STRIKING A BALANCE: SHORT- AND LONGER-TERM INTERESTS OF PEOPLE RECEIVING AID

Policy Report

June 2019

Martin Searle
HADR Series (Part 3 of 4)

RSiS | S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES

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Executive Summary

In December 2017 the Non-Traditional Security (NTS) Centre at RSIS identified four policy balances that must be struck when using emerging technologies in humanitarian operations. This report specifically explores how the short-term needs and long-term interests of those affected by disaster can be balanced when new technologies are used. It presents three principal findings. First, the use of emerging technologies for humanitarian purposes may influence land and labour markets in ways that require policy intervention. Second, locally focused innovators are best placed to take advantage of the relationship between humanitarian innovation and longer-term economic growth. Third, more must be done to mitigate the long-term risks, and harness the long-term benefits, of data collected for disaster management.

Introduction

In December 2017 the Centre for Non-Traditional Security Studies (NTS Centre) at RSIS identified four policy balances that must be struck when using emerging technologies in humanitarian operations.[1] These are as follows:

1. Balancing humanitarian uses of emerging technologies and other public goods;
2. Balancing the needs of disaster responders and those of the disaster affected;
3. Balancing the short- and long-term interests of those receiving aid;
4. Balancing the capacities of emerging technologies to both centralise decision-making and facilitate individual autonomy.

These give a framework through which to research and interpret the impact of using emerging technologies for humanitarian purposes.

This paper explores the third balance. It draws on two months of field research in Kathmandu, Nepal, between January and March 2019. The research was conducted by Associate Research Fellow Martin Searle, who was assisted by Associate Research Fellow Christopher Chen from 18 to 24 February. The fieldwork involved a mix of semi-structured interviews with government and non-government representatives, informal follow-up meetings and many more conversations with other humanitarian practitioners and academics based in the Nepali capital. The paper also draws on previous field research in the Philippines. Only conclusions with general applicability are reported.

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[1] Searle, M., "Humanitarian Technology: New Innovations, Familiar Challenges, Difficult Balances," RSIS Policy Report, December 2017, https://www.rsis.edu.sg/wp-content/uploads/2017/11/RSIS_HumanitarianTechnology_Final.pdf

Findings and Analysis

Humanitarianism, by definition, focuses on the emergency needs of people affected by conflict or disasters. Exploration of emerging technologies for use in humanitarian work is consequently motivated by these short-term needs. However, as discussed in the initial policy paper framing this research,[2] the longer-term legacies of deploying these technologies must be considered when deciding when and how to use them. While that paper cited predominately negative longer-term impacts that require mitigation, field research in Nepal also highlighted opportunities for positive outcomes. Both are discussed in turn below.

Market side-effects of humanitarian use of digital technologies

There is established literature on how aid groups can affect local commodities markets and monopolise talent in the local labour market.[3] Our field research in Nepal suggests that when humanitarians use new technologies, they may also affect the land market, and potentially affect local employment in other ways.

Land markets

Digital technologies are being used to publicly map and classify local geohazard risks across Nepal.[4] This is guiding resettlement policy, with those in high risk areas being offered money to buy land in safer zones. The decision whether to move or not is left to the affected household.

This public, relatively localised geohazard classification ought to increase the demand for safer land, thereby raising prices for such land. However, this was not the case.[5] One explanation offered for this stated that risk is not conventionally factored into land markets in Nepal.[6] Another given was that it is too early for the market to take account of this new information, meaning it is expected to do so in the future.[7] One interviewee strongly expressed hope for this to happen, as it would result in better informed markets that serve disaster risk reduction.[8]

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[2] Searle, M., "Humanitarian Technology."

[3] For a good overview, see Levine, S., "Markets in Crises: The Implications for Humanitarian Aid," Overseas Development Institute, 2017.

[4] See website of Durable Solutions, a digital initiative of the UK Department for International Development in support of the Nepali government's resettlement programme, http://www.durablesolutionsnepal.org

[5] Resettlement itself affected land values as owners predicted a rise in demand and no price controls were put in place. However, this is unrelated to geohazard classification.

[6] Conversation, representative of an international organisation,18 March 2019.

[7] Interview, representative of an international organisation,18 February 2019.

[8] Interview, technical platform manager, 6 February 2019.

If markets begin to reflect disaster risks, policy makers must ensure that poorer families are not drawn to cheaper but more disaster-prone land. Furthermore, in a significantly agrarian economy like Nepal with a charged history of land dispossession, any change in land values could have political implications that require careful handling.

