costs are lower. The current funding environment is likely to create more mammoths; one political economy analysis of humanitarian reform concluded that current reform measures would 'require working with fewer organisations (i.e., larger organisations or consortia)' (Steets et al., 2016). Under Market Humanitarianism, furthermore, this small number of mammoths control the flow of resources, and that financial control ensures political dominance (ODI, 2016). However, maintaining that dominance requires these organisations to continually maximise those resources, which translates into increasing the size of the organisation. As a result, while the major humanitarian actors started out small, and their goals never explicitly included growth, they have nevertheless grown into mammoths. Such economies of scale make sense in the logic of Market Humanitarianism: mammoths can mobilise large amounts of resources in order to achieve scale, making it possible to respond to the mega-crises that are the most visible face of humanitarian response, which in turn reinforces their legitimacy, which in turn brings them more resources.

Mammoth organisations therefore tend to fight against full participation in a networked way of working, since it does not bring in the revenue required to sustain or expand the organisation (Edwards, 2016). This creates problems for individual staff, since working inside a mammoth does not require developing the skills needed for working in a network, such as collaborating, improvising and leading a social network, and most staff consequently find it difficult to work in a network (Denning, 2006). Given the rapidly changing environments in which humanitarian organisations work, combined with the advent of the Network Society, modular approaches are more likely to appear – and perhaps more likely to succeed - but this will pose a huge challenge for the humanitarian community.

3.2 Distributed not decentralised

The structure should become more connected and less centralized. The number of communication links between organisations should increase, as should the amount of information communicated.

During the Arab Spring, international attention focused on the role of social media in organising protests such as those in Tahrir Square in Cairo. But social media was also being used for a form of coordination more familiar to humanitarian organisations. Four Egyptians began using a Twitter account called @TahrirSupplies, stating simply 'We have created this account to deliver the needs of the

³ Weinberger (2002) describes how the Web reconfigures traditional models of economic organisation, pointing out that 'We are the true "small pieces" of the Web, and we are loosely joining ourselves in ways that we're still inventing'.

Figure 2: Network models



Source: Baran, 1964

#Tahrir field hospital to the world'. The academic Zeynep Tufekci described what happened next:

Within a few days, an orderly and transparent system had solved a messy logistical problem through the efforts of four people. This ad hoc centralization of coordination also facilitated a significant increase in the scale of resources that the protesters could obtain. The donated supplies they collected were not limited to small items like bandages but included other large medical equipment, even general anesthesia devices. Increases in eye injuries – often caused by police shooting tear-gas canisters at protesters' faces and eyes – prompted a need for special surgical equipment that cost tens of thousands of dollars. @TahrirSupplies made an appeal and collected over \$40,000 to pay for two machines in under five hours (Tufkeci, 2017).

@TahrirSupplies clearly represents an alternative way of coordinating humanitarian assistance that would not have been possible without the Internet and associated technologies: a distributed network that was more flexible, more resilient and more responsive than the humanitarian community. It is useful to think of how this approach fits into the typology of network models developed by Paul Baran: centralised, decentralised and distributed (Baran, 1964). Although Baran was writing about communications networks, and these models are ideal forms rather than existing examples, they are a useful way to think about networks.

To the extent that the humanitarian system is a network in structural (rather than governance) terms, it began as a centralised network, relying on central planning and coordination built on a hierarchy of access. The central node holds power – for example, in places such as Geneva, New York and London – and peripheral nodes must route resources (including information) through the centre, which reinforces that power. With earlier communication technologies, links between central and peripheral nodes were 'thin' because communication was costly: calls between field offices and headquarters were regular but relatively light, fax machines kept written communication short and so on.

With the advent of the Internet the humanitarian sector was able to move towards a more decentralised network, in which regional and national offices took on more responsibilities. Yet the language of decentralisation obscures the fact that this version of decentralisation does little to affect power relations within the community. The same communication technologies that enabled decentralisation also enabled more central nodes (global and regional headquarters) to increase the 'thickness' of their links with peripheral offices. This is reflected in an increase in the frequency and density of information flow in both directions by propagating more policies and requiring more reporting – thus enabling more control over those offices.

