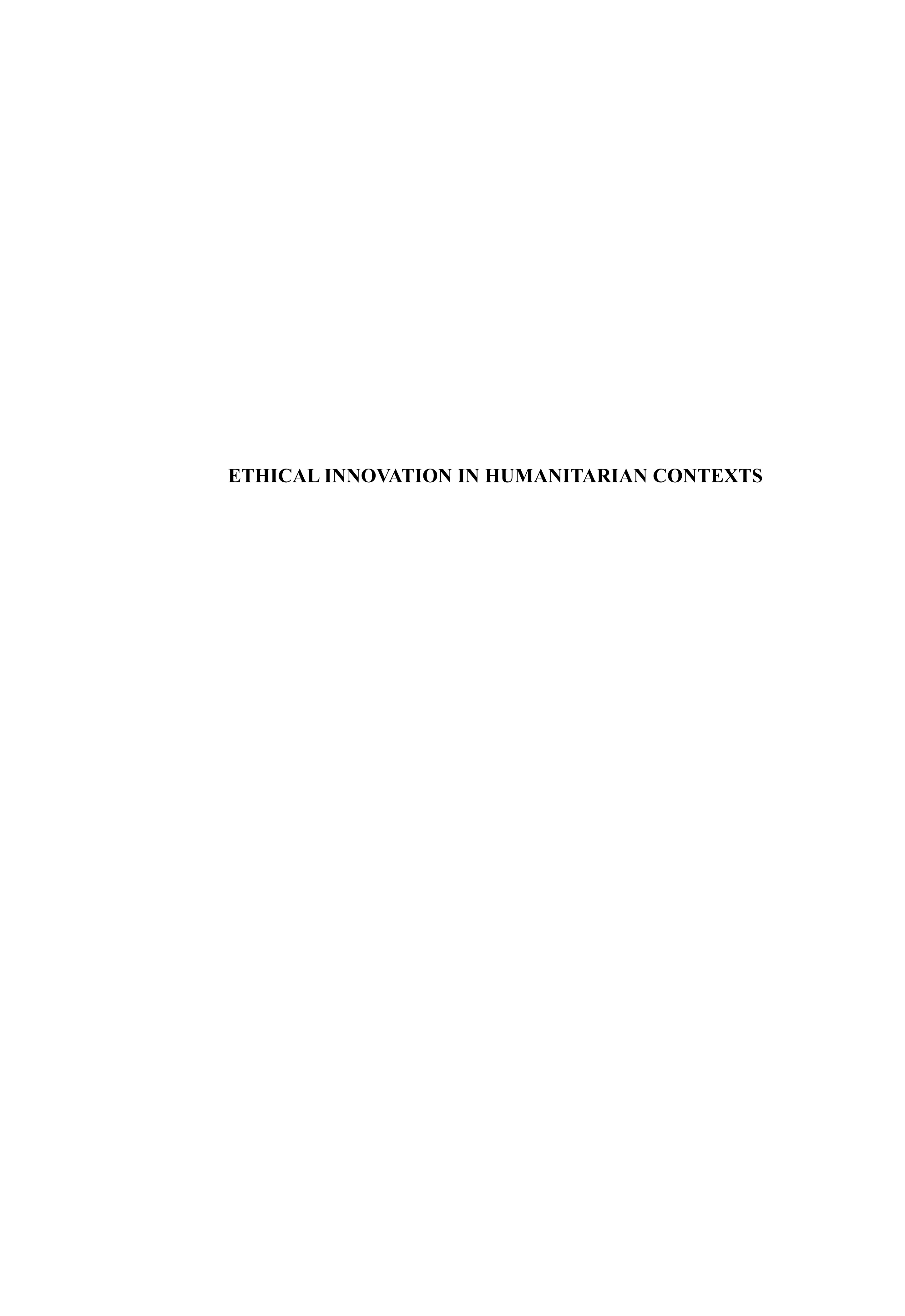

ETHICAL INNOVATION IN HUMANITARIAN CONTEXTS

Supporting the Development of Ethics Tools for Innovation in Humanitarian Contexts

By Gautham Krishnaraj BSc MSc

A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in Health Policy

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LAY ABSTRACT

Over the past decade there has been an intense proliferation of innovation activities in the humanitarian sector (challenges, labs, accelerators), but a lack of practitioner-oriented resources to facilitate ethical decision making and reflection when pursuing these activities. This research was conducted through a consultancy-grant between the Humanitarian Innovation Fund & the Humanitarian Health Ethics Research Group, with the aim of supporting the development of evidence-based resources to foster ethical innovation in humanitarian contexts. Qualitative interviews and literature reviews were used to explore the landscape of what is known and to identify gaps and needs, which informed the series of iterative tool workshops. This research ultimately produced five unique tools and a series of case studies, as well as greater understanding of the ethical dimensions of humanitarian innovation. Further research and the establishment of a community of practice surrounding these tools will be critical to the continued pursuit of humanitarian innovation in an accountable, ethical, and impactful manner.

ABSTRACT

In humanitarian settings (such as natural disasters, conflicts, famines, etc), innovation can be as important as regular programmatic activities or research, and can sometimes be difficult to distinguish from either of these. At once experimental and responsive, innovation can be a welcome response to an unresolved problem, but also lack the oversight of research and the reliability of established practices. To help address the unique ethical tensions that arise in humanitarian innovation, the research presented in this dissertation was conducted as part of a consultancy-grant with the Humanitarian Innovation Fund (HIF). The aim of this partnership was to support the development of evidence-based ethics tools for innovation in humanitarian contexts. In this dissertation I present three unique contributions to the body of knowledge surrounding humanitarian ethics research.

The first article presents the overarching research architecture that was employed in partnership with the HIF, highlighting strengths and weaknesses of this approach to the development of ethics tools. The second article presents the findings from a scoping review of academic and grey literature focusing on ethics and humanitarian innovation, identifying ethical tensions across innovation stages as well as a common thread of solutionism. The final article presents a qualitative description of key stakeholder interviews, which highlighted the need for micro (tools for reflection), meso (funding structures), and macro (sectoral learning and transparency) level shifts to foster ethical humanitarian innovation. Taken together, these contributions point to a humanitarian

innovation ecosystem that is very much still in its nascency, potentially vulnerable to exploitation by market interests, and has not established effective mechanisms to facilitate learning and collaboration between funders, innovators, and affected populations.

This research and the associated toolkit begin to respond to the immediate need for resources, and provide empirical support for larger sectoral change. Further research and the establishment of a community of practice surrounding these tools will be critical to the continued pursuit of humanitarian innovation in an accountable, ethical, and impactful manner.

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ABBREVIATIONS

ELRHA	Enhancing Learning & Research in Humanitarian Action
GAHI	Global Alliance for Humanitarian Innovation
GCC	Grand Challenges Canada
HGC	Humanitarian Grand Challenge
HHE	Humanitarian Health Ethics Research Group
HIC	High Income Country
HIF	Humanitarian Innovation Fund
HiREB	Hamilton Integrated Research Ethics Board
IHL	International Humanitarian Law
ICRC	International Committee of the Red Cross
iNGO	International Non Governmental Organization
iKT	Integrated Knowledge Translation
LMIC	Low & Middle Income Countries
MSF	Médecins Sans Frontières
QD	Qualitative Description
UN	United Nations
WHO	World Health Organization
WFP	World Food Program

DECLARATION OF ACADEMIC ACHIEVEMENT

This dissertation includes three original contributions (Chapters 2-4) as well as an introductory and concluding chapter (Chapter 1 & 5). Each of the chapters is co-authored with a number of researchers who contributed to this project as part of the Humanitarian Health Ethics (HHE) Research Group, and I, Gautham Krishnaraj, am the lead author on each of these chapters. I was also a co-lead (alongside my supervisor Dr Lisa Schwartz, and thesis committee member Dr Matthew Hunt) on the consultancy-grant, and extension, from the Humanitarian Innovation Fund, which funded the research presented in this dissertation. I conceived of the chapters presented here with Dr Schwartz, Dr Hunt, and my third committee member Dr Lydia Kapiriri, guided by the wider inputs of the HHE Research Group. I co-led the research architecture design and all of the workshops in Chapter 2; I was one of the primary reviewers and led analysis for Chapter 3; and led the recruitment, interviewing and analysis for Chapter 4. Finally, I drafted the chapters presented here, as well as facilitating and incorporating revisions from the HHE Research Group.

Chapter 1. Introduction

This doctoral dissertation takes the form of a "sandwich thesis". It consists of this introductory chapter, followed by three original contributions to be submitted as articles for publication in academic journals and/or grey literature reports to be published and disseminated by the Humanitarian Innovation Fund. The aim of *Chapter 1. Introduction* is to present a general overview of the humanitarian sector as it pertains to innovation. First, I provide an introduction to humanitarianism, innovation, and ethics, and highlight the gaps/needs that exist at the intersection of these concepts. I then present the objectives of the overarching research project, followed by a reflexive positioning of myself as a researcher within the context of humanitarian innovation, including my own motivations and goals for the research. The chapter concludes with an overview of the structure of the rest of the dissertation.

The humanitarian landscape has experienced several major shifts over the last decade. Political changes in the European Union with the departure of the United Kingdom, a divisive Republican government in the United States determined to withdraw from international commitments, and the generation-defining COVID-19 pandemic have all had enormous impacts on humanitarian need and financing. In 2020, the United Nations Inter-Agency Coordinated Appeals (IACA) including the Global Humanitarian Response Plan (GHRP) totaled $39 billion USD, of which $17 billion USD was met. Put in perspective, the gap of $22 billion USD is equivalent to the *total* value of Inter-Agency

Coordinated Appeals in 2017. In human terms, 98 million people were reached through UN coordinated Humanitarian Response Plans - 70% of the 140 million people identified for support from the UN and affiliated agencies, but a meagre 22% of the estimated total of 441 million people who required humanitarian assistance in 2020 (OCHA, 2020). While COVID-19 played a significant role in the widening of this gap, the humanitarian system was "not just broke, [but] broken" (Spiegel, 2017) long before the spread of SARS-CoV-2.

In the face of such extreme resource austerity, exponentially growing need, and increasingly complex geopolitical relations, one would expect the humanitarian system to be looking beyond the status quo to serve those affected by crisis events. Yet, as Betts & Bloom (2014) state, "despite the dramatic change in the operating environment, the structure of the humanitarian system has remained essentially closed and unchanged". There is an urgent need for new tools and ways of working if the humanitarian system seeks to avoid the loss of millions of lives, providing what some scholars have identified as an ethical obligation to innovate (Sheather et al. 2016). This ethical obligation to innovate brings with it an obligation to innovate in an ethical manner - however there is a dearth of practitioner-oriented, actionable resources for innovators seeking guidance in this endeavour.

In March 2019, Elrha, a global charity that focuses on research and innovation in the humanitarian sector released a Call For Applications (CFA) for the production of an Ethical Innovation Toolkit, to support the work of its Humanitarian Innovation Fund

(HIF). I co-led the Humanitarian Health Ethics Research Group in successfully responding to the HIF CFA, proposing the programme of research that is presented in this dissertation. Through this consultancy-grant, we generated a toolkit that is grounded in evidence, responsive to the needs of stakeholders, draws upon ethical theory and existing ethics resources, and is adapted for the distinctive realities of humanitarian innovation.

What is Humanitarianism?

Before exploring Sheather et al.'s (2016) claim of an ethical obligation to innovate, it is first necessary to establish working definitions of humanitarianism, innovation, and ethics, as they will be understood for the remainder of this dissertation. Throughout the years, there have been countless attempts to define what can be considered humanitarian. Companies tout their 'humanitarian' engagement through Corporate Social Responsibility (CSR) portfolios, militaries are called in to support humanitarian emergency relief operations, or even conduct their own humanitarian interventions. In 2020, the COVID-19 pandemic spurred on a further shift in what (and where) is considered humanitarian in a globalized world, as international non-governmental organizations (iNGOs) supported operations in the high income countries that typically take on the role of donors to humanitarian aid. Médecins Sans Frontières (MSF) Canada, reflecting on their decision to operationalize within Canada for the first time in the organization's history, called it "atypical" and an "exceptional decision" (MSF Canada, 2020), while taking significant efforts to increase locally-hired

staff to replace international staff in Low & Middle Income Countries (LMICs) and humanitarian crisis contexts.

Given these complexities and shifting global structures, it is difficult to establish an appropriately inclusive definition of what humanitarianism is that does not extend so far as to become meaningless. While Western humanitarianism as an ideology and movement traces back to the late 19th century and the founding of the Red Cross (Davies 2013), a more inclusive history of the term may look to the community-driven care traditions at the heart of Islamic humanitarianism that continue to this day (Donini 2010). Following the catastrophic mismanagement of the 2010 Haiti Earthquake response, calls for a more professionalized humanitarian workforce were amplified (Walker et al., 2010) leading to a decade that has been defined by increased efforts towards coordination, localization, and accountability.

Despite these developments, the term "humanitarian" also remains one that is inexorably linked to the concept of compassion - it has even been used to connote an excess of sentimentality (Benthall, 2018). When left unchecked, humanitarianism is "where an ethics of care meets the will to control [and] the outcome is captured by the concept of paternalism" (Barnett, 2013). Barnett goes on to clarify that not all acts of humanitarianism are paternalistic, but the basic assumptions that affected populations "want food, shelter, medicine, and clothing" can lead to the slippery slope of implied consent, "especially once the absence of a registered dissent is taken as an indicator of consent".

Donini integrates the above to offer the following: "[humanitarianism is] an ideology, a movement, a profession and a compassionate endeavour to provide assistance and protection to populations at risk" but goes on to add that "humanitarianism is also a set of institutions, a business and an industry" (2010).

Indeed, the ideology, the movement, the profession, and the compassionate endeavour all feed into the multi-billion dollar humanitarian aid industry with established institutions, and a market economy in and of itself (Carbonnier, 2015). In its most bleak and exploitative factions, this system leans away from ideology and principles, and towards market logic that treats moments of crisis as moments of opportunity (Klein, 2007). Klein coins this as "disaster capitalism" and explains it clearly - "with resource scarcity and climate change providing a steadily increasing flow of new disasters, responding to emergencies is simply too hot an emerging market to be left to the non profits - why should UNICEF rebuild schools when it can be done by Bechtel [as they did in Iraq], one of the largest [private] engineering firms in the US". Similar examples can be seen in nearly every humanitarian crisis - as for profit companies seek to expand their reach into low and middle income contexts or otherwise disrupted markets. Donini (2010) states that "regardless of the definitions one adopts and of the personal motivations of those involved, humanitarianism in its Northern and Western incarnations is increasingly consubstantial with and functional to processes of economic, social and cultural globalisation". If we take Donini and Klein's perspectives to be true, it is critical that we

hold humanitarianism in the light of these political realities, while also considering the values and ideals of its foundations in community-based relief and medical response.

Defining Innovation & Humanitarian Innovation

Much like humanitarianism, innovation is a difficult concept to define, as its use has expanded and evolved over history. For the purposes of this dissertation, we will focus on the rise of innovation as a concept in management sciences. As Marinova and Phillimore (2003) wrote in the seminal *International Handbook on Innovation,* "since the 1960s, an ever-increasing number of researchers have tried to put together pictures of the process of generation of new products and production methods and outline the activities involved in this". Such early scholarship defined "innovation, as distinct from invention" as when "invention which has reached market introduction in the case of a new product, or first use in a production process, in the case of process innovation" (Utterback, 1971 citing Gruber & Marquis, 1969). From these earliest articulations, innovation has focused on invention, the distinction between product and process, and the role of the market. Utterback builds on this definition, identifying subprocesses of "idea generation" "problem solving" and "implementation" - terms that remain central in contemporary innovation discourse. Scholarship on innovation boomed again in the 2000-2010s as companies including Google, Apple, Facebook, Uber, and Amazon took their places as the giants of the global market economy.

As Silicon Valley and the technology sector became synonymous with innovation worldwide, with the mantras of these companies becoming part of Valley lore ("don't be evil" [Google] and "move fast and break things" [Facebook]). Many sectors have sought to emulate the growth and success of the tech sector by adopting their strategies and maxims, often without deep consideration of the transferability of such approaches, nor of the potential ethical ramifications of doing so. However, it is impossible to deny the impact that these companies and their innovative approaches have had - maximizing the efficiency of daily tasks ranging from searching the internet; to hailing a cab; to purchasing anything, at any time, from anywhere.

In 2009, the Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) recognized the need for innovation in the humanitarian sector and began what has now been a decade-long dialogue on humanitarian innovation with the publication of *Innovations in Humanitarian Action*. The idea of innovation was not new - as shown above, it has a well-established place in business literature, and has come to have a deep cultural association to Silicon Valley and technological developments. Nor was it entirely new in the humanitarian sector - humanitarians have always engaged in creative problem solving to stretch restricted resources to have the greatest amount of impact possible. However, as Bessant et al. (2014) identify, innovation in the capitalist sense and innovation in the humanitarian sense face very different challenges. In capitalist terms, innovation is seen as a response to a demand-side survival pressure - in a competitive market, constituent entities must innovate to avoid

obsolescence. It could be said that in an ethical humanitarian system, the obsolescence of several of its constituent entities is the primary end goal - a world where there is no demand for the services of non-governmental organizations (NGOs) because governments are able and willing to support their citizens, and not waging wars (Slim, 2015). Therefore, innovation in an ethical humanitarian system does not face a need for the survival of the system or any individual firm, but instead the literal life-and-death survival of millions of people. It is important to note that this is in the case of an ethical (or ideal) humanitarian system. However if we adopt Donini (2010) and Klein's (2007) critical views of the humanitarian system as a tool of global marketization, we can see how aid organizations instead take on the characteristics of for-profit firms, competing for funding and opportunities rather than working towards their obsolescence.

