

The Ethics of Humanitarian Innovation: Mapping Values Statements and Engaging with Value-Sensitive Design

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Volume 6, Number 2, 2023

URI: <https://id.erudit.org/iderudit/1101123ar>

DOI: <https://doi.org/10.7202/1101123ar>

[See table of contents](#)

Publisher(s)

Programmes de bioéthique, École de santé publique de l'Université de Montréal

ISSN

2561-4665 (digital)

[Explore this journal](#)

Cite this article

Brahimi, L., Krishnaraj, G., Pringle, J., Schwartz, L., O'Mathúna, D. & Hunt, M. (2023). The Ethics of Humanitarian Innovation: Mapping Values Statements and Engaging with Value-Sensitive Design. *Canadian Journal of Bioethics / Revue canadienne de bioéthique*, 6(2), 1–10. <https://doi.org/10.7202/1101123ar>

Article abstract

The humanitarian sector continually faces organizational and operational challenges to respond to the needs of populations affected by war, disaster, displacement, and health emergencies. With the goal of improving the effectiveness and efficiency of response efforts, humanitarian innovation initiatives seek to develop, test, and scale a variety of novel and adapted practices, products, and systems. The innovation process raises important ethical considerations, such as appropriately engaging crisis-affected populations in defining problems and identifying potential solutions, mitigating risks, ensuring accountability, sharing benefits fairly, and managing expectations. This paper aims to contribute to knowledge and practice regarding humanitarian innovation ethics and presents two components related to a value-sensitive approach to humanitarian innovation. First is a mapping of how ethical concepts are mobilized in values statements that have been produced by a diverse set of organizations involved in humanitarian innovation. Analyzing these documents, we identified six primary values (do-no-harm, autonomy, justice, accountability, sustainability, and inclusivity) around which we grouped 12 secondary values and 10 associated concepts. Second are two proposed activities that teams engaged in humanitarian innovation can employ to foreground values as they develop and refine their project's design, and to anticipate and plan for challenges in enacting these values across the phases of their project. A deliberate and tangible approach to engaging with values within humanitarian innovation design can help to ground humanitarian innovation in ethical commitments by increasing shared understanding amongst team members, promoting attentiveness to values across the stages of innovation, and fostering capacities to anticipate and respond to ethically challenging situations.



ARTICLE (ÉVALUÉ PAR LES PAIRS / PEER-REVIEWED)

The Ethics of Humanitarian Innovation: Mapping Values Statements and Engaging with Value-Sensitive Design

Lilia Brahimi^a, Gautham Krishnaraj^b, John Pringle^{c,d}, Lisa Schwartz^e, Dónal O'Mathúna^f, Matthew Hunt^{g,h}

Résumé

Les réponses humanitaires auprès des populations victimes de conflits armés, de migration forcée ou d'urgences sanitaires font souvent face à des défis organisationnels et opérationnels importants. En réponse à ces défis, l'innovation en aide humanitaire cherche à identifier ces problèmes, tester et développer de nouvelles technologies et imaginer de nouveaux systèmes afin de pallier ces défaillances. Le processus d'innovation en aide humanitaire amène son lot de questionnements éthiques. Ceux-ci incluent le degré d'inclusion des populations affectées lors de la prise en charge des problèmes, le développement des solutions, l'identification et l'atténuation des risques ainsi que la distribution des bénéfices. Cet article enrichit l'ensemble des connaissances sur les implications éthiques des pratiques en innovation humanitaire de deux façons. Premièrement, nous dressons un portrait des concepts éthiques évoqués à travers les déclarations de valeurs et de principes éthiques publiés par des acteurs actifs dans le domaine de l'innovation humanitaire. L'analyse de ces documents nous permet d'identifier six valeurs fondamentales (les principes de bienveillance, autonomie, justice, responsabilité, durabilité et inclusion) auxquelles se joignent 12 valeurs secondaires et 10 concepts et pratiques connexes. Deuxièmement, nous proposons deux activités auxquelles les organisateurs d'innovation peuvent recourir afin de placer leurs valeurs au cœur du développement de leurs projets, et d'anticiper et de planifier une stratégie en cas de conflits de valeur. Favoriser une approche délibérée aux systèmes de valeurs et de principes éthiques en innovation humanitaire permet de centrer ces activités sur des engagements concrets. Les approches que nous présentons permettent de faciliter la diffusion des connaissances entre les différents agents, de promouvoir une attention particulière aux valeurs à travers les étapes d'innovation et de bâtir une résilience et une capacité à répondre aux situations présentant des dilemmes éthiques.