The post-WHS localisation agenda is largely based on the assumption that the main offices of international organisations will remain the dominant nodes in a decentralised network, but this is an incomplete picture of Network Humanitarianism. While finance remains an important resource, in a network information is at least as important as a source of power, and initiatives such as @TahrirSupplies illustrate what aid looks like when it is based on the organising principles of a network rather than a hierarchy.

In the Network Society it becomes easier to create new channels through which information can flow, followed by new institutions that can capture those flows. Network technologies reduce the transaction costs of managing many connections, making it feasible to stage more targeted interventions at smaller scale and greater speed. New technologies such as blockchain - the technology which underlies Bitcoin and other cryptocurrencies - create the potential for distributed networks with no central authority, in which power rests with nodes which have more connections or are capable of channelling more information than others. Scale is achieved not by increasing the size of any given node, but by adding nodes to the network; each node added increases the number of ties, and increases the resilience of the entire network. Network Humanitarianism will disrupt the humanitarian community unless the latter can respond to these new actors by entering into network relationships on their terms - which of course means giving up some of their own power.

3.3 Collaboration not communication

The processes of interaction at the administrative level should increasingly involve joint planning and adaptive responses to perceived outputs.

After the Fukushima Daiichi nuclear disaster in 2011, a network of volunteers began to measure and map

radiation levels. The network founders crowdfunded the development of a kit to measure radiation levels, and the network has since built the largest open dataset of background radiation measurements, with 65 million readings. Safecast eventually became a formal international organisation with a wider interest in monitoring a range of environmental indicators – it recently launched a new programme to measure air quality – but its core activity is still volunteer-driven (Beser, 2016). As mobile technology becomes more available and accessible, we could easily imagine this type of monitoring being extended to water quality in wells, for example.

Different organisational forms enable different types of production, and the Network Society specifically enables this type of commons-based peer production, characterised by 'decentralized individual action – specifically, new and important cooperative and coordinated action carried out through radically distributed, nonmarket mechanisms that do not depend on proprietary strategies' (Benkler, 2006). This type of production is associated primarily with producing information, with Wikipedia being the canonical example (Benkler, 2002), which might seem to limit its application to humanitarian action – yet as far back as 2005, information was being recognised as a form of disaster response (Niskala, 2005).

As more aspects of the economy become digital, information becomes more than just a question of communication, but instead an issue of collaboration around peer production. This process has only just begun in the humanitarian sector, but it is growing rapidly; the increasing use of cash transfers should not be seen as merely a more effective way of delivering assistance, but as the first wave of the digitisation of aid. Cash transfers were not previously part of the humanitarian toolkit not simply because of ideological opposition or lack of innovation (although both played roles), but because the networked technology was not available to manage cash transfers efficiently and securely.

The next wave of digitisation is likely to combine mobile communications technology with new means of production, such as 3D printing. In the field of health, for example, telemedicine has incorporated the smartphone as a medical diagnostic instrument via application software and additional sensors (Murgia, 2017). Automation has expanded access, while increased local capability to carry out digital design and manufacture of basic medical equipment will create more opportunities for communities to work as genuine partners, taking ownership of the services that they require (James and James, 2016).

The defining capability for self-organised communities will be the ability to take advantage of networked models of collaboration (Smith and Reilly, 2013) – although access to networked technology will remain vital. During the Rohingya refugee crisis, one assessment found that 81% never used the Internet, and only 58% had access to mobile phones, with only 19% of those with a phone able to access the Internet through it. One result was that 77% reported that they did not have enough information to make decisions. Technology was not the only barrier, since 73% of the affected population were illiterate and 62% were unable to speak to aid providers (Internews, 2017) – but Network Humanitarianism offers solutions to this problem that were not available before.

In the case of the language barrier, Translators without Borders (one of the H2H group of organisations mentioned earlier) has pioneered the use of distributed networks of community translators to translate crisis messaging into local languages, combined with an automated translation engine to improve the speed and efficiency of translation (Tanner and Obrecht, 2015). The World Food Programme (WFP) and other agencies are experimenting with chatbots (computer programmes that interact through phones using voice or text); these cut the costs of communication at scale, create more communication options in low-literacy settings and provide more frequent and direct contact with aid organisations (Bauer, Casarin and Clough, 2017).