Labour markets

Kathmandu already had a digital skills pool prior to the 2015 earthquake. However, most interviewees agreed that this pool grew significantly faster after the earthquake, citing their own recruitment or local contract tendering experiences. There are now approximately 150 software development companies in the capital, and a burgeoning focus on artificial intelligence.

In the absence of deeper research, interviewees were reluctant to endorse any causal relationship between the digital demand brought by international humanitarian organisations after the 2015 earthquake and the subsequent growth of Nepal's digital sector. However, they agreed that aid groups had at least catalysed that expansion.

Even this lower quality relationship brings opportunities for fostering skills and developing corresponding economic sectors during disaster recovery and thereafter. Countries like Nepal with significant diasporas may also find opportunities to turn the attention of overseas talent back home. For instance, Artificial Intelligence for Development, a New York-based organisation founded by a member of the Nepali diaspora, now employs over 200 people in Kathmandu. E.K Solutions, founded by a returning member of the diaspora, employs 150.

Such a relationship raises challenges. Superficially, it appears to bridge humanitarian and development work — a key objective of the UN Agenda for Humanity. But acquiring high-level digital skills requires a relatively advanced education. Therefore, it is likely to be already affluent groups who benefit most from the digital demand brought by international humanitarian organisations. These are not generally the targets of development work.

If humanitarian organisations' use of emerging technologies materially advantages elites over other local groups, then acceptance of such organisations by the disadvantaged is jeopardised. This is particularly true when that acceptance is based on aid groups maintaining political neutrality.

There are other political implications too. Digital start-ups in Nepal were reported to focus principally on public rather than private sector work. This appears to be

for two reasons. First, government clients are considered more reliable. Second, the founders of most digital start-ups often come from NGO backgrounds. They, therefore, have pre-existing expertise and experience of government needs and functioning, as well as personal networks.

Two notable consequences of digital start-ups' focus on the public sector were reported. First, in the context of Nepal's burgeoning federal governance structure it may be producing mutually unintelligible local digital governance projects. It is more lucrative for contractors to create bespoke solutions for different governmental clients than to repurpose existing ones.

Second, it means the increase in digital skills in Kathmandu is predisposing Nepal's evolving governance system to adopt digital solutions to most problems. Such a relationship between humanitarian use of digital technologies and subsequent political evolution echoes research conducted in the Philippines, where digital communications used by humanitarian organisations appeared to influence the way communities later mobilised politically.[9] Again, the exact nature of this relationship needs to be studied further both to mitigate threats to acceptance of humanitarian work by communities and governments, and to seize opportunities for political and economic development.

Harnessing the link between humanitarian innovation and economic growth

This research identified two approaches to take advantage of this relationship. The first, exemplified by internationally oriented innovation centres, focused on local job creation.[10] Here the logic is that the outcomes of innovation processes — be they products or services — can be produced and tested more cheaply locally due to lower labour costs. In one example cited, an airbag system for lifting debris that is marketed internationally at US$4,500 was being produced locally for US$1,700.[11] These savings encourage manufacturing and testing to move to environments such as Nepal.

The second approach was that taken by locally focused innovation centres and local for-profit firms. One executive connected innovation to meet Nepal's humanitarian challenges with development of an "innovation culture" that is critical

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9 Curato, N., "From authoritarian enclave to deliberative space: governance logics in post-disaster reconstruction," Disasters 42, No. 4 (2018): 635-654.
10 Interview, Manager, globally focused innovation centre, 19 February 2019.
11 Ibid.

to achieving sustainable economic growth.[12] In the developed world, military necessity has historically directed innovation towards solutions that ultimately had massive business implications. Analogously, humanitarian necessity can drive innovation in lesser developed countries to cultivate skills and ultimately produce marketable products or services. However, as pointed out by the same executive, this could mean a costlier, slower humanitarian innovation process as innovators may try out ideas already trialled elsewhere in order to cultivate important skills locally.

Overall, if donors and policy makers seek to uncover novel humanitarian uses of emerging technologies as soon as possible, they may wish to focus more on internationally oriented innovation centres. Importantly, this assessment comes with caveats on decentralising disaster management, which are explained in an accompanying paper in this series.[13] However, if they seek to bridge the improvement of humanitarian outcomes and the development of longer-term economic skills — again, a key objective of the Agenda for Humanity — then creating and funding locally focused innovation centres appears strategic.