Mots-clés

conflit armé, catastrophe, éthique, humanitaire, innovation, conception basée sur les valeurs, éthique technologique

Abstract

The humanitarian sector continually faces organizational and operational challenges to respond to the needs of populations affected by war, disaster, displacement, and health emergencies. With the goal of improving the effectiveness and efficiency of response efforts, humanitarian innovation initiatives seek to develop, test, and scale a variety of novel and adapted practices, products, and systems. The innovation process raises important ethical considerations, such as appropriately engaging crisis-affected populations in defining problems and identifying potential solutions, mitigating risks, ensuring accountability, sharing benefits fairly, and managing expectations. This paper aims to contribute to knowledge and practice regarding humanitarian innovation ethics and presents two components related to a value-sensitive approach to humanitarian innovation. First is a mapping of how ethical concepts are mobilized in values statements that have been produced by a diverse set of organizations involved in humanitarian innovation. Analyzing these documents, we identified six primary values (do-no-harm, autonomy, justice, accountability, sustainability, and inclusivity) around which we grouped 12 secondary values and 10 associated concepts. Second are two proposed activities that teams engaged in humanitarian innovation can employ to foreground values as they develop and refine their project's design, and to anticipate and plan for challenges in enacting these values across the phases of their project. A deliberate and tangible approach to engaging with values within humanitarian innovation design can help to ground humanitarian innovation in ethical commitments by increasing shared understanding amongst team members, promoting attentiveness to values across the stages of innovation, and fostering capacities to anticipate and respond to ethically challenging situations.

Keywords

armed conflict, disaster, ethics, humanitarian, innovation, values-based design, technology ethics

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INTRODUCTION

Structured approaches to innovation in the humanitarian sector have become increasingly prominent over the past decade. This development is linked to discussions of accelerating learning, accountability and improvement of system-wide performance amongst humanitarian organizations, funders, practitioners, and other stakeholders (1). There has been a corresponding global proliferation of innovation labs, accelerators, and hubs that seek to reimagine solutions and processes to address emergent and long-standing humanitarian challenges. Since 2009, the humanitarian innovation sector has itself

evolved “in nature and substance...” enabling the innovation agenda “to better match the complexity of the problems it seeks to address” (2).

Distinctive features of this innovation-driven humanitarian learning include adopting a structured approach to innovation and its evaluation, considering reactive changes to structured and evidence-driven approaches, and promoting changes at structural and system levels. However, discussions of the ethical dimensions of humanitarian innovation have not kept pace with the rapid technical and managerial developments associated with humanitarian innovation, though they have been garnering increased attention (see, for example the 2019 special issue on ethics and innovation in the *Journal of Humanitarian Affairs*) (3). As the reach and boundaries of the humanitarian innovation field are drawn and redrawn in response to a rapidly evolving humanitarian landscape, the need to deepen ethical analyses of humanitarian innovation is pressing. Simultaneously, developing ethical guidance through frameworks and methods to support innovation teams is key to harnessing such analyses for practical impact on the ground.

In this paper, we seek to contribute to ethics in humanitarian innovation, and the ways that a values-sensitive approach can be enacted. We begin with an introduction to humanitarian innovation and ethics, and then present an analysis of values that are included in normative statements of organizations involved in humanitarian innovation. Finally, we introduce and describe two activities that humanitarian innovation teams can use while developing and refining their projects to foreground values and attend to them across their innovation activities. These activities are rooted in value-sensitive design that focuses purposeful attention on values in design processes and has been proposed as a promising approach for humanitarian innovation ethics (4-7).

ETHICS AND HUMANITARIAN INNOVATION

Discussing the humanitarian sector, Betts and Bloom define innovation as “a means of adaptation and improvement through finding and scaling solutions to problems, in the form of products, processes or wider business models” (8, p.5). Reflecting this breadth, humanitarian innovation initiatives are conducted in diverse settings and address varied topics and problems across the sector. The solutions developed by humanitarian innovators, in the form of product or process innovations, also show considerable diversity. Cutting edge technological innovations garner the most attention and discussion, but non-technological innovations – for example, ones focused on improving organizational processes and coordination between actors – are also a key sector of innovation (2). The World Food Program’s Innovation Accelerator presents an illustrative example of a humanitarian innovation initiative. Established in 2019, the Scale-Up Enablement Programme supported the following projects in resource-constrained settings: a digital marketplace for farmers in Kenya to sell their crops online ([Farm to Market Alliance](#)), a global smartphone application allowing people to donate meals across the world ([ShareTheMeal](#)), and low-tech hydroponic systems in desert geographies to support food-insecure families ([H2Grow](#)) (9). Many innovative practices and products in the global food supply sector, such as those listed above, are implemented under the charge of “disrupting hunger”, a phrase which echoes the technology industry’s rhetoric of disruptive change. This influence reflects broader patterns in humanitarian innovation that include the establishment of cross-sector public-private partnerships, as well as the involvement of a broader set of actors in the humanitarian space.

While global and transnational networks such as the Global Partnerships for Humanitarian Impact and Innovation (GPHI2) of the International Committee of the Red Cross (ICRC) shape the innovation ecosystem considerably, efforts to localize humanitarian innovation exist. Such initiatives include the work of several networks supporting small-scale, grassroots innovators in countries affected by humanitarian crises, such as [Response Innovation Lab](#) (RIL) or the [Start Network](#). Breaking with the traditional top-down processes of humanitarian relief between aid donors and recipients, some innovation efforts have been spearheaded by communities and organizations based in conflict-affected regions such as the [Northeast Humanitarian Innovation Lab](#).