Humanitarian agencies have been slow to prioritise the reliable delivery of useful information to disasteraffected communities, but those communities themselves have increasing access to information. They are able to get more information about humanitarian organisations and their activities, and are also able to present their own narratives. As those narratives become more visible, primarily via social media, the discrepancy with the official narratives provided by the humanitarian community becomes more obvious. This has contributed to the sense of crisis in the humanitarian community, but Network Humanitarianism offers the opportunity to use technology to fundamentally reshape relationships with aid recipients.

3.4 Platform not pedestal

Decision-making authority should devolve to the operational level (that is, less hierarchical governance).

Localisation is recognised in the principal documents of the humanitarian community (Wall and Hedlund, 2016), but the localisation agenda has been boosted by the World Humanitarian Summit. The Grand Bargain struck at the WHS discussed national and local responders, and included commitments to:

- 'Understand better and work to remove or reduce barriers that prevent organisations and donors from partnering with local and national responders in order to lessen their administrative burden'; and
- 'Achieve by 2020 a global, aggregated target of at least 25% of humanitarian funding to local and national responders as directly as possible to improve outcomes for affected people and reduce transactional costs.'

Localisation will continue to enjoy limited success precisely because of that second point: it disrupts the flow of resources on which our mammoth organisations depend, and so the incentive structures of Market Humanitarianism actively work against this approach.⁴ Localisation is broadly defined as 'when a local humanitarian responder is involved in the entire programme cycle: needs assessments, programme design and delivery and final review and evaluation' (Fabre, 2017): i.e., local responders will be allowed to participate in the processes of the humanitarian community, and their role defined in terms of their position in the hierarchy of Market Humanitarianism.

If the humanitarian community is serious about localisation, however, then it must recognise the ways in which networked communities themselves respond. Network Humanitarianism is much more suited to the more radical approach of subsidiarity, 'which aims to empower the individual by ensuring that decisions are made, and problems are resolved, closest to where they arise. In turn, decision-making and action taken by those directly affected allows for problems to be resolved more quickly, and more accurately than if a higher-level decision maker who is distanced from the problem, were to become

⁴ There are a range of other obstacles which hinder localisation, described in Patel and Van Brabant (2017).

involved' (Evans and Zimmerman, 2014). It is widely accepted that the first responders in any emergency are the communities affected, but networked technologies now enable those communities to selforganise in ways that were not possible previously, such as in Somaliland in 2017:

As livestock began to die six months ago, and the parched earth ran dry, a handful of people in this self-declared republic had a novel idea: create a WhatsApp group called Daryeel, 'Caring,' to spread the news of their need ... The Somali clan structure has existed for centuries to keep everyone alive in times of crisis, but the WhatsApp group is a modern version of that time-honored community support ... Mr. Kabadhe ticks off the statistics: 600 water trucks have been sent out, and monthly food packages - rice, sugar, dates, milk, and oil - given to 864 families in 39 different villages ... 'Almost 100 families did not move, because of the help for 10 families,' says Ms. Ibrahim, noting the ripple effect that the guaranteed support for some had on the wider community (Peterson, 2017).

Daryeel is not unique; there are similar examples from all around the world, in poor countries and rich, and likely hundreds more that are simply not visible to the humanitarian community precisely because they are happening on the network. That these initiatives exist at all is because of a particular aspect of Network Society: 'digital infrastructures that enable two or more groups to interact [and which] position themselves as intermediaries that bring together different users: customers, advertisers, service providers, producers, suppliers, and even physical objects', or what are now referred to as platforms (Srnicek, 2017).

Platform capitalism has emerged as the dominant trend of the network economy; most of us use social media platforms such as Facebook and gig economy platforms such as Uber every day, as well as less visible platforms such as Amazon Web Services (AWS), which supports many well-known websites. Platform companies such as these are increasingly involved in humanitarian response, either through partnerships with humanitarian organisations or by launching their own initiatives, but what is more interesting is how aid recipients are spontaneously using these platforms as the basis of their own responses. While European volunteers coordinated

Box 1: United Beyond Nations: a proposal

One of this paper's key proposals is a humanitarian network and platform for people affected by crisis to connect with responders and service providers with a matching supply for their demand. The network – 'United Beyond Nations' – would be a direct form of coordination that puts those who need and those who can give in direct contact without intermediary, giving local organisations and community groups access to a local, regional and global network of people with skills and resources that are pre-vetted by a platform secretariat, and can be mobilised in a decentralised way to solve specific and defined humanitarian problems. Using a digital platform, people affected by crisis and first responders needing support make requests. Powered by AI, the platform then produces a list of certified providers with the resources and expertise to deliver customised, needs-based solutions. Money can be contributed into the network through private individuals, crowd-sourcing platforms or as institutional funding to certified NGO initiatives/requests.