Another perspective on the connection between humanitarianism and innovation is that the very endeavour of humanitarianism may be seen as an *innovation* in and of itself, as a response to needs. In the quote below, Obrecht & Warner 2016 point to the founding moment of the Red Cross Movement, whereby founder Henri Dunant came across fields of wounded soldiers in the aftermath of the Battle of Solferino:

> *"In 1867, a businessman travelling through Western Europe proposed a new innovation for handling the medical care of wounded soldiers: 'Would it not be possible, in time of peace and quiet, to form relief societies for the purpose of having care given to the wounded in wartime by zealous, devoted and thoroughly qualified volunteers?'"*
>
> (Obrecht & Warner 2016, quoting Dunant 1859)

This idea of relief societies formed in peacetime can be seen as the founding humanitarian innovation. This central role of innovation in humanitarianism can be seen in the following quote from Sheather et al (2016): “innovation is at the core of humanitarian action [since] humanitarian contexts are often volatile, uncertain, complex, and ambiguous, requiring responders to take a flexible, learning approach”. Despite this position, there has been no broadly accepted definition of Humanitarian Innovation as a formal and unique set of practices to date.

ALNAP (Obrecht & Warner, 2016), positioned as a leading voice in the sector, offer the following definition of humanitarian innovation as “an iterative process that identifies, adjusts and diffuses ideas for improving humanitarian action”. This process of “identifying, adjusting, and diffusing” has been subject to many attempts at mapping more exactly the stages, phases, and activites most commonly undertaken. Such attempts typically include some combination of the following: Recognizing Problems, Searching for Solutions, Selecting/Adapting Solutions, Inventing, Piloting, Implementing, Scaling, and Diffusion (Tidd & Bessant, 2009; ALNAP, 2009; HIF, 2013; HIF, 2018). Taken alone, these stages are nearly indistinguishable from those set forth in innovation management literature 50 years earlier (see: Utterback, 1971 citing Gruber & Marquis 1969). However, set against protracted conflicts, sudden onset disasters, and other complex humanitarian contexts, these terms take on very different risks and motivations.

As Skeels (2020) writes, “while it is indeed the case that there has been a multiplication in the *number* of innovation labs, studies and funds, there has also been an

evolution in the *nature* and *substance* of humanitarian innovation" [emphasis in Skeels]. Certain areas of humanitarian innovation have been the subject of constant discourse and analysis - drones and digital data are two particularly prominent examples that have developed robust communities of practice and codes of conduct (Campo et al. 2018; Kaplan & Calabria, 2016). Other areas have received less attention, particularly low-tech or no-tech innovations and process innovations. Skeels (2020) writes of an intentional shift being made at the HIF to uncouple "technology from humanitarian innovation, where the relationship remains strong but not automatically connected". This aligns with the larger shift in rhetoric within the humanitarian sector towards localization of aid and reducing dependency on international, western, technologically-driven approaches, however it remains to be seen how these shifts will translate into action (WHS, 2016). This localization agenda also comes into tension with one of the primary endpoints of innovation - going to scale. How these tensions are resolved will be critical to the definition of humanitarian innovation moving forward, and whether it is indeed a unique practice with its own set of practices and priorities, or the simple transplantation of processes from the Valley to the field.

The Role of Humanitarian Ethics

In order to further explore the tensions between the potentially discordant aims of innovation and humanitarianism (corporate vs corporal survival) I look to the field of humanitarian ethics as an orienting logic. The link between ethics and innovation has

been observed by Fontrodona (2013) who writes that, “ethics inevitably leads to innovation. In line with the principle that ‘if you always do things the same way, you always get the same results’, and assuming a goal of continual improvement, we cannot sit back and continue doing things in the same way”. This conception of ethics and innovation sharing a mutual spirit of *improvement* also aligns well with the aforementioned ALNAP definition of humanitarian innovation (Obrecht & Warner, 2016).

Lofquist (2017) defines humanitarian ethics as the “systematic philosophical reflection on ethical issues in a humanitarian context”, and cites a rich body of literature that spans several disciplines and ethical traditions. Much of this reflection has been rooted in applied ethics and principlism, codified through key documents including the Fundamental Principles of the Red Cross (Pictet, 1979), Red Cross Code of Conduct (IFRC, 1994), The Humanitarian Charter and the Core Humanitarian Standard (Sphere Project, 2018). Of these, the Fundamental Principles of the Red Cross (Neutrality, Impartiality, Independence, Humanity, Voluntary Service, Unity, Universality) have long held the central position, embedded in International Humanitarian Law through the Geneva Conventions, and the first four (Neutrality, Impartiality, Independence, Humanity) being adopted beyond the Red Cross Movement as fundamental principles of humanitarian aid. They are also aspirational in quality, representing the ideal towards which humanitarian actors may strive (Slim, 2015). The Red Cross Movement and the

Fundamental Principles have also been used as a critical reference point against which other organizations have come to define their own moral codes.

One such example is Médecins Sans Frontières (MSF), which was founded in response to ethical concerns surrounding the complicity of humanitarians in human rights violations, rejecting the premise of Neutrality manifest as confidentiality (alternatively, silence) in exchange for access (Terry, 2000). MSF's approach of *témoignage* (to bear witness) can be seen as a necessary evolution of humanitarian ethics that recognizes the growth of humanitarianism from a simple 'compassionate' medical endeavour to a fundamentally political act of solidarity (Givoni, 2011). As Donini (2010) writes, to ignore the political is to ignore the biopower of the humanitarian international, and the role of western humanitarianism in particular in the furthering of globalization agendas. Through acts of *témoignage,* humanitarian organizations may begin to challenge their role as "involuntary collaborators" (Polman, 2010) in the expansion of western hegemony. However, as Givoni (2011) states, simply witnessing is not a panacea, so much as a step towards a more nuanced understanding of humanitarian ethics that neither neglects the moral nor the political. The act of witnessing also contains several shortcomings, including the implicit positioning of who is "seeing" and and who is being "seen", which itself can contribute to further establishing power dynamics along these lines (Ivanovic, 2017). It also raises questions about what the person who is "seeing" can be held morally accountable to do in response, and the potentially paternalistic or colonial acts this could entail. Ivanovic goes on to suggest that moving beyond solidarity will involve a radical

shift towards giving up (rather than sharing) power and privilege, and in turn the humanitarian identity itself. This idea of giving up the humanitarian identity aligns with the movement towards localization and decolonization of the humanitarian sector, both of which de-centre the western/white individual from the position of power and “seeing”, creating space and power for local NGOs, local humanitarians, and local responses.

In the progression from Fundamental Principles, to *témoignage,* to the unseating of the humanitarian identity, we can also see a reflection of what scholar Hugo Slim (2015) identifies as the levels of practice for humanitarian ethics: the strategic, the operational, and the intimate. At each of these levels, there is a constant struggle to negotiate principled ideals, political realities, and identities. The tension that plays out within and between these levels leads Slim (2015) to describe humanitarian ethics as an “ethics of struggle”, going so far as to suggest that “struggle” is itself the “principle that is most predominant as it is practically applied”. It is also the state of constant tensions that Slim contends is the appropriate ethical stance for humanitarian action, whereby the resistance indicates engaging with the world (and its political realities) as it actually is. Perhaps the most significant of these tensions that humanitarians must struggle with is the critical role of international response when local systems are overwhelmed, and the fact that local systems are underdeveloped due to centuries of exploitation and oppression by the same international actors that fund and deliver humanitarian response.

Ethical Innovation in Humanitarian Contexts

Innovation takes these tensions and amplifies them, while drawing in an even greater diversity of stakeholders and interests, further exacerbating the existing power asymmetries and inequalities (Betts & Bloom 2014). By more than one account, the 2010 Haiti Earthquake was treated like a "living laboratory" (Knight Foundation, 2011), demonstrating the catastrophic outcomes of a lack of coordination and professionalization in the sector, and ethical standards for innovative response. While there have been efforts to articulate overarching ethical principles for humanitarian innovation (Betts and Bloom, 2014), on the whole, the application of ethical values to innovation activities in an actionable way has received limited discussion (Sheather et al, 2016).

The language and pace of innovation also often omit the "possibility that humanitarian principles could be compromised" (Sandvik, Jacobsen and MacDonald, 2017), with potentially disastrous consequences for the safety, dignity, and security of people affected by crises. In a recorded panel discussion at Oxford University in 2015, Professor Alexander Betts highlighted what he believed to be the uniquely precarious position of humanitarian innovation, stating that "it would take one disastrous ethical problem that came from a partnership or new technology and suddenly the entire endeavour of humanitarian innovation is irreparably compromised". Following the "firestorm of criticism" (Raymond, Walker Macdonald & Chandran 2019) in the wake of the World Food Programme-Palantir[1] partnership, it seems evident that this is not the

[1] In Feb 2019, the WFP signed a five-year partnership with Palantir Technologies to use its Foundry software in the delivery of food and cash based assistance worldwide. Palantir's history of collaborating

case, and that the endeavour of humanitarian innovation is here to stay. Given that humanitarian innovation is here to stay, it is critical that we develop the knowledge and resources to guide innovators towards more accountable, ethical, and effective practice, and to ultimately heal (and replace) a system that is both broke, and broken.

Research Objective and Questions

The main objective of my dissertation and this program of research was to generate an evidence-informed set of policy tools through an iterative, innovator-driven, and reflexive approach, with the ultimate aim of promoting greater integration of ethical considerations in humanitarian innovation processes. To do so, the following three overlapping phases/research studies were embarked upon:

1. an exploratory Scoping Review of the literature to investigate *what is known about the ethics of humanitarian innovation?*
2. a Qualitative Description analysis of key stakeholder interviews seeking to understand *what ethical considerations currently inform humanitarian innovation, and what values, principles, and methods can best support ethically-robust humanitarian innovation processes?*

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with the US government, surveillance agencies, and Cambridge Analytica was widely seen as a threat to the WFP's ability to uphold the core humanitarian principle of neutrality and ensure the data safety of over 90-million aid recipients. (Davis, 2020)

3. the development of a set of ethics resources informed by the needs identified by key stakeholder interviews, piloted and iterated through discursive, innovator-driven workshops and feedback sessions.

Research Reflexivity

In all research, and particularly in qualitative research, it is critical to engage in consistent reflexive practice to position the researcher(s) with relation to the subject area and where relevant, those being observed. By engaging in this process and having "some self conscious awareness of the process of self-scrutiny" (Chiseri-Strater 1996), I have aimed to be more "cognizant of the ways [my] personal history can influence the research process and thus yield more 'accurate' more 'valid' research" (Pillow 2003). Humanitarian research is additionally demanding in that it is the study of (and within) a sector that is fiercely values-driven, which can further blur the lines between the roles of "scholar, witness, and advocate" (Siplon 1999).

As a graduate researcher with the Humanitarian Health Ethics (HHE) Research Group, and PhD student in the Health Policy Program at McMaster University in Canada, my academic formation and experience has taken place exclusively in High Income Country (HIC) contexts, with the theoretical foundations rooted in the western biomedical tradition. This is a narrow lens through which the wide spectrum of health, wellness, death, and dying can be perceived - something I learned while examining the ethics of palliative care provision in humanitarian contexts during my MSc research. Furthermore,

the HHE Research Group is composed of individuals who are primarily academics, with some active humanitarian field-based professionals contributing to research studies, but not current study leads. This group, in conjunction with my own lack of experience in sudden onset disaster/humanitarian crises in a Low or Middle Income Country (LMIC) context settings, has certainly influenced the networks which I was able to reach for interview recruitment, as well as the substance, design, and dissemination of the policy resources and tool kit development. Recognizing the limitations of our collective experience, we drew on the expertise of innovators and humanitarian field professionals to feedback into our process, to ensure that the outputs would result in changes in practice and to maintain “integrity of purpose [derived from] an actual practice goal” (Thorne, 2008).

As a professional outside of my role within the HHE Research Group, I have an established stake within the humanitarian sector, having worked with many organizations including the Canadian Red Cross, Grand Challenges Canada, and as Principal of the newly established humanitarian consultancy, Humanitarian Partners International (HPI) . Most relevant to this dissertation was the summer position I held at Grand Challenges Canada (GCC) in 2018, during which I was able to support the launch of the first funding round of the Humanitarian Grand Challenge (HGC). It was in this role that I became aware of the need for specific ethics guidance around humanitarian innovation as a unique subsector - the reliance on medical and bioethics driven policy tools left several key questions unasked, and exposed funders like GCC, grantees, and affected populations

to a high degree of ethical risk. I was able to use my position within GCC to negotiate access and in-kind support for a program of research that would comprise exploring the existing evidence base, developing a set of ethics tools, and piloting those tools with HGC grantees. While a fortuitously timed Call for Applications from the Humanitarian Innovation Fund (HIF) led us to carry out the project with the HIF as our primary institutional partner, HGC remained strongly involved in the process, at least in part due to my personal investment and connection to the organization.

Based on my position in the humanitarian sector, my motivations in pursuing this research were manifold. While the primary audience for this research was the HIF and its potential applicants and current grantees, I remained dedicated to expanding the reach of this research into the wider humanitarian sector. I leveraged existing connections within the sector and as a graduate researcher to present this work and its importance to a diversity of audiences, knowing that my positionality and that of my committee influenced that access. In choosing to focus the spotlight of my academic attention to humanitarian innovation and aiding in the creation of resources that serve to facilitate and promote ethical innovation, I believe that I have been actively advocating for more innovation in the sector. Reflecting on the role of innovation in the larger humanitarian sector, and the critiques that position it as a vehicle of capitalist penetration into new markets of vulnerable populations, I am wary of whose voices I am highlighting, and the vision of the future humanitarian sector I am contributing to. It is my hope that ethics can be used as a tool to reorient the humanitarian innovation ecosystem towards its

foundational humanitarian aims (saving lives, alleviating suffering, promoting dignity (IFRC 2003)), and away from the development of new markets for capitalist exploitation.

As Siplon (2014) states, "Graduate and especially doctoral degrees convey authority, an authority we are quick to use to our own professional advantage. But we can also use our credentials to support those struggling for change we believe in". Rather than shying away from this convergence of academia and activism it has been my consistent aim to use this research as a platform to improve the lives of people affected by humanitarian crisis events through ethical, accountable humanitarian innovation. However it was important that this aim was not pursued in a way that precluded conclusions that challenged my initial assumptions about the uniqueness of humanitarian innovation as a set of practices or the need for the tools being generated. Throughout the interviews, I took careful effort to not "lead" participants in any direction, and welcomed participants who had extreme views ranging from questioning the existence of "Humanitarian Innovation" as a distinct or formal set of practices, to those who were firmly against the types of funding organizations ("challenges") that funded this research. When reviewing the literature, I remained open to adapting existing exercises or tools that could be adapted, rather than assuming the need for completely unique resources for humanitarian innovation context. In doing so, we treated the tools and development process as an innovation and innovation process respectively, and applied the ethical guidance we were developing to our own team.

It is my hope that providing these motivations and reflections, I will set the findings presented in this dissertation against an appropriate context, and facilitate a deeper understanding of its strengths, limitations, and future directions.

Overview of the Dissertation

This dissertation consists of three original contributions to the body of knowledge surrounding ethical humanitarian innovation that follow from the previously described overlapping phases of research.

The first paper (Chapter 2), presents the research architecture and lessons learned in the process of developing an ethics toolkit for humanitarian innovation. This chapter seeks to offer insight into the strengths and limitations of the user-driven integrated Knowledge Translation (iKT) approach we undertook to develop a set of five tools and six innovation case studies. In this paper, I discuss how the nature of our funding from the Humanitarian Innovation Fund (HIF) was a significant factor in the design, timeline, and methodological approaches that were taken. Major benefits included the depth of expertise, access to networks of innovators and innovation managers for iterative feedback, and the breadth of dissemination and uptake of the final research products. Challenges included varying levels of methodological robustness required at different stages, competing timelines, and ensuring participant understanding of research independence from the funder. Ultimately, the iKT approach offers an incredibly effective

strategy for the generation of practitioner-oriented research products, and facilitates valuable exchanges between humanitarian research, practice, and funding stakeholders.

The second paper (Chapter 3) seeks to illuminate the landscape of *"what is currently known about the ethics of innovation in humanitarian contexts*" through a scoping review of the literature. A scoping review was determined to be the best fit as they are well suited to research guided by a broad, exploratory question; that requires a rapid understanding of an area; and/or are mapping a complex set of data sources or under researched area (Arksey & O'Malley, 2005). The review spanned several disciplinary databases (medicine, engineering, project management) relevant to humanitarianism, ethics, and innovation, as well as searching organization- and sector- specific repositories of grey literature. In this paper, we employ the HIF Innovation Guide stages as an organizing logic for ethical considerations represented in the humanitarian innovation literature, and found a significant focus on the stages of Adaptation, Pilot, and Scale. Conversations focused on risk, distributions of harms and benefits, and the role of private sector innovation values. A major theme that arose was that of solutionism, analyzed from the lens of testimonial injustice (Fricker, 2007).

The third paper (Chapter 4) seeks to understand key stakeholder perspectives of ethical innovation in humanitarian contexts through a series of individual, in-depth, semi-structured interviews. Drawing upon the findings and gaps in the knowledge identified from the scoping literature review, this chapter applies Qualitative Description methodology to better understand "*what ethical considerations currently inform*

humanitarian innovation, and what values, principles, and methods can best support ethically-robust humanitarian innovation processes?" The sample (n=40) included individuals representing a diversity of organizations, technical backgrounds, and lived experiences in humanitarian crisis contexts. In general, participants confirmed a lack of practitioner-oriented ethics resources, and identified a number of barriers to pursuing ethical innovation activities. Primary among these was the role of donors and funding mechanisms, as well as inappropriate metrics, and a lack of transparency and learning within and between innovating organizations. Participants called for micro (tools and resources, as well as live support networks), meso (restructured funding), and macro (reconceiving "who" a humanitarian innovator is, and who holds knowledge) level shifts that would help support ethically robust humanitarian innovation processes.

The concluding chapter (Chapter 5) presents a summary of the dissertation, a brief discussion including reflections on the experience of conducting doctoral research through a consultancy-grant, the impact to-date of this research, substantive and methodological contributions, and potential future directions.

In a world governed by increasingly complex geopolitical relations and rapidly worsening climate change forecasts, humanitarian need is likely to continue to grow. With funding remaining stagnant (or shrinking), the sector has an obligation to maximize the reach and impact of its funding dollars, and innovation is one critical piece of a complex puzzle that we must solve to mitigate the effects of humanitarian crises on affected populations. This dissertation aims to contribute to the body of knowledge surrounding

ethical humanitarian innovation, and to generate resources that ultimately lead the sector as a whole towards more accountable, ethical, and impactful humanitarian response.