As with humanitarian actions more generally, innovation activities have ethical implications that warrant careful attention (10). For example, ethical considerations related to the use of emergent information and communication technologies (ICTs) include accuracy of information, protecting the privacy and security of users, responding to inequalities, demonstrating respect for communities, protecting relationships, and managing expectations (11). Since innovation projects often go beyond ideation into phases of prototyping and testing to determine whether a new approach is an improvement over existing practices; it is emphasized that innovators have a responsibility to ensure “that any increased risk remains isolated to the innovating organization rather than passed to an affected community” (1). In a similar spirit, the ICRC warns that innovating in the absence of ethical standards “will undoubtedly cause confusion and inconvenience, waste resources and create additional risk and vulnerability” (12, p.27). These assessments highlight the importance of attending to the ways that innovation processes intersect with situations of vulnerability experienced by populations affected by crises. Examining structural features of humanitarian innovation initiatives, multiple authors have also expressed concern regarding the roles of private for-profit actors, neoliberal and neocolonial global dynamics, and market-driven innovation models drawn from the technology industry, directing attention to potential misalignment with ethical commitments of humanitarians (13,14). While research activities in humanitarian contexts typically require review and approval from one or several research ethics committees, depending on the participating institutions and locations in which the project is undertaken, many innovation activities do not undergo such scrutiny.

Ethics guidance for humanitarian innovators has been developed within both the humanitarian and social innovation ecosystems (3,15). Other initiatives have focused on specific domains of innovation, such as guidance related to innovations in ICTs (16). Multiple organizations, initiatives and individuals have also emphasized the need to articulate ethical values or guiding principles to orient responsible innovation activities more generally (7). Taken together, these contributions present a portrait of diverse values that humanitarian innovation stakeholders consider to be important for guiding innovation activities. However, formal statements of values may appear abstract and remain disconnected from the actual processes of developing, implementing, evaluating and scaling innovations. In the next section, we map statements of values and identify patterns and linkages across them, before considering ways that attention to values can be further integrated in innovation processes.

MAPPING CONCEPTS IN NORMATIVE STATEMENTS OF VALUES

We drew on McDougall and colleagues' Critical Interpretive Review approach to map and analyze normative values statements for humanitarian innovation that have been developed by or for organizations involved in humanitarian innovation (17). The question orienting this exercise was, "How are ethical values expressed in normative statements that aim to guide organizations involved in humanitarian innovation activities?" We defined a normative statement as an explicit *articulation of a set of concepts presented as guiding values or ethical principles for orienting humanitarian innovation*. To identify normative statements, we used multiple approaches. Between September 2019 and February 2020, open searches were conducted using Google, as well as focused databases for academic and grey literature, i.e., Google Scholar, Scopus, ProQuest, and OpenGrey. Clusters of key terms linked to the concepts of "humanitarian", "innovation", "ethics" and "values" were tailored to specific databases, with no restriction on publication date. Targeted searches were also conducted of official websites associated with intergovernmental agencies, non-governmental organizations, interagency initiatives, funding agencies, private organizations, research groups, and foundations (e.g., ICRC, Humanitarian Innovation Fund, and ALNAP's Humanitarian Evaluation, Learning, and Monitoring [HELP] Library). Finally, we hand-searched reference lists of relevant documents.

Normative statements were assessed based on scope, source and content. They were included if they articulated specific normative values (or ethical principles) for humanitarian innovation (though these could be intermixed with technical or operational principles). Ethical guidelines or frameworks that were not based around specific values were not included, nor were statements that focused only on technical or operational aspects of innovation. Further, statements were included if they addressed humanitarian innovation generally and were not specific to a particular innovation domain or emergent technology. Thus, those that focused exclusively on technologies such as artificial intelligence, drones, or big data management in humanitarian action were excluded. Statements also had to be endorsed or put forward by a specific organization, be included in a report issued by an organization engaged in humanitarian innovation or be the result of a collective process that involved representatives of organizations involved in humanitarian innovation.

Following these steps, eight sources were retained for the mapping exercise (Table 1), meeting our goal of surveying a wide array of normative statements, i.e., statements linked to non-governmental organizations, networks, an intergovernmental organization, a private foundation and funding programs. We acknowledge that we may have missed some normative values statements pertaining to humanitarian innovation, such as ones not available in English or framed differently than our search terms. Nonetheless, this targeted approach is in line with a Critical Interpretive Review that aims at capturing and critically reviewing key sources in a structured and thorough manner, rather than exhaustively assembling every possible source related to the research question (17).