Data collection: struggles to mitigate threats and harness secondary benefits

Currently, emerging technologies based on collecting more data have the greatest potential to leave long-term legacies. Significant academic work stresses the long-term risk this data presents of corruption, fraud, unwarranted surveillance, unethical business targeting, non-consensual experimentation, discrimination, and even persecution.[14] Interviews in Nepal highlight the continued salience of these concerns, but also suggest there is potential for positive long-term legacies.

Need for further mitigating the risks posed by data collected during disasters

People in need of urgent assistance will share whatever data they can in an effort to access whatever assistance they need. In the immediate aftermath of the 2015 earthquake in Nepal, people shared many types of personally identifiable data on public platforms.[15] This included their own and others' names, addresses, and

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[12] Interview, Executive Director, local innovation centre, 21 February 2019.

[13] Searle M., "Striking a Balance: Centralising and decentralising disaster management through new technologies," RSIS Policy Report, May 2019.

[14] Faine Greenwood et al, The Signal Code: A Human Rights Approach to Information During Crisis (Cambridge, MA: Harvard Humanitarian Initiative, 2017), 15.

[15] Interview, Executive Director, local innovation centre, 21 February 2019.

telephone numbers. Subsequent response and recovery operations also appear to have collected significant personally identifiable data.

At the time of writing, there is no regulation in Nepal to protect data privacy. One interviewee tied this absence to perceptions of Nepal as a "guinea pig" for both humanitarian and development programming.[16] The risks of this experimentation were discussed in the initial NTS policy report on humanitarian technology.[17]

It has been left to organisations themselves to determine how to handle data, creating some problematic outcomes. In one instance, the Ministry of Federal Affairs and Local Development published online personal information of all people receiving assistance from the Earthquake Housing Reconstruction Project. This included their names, location, gender, payment serial numbers and citizenship card numbers.[18] In another example, one interviewee reported that several months after the earthquake his organisation took down personally identifiable data posted by those requesting urgent help on publicly available open source maps.[19]

The interviews revealed that the risk mitigation efforts of various organisations were generally technical in nature, relating to the protection of stored data. Some, however, also followed clear internal governance mechanisms relating to data access. These need to be complemented by appropriate national legislation, as well as protocols on data minimisation and, as much as possible, data deletion.

Need for facilitating positive secondary uses of data

The precise nature and extent of those additional protocols regarding data collection requires further reflection. Both data minimisation and data deletion could mean missing the potential long-term benefits resulting from the mushrooming of data following a disaster. These could fill gaps in existing datasets to help inform education, labour, health and more general social security policy. In places like Nepal, which are non-conflict settings with significant gaps in policy-relevant data, this is an attractive proposition.[20]

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[16] Interview, Manager, globally focused innovation centre, 19 February 2019.

[17] Searle, "Humanitarian Technology," 12

[18] Dennison, L., and Rana, P., "Nepal's Emerging Data Revolution," Development Initiatives, April 2017, http://devinit.org/wp-content/uploads/2017/04/Nepals-emerging-data-revolution.pdf

[19] Interview, Executive Director, local innovation centre, 22 February 2019

[20] Data collection in conflict settings introduces several additional complications that do not apply within this discussion. On this see Llorente, R. V., and Wall, I., eds., Communications technology and humanitarian delivery: challenges and opportunities for security risk management (London: European Interagency Security Forum, 2014).

However, government officials in Nepal reported deliberately not using NGO-collected data. They believe it is untrustworthy as it is driven mostly by fund-raising agendas and not rigorous in nature.[21] Such data was also described as fragmented as it focuses only on the immediate needs of the programmes in question. As a result, officials must return to the same communities to ask further questions if additional data is required.[22] This might happen several times. Meanwhile, NGOs and private sector representatives expressed negative sentiments about the government's and one other's data, suggesting a high level of mutual distrust.[23]

Such scepticism is damaging. Creating sector-wide norms for data-collection methods and ethics would be a step forward. This might include using a standardised questionnaire that goes beyond the immediate programmatic needs of the organisation collecting the data. Such a questionnaire would reduce the need to subject people to repeated questioning. Measures such as joint data collection or peer-reviewing each other's data-collection practices could contribute to building mutual trust among the various actors involved in humanitarian work.

Two key challenges remain. First, as noted above, a satisfactory balance between data minimisation and deletion on one hand, and the opportunistic expansion of policy-relevant datasets on the other, must be found. The requirement for informed consent before collecting data from a person provides a way forward.