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Chapter 2. User-Driven Development of an Ethics Toolkit for Humanitarian Innovation

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Abstract

Introduction: Humanitarian need has consistently increased over the last decade, and the complexity of crises has only grown in the face of turbulent geopolitical and climate forecasts. Humanitarian funding has not seen a commensurate rise, resulting in a further stretching of already austere institutional budgets. In order to respond to these challenges, innovation has been seen as a mechanism to reinvigorate the sector to make better use of slim resources and adapt to the changing landscape of needs. However, innovation has been positioned in a grey area between research and quotidian problem solving, resulting in a lack of evidence-based, practitioner-centred resources for navigating the ethical considerations of humanitarian innovation. To address this lack of resources, the Humanitarian Innovation Fund (HIF) called on the Humanitarian Health Ethics (HHE) Research Group to design, develop, and test a set of ethics tools for humanitarian innovation.

Methods: This programme of research was guided by an integrated Knowledge Translation (iKT) approach, characterized by close partnership with the knowledge user and a dedication to practice change. The primary objective was to generate a set of evidence-based ethics resources to facilitate greater ethical consideration and decision making by humanitarian innovators and associated stakeholders. The studies included a scoping literature review, qualitative description of key stakeholder interviews, as well as a series of workshops with over 50 innovation teams (100+ individuals) to iterate and refine the tools.

Results: A set of five unique ethics tools and six case studies was created, each grounded in interview or workshop feedback directly from innovators.

Conclusion: Innovators in the humanitarian sector have clearly articulated a desire to engage in ethical deliberation and lack the tools and guidance to support them in doing so. This research provides the evidence base for generating a set of resources responding to that need. It also clearly identified the importance of having different resources for different audiences, stages of innovation, and level of urgency of the ethical challenges.

Introduction

Humanitarian need has consistently increased over the last decade, and the complexity of crises has only grown in the face of turbulent geopolitical and climate forecasts. Humanitarian organizations, in their constant adaptation and adjustment to these complex contexts have taken to centering innovation in their mandates (Muller & Sou 2020). Major examples of this can be seen in the Doctors Without Borders/Médecins Sans Frontières (MSF) Transformational Investment Capacity (TIC), various United Nations agencies' innovation hubs (ie; World Food Programme Innovation Accelerator), and funding initiatives focused exclusively on humanitarian innovation (ie; elrha's Humanitarian Innovation Fund).

Despite this proliferation of innovation focused entities, relatively little guidance is available for what exactly humanitarian innovation means, or how to engage in it responsibly, effectively, and ethically. Humanitarian innovation has fallen into a 'liminal' space between research and quotidian practice (Hunt 2018), resulting in a lack of evidence-based, practitioner-centred resources for navigating the ethical considerations of humanitarian innovation. Early attempts to outline and respond to this gap included a report from the UN Office for the Coordination of Humanitarian Affairs (OCHA) (Betts & Bloom 2014), the MSF Ethics Framework for Humanitarian Innovation (Sheather et al 2016), and a series of papers from the Start Network's DEPP Innovation Labs (Sandvik 2019a). These contributions laid a critical theoretical foundation, however there remained

a need for accessible, applied, innovator-driven ethics resources that were reflective of the dynamic and non-linear nature of humanitarian innovation.

This paper outlines the overarching approach that was undertaken to develop a novel set of ethics tools and resources for the Humanitarian Innovation Fund, a subsidiary of the global charity organization elrha. It is important to note that the methods and findings of the scoping literature review, critical interpretive review, and qualitative description study will not be presented in their full depth as they are the subject of separate publications (Krishnaraj et al., In Development; Brahimi et al., In Development; Krishnaraj et al., In Development). This paper will only briefly review these evidence generating and synthesizing studies, followed by an in-depth reflection on the series of iterative feedback workshops and consultations, and the resources that arose through this process. Feedback from these workshops was ultimately what inspired the shift from a single tool embedded in the HIF Humanitarian Innovation Guide, to a set of five tools, each uniquely oriented to innovators needs and challenges.

Key Institutional Drivers

The origins of this research study lay between three institutions; the Humanitarian Innovation Fund (HIF), the Humanitarian Health Ethics (HHE) Research Group, and Grand Challenges Canada (GCC). The HIF and GCC are two of the leading innovation funders in the humanitarian sector, and HHE has an established track-record of

developing high quality evidence and guidance for ethical humanitarian practice, including the Humanitarian Health Ethics Analysis Tool (HHEAT) (Fraser et al 2015).

In 2018, GCC launched the first funding call for the Humanitarian Grand Challenge (HGC), a new initiative that would seek to provide Seed funding (<CAD$250,000) and Transition to Scale (TTS) funding (>CAD$250,000) for innovations focused on improving Safe Water & Sanitation, Energy, Life Saving Information, and Health Supplies and Services in conflict settings. Prior to 2018, GCC primarily focused on innovations in the global health and development sectors, and this foray into complex humanitarian settings brought many new challenges and opportunities to the organization. One such challenge was the identification of a gap in ethics guidance and policies to respond to the unique context of humanitarian conflicts - the existing ethics policies were strongly rooted in the Canadian Tri-Council Policy Statement (TCPS2) for research ethics, and biomedical/health research in particular. This gap was communicated to the HHE Research Group through a common employee/student (GK), who proposed a doctoral program of research starting September 2018 that would consist of a scan for existing literature, the generation of a humanitarian-focused addendum to the GCC ethics policy, and set of resources for grantees and HGC members. The HHE Research Group had an established stake in the ethics of humanitarian innovation through co-leads Dr Lisa Schwartz, Dr Matthew Hunt, and member Dr. John Pringle, both of whom had authored various reflections and publications (Hunt et al 2016; Hunt 2018;

Sheather et al 2016) on the topic from 2016-2019, including the MSF Framework for Humanitarian Innovation.

In the interest of not duplicating efforts, GCC connected HHE to the HIF, who had concurrently identified the generation of evidence-based, innovator-driven ethics tools for humanitarian innovation as a priority area. The HIF put out a Call for Applications to support the development of a humanitarian innovation ethics tool aligned with the HIF's larger programme of work, including the Humanitarian Innovation Guide (Elhra 2018). HHE successfully responded to the CFA (with the addition of collaborator Dr Donal O'Mathuna to lead case study development), and began work on March 18, 2019 for an initial term of one year, followed by a nine-month extension (until December 30, 2020) and expansion of scope to include piloting activities. HHE worked in close conjunction with the HIF's innovation managers, grantees, and extended network in an iterative manner to produce a set of resources that reflected their institutional needs and priorities. While the HIF became the primary funders and users, GCC remained closely involved throughout the process, with two of the three HGC cohorts providing additional piloting and feedback to the toolkit development process.

Research Approach and Studies

The overall research architecture was guided by an integrated Knowledge Translation (iKT) approach, which is defined by "active collaboration between research and research users in all parts of the research process" (Graham & Tetroe, 2007). iKT was

first conceptualized in the 1990s through in Canadian health services research, and formally recognized in 2007 by the Canadian Institutes for Health Research as a critical approach for influencing policy and promoting research uptake (Nguyen et al., 2020). In contrast to "End of Grant KT" where knowledge translation is limited to dissemination or communication of research that has concluded, iKT has been found to be most effective when there is early initiation of partnership in the research process. Zych, Berta & Gagliardi (2019) write that identifying partners; fostering momentum, commitment, and enthusiasm; and laying early groundwork are critical to enduring iKT collaborations. The iKT approach aligned strongly with our project, as we had established a strong partnership Humanitarian Innovation Fund/elrha, mutual enthusiasm (and need) for the research products identified, and clear commitments of access and funding from the two partners respectively.

As with any iKT guided project, the knowledge users played a significant role in the shaping of our research questions (through the CFA), and were consulted in the outlining of the methodologies to be used (Graham & Tetroe, 2007). In responding to the CFA, we proposed the use of a scoping literature review, key stakeholder interviews, and a series of workshops to form the evidence base for the development of the various ethics tools. As the toolkit development progressed, the need for a more focused identification and analysis of normative statements of ethical values prompted the team to undertake the Critical Interpretive Review. In the sections below, I present a very brief overview of the

methodologies, as well as some key findings that informed the iterative workshops and resource development.

Scoping Literature Review

This study sought to identify what is currently known about the ethics of innovation in humanitarian contexts. The scoping review methodology was determined to be the best fit as the research was guided by a broad, exploratory question; required a rapid understanding of an area; and aimed to map a complex set of data sources (Arksey & O'Malley, 2005). We identified literature across six databases of peer-reviewed academic sources; targeted searches of key interagency and organizational websites; focused Google searches using incognito and search strings related to "humanitarian", "innovation" & "ethics"; documents collected by our team or provided by key informants; and documents identified through the reference lists of other sources. Three independent reviewers removed duplicates, reviewed titles and abstracts, and selected articles for inclusion with a fourth reviewer to resolve any discrepancies. A total of 76 documents were retained for analysis.

The review presented a portrait of ethical complexity related to humanitarian innovation– as well as uncertainty in terms of clarifying parameters of ethical humanitarian innovation. There were diverse views about how ethical dimensions of humanitarian innovation should be understood, and how they should be addressed and by whom. Several organizations presented high level articulations of guiding values for

individuals who may be undertaking humanitarian innovation processes but there were no resources available/identified that helped innovators translate values into actionable ethical decision making structures. The MSF Framework developed by Sheather et al (2016) is the closest resource we were able to identify, but even it is a high-level guide that does not focus on grounding reflections in the values, team, and context that are unique to each innovation. This review confirmed the need for the types of resources being solicited by the HIFs Call for Applications, and provided critical direction for the key stakeholder interviews.

Key Stakeholder Interviews

The goal of this study was to explore humanitarians' experiences and challenges with innovation, identify best principles for practice, and to begin defining humanitarian innovation from an ethical standpoint. We employed a Qualitative Description methodology (Sandelowski, 2000), and conducted key stakeholder interviews (n=40, 24-16 M/F), recruited through a purposive snowball sampling method while engaging in concurrent analysis that was organized using QSR's NVivo12 software. Participant profiles included representatives from the UN system, international and local NGOs, government, and academia, with varying degrees of engagement with and understanding of humanitarian innovation processes.

Interview participants had varying definitions and levels of comfort with ethics (usually citing Red Cross principles, and "do no harm"/non-maleficence) and innovation

as concepts and practices. Some viewed innovation as a highly formalized process that carried Western cultural connotations and implicated bureaucratic processes, while others saw it as little more than the quotidian problem solving inherent to working in humanitarian contexts. The primary barriers to ethical innovation identified by participants included inadequate and inappropriately structured funding mechanisms, a lack of meaningful metrics for success, and an overall inability to discuss (and learn from) failure. Participants suggested more collaborative and adaptive relationships with funders and metrics derived from participatory, community-led approaches as potential ways to overcome these barriers. With regards to specific ethics resources, participant priorities could be broken down into two categories: interactive tools/resources (checklists, guidance notes, exercises), and community resources (peer forums, expert networks, review mechanisms). These interviews provided further justification of, and direction for, the development of practical, workable ethics resources for humanitarian innovators. It also highlighted the importance of establishing a community of practice to critically reflect on and adapt the developed resources as humanitarian innovation continues to evolve.

Critical Interpretive Review

This review was conducted in tandem with the development of an additional resource, the Values Clarification Tool. The aim of this study was to identify and analyze normative statements of ethical values for humanitarian innovation published online or

included in publicly available documents from organizations engaged in humanitarian innovation. To do so, we used a Critical Interpretive Review methodology (McDougall, 2015), and combined strategies of searching electronic databases (Google Scholar, Scopus, ProQuest, and OpenGrey) and relevant websites (including but not limited to intergovernmental agencies, non-governmental organizations, interagency initiatives, funders, private organizations, research groups, and foundations), and hand-searched corresponding reference lists. In order to meet the inclusion criteria, statements needed to be general to humanitarian innovation rather than focusing on a specific technology/domain, and include a clear discussion of values. Following these steps, eight sources were retained for mapping.

Using concept maps, a structure of six overarching values (Do No Harm, Autonomy, Justice, Accountability, Sustainability, & Inclusivity) was established from the literature, with twelve secondary values, and 10 associated concepts. It is critical to note that this hierarchy represents the density of connections (overarching values being most central and densely connected) rather than a ranking in order of importance for consideration. Furthermore, the association of a tertiary concept to one secondary or overarching value did not preclude it from having connections or significance to other values. The values identified through this Critical Interpretive Review provided an important foundation upon which innovators could be prompted to reflect on their own values and guiding principles through specific ethics tools.

Iterative, Innovator-Driven Workshops

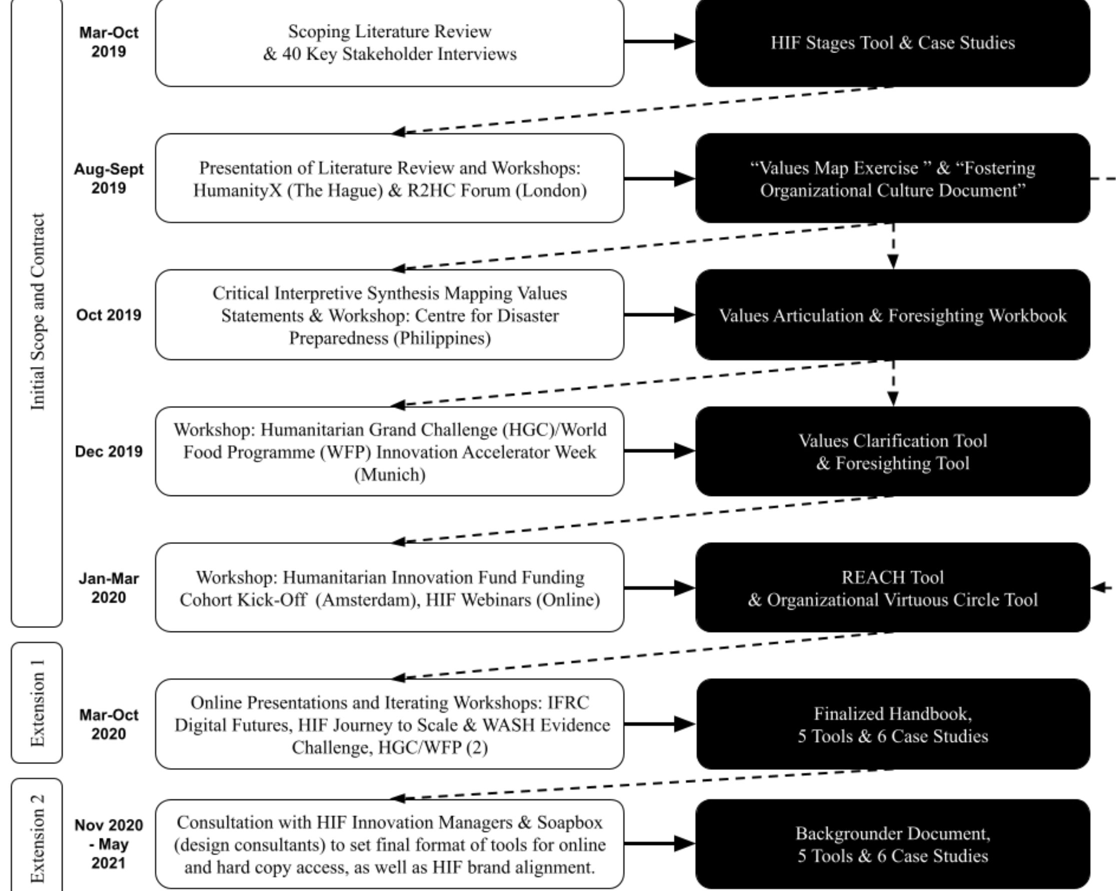

Figure 1. Outlining the development of the HIF Ethical Innovation Toolkit through a series of iterative, innovator-driven workshops and presentations. Workshop participation ranged from three to twenty-three innovation teams, consisting of one to three people.

The HHE Research Group used the preliminary results of the concurrently conducted scoping literature review and key stakeholder interviews in conjunction with the HIF's Humanitarian Innovation Guide to produce the first iteration of what would later be called the "Stages Tool". The Stages Tool was a direct response to the HIF Call for Applications (CFA), which sought ethical guidance that could be transposed onto the

HIF Humanitarian Innovation Guide's stages (Recognition, Search, Adaptation, Invention, Pilot, Scale [HIF 2018]) as a complementary resource. It was also derived from consideration of the stages, how each stage could be viewed from a risk analysis perspective, as well as a means of integrating considerations of equity and inclusion to better distribute benefits. This tool was then presented at a series of workshops (as presented in Figure 1 above) with humanitarian innovators, field professionals, researchers, and funders for feedback and iterative development. With each successive workshop, participants highlighted new gaps or needs, possible refinements or redundancies, and in many cases proposed structures for the development of additional resources. This series of workshops allowed us to work closely with the HIF, as well as the broader humanitarian community as knowledge users, throughout the research process, reflecting the iKT approach (Graham & Tetroe, 2007).

Feedback from these workshops was gathered in a number of ways: end of session "sticky note maps" indicating what worked and what needed improvement; one to one in-person or email correspondence; and feedback surveys sent by the HIF Innovation Managers to their innovators. While we recognize that this was a relatively informal and non-standardized approach to gathering feedback, it did allow us to adapt to different innovation groups, workshop approaches, and settings to encourage dynamic, in-course, and ongoing input from innovators into the toolkit development process. As such, we have structured the remainder of this paper around the tools that were generated in response to the iterative feedback process, rather than around the feedback itself.

The Stages Tool

The Stages Tool was the first and most heavily iterated resource that was developed in this process. In the first version of the tool, the HIF Innovation Guide stages were presented in a circle that centred around the phrase "Accountability to Affected Populations" (IASC 2011). "Accountability" as a concept arose throughout the Scoping Literature Review, Key Stakeholder Interviews, and as an overarching value in the Critical Interpretive Review- meriting its placement at the core of ethical humanitarian innovation. There was much discussion amongst the team and through feedback sessions with the HIF Innovation Managers/Innovators regarding the directionality of "accountability". Each stakeholder could both be accountable to and be held accountable by a different set of actors - and those lines of accountability differed in various humanitarian contexts, with different funding structures, and different risk distributions.