For more complicated problems, requests are escalated to the platform secretariat, comprising representatives from national government and NGOs and international experts, to determine operational and technical needs.

The concept aims to automate the transactional activities that humanitarian actors currently spend a large amount of time on. It will mainly be applied in smaller crises and will address low-cost, lower complexity problems. It is not a substitute for state action, nor will it cover the full range of needs in a crisis, which will continue to be fulfilled with the support of the international humanitarian system. As state capacity improves, the need for the platform should decrease. This concept accommodates and can work concurrently and weave in with the coordination mechanisms of the international humanitarian system.

on social media in 2015, Syrian refugees were helped on their journeys by Arabic-language Facebook groups like 'Smuggling Into the EU' (around 24,000 members) and 'How to Emigrate to Europe' (around 40,000 members) (Brunwasser, 2015).

Many more self-organised groups will emerge in future, but at the moment the humanitarian community does not have a coherent approach to engaging with them. Existing models of partnership are not merely useless but counter-productive in engaging with this type of self-organised network; the humanitarian community is moving in the opposite direction, increasingly seeking to distinguish itself from other responders through processes of professionalisation (James, 2016). Successful engagement with Network Humanitarianism will require a new model of partnership that is not based on assumptions of authority, which in turn will require the community to restructure itself to engage with and promote distributed networks that allow small actors to operate on a much larger scale (Zyck and Krebs, 2015). In order to achieve this, rather than placing itself on a pedestal, perhaps it would be better off on a platform. One proposal put forward during the design process for this project - United Beyond Nations - embodies this idea.

3.5 Relational not transactional

Processes of planning and action at the operational level should change from reciprocal to collective, at least some of the time.

Market Humanitarianism tends to reduce humanitarian action to a series of reciprocal transactions, reflecting 'the common sense of the neoliberal era: that choice through the market is the ultimate mark of freedom, and so the market is ... the most liberating and efficient means through which to provide services' (Fiori et al., 2016). The introduction of cash transfers reflects this logic, drawing legitimacy not just from its proven effectiveness, but from the wider financial inclusion agenda, which assumes that the best route out of poverty is integration into the market. Yet market relations do not encompass all human relations, and 'market reasoning also empties public life of moral argument' (Sandel, 2012).

Simultaneously, the growth of 'mammoth' organisations has seen an inevitable increase in the institutional distance between donors and beneficiaries. As organisations grow, layers of management are added, accompanied by another set of transactions, increasing transaction costs and decreasing accountability; as one study of reconstruction in Aceh found, 'the wide-scale use of intermediate implementers, contractors, and subcontractors undermine[s] vertical accountability, upward to the donors and downwards to beneficiaries' (Daly and Brassard, 2016).

Mammoth organisations struggle to accommodate collective action – yet collective action is critical to humanitarian action. This is most obviously seen in the importance attached to coordination, but Market Humanitarianism does not offer an inclusive form of coordination. The cluster approach exemplifies Market Humanitarian's hybrid structure, with a hierarchy created through the designation of cluster leads and a quasi-market in which humanitarian actors compete for share within a sector. While this approach has increased effectiveness, it 'has largely failed to create a sense of NGO ownership and involvement' and is insufficient 'to enhance accountability to affected populations' (Humphries, 2013).

Network Humanitarianism is not in itself guaranteed to lift humanitarianism above pure transaction. The platforms referred to in Section 3 themselves, for example, also tend to reduce relationships to monetised transactions as part of a business model that has been labelled surveillance capitalism (Zuboff, 2015). Partnerships with platforms provide new data streams for them, and any such projects are based on the commercial interests of the company, not on the humanitarian needs of affected people (Hopgood, 2008). This has raised ethical concerns about the use, misuse and abuse of that data in developing countries (Hosein and Nyst, 2013), and raises the question whether the humanitarian community should develop its own platforms (Gil Baizan, 2017; Denskus, 2017).