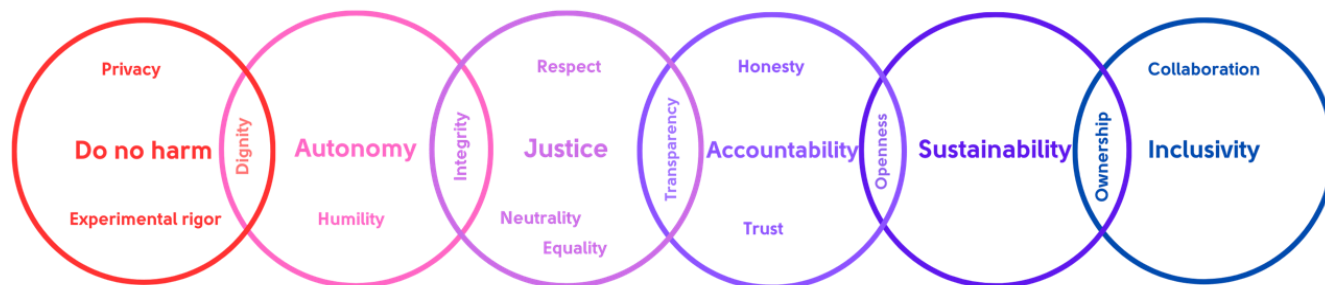
Table 1: Characteristics of included statements of ethical values and principles

	Linked organization or entity	Role of organization or entity	Name of document	Type of document	Date
1	Medécins sans Frontières' Transformational Investment Capacity (TIC) (18)	Invests funds, intellectual capital, and human resources to support humanitarian innovation projects	Guiding practices	Set of practices that projects supported by the TIC are to follow	2018
2	United Nations Office for the Coordination for Humanitarian Affairs (OCHA); Betts and Bloom (8)	Coordination of humanitarian response	Humanitarian Innovation: State of the Art	Ethical Framework for Humanitarian Innovation included within OCHA policy paper (such papers are "produced primarily for internal purposes and serve as a basis for promoting further discussion and policy analysis in their respective areas. They do not necessarily represent the official views of OCHA.")	2014
3	Oxford Refugee Studies Centre (15)	Workshop in preparation for World Humanitarian Summit with participation from academia and humanitarian sector	Principles for Ethical Humanitarian Innovation	Set of innovation principles drafted in preparation for 2016 World Humanitarian Summit. Workshop was convened at Oxford University and included participation of NGOs, intergovernmental agencies, funders and academics.	2015
4	Red Cross and Red Crescent Movement; Binger, Lynch, Weaver, American Red Cross (12)	Humanitarian agency	Principled Approach to Innovation	Official submission to the World Humanitarian Summit, drafted with support from the American Red Cross, International Committee of the Red Cross, International Federation of Red Cross and Red Crescent Societies, Korean Red Cross, Netherlands Red Cross, Red Cross Red Crescent Climate Centre, and Swedish Red Cross.	n.d.
5	IKEA Foundation (19)	Private foundation, funder of innovation projects with UNHCR	Ethical Framework	Framework to guide private foundation's activities, including for emergency relief and refugee-focused initiatives	n.d.
6	Global Alliance for Humanitarian Innovation (GAHI), managed by Elrha* (20)	Network aiming to connect, mobilize and amplify innovation	Values	GAHI was launched at the World Humanitarian Summit (WHS) with the overall goal to address the innovation needs in the sector that could not be effectively tackled by individual actors and organizations working on their own	2016-2019
7	Response Innovation Lab (RIL) (21)	Network aiming to convene, matchmake and support humanitarian innovation	Response Innovation Lab	Guidance document providing guiding principles for RIL staff, members and partners.	2018
8	Humanitarian Innovation Fund (HIF) (22)	Funding program under the management of Elrha	Humanitarian Innovation Guide Principles and Ethics	Includes 1) principles for humanitarian innovation management; and 2) set of ethical guidelines "to help mitigate the risks associated with the practice of experimentation in humanitarian environments."	2018

*GAHI was launched in 2016 but was closed down in 2019 (after the initial search was conducted). We retained the document in our analysis for the purpose of illustrating the values it foregrounded as a unique network of humanitarian innovators.

After repeated close reading of the sources, using QDA Software Atlas.ti (Version 8.4.4), the texts were coded and labels assigned to related value concepts. This process identified 28 distinct codes. Data display tables and concept maps were then developed to further clarify and refine an analytic structure, clustering related values and establishing linkages across concepts and between statements. Through this process, several codes were merged, and others added or refined, resulting in a total of 30 codes. We identified six primary values that represent more prominent and overarching conceptual categories and classified 14 concepts as secondary values that we interpreted as being closely related to one or several of the primary values, often functioning as actionable principles. Figure 1 illustrates the relationship between primary and secondary values.

Figure 1: Venn diagram of primary and secondary values



An additional ten codes were categorized as 'associated concepts,' concepts that were included in the normative statements but are not normative values in their own right. They are nonetheless concepts or design principles with ethical implications that present as enablers or challenges to the primary values (e.g., consent is often considered as an important way to operationalize the value of autonomy). The primary values, secondary values and associated concepts are presented in Table 2. In the following section, we briefly describe the six primary values and how they were defined, contextualized, and/or justified in the normative statements.