The most common element that all stakeholders could hold themselves accountable to (and seek to build mechanisms that would let them be held accountable by) were the populations affected by humanitarian crises. In each stage of the Innovation Guide, the representation of, engagement with, and accountability to affected populations was a key question to pose when considering the ethical dimensions of an innovation. Each stage was then annotated with a series of ethical considerations that were drawn from common experiences described in the literature as well as those shared by interview participants. Several questions were seen across the stages (these became "overarching" or "foundational" questions in later iterations), and some were seen to be outside of the

innovation journey, which created a list of questions to ask “before you begin” that was tentatively called the “fostering organizational culture document”.

This tool and the preliminary findings of the key stakeholder interviews and scoping literature review were presented at the HumanityX Conference in The Hague (June 26-27, 2019) as a breakout session to an audience of roughly 10 people who were primarily researchers, innovation accelerator/hub leaders, and technologists. It was presented for a second time following the R2HC Research Forum in London (Sept 9-12, 2019), where we invited participants who were researchers, designers, and scholars connected to the HIF as grantees or advisory members.

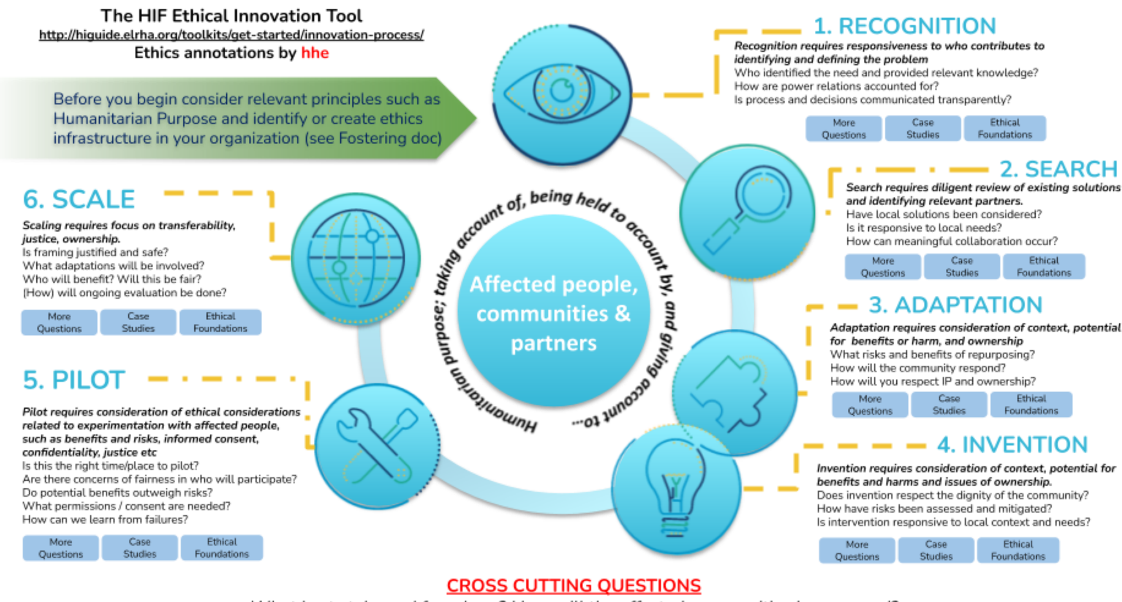

Figure 2. An early iteration of the “HIF Ethical Innovation Tool” prior to the shift towards having multiple tools and re-naming as the “HIF Stages Tool”.

Initial feedback from these two sessions centred around the density of the tool and the need to have something that was more accessible and interactive and could be expanded out by interested parties based on their specific needs. The centering of accountability to affected populations was also seen as too narrow in scope, and left some ambiguity as to what "accountability" meant, and the directionality of the term. We also heard that the "before you begin"/"fostering organizational culture document" presupposed that users would be using this tool quite early on in their innovation journey, and that using such language or pre-requisite work disincentivized the engagement of innovators who were further along in their innovation process. Many participants in workshop and presentation sessions suggested the disentanglement of the many users/priorities of ethical deliberation would lead to clearer, more actionable resources.

Towards the end of the consultancy period, the HIF renamed this tool the "Ethics for Actions" Tool, in an effort to shift the tone of the tool from linear, stepwise, stage-oriented language to more clustered, iterative, action-oriented approaches.

Case Studies

In both the interviews and participant workshop feedback, we often heard that the ethical challenges faced by innovators felt isolating. Providing honest accounts of the difficult decisions they needed to make to donors could jeopardize existing or future funding, and the sector has become adept at writing about "failure" in a palatable way that obscures facts and makes it harder to learn from the mistakes of others. By developing a

set of Case Studies, we hoped that innovators would be able to see a reflection of their own innovation journeys and challenges, and recognize the common, quotidian ethical challenges that are faced by others.

The Case Studies were developed in tandem with the toolkit with the intent to serve two purposes. First, the gathering of innovator experiences and ethical challenges to write the case studies was a valuable empirical exercise for the research team to engage in. Through the development of the case studies (structured around the six stages of the HIF Innovation Guide) we identified some of the key questions that are posed through the Stages Tool. Second, we used the case studies as pedagogical resources with workshop participants to demonstrate the logic of the tools on an innovation that was not their own. This worked particularly well for the REACH Tool in one of the later workshops, where one of the case studies was slightly adapted to prompt an immediate ethical decision making situation that simulated a challenge innovators may encounter in the field. The case studies were not piloted/iterated through innovator workshops to the same extent as the tools, primarily due to privacy concerns that need to be resolved by the Humanitarian Innovation Fund prior to their wider use and dissemination.

The Values Clarification Tool & The Foresighting Tool

Following the development of the Stages Tool, Fostering Organizational Culture Document, and initial case studies, we began to see that there was a clear need for tools that could ask more foundational questions of the innovation teams and organizations. In

cases where an organization was formed from an innovation, or in novel organizational partnerships established around an innovation, we often observed the lack of a common moral vocabulary and articulated values that would guide innovation activities and decisions. To address this gap, we first looked to our review of the literature and existing resources, and identified a set of tools oriented towards design professionals called "Ethics for Designers" (Jepsen, 2017). While this set of resources was not oriented towards humanitarian contexts, the delineation of "moral sensitivity, moral creativity, and moral advocacy" and the "Moral Value Map" resource did provide a valuable frame of reference for the type of tool that may serve our humanitarian innovation audience.

The first iteration took the form of two separate documents. The first was a values identification exercise that prompted innovators to select values/principles from a cloud of terms (drawn from the CIR) and/or to identify values/principles on their own, and to discuss what those values meant to their team & innovation. The second was a foresighting exercise that prompted innovators to anticipate ethical challenges that may arise during projected activities, and to apply the aforementioned values to those challenges. These two exercises were piloted with HIF-funded innovators during a workshop co-hosted with the Centre for Disaster Preparedness in Manila, Philippines and received favourable feedback, with many innovators stating that they wished they had engaged in such reflections earlier in their innovation process. We then took these two exercises and combined them with a draft of the Stages Tool, and replaced the word cloud in the values identification exercise with key values and principles Venn Diagrams

identified through the CIR which provided a clear link back to the literature and evidence base. These three elements (“Values Clarification Tool”, “Foresighting Tool”, and “Stages Tool”) formed a workbook exercise that could be printed on large format paper and worked through in workshop settings. This Workbook was then iterated to include a summative section that more explicitly prompted innovators to translate the linked values and challenges into an actionable mitigation strategy for the anticipated ethical challenges.

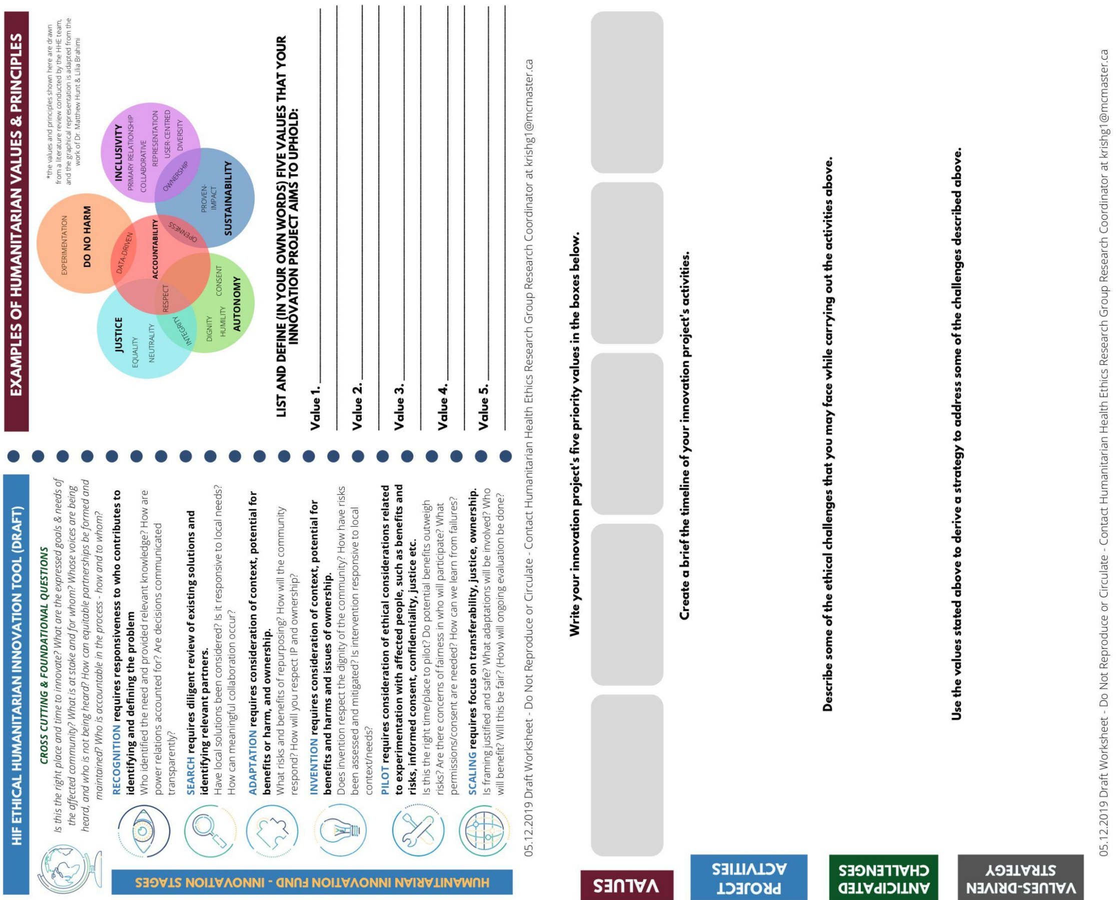

Figure 3. The HIF Ethical Innovation Workbook including earlier versions of the “Values Clarification Tool”, “Foresighting Tool”, and “Stages Tool”.

The Workbook was piloted and iterated through various workshops, including the Humanitarian Grand Challenge x World Food Programme Innovation Accelerator Week 2019 in Munich (23 innovation teams), and Humanitarian Innovation Fund Kick-off Week 2020 in Amsterdam (12 innovation teams). The Workbook received positive feedback in these sessions, with the most common comment being the need for more time to work through the resources. The concatenation of the Values Clarification Tool (to identify and describe values in actionable terms), the Stages Tool (to prompt anticipation of ethical challenges across innovation stages), and the Foresighting Tool (to create a values driven strategy to anticipate and respond to ethical challenges) was effective, and neatly linked previously disjunct exercises in a way that lent itself well to multi-session/day workshop formats. It also clearly showed participants how the tools could be used in isolation, but were most effective when used in conjunction with one another.

As we iterated these tools and the workbook further, we consistently heard requests for worked examples - when the tools were provided without an extensive briefing or facilitator support, many innovators felt the need for additional instructions beyond what was on the page. We also heard that presenting all three tools as part of a single workbook required a high level of commitment from workshop participants, and that the tools can and should stand alone depending on innovator needs. The current iteration of the toolkit presents the tools individually, with a guidance note for a facilitator (who may be from the innovation team, or external), as well as worked examples.

The REACH Tool

Having established four tools that allowed for innovators to engage in the process of ethical deliberation and reflection across the various stages of the innovation cycle, and to engage in the practice of ethical foresighting, there remained one major critique that was unanswered. All of these tools were most effective in situations where innovators have the opportunity to sit down *ex situ* to do planning, mapping, and reflection exercises as a team. While this is important, the field reality is that the majority of humanitarian professionals and innovators would search for/engage with ethical resources in one of two situations: requiring Research Ethics Board (REB) approval for a project that has been deemed "research", or in the context of a more immediate ethical challenge for which they are seeking decision making support. The latter situation remained unanswered by the tools created to date, which led to the drafting of the **Re**sponding to **A**n Ethical **Ch**allenge (REACH) Tool.

In this context, an ethical challenge is defined as a situation in which personal or institutional values are in tension or threatened, and 1) all options require giving up something of ethical significance, 2) there is uncertainty or disagreement about what the best course of action is, or 3) the ethically preferred option is clear but cannot be acted upon - and there is a requirement for some sort of immediate decision making or action. In developing this tool, the HHE Research Group leaned on the advice of the Humanitarian Innovation Guide itself - adapting existing solutions rather than inventing entirely new and potentially redundant ones. In 2014, HHE developed a similar resource

called the Humanitarian Health Ethics Analysis Tool (HHEAT) "in response to the ideas that: (1) an ethical analysis tool will enable humanitarian aid workers to better prepare for and process the ethical dilemmas they are likely to encounter, and (2) there are a range of features of care planning and delivery unique to humanitarian aid settings which require a tailored tool" (Fraser et al 2014). The HHEAT received very similar input/feedback from its focus audience of humanitarian healthcare workers - "near unanimous in their preference for a simplified version [...] using less text, including bullet points, and shortening the tool. Balancing the level of detail and substantive content with practical utility is one of the challenges facing all analysis tools" (Fraser et al 2014).

The HHEAT was adapted by reconceptualizing the table tool as a two page worksheet, which facilitates a step-by-step processing of the ethical challenge, from the gathering of information and consideration of benefits and harms, to identifying a course of action and establishing a strategy for evaluation and follow up. The REACH Tool was validated by a small group of experienced innovators (3 teams, 3 individuals each), who used the tool to analyze one of the Case Studies or an ethical challenge derived from their own use of the Stages Tool.

The Organizational Virtuous Circle Tool

The Organizational Virtuous Circle Tool was the final resource to be developed, despite being rooted in one of the earliest iterations of the Stages Tool ("before you begin/foundational questions") and the "fostering organizational culture document". The

initial inspiration for this document came from an informal consultation with a humanitarian researcher who identified the need for a foundational policy-oriented tool aimed at supporting smaller organizations that may not have the resources or policies of larger, more established NGOs and institutions. This document ideally serves to identify (or help create) the organizational structures and facilitating environment under which ethical deliberation surrounding innovation can occur. In order to foster such an environment, or identify the existing mechanisms within an organization, we looked to the concept of a virtuous circle. A virtuous circle in ethics occurs when ethical acts and ethics resources positively reinforce an organization's ethical climate to support further ethical acts (Teresi et al., 2019). The Organizational Ethics Virtuous Circle highlights three important areas of organizational ethics that can influence an organization's ethical climate: ethical expertise, ethical resources, and ethical practices. These create the foundations for orienting how an organization and its members could respond when facing particular ethical issues. The tool integrates a set of considerations at the level of organizations and projects related to: mainstreaming ethical considerations, supporting ethical climates, facilitating access to appropriate resources, reinforcing accountability and prioritizing learning.

The Organizational Virtuous Circle Tool in many ways lays the foundation for the use of the other tools. The tool was presented in its final form through an open plenary session with experienced HIF grantee innovators (3 teams, 3 individuals each), who reflected on the questions presented with regards to their own innovation teams. The

participants highlighted the particular value of this tool for innovation teams with multiple organizational partners, who may have internal organizational ethics mechanisms, but lacked clarity on the intersection of those structures when addressing ethical challenges as an innovation team. It may assist such innovation teams by encouraging them to reflect on the ways in which they are expected to be accountable to their organization's vision and expressly consider these with reference to their own work, and to explicitly articulate these expectations with their collaborators to foster transparency and accountability.

Supporting Texts

The final piece of the HIF toolkit was the creation of supporting texts to guide users of the resources, as well as to provide the HIF with adequate background information on how the resources were developed. These supporting texts included a Preliminary Scoping Report, a Final Report/Manual, and a Handbook. These supporting texts were a critical component of handing over the knowledge and resources that were generated to the HIF as part of our iKT approach, in which the knowledge user serves as an owner of the resources and advocates for further dissemination and uptake.

The Preliminary Scoping Report (Sept 2019) was primarily a summary of the early findings from the Scoping Literature Review and Key Stakeholder interviews, situating the project within the existing literature and identified needs. It also included several case studies that were being developed based on innovator experiences, to help

inform our development of the ethics tool. At this stage, the output was still a singular ethics "tool" which was effectively an annotation of the HIF Innovation Guide Stages - this annotation was included as an appendix. The Final Report/Manual (Mar 2020) represented a significant development from the Preliminary Scoping Report. Through the iterative design and delivery of several workshops, the singular ethics tool evolved into a toolkit of five unique resources and six case studies. The Final Report/Manual served two purposes. First, it was a presentation of the research done to-date (Scoping Literature Review, Critical Interpretive Review, Key Stakeholder Interviews), and the connecting of this evidence to the resources that had been developed. Second, the toolkit required an in depth explanation of how each tool was developed, how they were to be used, and how they fit within the larger context of the other tools. This was a lengthy document (75+ pages), that was ultimately oriented towards the HIF leads and innovation managers.

While the Final Report/Manual was valuable to the HIF, we also received feedback that the dual-purpose approach was cumbersome to users and that the juxtaposition of practically-oriented tools and heavy academic introductions would dissuade potential users from engaging. In response to this (and through a project extension with the HIF), a much more streamlined, innovator-focused "Handbook" document was produced. The Handbook (~25pg) focused strictly on what innovators needed to know - which tool to use to answer what questions, how the tools fit together, the tools themselves, and generic worked examples.

After handing off the “Toolkit”, “Manual”, and “Handbook” to the HIF, an external design team (Soapbox) was contracted to support the design and final development of the various documents. At this point, the focus shifted away from the generation of new ethics tools or analysis, and more towards multi-platform accessibility, and alignment of the resources to HIF/elrha brand guidelines. As the content developers/subject matter experts, our role also shifted to consult with the designers to ensure that the substance and integrity of the tools remained intact as design elements and structural changes were made. As this process was ongoing at the time of submission for this dissertation, the most recent iteration of the toolkit has been included in Appendix 8, noting that it may differ from the final version that is released to the public by the HIF.

