

STRIKING A BALANCE: EMERGING TECHNOLOGIES, HUMANITARIAN NEEDS, AND OTHER PUBLIC GOODS

Policy Report
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**NANYANG
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SINGAPORE

POLICY REPORT

**STRIKING A BALANCE: EMERGING
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OTHER PUBLIC GOODS**

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PART 1 OF 4**

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EXECUTIVE SUMMARY

In December 2017 the Centre for Non-Traditional Security Studies at the S. Rajaratnam School of International Studies (RSIS) identified four policy balances that must be struck when using emerging technologies in humanitarian operations. This report specifically explores how to balance humanitarian uses of emerging technologies and other public goods. It presents two principal findings. First, inhabitants of less regulated, often less developed locations, shoulder a greater burden of the risk from experimenting with emerging technologies for humanitarian use. Second, humanitarians' regulation of their own innovation efforts may produce sub-optimal, even perverse, results. The paper gives several policy recommendations in light of these findings.

INTRODUCTION

In December 2017 the Centre for Non-Traditional Security Studies at RSIS identified four policy balances that must be struck when using emerging technologies in humanitarian operations.¹ Those 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 when exploring uses of emerging technologies
3. Balancing the short- and long-term interests of those receiving aid when deploying new innovations in humanitarian response
4. Balancing emerging technologies capacities to both centralise decision-making and facilitate individual autonomy during disasters

These balances are considered more closely in a series of follow-up policy reports. This report explores how to balance humanitarian uses of emerging technologies and other public goods. It draws on 10 semi-structured interviews conducted in Manila, Philippines in August 2018 with purposefully selected interlocutors representing both government and non-government sectors. The outcomes of those interviews were then discussed with humanitarian workers in Japan in September 2018 to gain a comparative perspective between a developing and a developed economy that both routinely experience significant disasters.

Two principle issues arose during interviews on this topic. The first was the regulation of data handling to ensure that the benefits of data-based innovations were balanced with concerns of privacy, a particular example of a public good. The second was regulation of experimentation to ensure innovations are properly tested while still protecting subjects who consent to be part of trials. This report details the findings on those two issues. Where appropriate, it situates those findings within broader debates in the literature on humanitarian innovation. Based on this, it provides a series of policy recommendations.

¹ Searle, M. *Humanitarian Technology: New Innovations, Familiar Challenges, Difficult Balances* (RSIS, Singapore, 2017 Report)

FINDINGS AND ANALYSIS

Less regulation attracts more and riskier experimentation

In the Philippines, few regulations were reported to be applied to either the process of experimenting in humanitarian settings, or the particular emerging technologies being trialled by humanitarians. As a result, “most restrictions come from NGOs (non-governmental organisations) themselves.”² This particular regulatory situation appears to have resulted in a lot of trialling of new technologies. Several interviewees questioned the way this has been done. Describing her research into innovation following Typhoon Haiyan in 2013, one informant reported that many organisations viewed Haiyan as a “Disaster Laboratory.” Many innovations were deployed, ranging from some with clear merit to others that had “agendas in mind that really wasn’t fitting to the context of the Philippines.”³ These agendas are regularly institutional, and related often to the mere fact of having secured funding specifically to engage in innovation or the effort to position one’s organisation as “innovative.” In one example cited by an informant, this reflex resulted in a direct, card-based cash-transfer system being implemented in an area riddled with informal debt due to loan sharking.⁴ When the programme transferred cash directly to recipients, to be withdrawn from local ATMs (and thus out of sight of the programme’s administrators), loan sharks simply accompanied people to cashpoints and took the money.

Very little regulation of data collection and storage in particular, was reported. Again, regulation that did exist came from NGOs themselves. While the Philippines has passed a Data Protection Act, the extent of its implementation was questioned by several informants.⁵ Congruently, the vast majority of innovations described by informants involved collecting and storing household data. While this brings the same privacy challenges as any other location, violating privacy is more likely to have serious consequences for people with elevated vulnerability, like those caught in disasters.⁶ If this

² Interview local NGO employee, Manila, Philippines, 24 August 2018

³ Interview with local scholar, Manila, Philippines, 21 August 2018. This accords with previous research. See Katja Jacobsen, *The Politics of Humanitarian Technology: Good Intentions, Unintended Consequences*, (London: Routledge, 2015): 119-129; Mark Duffield (2016) *The resilience of the ruins: towards a critique of digital humanitarianism*, *Resilience*, 4:3, 147-165, DOI: 10.1080/21693293.2016.1153772