The challenge of coordination also points to the potential limits of collective action in Network Humanitarianism. The modular approach described in Section 1 requires more investment in coordination than the current system, yet even with that investment the sort of coordination around @TahrirSupplies described in Section 2 is also unlikely to be fully inclusive. (It is hard to imagine the Egyptian military agreeing to coordinate via Twitter.) Although in some countries, such as the Philippines, social media has become a critical tool for disaster management (OCHA, 2014b), such adoption without consideration of barriers to access risks amplifying social inequalities and creating 'second-order disasters' (Madianou, 2015).

More critically, the growth of Network Humanitarianism, particularly in wealthier countries, stems partly from opposition to the humanitarian community and its ways of working. Groups such as the Common Ground Collective in the United States – which has been active in various forms since Hurricane Katrina, running health clinics, rehabilitation projects, community gardens and legal advice offices – are formed in the belief that they 'could do better than the bloated bureaucracies of the government and the Red Cross' (Crow, 2017).

The different modes of governance of Market and Network Humanitarianism – rather than their different structures – are the source of this tension. Similar tensions arise because some initiatives that appear to be Network Humanitarianism in structural terms more closely resemble Market Humanitarianism from a governance perspective. Airbnb's Open Home initiative is a constructive use of their platform, but it uses the language of Market Humanitarianism to 'give the same solution we provide to travelers to those who are displaced' (Airbnb, 2017). This positions refugees as consumers of services rather than bearers of rights. By contrast, Refugees at Home (UK), Singa (France) and Nestwerk (Germany), as well as the pan-European Refugees Welcome network, provide a similar service, but with radically different approaches that focus on building connections that go beyond supply and demand (Toor, 2017).

4 The trouble with networks

Seybolt's five points do not cover all the differences that we would expect to see in a humanitarianism rooted in the Network Society. Most importantly, we have described above how much of the distinction between hierarchies, markets and networks is about how their different forms of governance affect how resources are mobilised; we would expect Network Humanitarianism to find alternative models to those which Market Humanitarianism relies on.

4.1 Finance

Aid finance is widely recognised to suffer from misaligned incentives in a market where demand is not correlated with need (Carbonnier, 2015). As noted already, the prevailing wisdom is that, if only the humanitarian community were adequately funded, it would be able to deliver on its promises and restore trust, despite findings that show that, in situations where there is adequate funding, coverage and quality are still inadequate (Healy and Tiller, 2014). Meanwhile, there was a slowdown in humanitarian funding in 2016 (GHA, 2017), and the models of media attention and political support which Market Humanitarianism relies on are themselves being disrupted by the Network Society (Arrillaga-Andreessen, 2015).

The business model of Market Humanitarianism is that organisations generate revenue by subtracting overheads from grants, which might be as high as 25% (Bailey and Pongracz, 2015). However, disintermediation – a key characteristic of the Network Society – means that the long chain of intermediaries between donor and recipient is likely to be cut down, and that business model will collapse as a result. Already, organisations such as Kiva and GiveDirectly leverage networked technology to enable donations to flow more directly to recipients – the crowdfunding sector raised \$34bn in 2015 – and, for better or worse, this type of approach is likely to grow as the general public seeks more direct connection with the recipients of their donations (Paynter, 2017).

Large-scale institutional grants are likely to remain necessary to address the conflict-related mega-disasters

that dominate the headlines, both because mobilising resources at that scale remains a challenge, but also because this type of funding is a valuable form of soft power for institutional donors. However, many communities affected by disaster are in a long tail of small- and medium-size emergencies in middleincome countries, which the current system struggles to address. Network Humanitarianism offers a variety of relatively low-cost and agile strategies that can potentially fill the finance gap that currently afflicts the humanitarian community.

4.2 Access

The greatest challenge for Network Humanitarianism concerns access. Lack of access to the network has become less of a problem as the Internet has become wireless; by the end of 2016, 4.8bn people had a mobile phone subscription (GSMA, 2017a), and by 2020 fivesixths of the projected 5.7bn mobile subscribers will be using their phones to access the Internet (GSMA, 2017b). Despite the staggering growth in mobile connectivity, not everybody will have access to a mobile phone, not all of those phones will have access to the Internet, and not all Internet access will be equal. In particular, research by the UN High Commissioner for Refugees (UNHCR) indicates that refugees are around 50% less likely to own a smartphone than the global population as a whole, and 29% of refugee households have no phone at all (UNHCR, 2016).