Discussion

The progressive development of the tools presented in the previous section reflects an iterative, innovator-driven process that was grounded in the literature and empirical evidence generated through key stakeholder interviews. The scope of the project began with a single tool that was effectively an ethics annotation of the Humanitarian Innovation Fund’s Humanitarian Innovation Guide stages, and ended as a stand alone toolkit with five unique tools and six case studies that can be used in isolation or in conjunction with one another. The resources are primarily oriented towards HIF Innovation Managers, prospective and current grantees, and application reviewers. In engaging with a diversity of innovators through the series of workshops, we learned a

number of things about how innovators engage with resources such as these, their needs, and their reservations.

First, we saw how heterogeneous cohorts of innovators may engage with ethics resources in incredibly different ways. Some of the innovators we worked with had received hundreds of thousands of dollars in funding, and gone through many workshops on design thinking, pitching, and project development. Others had only just formed their organizations and were being exposed to such concepts for the first time. In developing this set of resources, we needed to strike a balance between the needs of these two groups and the expectations of their respective funders - to ultimately create something that is accessible to the novice innovator, but can be scaffolded out to adequately engage and support more experienced individuals. Some experienced innovators recognized this and used the tools as a launching pad into deeper discussions, while others observed it as too simplistic and did not engage much further. With such "expert" innovators, close contact with facilitators seemed to improve their willingness to engage and ability to see the value in the tools.

We observed a tendency across all groups to link experience navigating Research Ethics Boards (REBs) in academic/research settings with ethical reflection in innovation contexts. Innovators were often hyper-focused on determining if their innovation required REB approval (where to get it, how to navigate the process, how to expedite such approvals) rather than actually wanting to engage in critical ethical reflection on their innovation. This represents a fairly bureaucratic conception of the role of ethics - in most

cases, the REB requirement would be determined by the funding agency - the role of the resources created was to prompt and facilitate reflection regardless of the need for a formal approval. In these situations again, close contact with tool developers or trained facilitators helped innovators look beyond the REB.

One interesting dimension of workshop facilitation and engagement was the role of the other sessions, and the incentivization to participate through access to funds. Three of our workshops took place in a curriculum that culminated in some sort of "pitch" event or submission of a grant request. In these workshops, participant feedback reflected far greater interest in additional "pitch" skills that could translate into financial return, rather than sessions on leadership or ethics which they felt they could perhaps get elsewhere. In one of these three workshops, we were able to directly link requirements in the grant request submission to specific tools. While this garnered more interest, the feedback reflected more interest in simply fulfilling the section requirements, rather than an appreciation of/interest in deeper reflection on the ethical dimensions of their proposed innovation. The remaining workshops were conducted with groups who had already been awarded funding, and were expected to engage for development purposes. In these groups, participant involvement felt more subjectively dependent on the individual's interest in the topic.

A final piece of feedback across the interviews and workshops was the need for two different sets of resources - one that was developed to "click through", iteratively designed for web browsers; and another that could be printed off as a single pdf to be

used in low-access regions. This dual-design is something that was outside of the scope of our research group's expertise, but we remain engaged with the HIF design team, as we recognized the critical importance of the medium in conveying the right information.

Limitations

The methods applied to develop this ethics toolkit can be split into two parts: primary evidence generation/synthesis; and the series of iterative, innovator-driven workshops that led to the development and refinement of the tools. In the primary evidence gathering and generation phase, three concurrent studies were applied, the Scoping Literature Review, Key Stakeholder Interviews, and Critical Interpretive Review. While this approach was ultimately very fruitful and allowed us to establish a firm evidence base for early iterations of the tools and to respond directly to gaps and needs identified through interviews, the timeline of the initial agreement with the Humanitarian Innovation Fund did preclude the possibility of conducting these studies in any other way. For example, the initial scoping search of the literature needed to be expedited to create an evidence informed interview guide/structure, but the search ultimately needed to be redone to ensure methodological robustness (multiple reviewers) and an adequately broad search net for academic publication.

Similarly, the dynamic form of the resources being produced (from an annotation of the stages to a stand alone toolkit, handbook, and case studies), shifting timelines (from twelve to twenty-one months with extension), and the adaptive workshop format (based

on the needs of the funders, innovators, or COVID-19 restrictions) made it difficult to gather feedback with a standardized questionnaire. In this way, our process of developing the toolkit was subject to some of the same challenges cited by the innovators - leading us to collect feedback more informally through post-workshop reflections on personal interactions, or through surveys managed by the workshop organizers (HIF or GCC). While the lack of standardized feedback may have repercussions for the reproducibility and transparency of our process, it did allow us to be nimble and responsive to the needs of the HIF and the feedback provided by innovators.

It is also important to note that while some workshops were delivered to innovators who had already secured funding from the workshop organizers, others were delivered as part of week-long curriculums that culminated in the submission of a funding proposal to the workshop organizers. In the latter scenario, it is possible that innovators may have felt incentivized to engage in the workshops - to ultimately produce a better submission and secure funding. In these situations, our facilitation team made all possible efforts to communicate that workshop participation was voluntary, and that the provision of feedback on workshop tools was in no way connected to the funding application process. In these scenarios, feedback was collected by the HIF as part of their process, which we reviewed for tool-specific reflections.

Another limitation of the resources and methodology is that almost everyone who has interacted with these tools has been given at least a short introductory webinar or briefing on how to use them, and had a facilitator near at hand. When the resources

become publicly available through the HIF-website, it will be valuable to see how first-time users engage with the tools without any additional support. Among these first time users, it will be particularly valuable to see how individuals who neither self-identified as innovators and/or humanitarians engage with the tools - as this demographic was underrepresented in our study and workshop cohorts. The sole exception to this was our community workshop cohort in the Philippines, who were teachers, artists, and community organizers, would not self identify as 'humanitarians', and only newly align themselves with the term 'innovators'. We acknowledge that many of the most impactful innovations in humanitarian contexts arise from affected populations, in response to local challenges, who lack access to the networks and resources available to larger iNGOs through entities such as the HIF. It is our hope that through making these tools freely accessible on the internet and promoting resource sharing through key institutional partners, that these communities of innovators will be able to benefit from these resources as well.

We would also like to note that the final stage in our process involved the handing off of the "Toolkit", "Manual", and "Handbook" to the HIF, an external design team who were contracted to support the design and final development of the various resources. At this point, the focus shifted away from the generation of new ethics tools or analysis, and more towards multi-platform accessibility, and alignment of the resources to HIF/elrha brand guidelines. As the content developers/subject matter experts, our role also shifted to consult with the designers to ensure that the substance and integrity of the tools remained

intact as design elements and structural changes were made. Despite remaining involved in this process, some of the tools did change in form from the last HHE designed version, which introduces the possibility that these new versions will not have the same reception from innovators.

Lastly, the COVID-19 pandemic impacted our program of research in many ways, including limiting access to certain populations, shifting timelines, and changing methods. As noted above, we were unable to engage with affected communities directly to pilot the final toolkit. A plan was in place for a 2020 workshop in partnership with ALNAP in Nepal, however this was postponed and ultimately cancelled due to the pandemic. We pivoted our workshop structure to be primarily online through the use of videoconferencing and virtual education softwares, however the audience became limited to people within the existing networks of the HIF. The pandemic also required both the HIF and HHE members to reprioritize activities towards COVID-19 research and response activities, shifting the public dissemination of the tools from mid 2020 to 2021. This represented a significant delay from the projected timeline, however not one that we believe could have been circumvented or anticipated.

Conclusion & Next Steps

The Humanitarian Innovation Fund Ethical Innovation Toolkit was developed through a unique consultancy and partnership that provided our research group with direct access to a diverse network of innovators and innovation managers, as well as a clear

understanding of the primary end user for the research and resources developed. The iKT approach to the development of the toolkit was manifest throughout the literature reviews, interviews, and series of workshops. The product of these efforts was the development of six humanitarian innovation case studies, five unique tools that respond to different needs and user priorities, and a user handbook/backgrounder, all of which have been iterated through user-feedback.

In response to needs identified in both the literature and user-engagement, we sought to create resources that were accessible to non-academic audiences, could be used in isolation or in conjunction, and promoted ethics as a facilitating rather than inhibiting force to innovation in the humanitarian sector. Users further requested that the tools be intentionally designed with space to work through problems in a discursive manner, rather than serving as a simple "checklist" exercise. When used in conjunction with case studies, the tools can act as effective pedagogical resources to reflect on common experiences and ethical challenges faced when innovating in the humanitarian sector. In the final workshop sessions with the full toolkit, a key marker of success was seen in almost every participant being able to find a tool or resource that they found useful, despite significant differences in their prior level exposure to ethical analysis, stage in the innovation process, and/or technical domain of innovation. Furthermore, we encourage innovators to use these tools collaboratively with co-innovators and affected populations wherever possible, promoting the growth of sharing networks within the humanitarian innovation ecosystem.

The next steps for the success and wider uptake of these resources lay in the design and dissemination strategies of the Humanitarian Innovation Fund. A team of experienced designers have been contracted to maximize accessibility, align with HIF brand standards, and develop a strategy for integration into the existing HIF Innovation Guide online portal. This will ideally include a feedback portal to allow new users to effectively "field" test the tools outside of the purview of HIF and the HHE research team, and feed into future iterations of existing tools, or the development of new resources to support ethical innovation.

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Chapter 3. Ethical Considerations Across the Humanitarian Innovation Cycle: A Scoping Review of the Literature

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Abstract

Introduction: Humanitarians have long sought and employed innovative approaches to the daily challenges of working in austere environments with limited resources - however it is only in recent years that Humanitarian Innovation has begun to be defined as a discrete set of activities and practices. Functioning in a space that has neither a well established set of operational norms nor the rigorous oversight of research, humanitarian innovators lack the ethical guidance and resources necessary to navigate its unique challenges in an accountable and effective manner.
Methods: The aim of this review was to explore what is currently known about the ethics of humanitarian innovation processes, and the most prominent considerations across the various stages of the HIF Innovation Guide's innovations stages. we applied a scoping review methodology (Arksey & O'Malley 2005) to investigate "what is known about the ethics of humanitarian innovation processes?" We searched six academic databases, a diversity of targeted organizational and sectoral grey literature sources, and engaged in citation chaining. 76 texts published between 2009 and 2020 were retained for analysis.
*Results:*We found that the stages of Adaptation, Pilot, and Scale received significantly more attention in the selected texts, with a focus on considerations of risk, moral alignment between inventing and adapting users, and cultural specificity. Solutionism was identified as a common thread across all of the stages, as it precludes community-driven Recognition; derails good-faith attempts at Search, Invention, or Adaptation; and appeals to the risk averse nature of funders and iNGOs that is particularly prominent in the Pilot Stage. While there have been attempts at articulating high level ethical principles for humanitarian innovation, there is a lack of practical guidance available to innovators.
Conclusion: Humanitarian innovation has a critical role to play in guiding the sector towards more ethical, responsible, and impactful response, and this can only be attained through diligent ethical reflection throughout the innovation process. By developing meaningful, accessible, and actionable ethics resources and creating communities of practice around these resources, we can begin to reconceptualize humanitarian response, and who holds knowledge and power within these systems.

Introduction

Humanitarian organizations and the populations with whom they work have always had to innovate in order to find solutions to the daily problems they face in crisis settings. Over the past decade, a more structured and formalized approach to innovation has emerged with a particular organizational logic and set of practices. The rise of Humanitarian Innovation is often traced to an influential report from the Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) in 2009, where learning amongst humanitarian actors was reframed as innovation.

The concept of humanitarian innovation has been resonant, and has had an impact on the shape of the humanitarian sector. Increased emphasis on innovation has led to new structures: Innovation Labs, Services, and Hubs have been created within, across, and outside of humanitarian organizations; new funding models have been established (e.g. Humanitarian Innovation Fund [HIF], Humanitarian Grand Challenge [HGC], Groupe Spécial Mobile Association [GSMA] Mobile for Humanitarian Fund); and a raft of new partnerships have been launched between humanitarian and private sector actors. These changes have been described as an innovation turn (Scott-Smith, 2016), that has led to a growing humanitarian innovation movement (Aganthangelou 2017) within an innovation ecosystem (Ramalingam 2015). Simply put, there has been a shift of attention from the sorts of small-i innovation that naturally occurs in applied practice, to big-I Innovation. The former typically includes unstructured, locally grounded, trial-and-error approaches to solving problems. The latter has come to encompass structured and increasingly

systematized efforts to increase effectiveness or efficiency through "an iterative process of identifying, adjusting and diffusing ideas for improving humanitarian action" (Obrecht and Warner 2016).

There have been many attempts to map out this process in stages, which have included combinations of the following: Recognizing Problems, Searching for Solutions, Selecting/Adapting Solutions, Inventing, Piloting, Implementing, Scaling, and Diffusion (Tidd & Bessant, 2009; ALNAP, 2009; HIF, 2013; HIF, 2018) The Humanitarian Innovation Fund's Innovation Guide, for example, presents the process as involving problem recognition, a search for solutions, adaptation or invention, piloting and scale up (HIF, 2018). While these stages of Recognition, Search, Adaptation, Invention, Pilot, and Scale are useful categorizations to begin a conversation, there is a recognition that such structures apply much more loosely in practice. An innovation journey rarely takes a linear path, instead moving through these stages fluidly and iteratively, suggesting a porousness to the boundaries between the stages.

The objective of humanitarian innovation, to develop rigorous approaches to improve care and support for populations affected by crisis, and, where feasible, to diffuse successful innovations, has been described as an ethical imperative (Blunt 2015). Yet, it is also recognized that innovation processes raise ethical issues that warrant careful attention (Binger, Lynch & Weaver 2015; Skeels 2018). While innovating in any context requires careful ethical consideration, innovating in a humanitarian crisis is of a distinctive ethical register, with its own unique critiques and cautions. Humanitarian

crises (sudden-onset, recurrent or chronic emergencies due to conflict, natural disaster or disease outbreak, or a combination thereof) are situations of heightened need and precarity for large groups of people, where limited resources exist to respond, and where risks are elevated and dynamic. The ethical complexity of humanitarian innovation must take into account these elevated risks and dynamics, while also considering the risks inherent to the experimental nature of innovation and the compounding effects it may have.

As part of a consultancy project commissioned by the Humanitarian Innovation Fund (HIF) to develop an ethics toolkit for humanitarian innovation, we undertook a scoping literature review of gray and academic literature with the goal of mapping what is known about ethics and humanitarian innovation. In this article, we analyze how ethical considerations are described in the literature in relation to the different stages of the innovation cycle (as defined in the HIF Innovation Guide). The application of the HIF stages provides a general organizing logic which we believe any innovator will be able to position themselves within when reading this review.

Humanitarian innovation is a rapidly growing field of knowledge, but as Sandvik, Jacobsen & McDonald (2017) wrote, “there has been little discussion that critically analyzes the relationship between “innovation” and humanitarian [ethical] principles”. Thus, in addition to supporting the development of the HIF toolkit and HIF innovators, this scoping review also seeks to respond to a gap in the literature surrounding the ethics of innovation in humanitarian contexts.

Objectives

The primary objective of this study was to conduct a wide-ranging, preliminary review of the existing literature to determine what is currently known about ethical humanitarian innovation and to identify potential gaps that require further investigation. The nature of humanitarian and innovation literature is such that a broad diversity of sources would need to be included, as well as an existing cache of literature available to our team through the HIF. Furthermore, the agreement with the HIF was to produce a rapid scoping report within the first few weeks, which would be used to orient the interview and tool development process - necessitating a method that was equally robust and rapid. Working within these parameters, a scoping review seemed best fit for our purposes.

Methods

Scoping reviews are often conducted as a preliminary assessment of “research and non research material to provide greater conceptual clarity” (Davis et al 2009) and aim to “map rapidly the key concepts underpinning a research area and the main sources and types of evidence available” (Arksey & O’Malley 2005). We used Arksey & O’Malley’s framework: identify the research question; identify the relevant studies; study selection; chart the data; collate, summarize and report results; and stakeholder consultation.

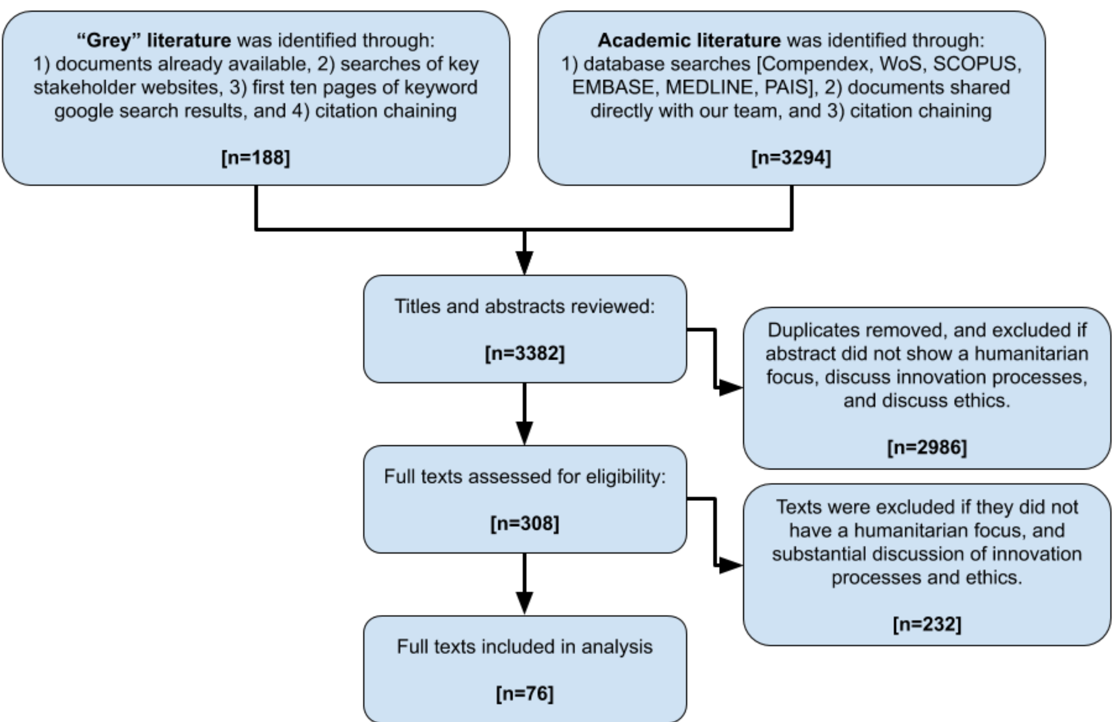

Figure 4. Modified PRISMA flow diagram of the overall review process.