⁴ Interview with local scholar and humanitarian innovator, Manila, Philippines, 23 August 2018

⁵ Interview with local scholar, Manila, Philippines, 21 August 2018; Interview local NGO employee, Manila, Philippines, 23 August 2018; Interview local NGO employee, Manila, Philippines, 24 August 2018

⁶ This was discussed at an RSIS roundtable 11 June 2018: see Searle, Foo and Wai, Roundtable on Humanitarian Technology and Innovation: Critical Questions and Implications for Southeast

data cannot be handled safely, then risks of holding it must be balanced with benefits. In contexts without external regulation of the practice, humanitarian responders themselves decide whether collecting data is justified. However, they do not shoulder the ensuing risks. Several stories of data breaches in other humanitarian settings highlight the challenges of this.⁷

The Philippines' experience contrasts sharply with places with strong regulation. For instance, Japan first instituted regulation of data collection and storage approximately fifteen years ago, before the current wave of disaster responders investigating the possible uses they could make of emerging data-based technologies. As a consequence, less technological experimentation is reported in humanitarian response in Japan than other disaster-prone areas in the Asia Pacific.⁸ This means inhabitants of less regulated, often less developed locations are subjected to a greater burden of the risk that stems from this experimentation.⁹

Self-regulation could be detrimental to beneficiaries and to innovation success

Emphasis on financial regulation

Humanitarian innovation projects appear to focus on regulating finances rather than areas more relevant to successful experimentation. For instance, three Philippines state representatives engaged in humanitarian innovation reported being hamstrung by internal financial reporting, with the result that they felt most innovation occurred in the NGO and private sectors.¹⁰ Meanwhile, those engaged directly in the NGO innovation process cited

Asia (Singapore, RSIS, Report). See also Kristin Bergtora Sandvik et al., "Humanitarian Technology: A critical research agenda," *International Review of the Red Cross*, 96, (2014): 219-242; Sean. M. McDonald, "Ebola: A Big Data Disaster. Privacy, Property, and the Law of Disaster Experimentation," CIS Papers 2016.01, March 2016, <http://cis-india.org/papers/ebola-a-big-data-disaster>; Zahra Rahman, "Irresponsible Data? The risks of registering Rohingya" IRIN News, 23 October 2017, <https://www.irinnews.org/opinion/2017/10/23/irresponsible-data-risks-registering-rohingya>.

⁷ Raymond, N., Scarnecchia, D. and Campo, S. (2017, 8 December). Humanitarian data breaches: the real scandal is our collective inaction. IRIN. Retrieved from <http://www.irinnews.org/opinion/2017/12/08/humanitarian-data-breaches-real-scandal-our-collective-inaction>; Parker, Ben, (2018, 18 January). Audit exposes UN food agency's poor data-handling. IRIN. Retrieved from <http://www.irinnews.org/news/2018/01/18/exclusive-audit-exposes-un-food-agency-s-poor-data-handling>

⁸ Interview, Japanese NGO Network Consortium, Tokyo, Japan 4 October 2018

⁹ For more evidence of this, see McDonald, "Ebola: A Big Data Disaster"; Jacobsen, *The Politics of Humanitarian Technology*

¹⁰ Interview National Disaster Risk Reduction and Management Council, Manila, Philippines, 22 August 2018

financial reporting requirements stemming from funders as “add[ing] burden to the innovators compared to innovators not associated with humanitarians in the more typical incubators in the private sector.”¹¹ A tendency to prioritise upward accountability to funders over downward accountability to those receiving aid is well documented in humanitarianism in general. However, this reflex appears to be spilling into the regulation of trials of emerging technologies at the expense of other regulations that are more relevant. For instance, almost all interviewees stressed that reporting to funders is a major driver of what data gets collected during a trial. One noted that “sometimes NGOs neglect to ask communities, as long as they have data to report to funders to calculate success.”¹²

Beyond distracting from more relevant regulatory concerns, a heavy focus on regulating finances can backfire when innovating. Again comparing to the private sector, one informant with direct experience of working with private sector innovators noted: “These people are more flexible than us. We’ve already had to do tweaks to reduce the reporting burden. For example we are not asking for financial reports [from the innovators we are supporting].” Highlighting the internal struggle he has faced around this, he continued, “There’s a lot of hesitation internally [about that] – how will we make sure they are using the money correctly?”¹³ This goes to the very core of innovating, which relies on failure as a key part of the learning process. This is critical to reiterating an innovative idea and thus achieving a workable product. The same interviewee explained: “We are saying we also want to facilitate a flexible innovation environment where they are not afraid to make mistakes because there is a lot of experimentation.”