During an acute disaster, consent is unlikely to be informed. The urgency of needs will affect any decision to share data. Therefore, strong principles of data minimisation and subsequent deletion must apply. During the less intense risk reduction, mitigation, and disaster recovery phases, the possibility of gaining properly informed consent is higher. As such, data that goes beyond immediate programmatic needs — and helps fill broader gaps in existing policy-relevant databases — can be more easily and ethically collected. This could be standardised across organisations to include data of general relevance to government policy-making.

The second challenge concerns a paradox that states face around data collection for humanitarian purposes. On one hand, data that is relevant to humanitarian work can also be used to judge state policy decisions. This may

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[21] Interview, government official, 12 February 2019.
[22] Interview, government official, 6 March 2019.
[23] Interview, Executive Director, local innovation centre, 28 February 2019; interview, technical adviser, international NGO, 21 February 2019; informal conversations.

create pressure from authorities not to collect it. But conversely, that same data can facilitate state surveillance, creating the opposite pressure to over-collect and share. This pressure can be particularly acute when it concerns people who are considered security threats. Importantly, that category often overlaps with marginalised groups, who tend to shoulder disproportionate humanitarian needs. Humanitarians must avoid becoming accessories to this practice if they hope to maintain the trust of people they seek to assist.

Conclusion

The deployment of emerging technologies for humanitarian purposes presents long-term threats that policy makers must mitigate, and opportunities that they should seize.

Regarding threats, the localised and public risk analysis made possible by digital data management could influence land values, with implications for political economy. However, research in Nepal shows that this relationship requires further investigation. Meanwhile, the training required to use many of these technologies has labour market effects that, if not properly managed, could produce politically significant biases. On data, the same threats to privacy and personal security exist in Nepal as in any other context where humanitarian actors have deployed these technologies.

If the potential harms are properly identified and mitigated, then there are opportunities for long-term benefits from using these technologies for humanitarian purposes. The labour market impacts could contribute to economic objectives by both creating a pool of talent that is attractive to foreign business and catalysing the "culture of innovation" required for successful entrepreneurship. Meanwhile, data collected for disaster management purposes could potentially fill gaps in policy makers' databases. While data collected during acute disaster response phases should not be used in this way owing to the impossibility of gaining informed consent, data gathered in other disaster management phases could be potentially used in this way.

However, governments and the humanitarian sector need to trust each other's data for it to serve larger policy purposes. Building such trust requires agreements on proper collection, management and disposal practices for the data they collect.

Policy Implications

The above findings lead to the following policy recommendations, several of which accord with items on the UN Agenda for Humanity. Specifically, they could help empower young people, include the most vulnerable, transcend humanitarian-development divides, reinforce local systems, and increase investment in local capacities.

All humanitarian actors, donors, policy makers, and academics should:

- Identify what forms of disaster-related data could be relevant to broader policy-making.

- Develop two sets of data-collection protocols to ensure that data is of sufficiently high quality to be used for secondary purposes, and that doing so can be done ethically. Singapore, with its own data-focused policy and strong regulatory environment, should consider leading on this:

    > For acute disaster response, data-collection protocols should have strong principles of data minimisation and, especially, deletion.

    > For less acute stages of disaster management, protocols should standardise the data to be collected and seek to produce information relevant to domestic policy-making as much as possible.

Governments should:

- Ensure any indirect impact of emerging technologies on land markets is monitored and, if relevant, properly compensated, and lower socio-economic groups are not drawn to cheaper, more dangerous land.

- Re-evaluate using NGO-collected data as evidence to drive their own disaster-related and other policy-making.

- Ensure appropriate national legislation is in place regulating data collection.

Governments and donors should:

- Create locally focused innovation centres. Singapore, as a regional humanitarian and innovation hub, is well placed to support such centres.

- During disaster recovery, strategise to take advantage of the relationship between humanitarian use of new technology and longer-term labour market evolution.

Government, academia and local and international NGOs should:

- Agree on data-collection protocols that increase faith in each other's methods.

- Consider shadowing and peer-reviewing each other's data collection.

International humanitarian NGOs should:

- Ensure that the skills transfers resulting from the use of emerging technologies are not biased towards already privileged groups.

Academics should:

- Research the impact of deploying emerging technologies for humanitarian ends on local land and labour markets, including any influence of subsequent state or governance practices.

About the Author

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