Access to the network is increasingly a priority for those affected by disaster because it means access to vital information: during the European migrant crisis, 'so important were mobile phones that, on arrival, many refugees asked for Wi-Fi or charging services ahead of food, water, or shelter' (GSMA, 2017c). This has led to suggestions that aid organisations should provide relief not just in the form of information, but also in terms of communications – handing out SIM cards or setting up wireless networks, either by themselves or in partnership with the private sector – and ensuring 'that communities can access information irrespective of their level of technological development' (OCHA, 2013). However network access is not just physical, but also social and economic; in a Syrian refugee camp in Jordan, for example, access was 'particularly tied to gender ... often - though not always - the men were the ones with the phone tucked into their pockets and not their wives, mothers, or daughters' (Wall, Otis Campbell and Janbek, 2015). While networked technology does offer new opportunities for previously disadvantaged groups, Network Humanitarianism will potentially 'exacerbate inequalities associated with gender, age, literacy and experience with technology, as well as access to energy, mobile phones and network connectivity' (ICRC et al., 2017), and cannot substitute for institutional capacity and political will (Toyama, 2011). If the humanitarian community wants to invest in the future of humanitarianism, greater focus on addressing these inequalities – in policy as well as practice - will be essential.

4.3 Accountability

There is an argument that people will fall through the gaps more easily in a system based on Network Humanitarianism. It is difficult to argue, however, that the current system really delivers in terms of quality and accountability: surveys consistently show that aid recipients feel that the aid they receive does not cover their basic needs - a 2017 survey found that in Afghanistan only 29% of respondents felt the aid they received covered their basic needs, while in Lebanon the figure was 14% and in Haiti 7% (Ground Truth Solutions, 2017) – and that they feel that their voices are not listened to (Anderson, Brown and Jean, 2012). Genuine accountability has proven almost impossible to achieve, partly because of the political economy of Market Humanitarianism. At the very least, Network Humanitarianism shows the way towards an approach that engages communities more openly.

The evaluation of reconstruction in Aceh mentioned earlier found that accountability 'can usefully be seen as a function of direct beneficiary involvement, unfettered access to information, and the type and strength of the relationships that form between aid agents and beneficiaries' (Daly and Brassard, 2016). In short, accountability lies in the network, rather than in the contract. This does not mean that Network Humanitarianism will solve the problem of accountability entirely, although disintermediation means less distance between donor and recipient, and networks are generally better at providing feedback than hierarchies. At the same time, however, networks lack the potential for the more rigorous accountability found in hierarchies; a certain amount of quality is likely to be lost as part of a trade-off between inclusion and professionalisation, and fraud and corruption are likely to find new forms.

The Network Society also poses new challenges to accountability, the greatest of which concerns privacy. While data will become increasingly important in humanitarian response (Whipkey and Verity, 2015), the humanitarian community has not taken on its responsibility to ensure that the future enabled by networked technologies accords with humanitarian principles, in what Privacy International has identified as 'a systematic failure ... to consider the legal and technical safeguards required in order to uphold the rights of individuals living in the developing world' (Hosein and Nyst, 2013). Concerns are growing that the platforms that Network Humanitarianism will be built on may in fact contribute to crises as much as they help to address them; Myanmarese farmers' embrace of Facebook in 2016 (Mod, 2016) turned out to be a key driver in the persecution of the Rohingya in 2017 (Specia and Mozur, 2017).

Network Humanitarianism is unlikely to be able to address what is probably going to be the biggest protection challenge of the future: the world created by surveillance capitalism, in which data can be mobilised both for good and for ill. The systematic failure of the humanitarian community so far to address these issues 'jeopardize[s] the appropriate application of core humanitarian principles in the networked age' (Greenwood et al., 2017). Regardless of whether the humanitarian community embraces Network Humanitarianism, these challenges will remain.

5 Conclusion: a way forward

This paper does not endorse all of Castells' entire thesis regarding the Network Society – mainly because that thesis is so wide-ranging⁶ – but it does agree with his basic proposition: 'Until we rebuild, both from the bottom up and from the top down, our institutions of governance and democracy, we will not be able to stand up to the fundamental challenges that we are facing' (Castells, 2001). What form that rebuilding takes is the real question: networks already play an important role within the humanitarian community in activities such as supporting policy-making and implementation, setting norms and standards and developing knowledge resources (Collinson, 2011), but can the humanitarian community move beyond network-as-structure to network-as-response?