Stage 1: Identify the question

Our primary guiding research question asked "what is known about the ethics of humanitarian innovation processes?" We developed several secondary questions to further probe the literature as the review progressed. In this article, we present the results of the review in relation to the following secondary questions: "what is described as being ethically at stake during humanitarian innovation", and "what are the ethical challenges most prominent across the HIF Innovation Guide-defined stages of the innovation process?"

Stage 2: Identify relevant documents

We employed four approaches for identifying relevant gray literature sources (e.g. reports, policy briefs, discussion papers, policies): 1) documents already collected by our team or provided to us by members of our professional networks; 2) targeted searches of key interagency (e.g. ALNAP, GAHI, HGC, HIF, RIF) and organizational (e.g. MSF, ICRC, IFRC) websites, the UN library and ReliefWeb; 3) focused Google searches using incognito and search strings related to the terms "humanitarian, "innovation", and "ethics", where we reviewed the first 10 pages of results only; and 4) citation chaining (reviewing texts that cite, and that are cited by) identified texts and sources. Following these steps, a total of 188 gray literature sources were retained for further review. Working with an academic librarian, we then selected six databases in which to run our search for peer-reviewed academic sources. These databases target a range of relevant fields, including science and engineering literature (Compendex, Web of Science, Scopus), health-related literature (EMBASE and MEDLINE) and philosophy and social science literature (PAIS). The librarian tested, refined and ran the database searches in each of the databases. The start date for the review was 2009. This date was selected to align with the release of the ALNAP report that has been described as a catalyst for increased emphasis on innovation in the humanitarian sector (Ramalingam, Scriven & Foley, 2009). The searches were conducted in two stages, the first in May 2019 (texts published 2009-2019) to inform the expedited review for the HIF, and a second search in April 2020 (texts published 2019-2020).

In addition to the database searches, we identified additional peer-reviewed texts by four approaches: 1) texts already collected by our team or provided to us by key informants (including HIF representatives); 2) citation chaining key articles using SCOPUS; and 3) reviewing the publications of key authors in this field using Google Scholar. Following these steps, a total of 3294 academic sources were retained for further review.

Stage 3: Selection

Two independent reviewers (one reviewer did all texts, two reviewers split 50/50) then screened titles and abstracts for indication of meaningful discussion focusing on ethics and humanitarian innovation. To be included, each document had to satisfy the following conditions: 1) be focused on humanitarian crises or organizations; 2) discuss the process of innovating; and 3) include a substantial discussion of ethics. If the review of the title and abstract was inconclusive ("maybes"), the full text was scanned for keywords. Through this process, 139 of 3294 academic texts were retained for further review. The reviewers then read the full text of all the retained academic texts (n=139) and all the gray literature texts (n=169 after duplicates were removed), for inclusion in analysis using the same criteria listed for title and abstract review. A third reviewer was involved to resolve any discrepancies between the two reviewers inclusion lists. The primary source of inter-reviewer disagreement was due to different understandings of the

term “substantial” in criteria 3, “substantial discussion of ethics”. Following these steps, 76 documents were retained for extraction.

Stage 4: Charting the data

We then extracted data from the retained texts to a spreadsheet with headings related to bibliometrics (title, source, date, document type, link to document), contextual focus (type of organization, type of innovation, type of humanitarian crisis), and ethical features in relation to the HIF-innovation guide defined stages of the innovation process, needs identified in relation to humanitarian innovation, and any guidance/ recommendations offered related to the ethics of humanitarian innovation.

Stage 5: Collating, summarizing and reporting the results

First, we tabulated bibliometric and contextual details of the collected texts using basic statistics. We then undertook a descriptive qualitative analysis of the extracted data for the ‘ethical features’ columns. To do so, we used QSR International’s qualitative research software NVivo12 to code the 76 included texts, using a codebook derived from the ‘ethical features’ headings in the data extraction table (innovation stages, what is ethically at stake, needs identified, and existing guidance). This coding process allowed us to collate passages presented under each code, as well as observe which ideas/codes were commonly associated and identify any larger themes or patterns. Through this analysis, we developed an account of key ethical considerations across the HIF

innovation stages, cross cutting challenges/opportunities, and gaps in the existing ethical guidance for humanitarian innovation.

Findings

Bibliometrics

The start date for the review was 2009 and concluded in 2020. The number of publications per year varies from 1 in 2010 to 16 in 2016. There was a significant increase in the number of publications per year from 2015 onward: 14 (18%) of the documents were published between 2009-2014 and 62 (82%) between 2015-2020. The rapid increase in publications reflects the increased attention being given to innovation in the humanitarian sector, particularly noting its prominence as a theme at the 2016 World Humanitarian Summit.

Of the 76 included texts, 37 are academic sources (49%) and 39 are gray literature sources (51%) including reports, guidance documents, articles in non-academic journals and blogs. While most (89%) documents discuss innovation across the humanitarian sector, some had a specific focus on the Red Cross Movement (2), MSF (1), UN Agencies (2), or humanitarian innovation lab/funder (3). Most (86%) considered humanitarian crises generally, rather than a specific type of crisis. A slight majority of texts addressed innovation in general terms, but a significant number (16) focused primarily on Information & Communications Technology (ICT) and/or Data. Several other texts

focused on specific innovation types including drones (4), biometrics (2), WASH (2), NFIs (2), Shelter (1), and Vaccines (1).

Ethical Considerations Across the HIF Innovation Stages

Ethical issues arise at all stages of the innovation process. The HIF Innovation Guide stages (Search, Recognition, Adaptation, Invention, Pilot, & Scale) have been developed iteratively through consultation with the wider humanitarian innovation literature (elrha 2018) and strongly aligned the most commonly articulated stages that we saw across reviewed texts. Remaining cognizant of the fact that the boundaries between these stages are porous, and that the activities associated with each stage may occur in iterative, non-linear, and/or compounding pathways, we used the HIF stages as an organizing logic to the ethical considerations presented in the collected literature. This is followed by a brief presentation of the existing ethics resources identified in the collected texts, and concludes with a summary table of the findings.

Ethical Considerations in the Recognition Stage

Recognition focuses on the identification and framing of a specific problem or opportunity to be addressed by an innovation process (ALNAP 2009; elrha 2018). Sheather et al (2016) writing on the ethical significance of problem definition asks “rather than focusing on technocratic fixes, what are the socio-political determinants of the problem and the wider possibilities for solutions? Who has stakes in finding a solution

and who may have interests in perpetuating the problem?" Redfield & Robbins (2015) focus on how water and sanitation problems have been framed as humanitarian and global ecological issues "to be solved through private initiative and technological innovation" by western and philanthropic foundations, and how these problem formulations are often blind to cultural, historical, and contextual factors, stating that "their formulation of the problem floats free of any specific legacy of the past [...] it focuses on health metrics and norms projected into life expectations at a global scale". Sandvik (2019) clearly articulates why this is cause for ethical concern - "inadequate problem definitions mean that technological solutions may fail to respond to the real-life problems they have been deployed to deal with. One common reason for faulty problem definitions is that affected populations are often absent from innovation processes: they are not properly consulted or invited to participate in any meaningful way". Sandvik also reveals something about who holds power and space in the humanitarian innovation sector in using the terms "properly consulted" and "invited to participate in a meaningful way".

Throughout the collected literature, problem recognition/identification is situated at the start of the innovation process (ALNAP 2009; Sheather et al 2016; Coletti et al 2017; elrha 2018), where "participatory methods" (Betts & Bloom 2014; Betts & Muller 2015; Binger, Lynch & Weaver 2015; Scott Smith 2016), "user-centred design" (Betts & Muller 2015), or other similar approaches are seen as the key to ethical, accountable innovation processes. Scott-Smith (2016) considers the question "who is 'humanitarian innovation' really for", and suggests that "it is often the humanitarian community rather

than the beneficiary community who request, drive, and benefit from the innovation, which is a serious ethical challenge to the movement as a whole". In such scenarios where humanitarians are innovating "on behalf of others", Scott-Smith (2016) suggests that 'bottom-up' or participatory approaches should be a baseline ethical requirement in order to avoid exacerbating existing power disparities. However several other sources have highlighted that the simple "fact of participation or inclusion" as Johnson (2011) writes, "does not always equal meaningful power. In some instances, these rituals of participation, in fact, conceal substantive inequalities". In fact, many of these participatory approaches often begin with 'humanitarians' (read as western, external actors) identifying an opportunity for innovation and then seeking to engage affected populations - "the needs of the affected community are supposed to be the central focus, however, the way the system is designed to operate, it takes away the attention from the people to processes and numbers" (Kumar & Vidolov 2016). Betts and Bloom (2014) echo this concern, adding that "bottom-up, or, community-centered, approaches are not a new idea for humanitarian work" and "often [fail] because they take information but offer no new solutions".

This concept of "taking" information feeds into a final theme that arose in relation to the recognition stage: how affected populations and humanitarian contexts may be conceived of as "sources" to be tapped for innovative ideas. The seminal humanitarian innovation report from ALNAP (2009) stated that "those with perhaps the most groundbreaking ideas for how assistance is provided, and sufficient knowledge of

contexts to understand what will work, are people in the affected states themselves". ALNAP (2009) also called for a more "porous" boundary between the "humanitarian 'firm' and its 'users", stating that "such open relationships may be a source of potential innovations, especially as many agencies are increasingly concerned with promoting 'downwards' accountability". However, when done poorly, such approaches can instead lead to "marketization of poverty risk generation, and instrumentalization of poor people's social and cultural resources" (Schwittay 2014). As such, some have begun to replace the extractive "source" metaphor with "active partners" (Vogel 2017), which instead positions affected regions and populations "in this global chain of value not only as output and processing but also as subjects/institutions with capacity to innovate and create" (Aganthangelou 2017).

Ethical Considerations in the Search Stage

The Search stage of an innovation process focuses on the process of canvassing existing solutions that could be used to address the problem that has been identified. These solutions may exist within the local context, be drawn from the humanitarian sector more broadly, or come from other domains of practice (elrha 2018). Ramalingam, Scriven & Foley (2009) capture the essence of the search stage: "we should always assume that we are not the first one who came up with [an] idea. Instead we should rather ask the question: what prevented the others from making it happen/or taking it to the next level?" From these descriptions we see how innately tied search is to its preceding stage

(recognition) and succeeding stages (adaptation or invention). If a problem has been recognized and framed as a technological problem, these parameters may limit where and what type of solutions are searched for. If the search stage is undertaken while bearing in mind the question posed by Ramalingam, Scriven & Foley (2009), one may be more oriented towards existing solutions rather than the creation of novel ones.

The most striking feature of the collected texts in relation to the Search stage of the innovation cycle is that it presents true "search" (as defined above) as rarely happening. Instead, humanitarian innovation processes often reflect an approach rooted in "solutionism" (Raymond & Harrity 2016; Madianou 2019a; Madianou 2019b). Solutionism is characterized as a "solution looking for a problem" (Hayes 2017), "driven by ideas from outside the affected community or from available products, rather than by the priorities of affected people, resulting in limited or even negative change" (Betts & Bloom 2014). Such an approach fundamentally contradicts the purpose of the search stage as defined by the HIF, replacing a canvassing of existing solutions with a canvassing of potential problems. Novel ICTs were the most common type of innovation presented in discussions on solutionism, with some authors highlighting how these nascent technologies aim to "gain legitimacy, visibility, and a leg up in the burgeoning business of global emergencies" (Sandvik & Raymond 2017) while promoting and reinforcing existing power imbalances, and "stymieing their ethical application" (Raymond & Harrity 2016). In the Signal Code, Campo et al (2018) write that "Information communication technologies and data should never be used simply because

they can be; the humanitarian need and potential benefits must be clear, causal, and defined". The Signal Code authors focus further on this point, calling the existence of a clearly defined problem and need a critical obligation to avoid blatant solutionism, and stating "if humanitarians cannot determine the humanitarian need that a proposed information activity is intended to address, it is inappropriate for them to engage in such interventions."

Ethical Considerations in the Adaptation Stage

Adaptation is often overlooked as a key form of innovation. Yet, as Betts & Bloom (2014) state, "innovation is not the same as invention: it need not involve the creation of something absolutely novel, but often takes the form of adapting something to a different context". When (as it often does if conducted in good faith) the Search stage of an innovation process does identify viable options for adaptation, the ethical challenges that arise are very different to those faced by an innovator who must design a novel product or process to address the identified problem. Some humanitarian organizations have focused on adaptation as their primary approach to innovation - as Ramalingam (2015) writes, "a lot of MSF's role in trying new ideas has not been to invent whole new approaches, but rather to scan the horizon for new approaches and undertake translational research on their efficacy in emergency settings. This can be seen as a valid means by which to overcome the ethical barriers to innovation". However, as Dette (2018) states, "transplanting what works in one part of the world or even [another part of] humanitarian

programming is no guarantee for success elsewhere", and there are a number of considerations and ethical challenges associated with adaptation innovations.

The most consistently presented ethical challenge when considering the adaptation of existing tools or processes for humanitarian use is the alignment between the original user/use and humanitarian principles. As Fukugawa (2018) writes in a reflection on UNICEF's investments in open innovation, "they become more susceptible to external interests that do not share the same moral imperative. Can this moral imperative be sustained as UNICEF continues to expand open-innovation? If so, how?" The ethical issue of moral alignment between developer intentions and user application is particularly pertinent when considering innovations that draw a clear lineage to military research and development. Most notable among such innovations are unmanned aerial vehicles (UAV), broadly referred to as drones, as well as remote sensing and geospatial technologies. Kaplan & Calabria (2016) highlight the critical need to engage with the risks posed to humanitarian principles when such military solutions are adapted for humanitarian applications, as well as the importance of separating "tangible risks to humanitarian principles from general unease about certain technologies with military origins, of which there are countless examples in everyday use". The Red Cross & Red Crescent approach to innovation cites the principle of independence as being particularly important to their ability to "work with affected populations to create solutions that are not beholden to other agendas" (Binger, Lunch & Weaver 2015).

Lastly, adaptation also bears the risk of being perceived "as Western-imposed and not organically or indigenously developed" which "may mean that the technology is not adopted, and some projects could become white elephants, unless they are carefully planned and managed" (Axworthy & Dorn, 2016). Kreutzer et al (2020), writing on the adaptation of Natural Language Processing (NLP) innovations state that "without upfront and ongoing identification of the socio-political complexity that often leads to or accompanies humanitarian emergencies [...] humanitarians may exacerbate context biases that make a particular group vulnerable". Given that the aim of innovation is to improve the conditions of affected groups, exacerbation of existing vulnerabilities through context-blind approaches can undermine the success of the innovation and the safety of the communities it seeks to serve.

Ethical Considerations in the Invention Stage

Invention involves the design and prototyping of novel solutions (elrha 2018), with the majority of the reviewed texts focusing on 'product' innovations rather than process innovations.

The primary area of ethical concern with regards to the invention stage arises when funders are assessing what is"truly [an] innovation" (Obrecht 2017), based on "uniqueness". This often leads to product innovations being seen as the 'most innovative' and therefore most worthy of investment (Obrecht 2017). The metrics of uniqueness and newness being conflated with 'innovativeness' is cautioned against by some scholars.

Sandvik (2017) warns against "fetishizing" newness, and Ramalingam et al. (2009) suggest that "novelty should not be seen as good in itself, rather innovations need to be judged on the basis of their contributions to improvements in efficiency, effectiveness, quality, or social outcomes". Obrecht (2017) echoes these concerns of newness as a governing metric of value: "novelty or uniqueness is never a valued characteristic of an innovation in itself: innovators are not engaged in innovation 'for the sake of innovation' but for the sake of achieving broader aims".

Further ethical risks arise when humanitarian innovators, caught in the pursuit of newness, deprioritize representation and participation by failing "to consult or involve the people they are trying to help, which can lead to problems with acceptability and appropriateness, which leads to practical problems as well as ethical ones, deriving from unchecked neophilia" (Scott-Smith 2016). These ethical problems include the breakdown of trust between the innovator and the primary beneficiaries who are left "not aware of how technology is being used and its value" (Cornish 2017).

Zara Rahman quoted in Cohen (2018) cautions against completely ignoring novel innovations, noting that it is "right to consider new technologies" but that "being slow, and thoughtful, and intentional is a key part of doing it right". This recommendation stands in stark contrast to the "fail fast" mantra of silicon valley that has been widely criticized for failing to adequately consider the costs (and distribution of costs) of such rapid, successive failure on affected populations (Betts & Bloom 2014; Obrecht 2017; Sandvik 2017; Madianou 2019b). Closely linked to the fail fast approach is the concept of

disruptive (or "radical") innovation (Obrecht 2017; Sandvik 2017). While disruption may be a key criteria of success in Silicon Valley, such an aim is ill-suited to the humanitarian context, where lives have already been disrupted, displaced, or destroyed in countless other ways (Madianou 2019a).

Ethical Considerations in the Pilot Stage

The pilot phase encompasses the real-world testing of a potential solution to assess how it functions in context (elrha 2018). From an ethics perspective, this phase is most often discussed in relation to experimentation, which can be defined as "defined, structured process to test and validate the effect and effectiveness of new products or approaches" (Sandvik, Jacobsen & McDonald, 2017). The primary concerns here focus on the exposure of crisis affected populations to further uncertainty and risks arising from this testing and validating of innovative products or approaches (Hunt 2018). These discussions often cite research ethics literature as the key sources of relevant ethical standards and guidance, with many identifying the Declaration of Helsinki of 1964 and the Nuremberg Code of 1947 (RIL 2020).

Sandvik & Raymond (2017), citing Sean McDonald (2016), write that "the chaos of humanitarian disaster often creates an implied social license for experimentation with new approaches, under the assumption of better outcomes." These new approaches may include "the acceleration or modification of the experimentation cycle" and "in turn, alter notions about acceptable levels of risk" (Sandvik, Jacobsen & McDonald, 2017).