Table 2: Primary and secondary values, and associated concepts, identified in normative statements

Primary values	Secondary values	Associated concepts	Illustrative excerpts linked to the primary value
Do-no-harm	Experimental rigor Dignity* Privacy	Data security Consent	"Under no circumstances should humanitarian innovation lead to intentional harm. Risk analysis and mitigation must be used to prevent unintentional harm, including from primary and secondary effects relating to privacy and data security, impacts on local economies, and inter-communal relationships." (15) "We apply ethical standards to ensure the innovation process and outcomes do not create additional vulnerability, dependencies, risks or other harms." (12)
Autonomy	Dignity* Humility Integrity*	Consent	"All humanitarian innovation must be conducted with the aim of promoting the rights, dignity and capabilities of the recipient population. Innovation must be based on representative consultation and informed consent." (15,21)
Justice	Integrity* Equality Neutrality Respect Transparency*		"Equity and fairness should underpin the distribution of benefits, costs, and risks resulting from innovation." (15,21,22) "We are a trusted, neutral convener with the ability to lead an equitable and fair innovation process." (12) "Equity and fairness should underpin the distribution of benefits, costs, and risks resulting from innovation. Innovation should be sensitive to, and useful for, the most marginalized populations, including sensitivity to age, gender, and disability." (22)
Accountability	Transparency* Trust Honesty Openness*	Conflict of interest User-Centeredness*	"Engagement in humanitarian innovation constitutes an obligation to ensure accountability to recipient populations, including establishing processes for complaints and recourse relating to unforeseen consequences and maleficence." (15) "Improve mechanisms for sustained dialogue and communication during all stages of the innovation process." (7,8) "Projects should be visible across the MSF movement and have a high degree of accountability." (18)
Sustainability	Openness* Ownership*	Timeliness Quality Proven Impact	"Ensure that the local market and local systems are well understood before implementation, and that measures are in place for long-term impact and sustainability." (8) "[a resilience strengthening solution] has the required financial resources to support its current use and growth, but does not compromise natural resources or the interests of future generations." (8) "We actively work towards sustainability and making the best possible use of resources." (19)
Inclusivity	Collaboration Ownership*	Communication Representation Partnership User-centredness*	"As a central component of innovation, partnership is [...] a means to draw in ideas, good practices, and resources from private technology developers, military R&D agencies, universities and affected people themselves." (8) "Affected populations have the right to inclusion during the process as well as to benefits from the outcomes of such a process." (22)

* indicates secondary values or associate concepts that relate to two of the primary values

SUMMARIES OF PRIMARY VALUES

Do-no-harm: A central concept in many of the normative statements is the commitment to avoid causing harm through humanitarian innovation. In multiple normative statements, innovation stakeholders are guided to enact the 'do no harm' principle, a central concept in the broader domain of humanitarian ethics (23,24). Innovation involves uncertainty and includes cycles of experimentation, piloting, testing, and evaluating. Efforts to improve practices and processes, or test products, may give rise to risks distinct from those occurring in regular humanitarian activities, and possibly worsen existing power struggles (8). As the HIF ethical guidelines indicate, "Applying 'Do No Harm' necessitates an anticipatory approach toward identifying, describing, and analysing intended and unintended impacts that might arise because of research and experimentation." This quotation from the HIF's Humanitarian Innovation Guide reflects a common emphasis in other normative statements on issues related to particularities of experimentation. To mitigate the risks of harms linked to this step of the process, several values statements point to rigorous evaluations of an innovation's impacts, upholding standards of research ethics, and undergoing external review of experimentation activities where relevant – including assessing how these processes could harm populations affected by crisis, especially marginalized groups or individuals (12).

Autonomy: Respect for autonomy in the context of innovation encompasses designing and implementing innovations in ways that acknowledge and promote the rights, dignity and capabilities of crisis affected populations, and especially persons who will engage with the innovation process and its products. This is supported by responsiveness to "change the shape or direction of a project in response to stakeholder perspectives, social values, and changing circumstances." (22) Respect for autonomy is operationalized by engaging communities in the identification of problems to be addressed through innovation, the design of innovation projects, and by recurrently seeking their informed consent as the circumstances and conditions of the innovations evolve, and especially during trials, pilots or experimental activities (15,22).

Justice: The principle of justice is often conceived of as "fairness" and linked to concepts of distributive, social and procedural justice. Addressing justice requires attention to how risks and benefits are apportioned within and across populations, and amongst innovation stakeholders (22), and dedicated effort to attend to the needs of marginalized or especially vulnerable groups (15,21). Justice is a relational concern in partnerships, requiring integrity and honest dealing, including attention to conflicts of interest (19). Also important for innovation is procedural fairness in the way that decisions are made, including transparency of processes (18,20).

Accountability: Those involved in humanitarian innovation activities should accept responsibility for their actions and be accountable to both the crisis-affected populations they assist and to the partners and donors involved in their project (15). Strong mechanisms of accountability rooted in openness and transparency about the successes and failures of the innovation processes foster trust between partners and help maintain the legitimacy and reputation of the system and its actors (20). A further aspect of accountability relates to respecting the rights of affected populations to rectify and redress harms that may result from an innovation process (22).

Sustainability: Sustainability is featured in multiple normative statements but is defined in at least two ways: first, fostering innovations that promote longevity of the innovation and its long-term impact, and second, innovating in ways that are ecologically responsible. The first emphasizes concern for the continuity of positive impacts of practices, processes and products that are developed through innovation (8,22). The design principle of openness and the local ownership of the innovation project are related concepts fostering sustainable practices. Fair and sustainable innovation practices are linked to commitments to avoid displacement of local businesses; provide crisis-affected communities with needed information, training and infrastructure; and sharing resources between all participating actors (e.g., community, funders, and aid workers), even beyond the termination of the project (8,12). Ecological sustainability reflects a concern for the legacy of the innovation activity, its resilience to environmental shocks, and potential unintended harmful impacts on the environment, especially for future generations (12).