The latter is already being explored at the national level, including during the 2014 Ebola response. The Missing Maps project addressed the lack of detailed maps with a network of volunteers visiting every community in the border regions of affected countries, releasing the results as open data on OpenStreetMap and the Humanitarian Data Exchange, and creating paper maps that could then be distributed back to communities (American Red Cross, 2017). Translators without Borders established 'Spider Networks' of crisis translators across affected countries, and worked through partner networks to disseminate translated awareness-raising materials (Translators without Borders, 2017). Networked approaches have also been proposed as a way of scaling up community resilience work (Mellor, 2014).

At the international level, however, the humanitarian community overall has been reluctant to move in this direction. Although members of this community are now coming to terms with the fact that they are just one set of actors in a broader network (ODI, 2016), the assumptions of Market Humanitarianism mean that they do not embrace their roles as network actors, instead falling back on familiar transactional relationships, whether with the military, the private sector or non-traditional donors. This will not work with much of the Network Humanitarianism which is happening at the periphery or entirely outside the humanitarian community, where this transactional approach is unfamiliar and potentially counterproductive.

A more constructive approach would see the humanitarian community recognise that all three approaches - hierarchies, markets and networks - have a role to play depending on the situation (Kotter, 2011). If the humanitarian community is able to adopt a more networked way of working (as opposed to just creating more networks within the community), this will have significant implications for organisational governance as well as structure. The current humanitarian system will not disappear overnight, since Network Humanitarianism will probably never be able to mount large-scale responses to the mega-crises that preoccupy the humanitarian community, but this does not mean that the current system itself is not struggling: while 'parts of the [humanitarian] system are working better and better ... it is still akin to a pocket calculator attempting the job of a computer'; as such, 'calls for radical reform, now heard from the highest levels of the humanitarian system, would seem justified' (ALNAP, 2015). Such calls for radical reform are now mainstream, particularly after the World Humanitarian Summit, but the actual changes proposed are far from radical; previous reforms have 'tweak[ed] the current system rather than challenging the underlying structures and assumptions on which it operates' (ODI, 2016).

The sketch of Network Humanitarianism presented here is speculative, not predictive, but it does offer an alternative vision of humanitarian action, one structured more around collaboration than control (as in a hierarchy) or competition (as in a market). However, this paper does not lay out specific recommendations for specific institutions about how to move towards Network Humanitarianism, since the very idea of a blueprint for success would be against the spirit of Network Humanitarianism. While the costs of transition to a networked way of working need to be carefully weighed (Hearn and Mendizabal, 2011), it is no longer possible to avoid those costs.

⁶ An overview and critique of the main points of Castells' thesis can be found in Webster (1995).

Network Humanitarianism is neither better nor worse than Market Humanitarianism, simply different, and it is not the answer to all the challenges facing the humanitarian community. It is simply that, in the Network Society, Network Humanitarianism is a better fit with cultural expectations and technological capabilities, and it is likely that we will see an increasing number of more networked responses. The challenge is how the humanitarian community will engage with those responses – and the danger is that the humanitarian community will become marginalised by other actors for whom networked ways of working are native.

This is a danger because humanitarian action is not just about the delivery of relief, but also the propagation of principles. The humanitarian system is not just a delivery mechanism for humanitarian aid – any more than the Eucharist is a delivery mechanism for wafers – but a medium for the propagation of humanitarian values, and humanitarian aid is the means by which those values are instantiated in specific places and at specific times. The question of whether the humanitarian system is fit for purpose is fundamentally a question of whether it is the best vehicle for propagating humanitarian values, and whether humanitarian aid as it currently stands is the best means to instantiate them.

Network Humanitarianism is not necessarily more principled than the humanitarianism we practice now, but if we are living in the Network Society, humanitarian principles must find a way to survive in the network. In the process they might become more widely distributed, but also more diluted as they spread, and the challenge for the humanitarian community is not just how to preserve but to amplify them. Hugo Slim recently wrote 'I wish humanitarian action was more a people's movement than it is' (Green, 2017); Network Humanitarianism has the potential to be that people's movement, but only if the humanitarian community recognises that potential.

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