Wynsberghe & Comes (2019) share are a similar critique of the level of risks taken under this implied social license to experiment and how similar levels of risk would not be permitted in High Income Countries (HIC), despite the fact that the benefits of this experimentation may be those very countries. As a participant quoted in Madianou (2019a) dramatically states "we do things that might get us a Nobel prize in Africa—but which would get us arrested in Europe".

The discussion of risk and experimentation in the piloting of humanitarian innovations is for the most part divided into three general subcategories: acceptable risk, risk aversion, and risk transfer. The previous quote from Sandvik, Jacobsen & McDonald introduces "acceptable risk", which has also been called "intelligent risks" (Vogel 2017), or "honourable risk" (Ramalingam, Scriven, & Foley 2009). These terms all refer to the threshold of risk that humanitarian innovators are willing to take in the pursuit of improved outcomes. This threshold is often very high - "humanitarian donors and agencies have historically been risk averse" (Betts & Bloom 2014) or have a "very low risk appetite" (Ramalingam 2015). However, as Obrecht (2016) notes, "the message that humanitarian agencies should be less risk averse can overshadow the fact that increased risks are easily passed onto affected communities" - and that the thing "at risk" is not just investment dollars, it is people's lives (Ramalingam, Scriven & Foley 2009; Betts & Bloom 2014; Blunt 2015). Rather than passing on the risk to affected communities, many scholars call for risk transfer upwards (to donors) through calling for more flexible innovation funding that allows for "failure" (Betts & Bloom 2014) or outwards (to non-

vulnerable populations) through finding "safe spaces" for innovation (Ramalingam, Scriven & Foley 2009; World Humanitarian Summit 2015).

Innovation, by definition, has a high risk of failure (Ramalingam, Scriven & Foley 2009; PHAP 2015; Sheather 2016 et al; Sandvik 2017; Obrecht 2016). There is little agreement on who bears the cost of failure or reaps the benefit of success however (Sandvik 2017), and what "good" or "ethical" failure may entail (Obrecht 2016). The costs of failure are diverse in scope and severity - donors may lose their investments and in turn their access to taxpayer dollars; humanitarian agencies may lose their reputation, their access, or the safety of their workers; but most importantly, an innovation's failure may lead to the loss of life and/or quality of life of affected populations. Despite having the most to lose, the populations who endure the failures of humanitarian experimentation have few ways to hold those humanitarians and partners accountable (McDonald, Sandvik & Jacobsen 2017). In response to these concerns of failure and accountability, some have argued that the humanitarian system as it stands is rife with failure and inefficiencies that would themselves be unacceptable in other sectors, creating an ethical imperative to experiment and improve (Blunt 2015). Scholars at ALNAP have created a taxonomy of good and bad failures - as well as recognizing the "missing middle" wherein an innovation fails to be adopted, but through the honest and open reporting of learnings, the innovation process may be deemed "successful" (Obrecht 2016). As Sheather et al (2016) write, "given the time, energy, and resources that these projects require, rigorous evaluation and sharing of lessons is itself a moral obligation".

The final major ethical theme related to piloting and experimentation was the role of consent and coercion. The endeavour of humanitarian innovation has turned certain regions of the world into a laboratory for new products and approaches, where populations are in a perpetual state of trialing innovations (coined as "pilot-itis" by McClure & Gray [2014]). In these contexts, informed consent is viewed as the bridge between the responsibility to protect affected populations and the imperative to innovate - but the possibility of true informed, voluntary consent from populations facing vulnerability has been called into question by many scholars. A striking example of such compulsion is captured by Jacobsen (2015) who writes that "eligibility for UNHCR repatriation assistance required Afghan refugees to enrol in the iris scheme. Any refugee who refused to enrol was deemed ineligible for and undeserving of humanitarian assistance".

Ethical Considerations in the Scale Stage

Scaling builds on a successful Pilot phase to extend the reach of the innovation to the wider social problem it aims to address (elrha 2018). While the primary scale stage ethical features reported in the collected literature are concerned with matters of cultural and contextual specificity, sustainability, and justice - several themes from the other innovation stages are interconnected with scaling. The ethical tensions around risk and failure presented in the Invention and Piloting stages in particular are often presented in relation to the potential for scale. "The humanitarian innovation literature often talks

about successful innovations as those that are adopted and those that manage to "scale"" (Sandvik 2017), making scale a sort of moral metric against which investment in an innovation can only be justified if it can become "more widespread and enduring" than the original context it was developed for (Ramalingam, Scriven & Foley 2009). The latter clause of "enduring" is widely supported by reviewed texts, aligning with the concept of "building for sustainability" (RIL 2020). In order for an innovation to be successful and endure, end-users and primary beneficiaries must be engaged in a meaningful (able to reject and able to feedback/influence) manner through the participatory/user-centred methods highlighted in the Recognition stage, and carrying forward throughout the innovation process (Betts & Bloom 2014; Ims & Zsolsnai 2015; Nielsen, Sandvik & Jumbert 2016).

This pressure to scale has been criticised for introducing a more capitalist-aligned approach to humanitarian innovation (Madianous 2019a) where every innovation must be marketed as "revolutionary" and "claim to change the world" (Scott-Smith 2016). Such proclamations ignore the fact that product and process innovations are "not morally neutral because their functions pertain to the objectives of human actions and those actions" (Cawthorne & Cenci 2019). If, as Ramalingam, Scriven & Foley (2009) write that "no two humanitarian crises and no two recipients of aid are exactly the same", the question becomes how context-specific, culturally-appropriate innovations can be repurposed to entirely different contexts and cultures while retaining their fundamental qualities. As Scott-Smith (2017) writes in a reflection on the now infamous IKEA shelter,

“the whole product is deeply dependent on context. It is only ‘better’ in some times and places” and “what counts as ‘just enough’ depends on where you are, who you are, and what you are doing”.

The final theme highlighted throughout discussions of scale was the importance of justice for the populations involved throughout the innovation process. Sheather et al (2016) write that communities are wronged if “innovations produce commercial benefits that are not shared with the community.” Commercial benefits may take the form of economic gain, but could also include intellectual property and ownership - particularly when ideas are indigenously sourced (Betts & Bloom 2014; Schwittay 2014). As the Response Innovation Lab Ethical Standards & Principles state, “equity and fairness should underpin the distribution of benefits, costs, and risks resulting from innovation. Projects should take into consideration and address the distributive consequences of innovation” (RIL 2020). In doing so, innovation processes may shift away from “rituals of participation” (Johnson 2011) and resist “widening asymmetries of power undermining the dignity of individuals receiving assistance (Hunt 2018).

Existing Sources of Ethics Guidance for Humanitarian Innovation

It has also been argued that “innovating in [the] absence of ethical standards and principles will undoubtedly cause confusion and inconvenience, waste resources and create additional risk and vulnerability.” (Binger, Lynch & Weave 2015) The humanitarian innovation community has developed a narrow range of resources to fill this

gap. Principle-based accounts were by far the most common way to discuss ethics of humanitarian innovation. Authors commonly drew upon fundamental humanitarian principles (Binger, Lynch & Weave 2015; Campo et al 2018; Vinck 2013), the do-no-harm principle (Campo et al 2018; Cohen 2018; Dette 2018; Raymond 2017' Sandvik, Jacobsen & McDonald 2017), as well as other principles and standards informed by various domains of innovation or human subjects research. For those who reference standards of research ethics, some emphasize that components of innovation that constitute research ought to undergo formal research ethics review processes and be held to its standards. Some authors also reference other key documents such as the SPHERE standard, the Red Cross/NGO Code of Conduct, and the Core Humanitarian Standard (Ahsan 2012; Campo et al 2018; Vinck 2013). Others point to research ethics models and suggest that innovation needs a structure parallel to this approach with its solid grounding and explicit guidelines (Betts & Muller 2015).

In an effort to provide guidance for ethical humanitarian innovation, some groups have articulated more specific principles and norms. As part of a report for OCHA, Betts and Bloom developed the *Framework for Analyzing Ethical Principles in Humanitarian Innovation*. The framework presents considerations organized by level of impact (individual, community, system), innovation principles, risk and mitigation techniques (Betts & Bloom 2014). MSF developed the *Médecins Sans Frontières Ethics Framework for Humanitarian Innovation* after recognizing that tailored ethics guidance was needed for humanitarian innovation projects. The framework includes six guidance statements for

ethical innovation: "Identify the problem you are seeking to address and what benefit you expect the innovation to have [...]; Ensure that the innovation shows respect for human dignity [...]; Clarify how you will involve the end user from the start of the process [...]; Identify and weigh harms and benefits [...]; Describe the distribution of harms and benefits[...]; Plan (and carry out) an evaluation" (Sheather et al 2016). A third effort to articulate normative principles for humanitarian innovation occurred during a joint Humanitarian Innovation Project (HIP)-World Humanitarian Summit (WHS) Workshop hosted by the Oxford Refugee Studies Centre. The workshop led to the development of a set of seven principles with the following headings: Humanitarian Purpose; Primary Relationship; Autonomy; Maleficence; Experimentation; Justice; Accountability (Betts & Muller 2015) .These three examples represent the most influential examples of efforts to develop ethics guidance for humanitarian innovation identified in this review.

Table 1. A Summary of the key ethical considerations highlighted in the collected texts, presented across the stages of the HIF Innovation Guide innovation process.

	Key Ethical Considerations
Recognition	● Consideration of sociopolitical (and historical) determinants of the problem, who has a stake in solving the problem and/or maintaining status quo (Sheather et al 2016; Redfield & Robbins 2015) ● Consideration of power dynamics - who is holding space for whom, how is participation challenging or concealing substantive inequities (Sandvik 2019; Betts & Bloom 2014; Johnson 2011)
Search	● Consideration of previous attempts and checking assumptions around the novelty of a problem/ solution (Ramalingam, Scriven & Foley 2009) ● Consideration of context specific, indigenous knowledge and solutions, avoiding techno-solutionism (Raymond & Harrity 2016; Hayes 2017; Betts & Bloom 2014)
Adaptation	● Consideration of moral alignment between inventor/initial use and adapter/user [as in the case of military UAV technology being used by humanitarian NGOs] (Fukugawa 2018; Kaplan & Calabria 2016) ● Consideration of contextual specificity, and imposition of western ideology/technology (Dette 2018; Axworthy & Dorn 2016)
Invention	● Consideration of neophilia and donor influence on direction of innovation programs and interest (Obrecht 2017; Ramalingam et al 2009) ● Consideration of how novel inventions may "disrupt" systems in a negative sense, and the distribution of costs and benefits (Madianou 2019a; Obrecht 2017; Sandvik 2017; Betts & Bloom 2014)
Pilot	● Consideration of risk aversion and risk transfer from donors to affected populations arising from experimentation (Hunt 2018; Sandvik, Jacobsen & McDonald 2017; Blunt 2015; Bloom 2014; Ramalingam, Scriven & Foley 2009) ● Consideration of what failure entails, what a "good" or "ethical" failure looks like, and how to communicate failure to foster learning (Sandvik 2017; Obrecht 2016; Sheather et al 2016; Blunt 2015)
Scale	● Consideration of scale as a primary metric of success in humanitarian innovation contexts (Sandvik 2017; Ramalingam, Scriven & Foley 2009) ● Consideration of cultural specificity, ownership of indigenous knowledge when used in new contexts, and distributive justice (RIL 2020; Scott-Smith 2017; Schwittay 2014)

Discussion

This review presents a portrait of ethical complexity related to humanitarian innovation. The selected texts contained a diverse set of views with regards to how ethical dimensions of humanitarian innovation should be understood, how they should be addressed, and by whom. Table 1 above provides a summary of the key ethical considerations presented in this review, followed by a discussion of larger themes that arise from this mapping below.

Mapping Ethics Across the HIF Innovation Guide Stages

While we have applied the HIF Innovation Guide's innovation stages to structure our findings, we would like to reiterate the observation that the majority of ethical considerations intersect or appear across multiple stages. For example, the engagement of affected populations when they are the primary beneficiaries of an innovation was identified as being critical to recognizing the "right" problem; searching for and identifying existing solutions that may be adapted; inventing a novel solution that reflects the local context; piloting in a way that is safe and accessible to those with the highest needs; and determining if, how, and when scaling is appropriate. It is also evident from included texts that the ethical features of several stages of the innovation cycle have been the focus of more extensive discussion, leaving other phases under-investigated.

The Pilot phase, synonymous with experimentation and trialing, has received the most significant attention. The reasons for this are numerous. Piloting is often the first

instance where affected populations come into contact with the innovation, making it a key point of potential risk for harms (Sandvik, Jacobsen & McDonald 2017). The fact that affected populations are often first engaged at the Pilot stage is one of the causal forces behind those potential harms - earlier engagement and participation may serve to mitigate harms through due consideration of context prior to the experimental trials. Innovators in the Pilot phase have the greatest diversity and depth of guidance to draw upon - as the ethical dimensions of experimentation and iteration are covered at length in business, science research, and humanitarian literature.

It is particularly notable that there is a dearth of scholarly engagement with the Invention stage - particularly given that donors and other key stakeholders tend to perceive these innovations as being the most novel, innovative, and worthy of investment. This may be where humanitarian innovation deviates most strongly from market-driven innovation. Rather than seeking to invent products that disrupt lives and systems that have already been ruptured, humanitarian innovation often focuses on adapting existing solutions to new contexts in a way that improves the system, and the lives of crisis affected populations.

Furthermore, both “ends” of the innovation cycle, Recognition and Scale, were not equally represented in terms of depth and diversity of analysis within the collected literature. A potential reason for this is that ethical challenges to either stage may undermine the entire endeavour of humanitarian innovation. It has been noted that humanitarian organizations and philanthropic donors have a tendency towards defining

problems in a way that necessitates biological-technical solutions, rather than challenging the larger social and structural problems (Eckl, 2014). The considerations of donor power and influence on what is recognized as being “truly innovative” (Obrecht 2017) and thus worthy of investment is important, yet currently lacking. Similarly, it may be that ethical scaling may actually mean restricting the breadth of scaling that can be done to a single country, state, or even community. This is a significant challenge in a sector that faces an ever expanding gap between needs and resources, leading to a sense of obligation to invest only in innovations that can be generalized to different geographic and crisis contexts. Not knowing how to reconcile the aims of local, contextually-appropriate solutions and generalizable, scalable solutions may be the source of this knowledge gap - and it is one that will be critical to explore with the push for localization and decolonization of the humanitarian sector.

Solutionism as a Common Thread

A common thread across the stages was the influence of “solutionism” on humanitarian innovation. Solutionism arises when an innovation is identified or created (product or process), and the innovators then seek out problems to apply it to (rather than starting with identifying a problem). If pursued in good faith, this approach could reduce redundant efforts to solve similar problems faced by different actors in different contexts. However when motivated by other interests, or without the appropriate level of due

diligence to determine if the solution is truly fit for purpose, solutionism can become a dangerous force undercutting innovation ecosystems.

Solutionism manifests throughout the innovation stages, and can be linked to the key ethical challenges that were highlighted in this scoping review. First, where a responsible Recognition stage would involve innovators working with the community (unless the innovators *are* members of the community) to identify and prioritize issues, solutionism seeks out issues that fit with existing solutions, even if those issues are not the community's priority. As the management scholar Morozov (2013) writes, "Solutionists err by assuming, rather than investigating, the problems they set out to tackle." This assumption leads to a lack of good faith effort in the Recognition and Search stages, as having a solution in hand precludes the need (or desire) to conduct an unbiased assessment of the problem in context or rigorous consideration of the available options. Solutionism then takes the process of Invention and places it outside of the temporal and geographical context of the problem, often resulting in innovations that are not informed by indigenous knowledge nor respond to local needs. The influence of solutionism on the Adaptation stage is slightly more nuanced- at a superficial level, both could be seen as the application of existing solutions in novel contexts. However, the critical difference is that Adaptation seeks to adapt the solution to the problem, whereas solutionism attempts to adapt the problem to the solution. In the latter scenario, neither community nor innovator find success, as the innovation fails to gain traction and the problem remains unresolved.

When considering the Pilot stage of humanitarian innovation, the most prevalent ethical consideration centred on the distribution of risks and benefits. Here, solutionism appeals to the risk averse nature of the humanitarian sector by offering products that have been "proven" elsewhere (Betts & Bloom 2014). While this may appease donors or agencies, the reality remains that each humanitarian context is unique, and the risks associated with an innovation being applied in a new setting are not insignificant. Solutionism pushes away from culturally-specific solutions, removing problems from their social and political contexts so they may be solved by generalized products with broad market possibilities.

Across all of the stages, solutionism consistently positions affected populations as the sources of problems, rather than knowledge holders or sources of innovation solutions in their own right. This framing of the role of affected populations finds resonance with Miranda Fricker's theory of epistemic injustice, and more specifically the component of testimonial injustice. Testimonial injustice is defined as "a prejudice on the hearer's part [that] causes him to give the speaker less credibility than he would otherwise have been given" (Fricker 2007). Fricker identifies the central case of testimonial injustice to be one of *systematic* (as opposed to incidental) testimonial injustice, whereby one's social identity can have either positive or negative prejudice associated with it within a social system. To illustrate this, she reflects on the racial identity power and prejudice on display during the pivotal trial in Harper Lee's *To Kill a Mockingbird.* Translating this case to the humanitarian innovation, it is impossible to ignore the fundamentally racialized nature of

the various binaries that define the sector, including: Global North/South, International/National Staff, and Humanitarian/Affected Populations, etc. Each of these pairings communicate the same power differential, where the former often carries some form of negative identity prejudice to the latter (leading to undue discrediting), and the latter affording positive identity prejudice to the former (leading to undue credibility). This prejudice limits the access of affected populations to the various parts of the innovation process - as they are not seen as having anything to contribute to, say, the process or appropriateness of scaling. As Ramalingam, Scriven & Foley (2009) plainly state "indigenous knowledge [is] also systematically undervalued by international agencies", adding that "there is far more work in this field [of engaging and valuing indigenous knowledge] at the conceptual level than in practice".