Inclusiveness: Innovation projects should be demand-driven, responding to needs within crisis-affected communities as identified by end-users (8). Considering the inherent uncertainties and uneven distribution of risks in the contexts in which humanitarian innovations are deployed, special care must be taken to avoid exacerbating the vulnerability of particularly at-risk or marginalized groups by excluding them from an innovation project (22). A non-tokenistic, user-centred approach can promote inclusion by integrating crisis-affected communities in all stages of the innovation process; collaboration and meaningful engagement of stakeholders across disciplines and industries was also identified as a form of inclusiveness (8,21). A feature of the Red Cross and Red Crescent Movement's approach is described as "advocating for equitable access so as not to exclude important stakeholders in the innovation process." (12) Further, ethical innovation practices foreground meaningful collaboration and consultations with end-users and promote fair representation in their partnerships.

DISCUSSION OF VALUES MAPPING

This mapping exercise provides a portrait of what values are included in normative statements as of May 2020. Considerable variability exists across the values statements in terms of purpose, framing, and substantive content. Organizations frame and disseminate these statements in different ways, referring to them as summations of guiding principles, guiding practices, ethical standards, or values. They include concepts ranging from broad ethical principles (e.g., justice), to operationalized practices (e.g., obtaining informed consent), and design strategies (e.g., user-centredness). In drawing upon these statements, innovators will need to be attentive to the fit and focus of the included content in relation to their own needs and purposes.

A second consideration relates to whether values statements were tailored to organizations or developed for a broader humanitarian audience. For example, the Red Cross and Red Crescent's Principled Approach to Innovation articulates how innovation activities can be aligned with the seven humanitarian principles, the key normative reference points for the Red Cross movement. In other instances, statements draw from principles formulated for the practice of innovation in the development field. The UNICEF Principles for Innovation and Technology in Development have been particularly influential to other organisations, with aspects included in the normative statements of the UNHCR and the RIL. These trends raise interesting questions about the specificity of the value set that might be most relevant to humanitarian innovation or humanitarian innovation organizations, and the transferability of value sets from neighbouring domains.

We also note that some values statements appear to be more focused on specific phases or aspects of innovation (e.g., problem recognition or experimentation phases). Generally, little guidance is provided alongside the normative statements about how innovators ought to apply them in their work, nor how to adjudicate between principles in situations when they might conflict. One challenge with principle-based approaches to ethics in any practice domain is the possibility of conflicts arising between two or more principles. The Humanitarian Innovation Guide notes this possibility in terms of the application of the fundamental humanitarian principles for innovation, stating that "efforts should be made to articulate all potential tensions, conflicts, and challenges to such principles and the strategies that innovators will use to resolve such tensions." Moreover, challenges may arise when partners from different organizations, with different sets of values (whether or not articulated in normative statements) seek to collaborate. Such challenges may be especially likely when collaborations span the humanitarian and private sectors, or if there is involvement of military actors. The diversification of stakeholders and funding sources in the humanitarian innovation ecosystem can complicate the delineation of coherent values and create tensions between stakeholders. As innovators seek to integrate an ethics framework in their projects, potential value conflicts should be identified and strategies to mitigate them developed, along with guidance on practical ways to integrate values into innovation processes.

Based on this review, several questions can be asked: how do these values map onto the actual practices of innovators and innovations teams? How can values be integrated across different innovation stages from problem recognition to scaling? How can innovators address potential trade-offs or conflicts between values? How can these values and associated concepts draw attention to power imbalances in the innovation process, amongst partners, and between innovators and crisis-affected

populations? And importantly, how can one best attend to these considerations and ensure that injustices are not reinforced by the innovation project? In the following section, we present two activities that can support teams in making values more concrete in their project design process.

Foregrounding Values in Innovation Projects: Two Activities to Support Value-Sensitive Humanitarian Innovation

As described above, organizations involved in humanitarian innovation have identified a wide range of values to guide their innovation activities. A challenge for innovators and innovation teams is the question of how to integrate these values into their projects in a deliberate and tangible manner. A range of frameworks and approaches exist that could provide methods and structure for engaging values in humanitarian innovation (25-29). Among these, value-sensitive design (VSD) is particularly salient (30). VSD was developed as an iterative approach for developing technology applications and incorporating close attention to human values across all phases of the design process (4,31). A wide range of VSD methods have been developed (32), and VSD has been proposed as a useful approach for guiding humanitarian innovation (6,7).

With the goal of illustrating practical approaches for enacting a value-sensitive humanitarian innovation approach, we highlight two activities that innovation teams could undertake as practical means of foregrounding values within their innovation process. These activities were developed as part of an initiative that our research group undertook to develop an ethics toolkit for humanitarian innovation for the [Humanitarian Innovation Fund](#). This development was inspired and informed by the above review of the literature on humanitarian innovation ethics; interviews with humanitarian innovators, donors, funders, and researchers; and a series of iterative workshops with innovators and innovation teams.