In short, the focus on budgetary regulation in the humanitarian sector may be limiting appetite for failure.

Self-regulation can produce suboptimal, even perverse results

Non-financial areas also raised challenges to achieving adequate self-regulation. One reported outcome of individual NGOs regulating their own practices was the repeated collection of the same data from beneficiaries by different humanitarian groups.¹⁴ As such, affected populations are asked the same questions repeatedly. But beyond this, it means multiple agencies collect and then store that data on their own systems. This increases the

¹¹ Interview local NGO employee, Manila, Philippines, 24 August 2018

¹² Interview local NGO employee, Manila, Philippines, 22 August 2018

¹³ Curato, N. “From authoritarian enclave to deliberative space: governance logics in post-disaster reconstruction” *Disasters* 42(4): 635-654

¹⁴ Interview local NGO employee, Manila, Philippines, 22 August 2018

possibility of unauthorised access or simple leaking. Furthermore, that data is only as secure as the weakest set of self-regulated security protocols. This repeated collection of the same data was attributed to a mixture of the organisations' own institutional interests and a lack of common standards. For instance, agencies may receive funding to engage in data collection, and so must do so to satisfy reporting requirements. Alternatively, an individual's job description may require data collection, and a satisfactory performance requires them to execute that task. Similarly, some agencies were reported as simply not trusting the internal regulations of another organisation, and so prefer to collect data again but this time in accordance with their own protocols.¹⁵

CONCLUSION

The interviews conducted for this policy report point to three core conclusions. First, funders need to review the financial reporting requirements they place on the innovators they fund. Practices transplanted from the administration of typical humanitarian programmes appear counterproductive when applied to innovation projects. Private sector approaches to funding innovation projects, which focus less on scrutinising spending decisions and more on evidence of learning and progress through trials, appear more appropriate.

Second, trialling emerging technologies for humanitarian uses should be conducted first in properly regulated environments. This concerns both regulation of particular issues to which a given technology gives rise – for example privacy, production standards, or medical quality – and regulation of the experimentation process itself. This mitigates the risk that a new technology will violate other public goods, as external regulations balancing those competing goods according to domestic sensibilities have already been instituted. Singapore could consider taking on this role. This could be institutionalised through the creation of a Humanitarian Technology laboratory that could test the suitability of innovations for particular regional contexts as well as their consistency with humanitarian principles. Given the data-based nature of so many current innovations, this would likely complement plans to develop Singapore as a more general data hub.

Importantly, experimentation may still be necessary in places without adequate regulation. There are two clear reasons for this. First, it may be necessary in order for the trials to be valid. For instance, contextual

¹⁵ Interview local NGO employee, Manila, Philippines, 23 August 2018

differences between well-regulated and under-regulated spaces could render lessons learned through trials in the former difficult to generalise to the latter. Nonetheless, even in such circumstances, initial trials could be done in well-regulated locations first. Second, regulation might be considered inadequate because relevant local communities distrust its source. Maintaining perceptions of independence might require humanitarian aid providers to distance themselves from regulators in such instances.

This prompts a third recommendation. In the absence of adequate or appropriate local regulation, humanitarians need a back-up structure. This must be stringent enough to remove the incentive to trial new technologies in certain places simply because regulatory burdens there are lower. It needs to be strong enough to give adequate protection to local public goods, such as privacy, security, order, or property, but flexible enough to respect the contextual differences that exist in the various under-regulated places where emerging technologies could provide substantial humanitarian benefits. It must also avoid unduly hampering the innovation process. Given these particular tensions inherent in self-regulation, protocols should ideally be devised by a party external to innovators themselves.

There are two potential solutions to instituting this back-up structure. The first is to adopt a set of sector-wide standards both for engaging in experimentation and for the particular emerging technologies being considered. This might follow the model of the SPHERE standards – a set of minimum technical standards that all humanitarian aid is expected to meet. However, this solution would likely face difficulties. The regulatory balances in question in this area of humanitarian innovation are arguably not fixed. This is particularly clear with the privacy example: determining the threshold between public and private life, and the circumstance in which it is acceptable to violate the latter, is an intensely political endeavour. That threshold is likely to change both over time and from one place to another. This is different from the very technical standards articulated by the SPHERE project. In the words of one informant when discussing the possibility of sector-wide regulations, “we believe these should be localised and adapted to local realities.”¹⁶ This cannot be done through blanket regulations.