The first activity provides a process for teams to identify the values that they deem most important to attend to within a particular project and guides them to articulate how and why the values are particularly salient. The second activity builds on the first by having the team consider how the identified values are relevant to each of the different components of their project work plan, and how these values might be hindered or even threatened. Innovators can then reflect on how the project design might be adjusted to avoid, minimize or mitigate these potential issues, effectively establishing a values-driven strategy for their innovation process. Both exercises can be conducted in-person or online, and they should have a facilitator, who can be a member of the team or someone outside the group.

Activity 1: Values Clarification

As demonstrated through the mapping review, some organizations have identified values to guide humanitarian innovation. Due to the nature of innovation projects, teams will continuously benefit from engaging in discussion to clarify organizational and project-specific values. These conversations may be especially important for collaborative innovation projects that involve partners from multiple sectors (e.g., humanitarian organizations, academia, industry). This process can help team members develop a shared understanding of and commitment to a core set of concerns. In doing so, it can help clarify expectations and priorities, and may help prevent misunderstandings.

In preparation for the activity, the facilitator should prepare a set of values for the team to consider. These can be drawn from the organization's values statement (or a number of values statements within a partnership), from guidance documents specific to the domain of innovation, or other relevant source. The results of the mapping exercise presented above could also be the basis for this values list or be used to supplement other sources. For an in-person session, the facilitator writes each of these values on a card and places them on a table. Online, the values could be organized as a list or word cloud that is visible to all participants. When the group is convened, the facilitator explains the purpose of the exercise, and responds to any questions. Participants are then invited to look over the list of values. Before discussing with others, they are asked to write down three to five values that strike them as especially relevant to their project. If they think other values are important but missing from the cards/list, they are encouraged to take note of them. The facilitator then asks each member of the team to share which values they identified as particularly important to their project, and why. The team then discusses which values were frequently included and which were included by a minority. The facilitator should encourage the team to think about the values in the context of the particular project, rather than for innovation in general or for other innovation projects. The team should also be attentive to situations when the same value is understood differently by members of the team, and these differences should be discussed. For example, team members might have chosen 'sustainability' as the value, but some could be thinking about environmental impacts of the project, while others could be considering the likelihood of durable benefits for end users. Any newly proposed values that were not on the original list should be considered by the group. Through discussion, the team should aim to arrive by consensus at a set of four to six values that they agree are especially important to attend to in their project. Importantly, this selection does not mean that other values are not relevant to the project, but rather that the team has chosen to prioritize these 4-6 values, at least for the time being.

The second part of the exercise involves group work to write a short summative description of what the team thinks it will mean to be attentive to each of the selected values in their project. For example, if the team identified 'inclusion' as a key value, they might have written the following description of how they planned to enact that value: "We will be attentive to power structures that exist within the project and strive to listen to diverse voices, especially those of people who have been marginalized within the population affected by the crisis." By doing so, the team has the opportunity to concretize their commitment to inclusion and to 'make it their own' for the purposes of their project.

We piloted this activity in workshops in the Philippines and Germany, and online with multinational groups, and observed that innovation teams often drew upon the values identified in the mapping review when selecting project-specific values, rather than starting with a pre-established set of organizational values. This process also provides an opportunity for all team members to bring their perspectives, commitments, and priorities to the table. Discussing the wider set of values in relation to their own project can thus support teams to establish common ground when people are drawn from different organizations or have different familiarity with value-related vocabulary. Where team members have different perspectives on which values to highlight for their project, discussion can help clarify how people understand these terms and their application to the specific project. It also provides an opportunity to consider differences across organizational values statements, and how to align the value set for a particular project. The second part of the exercise aims to support participants to go beyond the creation of a list (which may feel like an abstract exercise) and express the value as a project-specific commitment in order to make its application more tangible and tailored.

Activity 2: Foresighting

The second activity presents a further opportunity to consider how values relate to planning and implementing a humanitarian innovation project. The values used in this exercise may be generated through the Values Clarification activity, or could draw on another source, such as a set of organizational values. The intent is for teams to consider potential challenges to enacting the prioritized values within their planned project. This can be considered an act of foresighting, by which we mean to “identify possible outcomes, anticipate contingencies, and be diligent in planning” (33) while aiming to “understand and anticipate how choices and actions made today shape or create the future”. (34)

If done in person, this activity works well with a poster-sized paper that team members can group themselves around. Online, some form of shared work board (such as [Miro](#), [StormBoard](#) or similar tools) can be used. Prior to the session, the facilitator should ensure that the team has a copy of their project work plan. This work plan can be pre-populated across the centre of the poster or work board. In many instances, it may help to organize this material visually as a set of boxes or circles arranged linearly according to the timeline of the project (e.g., a box or circle could be created for a community consultation workshop or a pilot trial of the innovation in a particular locale).