One alternative is instead to make the practice of reviewing all experiments in humanitarian settings via a standing review board an industry standard. Such boards should include experts in the technology being trialed, experienced local and foreign humanitarians, in addition to local government figures. Most importantly it should have representatives of those being asked to consent to the trial being proposed. This combination of profiles

¹⁶ Interview local NGO employee, Manila, Philippines, 23 August 2018

maximises the possibility of properly identifying the sorts of public goods that might need consideration when using emerging technologies, and which would typically be handled by state-level regulation. An emphasis on local representatives would further encourage any protocols or restrictions placed on innovators to be informed by local values, preferences, and interests. Meanwhile, a balance of outsiders helps mitigate the risks of attempts to co-opt any project for political ends. Models for this exist in medical and social science research, both of which similarly entail experimenting on human beings.

Importantly, this might reduce the flexibility of innovation, curtailing innovators' capacity to "fail fast and fail often." Thus in balancing regulation with operational flexibility – in particular the flexibility to innovate rapidly in a fast moving emergency context – this represents a stronger call to regulate innovation and the experimentation surrounding it than is usual for this sector. However, humanitarian contexts differ vastly from those mainstream market conditions in which the norms of rapidly failing and re-iterating ideas are created. While humanitarian innovators must still have permission to fail, inadequately formulated trials are simply too risky given the elevated vulnerability of people caught in disasters. The flexibility of review boards compared to blanket regulation would help maintain freedom for innovators to fail and re-iterate. But trading some flexibility for regulation appears justified, although importantly some of that lost flexibility would be off-set by the corresponding call to loosen financial regulation. Nonetheless, a review board would not completely replace self-regulation, which remains fruitful and often well formulated despite the tensions this report highlights.

POLICY IMPLICATIONS

Humanitarian innovators should:

- Seek well-regulated environments when trialling their ideas as much as possible.

States should:

- Review regulations that govern experimentation in humanitarian response.
- Host more trials of new technologies that promise to improve aid if they have strong regulatory environments.
- Singapore in particular should consider hosting trials of humanitarian technologies, perhaps through instituting a Humanitarian Technology Lab in which the suitability of technologies for different regional humanitarian contexts, and their compliance with humanitarian principles, could be tested ahead of trialling in the field.

Donors should review financial reporting requirements to ensure:

- Balance between financial accountability and protecting local public goods, such as privacy, security, order, or property.
- “Productive failure” – in which innovations fail but lessons are learned that move the innovation process forward – is encouraged.

NGOs should:

- Develop robust self-regulation drawing on outside expertise in academic and private sectors.

The private sector should:

- Invest in partnerships with universities and NGOs to explore humanitarian uses for new technological developments.

The higher education sector should:

- Review institutional ethical guidelines to consider their application more directly in humanitarian settings by humanitarian innovators when trialling and using new technologies.
- Develop research and teaching space for the testing of new technologies in humanitarian settings.

All donors, NGOs, private sector, and state actors should:

- Consider routinely creating a standing review board whenever conducting any innovation project. This should include technological and innovation experts, local and international humanitarian professionals, representatives of relevant local authorities and, in particular, the local community that has consented to partake in testing.

ABOUT THE AUTHOR

Martin Searle is an Associate Research Fellow on the Humanitarian Assistance and Disaster Relief [HADR] Programme, Centre for Non-Traditional Security Studies (NTS Centre), S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU) in Singapore. He previously spent 6 years with the international medical humanitarian organisation Médecins Sans Frontières/Doctors Without Borders (MSF), including in South Sudan, Central African Republic, Kenya, India, Bangladesh, Myanmar and Malaysia on a mixture of conflict response, healthcare exclusion, HIV and TB treatment, and migrant and asylum issues. He also worked at MSF headquarters on communications and advocacy for the South and Southeast Asia operational portfolio.

ABOUT THE CENTRE FOR NON-TRADITIONAL SECURITY STUDIES

The Centre for Non-Traditional Security Studies (NTS Centre) conducts research and produces policy-relevant analyses aimed at furthering awareness, and building the capacity to address NTS issues and challenges in the Asia Pacific region and beyond. The centre addresses knowledge gaps, facilitates discussions and analyses, engages policymakers and contributes to building institutional capacity in the following areas: Humanitarian Assistance and Disaster Relief; Climate Security and Migration. The NTS Centre brings together myriad NTS stakeholders in regular workshops and roundtable discussions, as well as provides a networking platform for NTS research institutions in the Asia Pacific through the NTS-Asia Consortium.

More information on NTS Centre and a complete list of available publications, policy briefs and reports can be found here: <http://www.rsis.edu.sg/research/nts-centre/>.

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