In beginning the discussion, the facilitator should review the goals and steps of the exercise. Participants can then be invited to review the project components and timeline, and small corrections made. Depending on the complexity of the project and the stage of development, practical decisions may need to be made about which components to focus on or the degree of granularity that will be introduced. Next, the set of key values that the team has identified as particularly important for their project are listed across the top of the page. The facilitator then invites participants to consider how each project component relates to the values, asking themselves: “what might hinder the enactment of these values at this step of our project?” For example, a team which identified ‘inclusion’ as a key value might be prompted to reflect on whether challenges could arise for incorporating marginalized groups into a community consultation workshop, or whether accessibility barriers could exist for the inclusion of people with mobility impairments (for further examples, see the [EHI case studies](#)).

The final step in the foresighting exercise is to discuss ways to avoid, respond to, or mitigate potential harms that could arise from the identified challenges. The product of the Foresighting Activity can thus be seen as an actionable, values-driven strategy to anticipate ethical challenges and to increase the alignment of the innovation project’s components with the stated values of the team members. This activity gives the team an opportunity to assess and adjust project plans according to a value-sensitive approach and encourages teams to establish patterns of reflection and discussion around the ethics of their work, a process that fosters learning, mutual support, and accountability.

During piloting workshops that we conducted, the foresighting exercise led to many rich discussions centred around how values connect with project activities. Depending on where an innovation team was situated in their process (ranging from early-stage problem recognition to late-stage implementation), different decisions were made about the degree of granularity in which project components were separated out for discussion. Some teams focused on an area of challenge about which they were already loosely aware, but had not yet addressed in detail, while other teams discussed potential issues that they had not yet considered. Both types of discussions can be fruitful outcomes of the foresighting exercise and provide opportunities to adjust project plans. The exercise was noted as being most effective when teams have a high degree of shared buy-in to the key values guiding the activity.

CONCLUSION

As the field of humanitarian innovation continues to evolve in the years to come, it will benefit from the adoption of proactive approaches to integrate and address values and that promote alignment between innovation projects and the needs and priorities of populations affected by crisis. Clarifying values and ethical commitments is more important as innovation integrates multi-sectoral partnerships and as diverse actors engage in this space. Within humanitarian innovation, increasing emphasis has been placed on fostering local, grassroots innovations, a development that promotes direct engagement by populations affected by crisis, and greater attention to local needs and contextual realities. These initiatives may involve collaboration among partners with different goals, expectations, and commitments. In other instances, innovation projects involve partnership between humanitarian organizations and private industry. Burns cautions that “private-sector logics, languages and rationalities” are increasingly prominent in digital humanitarian innovation and are influencing the humanitarian sector more broadly. (14) The values motivating private-sector organizations are likely to differ from those motivating humanitarian

organizations, which could lead to challenges within partnerships and innovation initiatives. Activities like those described in this paper may bring differences to the surface and allow fruitful discussion and articulation of a common vision for the values that will guide an innovation project. Regardless of the configuration of partners and stakeholders who are involved, engaging in values-sensitive design will promote attention to how ethical commitments can animate and guide design decisions and the implementation of a humanitarian innovation project. While the development of organizational values statements is an important contribution, tangible strategies are also needed to support innovation teams to foreground values in their practices and across their innovation projects.

Reçu/Received: 10/05/2021

Remerciements

Nous remercions Ian McClelland, Anna Skeels et Bjorn Rust du Fonds d'innovation humanitaire pour leur contribution très utile aux idées et activités présentées dans cet article. Nous remercions également les autres membres de notre équipe de recherche, Rachel Yantzi, Ali Okhowat et Lydia Kapiriri, ainsi que tous les innovateurs qui se sont engagés dans différentes itérations des outils de clarification des valeurs et de prospective lors d'une série d'ateliers en 2019 et 2020. La cartographie des déclarations de valeurs et le développement des deux activités ont été entrepris dans le contexte du projet Éthique pour l'innovation humanitaire qui a été initié par Elrha et entrepris par les membres du Groupe de recherche sur l'éthique de la santé humanitaire. Ce travail a été rendu possible grâce au financement du Foreign, Commonwealth and Development Office (FCDO) du Royaume-Uni et du ministère néerlandais des Affaires étrangères. Lisa Schwartz bénéficie du soutien de la chaire Arnold L Johnson d'éthique des soins de santé.

Conflicts d'intérêts

Aucun à déclarer

Publié/Published: 27/06/2023

Acknowledgements

We are grateful to Ian McClelland, Anna Skeels and Bjorn Rust from the Humanitarian Innovation Fund for their very helpful input related to the ideas and activities presented in this article. We also thank the other members of our research team, Rachel Yantzi, Ali Okhowat and Lydia Kapiriri, and all the innovators who engaged with different iterations of the values clarification and foresighting tools at a series of workshops in 2019 and 2020. The values statement mapping and development of the two activities were undertaken within the context of the Ethics for Humanitarian Innovation project that was initiated by Elrha and undertaken by members of the Humanitarian Health Ethics Research Group. This work was made possible by funding from the UK Foreign, Commonwealth and Development Office (FCDO), and the Netherlands Ministry of Foreign Affairs. Lisa Schwartz is supported by the Arnold L Johnson Chair in Health Care Ethics.

Conflicts of Interest

None to declare

Édition/Editors: Aliya Affdal

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