Solutionism thrives when local, indigenous knowledge is ignored in this way. If an innovator (who is not from the affected population) can start with a solution in hand, they do not need to truly consider the unique facets of the problem being faced, as additional context inherently threatens the applicability of a generalized solution and the external innovator's relevance. In such contexts, "participatory" and "user-centred" approaches may not be genuine opportunities for community input and leadership, but instead are mere attempts at gaining buy-in in contexts where there is no real opportunity to opt-out. As the philosopher Heather Widdows wrote in her book *Perfect Me* (2018), "choice alone cannot make an unjust or exploitative practice or act somehow, magically, just or non-exploitative". The choices being made by affected populations and by humanitarian

organizations in a solutionism-driven innovation ecosystem (to participate in a pilot or not, to use a new tool or not, to scale or not) are not just choices - as the system itself is prejudiced towards the options presented by specific knowledge holders.

Responding to the epistemic injustice of solutionism thus requires a reframing and refocusing of the humanitarian innovation endeavour - away from a system focused on scale and adaptation, and towards one that focuses on recognition and search. In doing so, humanitarian innovation may begin to reposition affected populations in the value chain "not only as output and processing but also as subjects/institutions with capacity to innovate and create" (Aganthangelou 2017). This would be, in many ways, the most impactful innovation of all - an actual shift in the power relations between humanitarians and affected persons.

Limitations

It is important to note a few methodological and analytical limitations to this review. First, the field of humanitarian innovation is a rapidly evolving space and there is a constant generation of new knowledge in the field. We recognize that this review was conducted in two separate phases (2009-2019, 2019-2020) and is being published one year later, resulting in more recent contributions being excluded. It is also a feature of the humanitarian that publication and/or public dissemination is not always a primary aim, and what is published is often exclusively on organizational websites or embedded in larger reports. Furthermore, discussions of ethical challenges faced while innovating are

likely to be kept internal rather than publicly shared for fear of risk to organizational reputation or funding. While we took the necessary steps to collect resources from a diversity of organizations, reference-chain, and databases, there remains the possibility of texts not being identified or included. Of the texts that were included, we note that our inclusion criteria did hinge on raters assessments of what a "significant" amount of focus on ethics or innovation entailed. While we used a third (or fourth) rater to resolve any discrepancies, there is the chance that a shorter passage, regardless of the depth of insight, may have been excluded from analysis if it was not the focus of the overall text.

With regards to the analysis, we recognize that the application of the HIF Innovation Guide stages as an organizing logic has some shortcomings, including the porousness of the 'boundaries' between these stages. Despite this fact, we still felt that the stages represent the current language that is used to describe common periods in an innovation journey, and also allowed us to position our findings in a way that fed into the larger ethical humanitarian innovation toolkit development project. Lastly, we note that certain stages benefited from more critical discussion in the selected literature than others. While our analysis identifies these stages as gaps, it is also possible that these innovation stages simply have fewer or less consequential ethical issues, resulting in less representation in the texts.

Conclusion

The aim of this review was to explore what is currently known about the ethics of humanitarian innovation processes, and the most prominent considerations across the various stages of the HIF Innovation Guide's innovations stages. Unsurprisingly, we found that there are not sharp boundaries between these stages in practice, and that very few authors engaged with ethical tensions that were limited to a single stage. However certain stages received much more significant engagement in included texts, specifically the Adaptation, Pilot, and Scale stages. The primary areas of ethical concern in these stages were moral alignment (between original and adapting organizations and contexts); risk aversion and distribution; and cultural/contextual specificity respectively. While Recognition, Search, and Invention stages received significantly less attention, there were still significant ethical tensions identified - namely accountability, solutionism, and neophilia. The issue of solutionism can be linked to many of the other ethical tensions that arose across the stages. When innovators arrive with a solution in hand, this precludes any genuine efforts to engage in participatory, user-driven innovation approaches - as the aim is to facilitate buy-in with limited possibility to opt-out, shared ownership, or appropriate contextualization. While there have been some early attempts to reconcile and respond to these ethical challenges, they have primarily taken the form of high-level articulations of principles. What remains lacking is actionable, values-driven guidance, aimed at engaging innovators and building ethical sensitivity and reflexivity into innovation teams.

As Skeels (2020) has written “we need to clearly set out the kind of humanitarian innovation that we want to see – ethical, responsible, impactful – and be deliberate and purposeful in how this is achieved, including taking actions at systemic level”. Determining what those systems level actions are will require further engagement with humanitarian innovators, people affected by humanitarian crisis events, and inquiry into the less-focused upon stages of innovation. This work will be critical, as systems level actions may be necessary to adequately respond to the solutionism-driven ethical tensions that exist in the current humanitarian innovation ecosystem. Solutionism undermines the possibility of ethical humanitarian innovation, and the link to epistemic injustice presented in this paper is a key area for further critical engagement and future research. It is our hope that the research and tools developed through our work with the HIF will contribute to laying the foundation for these systems-level actions, by prompting critical ethical reflections across the innovation journey at both individual and organizational levels.

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Chapter 4. Key Stakeholder Perspectives on Ethical Humanitarian Innovation

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Abstract

Background: Humanitarian Innovation falls in a grey area, lacking the standardized methods of research and the proven effectiveness of programmatic interventions, and is subject to a number of potential pitfalls and ethical dilemmas. There have been few empirical efforts to capture humanitarians' experiences of innovating, barriers they may experience in pursuing innovation activities, and what resources are needed to better support ethical reflection and decision making.

Methods: We conducted a qualitative description study to analyse key stakeholder interviews that focused on perspectives of ethical humanitarian innovation and the resources and guidance needed by innovators to further facilitate ethical reflection in humanitarian innovation spaces. We conducted 40 in-depth, individual, semi-structured interviews with participants identifying as funders (n=5), innovators (n=7), accelerator/ lab professionals (6), research/policy specialists (n=11), and field workers (n=11).

Findings: There were diverse views among participants regarding what could be defined or described as "humanitarian innovation". The primary barriers to ethical innovation identified by participants included inadequate and inappropriately structured funding mechanisms, a lack of meaningful metrics for success, and an overall inability to discuss (and learn from) failure. Participants believed that more collaborative and flexible relationships with funders, as metrics rooted in community-defined indicators would serve to facilitate more ethical and accountable innovation processes. With regards to the need for specific ethics resources, participant requests fell into two categories; interactive tools/resources (checklists, guidance notes, exercises), and community resources (peer forums, expert networks, review mechanisms).

Conclusion: There is a clear need for micro (tools, workshops), meso (changes in funding mechanisms), and macro (reconceptualizing who is a 'humanitarian innovator') level changes in order to orient humanitarian innovation towards more accountable, ethical, and effective practice. The needs identified begin with the development of actionable ethics resources that are accessible, interactive, and responsive to the barriers and needs identified by study participants. Forming a community of practice around these tools to facilitate learning and meaningful ethical dialogue will be a critical next step in this process.

Introduction

Western humanitarianism can be seen as an innovation in and of itself (Obrecht & Warner, 2016) - starting with the recognition of a problem (Henri Dunant observing the lack of critical care at the Battle of Solferino), a search for ideas leading to the invention of a novel solution (volunteer societies trained in peacetime, formation of the Red Cross), and culminating in the widespread scaling of the solution (IFRC - 192 National Societies, 12M+ volunteers [IFRC, 2020]). The humanitarian sector has continued to be innovative in its practices as it responds to and functions within the settings in which it works, the gap between resources and needs, and the daily problem-solving that defines work in the field. In 2020, the United Nations Inter-Agency Coordinated Appeals (IACA), including the Global Humanitarian Response Plan (GHRP), totaled $39 billion USD, of which $17 billion USD was met. This gap of $22 billion USD is equal to the total value of the IACA appeal a mere three years prior. In human terms, roughly 100 million of the estimated total of 441 million people who required humanitarian assistance in 2020 received it. (OCHA 2020). As a result of this under-resourcing, humanitarian professionals are always seeking out ways of doing more with less, seeking more efficient and effective ways of delivering assistance to those affected by crisis worldwide.

Despite the centrality of innovative practice, innovation only became a topic of formal discussion in the late 2000's, with many citing the seminal Active Learning Network for Accountability and Performance (ALNAP) text *Innovations in International Humanitarian Action* (2009) as the first non-technical domain-specific report exploring

the topic. Since then, there has been a proliferation of innovation accelerators and labs, innovation departments and funding streams, and broad agreement within the sector on the necessity of innovation (Skeels, 2020). These efforts have, however, been mostly siloed within organizations, with a few examples (such as ALNAP) of larger collaborative efforts. The daily dilemmas of engaging in humanitarian response in complex settings are only exacerbated when pursuing innovation projects, which inherently carry their own level of ethical risk and uncertainty (Hunt, 2018). There are a number of key ethical considerations to be made throughout the innovation process, ranging from consideration of the cultural and contextual specificity of problems, to the appropriateness of scale as a metric of success, and the challenges of neophilia and solutionism (Krishnaraj et al., In Development). While there have been attempts to articulate high-level ethical principles to guide the endeavour of humanitarian innovation, these efforts have not been translated into more practical, actionable ethics resources.

The need for evidence-based, practitioner-oriented ethics resources for humanitarian innovation was identified by a number of parties, including the UK-based Humanitarian Innovation Fund (HIF). The Humanitarian Health Ethics Research Group successfully responded to a Call for Applications from the HIF to develop such a set of resources, grounded in humanitarian innovators' experiences of innovation, and their perspectives on the barriers and opportunities that exist in pursuit of a more accountable, ethical, and impactful humanitarian innovation ecosystem. We utilized an integrated Knowledge Translation (iKT) approach (Graham & Tetroe, 2007), conducting a scoping

review of the literature (Krishnaraj et al., In Development) and critical interpretive review (Brahimi et al., In Development) as well as iterative feedback workshops with innovators, directly engaging with humanitarian innovators and key stakeholders. Our objective in this study was thus to gather key stakeholder perspectives on humanitarian innovation including barriers and opportunities to ethical practice, and what resources may be needed to further facilitate ethical reflection and decision making.

Methods

The primary research questions driving this study were "what ethical considerations currently inform humanitarian innovation, and what values, principles, and methods can best support ethically-robust humanitarian innovation processes?"

In order to explore these questions, we used a Qualitative Description (QD) methodology to analyze key stakeholder interviews (Sandelowski, 2000). QD is rooted in the constructivist paradigm, which sees human experience as intrinsically subjective and specific to cultural, historical, and social context (Denzin & Lincoln 2011). By applying QD, we align ourselves with Sandelowski's view that the qualitative mode of description, that values the words of the participants as a viable end-product, even without further interpretation and theorizing. This is particularly the case as we aim to use the guidance of the study participants, in conjunction with the findings from a scoping review of the literature (Krishnaraj et al., In Development), to inform the development of a set of key policy tools and practitioner-oriented resources as part of a consultancy project funded by

the UK-based Humanitarian Innovation Fund (HIF). While it would be impossible (and not necessarily desirable) to remove any element of interpretation from our analysis, QD limits the imposition of the researcher's biases and assumptions, as their role focuses on structuring rather than interpreting the words of study participants (Sandelowski, 2000). By presenting a qualitative description of key stakeholders inputs, we are able to directly link the ethics tools we developed to the exact words and requests of humanitarian innovators, establishing a clear line of accountability through our process.

Ethics & Consent

This study was reviewed and approved through the Hamilton Integrated Research Ethics Board (HiREB #7251) and the McGill University Institutional Review Board (IRB #A06-E37-19B). Participants were given a study information and consent form to review and sign at least one week prior to the interview, and the consent process was repeated prior to the interview verbally. Participants with any link to the HIF or HGC were reminded upon recruitment, immediately prior to the interview, and after the interview that their participation and contributions would have no impact on current or future funding opportunities. All participants were made aware that their participation was completely voluntary and that their information would be kept completely anonymous. This was particularly important as participants were encouraged to share their experiences of ethical challenges, oversights, or failures in the innovation process as transparently as possible.

Sampling & Recruitment

In the interest of having an accurate depiction of the humanitarian innovation ecosystem, we sought to include a wide range of key stakeholders in our study sample. This included people identifying as humanitarians, innovators, funders, researchers, people affected by humanitarian crises. Recognizing our grounding in the network of the Humanitarian Innovation Fund, we also wanted to ensure adequate representation of other organizational perspectives, particularly those with a significant presence in the humanitarian innovation field (MSF, UNHCR, GSMA etc). Lastly, we hoped to identify individuals who may not be supporters of humanitarian innovation as a concept, so as to avoid the bias of only speaking to those who believe in and support the concept. We therefore engaged in purposive & snowball sampling approaches, with the primary aim of recruiting a diversity of technical and organizational backgrounds, gender, age, geography, and lived experiences in humanitarian contexts.

We had three main strategies to recruit key stakeholders from all parts of the humanitarian innovation sector, ranging from government donors and UN agencies to research institutes and small NGOs. First, we looked at the networks of innovators and experts connected to the HIF and Humanitarian Grand Challenge for key perspectives we wished to capture. While the HIF and HGC were able to provide us with some contact details for expert reviewers/employees, neither funding agency connected us directly with innovators, in an effort to avoid conflicts of interest. All innovators who participated in

the interviews were thus contacted through connections made at workshops, or cold emails from the research team. Second, we disseminated a call for participants through the Humanitarian Health Ethics (HHE) Research Group's and personal Twitter accounts (GK, LS), and through the HHE website. Lastly, connections were made through recommendations from study participants. In all recruitment communications, we made it clear that the study was independent from the HIF, and that participation would have no impact on existing or future funding opportunities from this funder. Following the interviews, participants were encouraged to share study details with colleagues or collaborators who they felt may be interested in and eligible to participate in the study.

Participants

Forty individuals participated in this study, providing us with a broad perspective on the topic of humanitarian innovation. They worked for 36 unique organizations (employer at time of interview) and the group consisted of 23 men and 17 women. It should be noted that in the interviews, participants were speaking on their own behalf, drawing on a diversity of experiences, and not representing their employers (past or present). Using broad divisions of professional roles, seven participants could be primarily described as humanitarian innovators, six working for humanitarian innovation accelerator/labs, five working in humanitarian funding organizations, 11 research/policy specialists, and 11 humanitarian field workers/managers. Geographic diversity was difficult to assess, as many participants had lived and/or worked for extended durations in

humanitarian contexts, but at the time of interview were living in Europe or North America (32 of 40 participants).

Interviews

In-depth, semi-structured interviews were conducted between May 2019 and February 2020 in English, by the lead author (GK) in-person or via Skype voice-conferencing. The initial interview guide was developed in consultation with the full research team, and reflected preliminary findings from a scoping review of the literature, as well as general focal points highlighted in the HIF Call for Applications. The interview guide had four main sections: an introduction and establishing the participant's conception of humanitarianism and humanitarian innovation; an exploration of their most salient innovation experiences; highlighting perceived barriers and what "ethical" innovation would look like; and lastly what resources (and what form of resources) they would like to see developed to support ethical humanitarian innovation. A pilot interview was conducted with a member of our research team who was not part of the interview guide development, allowing for further refinement of the interview guide for clarity and flow of questions. Interviews ranged from 23 to 123 minutes in duration (average 60 min).

Data Analysis

Interview transcription and analysis began once recordings were available, and continued throughout the following months. Interview transcription was done verbatim from recordings by GK, and anonymized prior to circulation within the research team by removing any references to organizations, individuals, or specific positions held by the participant. Four anonymized interview transcripts were randomly selected and inductively coded by four independent coders (GK, MH, LS, RY). The codes were collected and compared to form a provisional codebook, which was presented to the research team to refine the codebook and identify any additional amendments necessary to the interview guide (amendments were minimal, some suggestions for follow up questions but main sections remained). The codebook was then used to code all remaining interviews (GK) while remaining open to the need for capturing new ideas that arose in later interviews. This was followed by an examination of the most common codes and common overlaps, linking codes in a scaffolded structure (ie; 'Failure', 'Successful Innovation' & 'Impact' being grouped under 'Metrics and Evaluating Innovation').

Findings

Our participants drew on a vast knowledge of the humanitarian response from a diversity of technical backgrounds and lived experiences, as well as having differing degrees of engagement with humanitarian innovation processes. The findings presented below are organized into four sections: participant descriptions of humanitarian

innovation, barriers (perceived or experienced directly) to ethical humanitarian innovation and potential opportunities to overcome these barriers, and direct recommendations for the form and content of ethics resources oriented towards humanitarian innovation practitioners. This order closely follows that of the interview guide, which was developed to establish a clear foundation of terms, understand experiences of innovation in the humanitarian sector to date, and look forward aspirationally towards what "good and ethical" humanitarian innovation looks like and the resources needed to facilitate it. It is also important to note that this paper does not present all of the ideas and themes that arose during the interviews, and other aspects of the analysis will be developed in future manuscripts.

Describing Humanitarian Innovation

For the most part, participants shared a broad understanding of what constitutes a humanitarian context. Humanitarian contexts may include conflicts, natural disasters, public health outbreaks, and protracted crises, but could also be defined by formal UN emergency declarations or "who shows up", referring to the presence of certain iNGOs or establishment of coordination mechanisms (P04). Participants often referred to the severity of needs (eg; P05, P16, P29), the urgency of response (eg; P02, P15, P24), and the prioritization of fundamental principles (eg; P12, P19, P40) as key descriptive elements. Participants also emphasized the lack of a "*clear demarcation point*" (P28) at

the boundary of humanitarian and development work, and the importance of working together with the development sector to ensure the sustainability of response efforts.

Drawing on their respective definitions of humanitarian response, we then asked participants to define humanitarian innovation, which had a much lower degree of consistency between responses. The first point of divergence was the existence (or necessity) of 'Humanitarian Innovation' as a formalized concept or set of practices.

Among those who believe it to exist as a distinct domain of activity, definitions of humanitarian innovation centred on two major concepts - invention and adaptation. Inventions were described by one engineer/innovator as "*pure innovation, which is a completely new way of doing something - a product innovation or process innovation, but more often a product innovation, inventing something for a particular purpose of the disaster relief setting*" (P07). Adaptations were perceived as being less about the novelty of the product or process, and more focused on the novelty of application or context. As participant P32, who works for a non-medically focused iNGO, shared, "*for us, it's not always creating something new, creating something from scratch, like that's not for us. It's not always the next big discovery, right? For us, it could be taking existing ideas and concepts and just tweaking it to meet local demands or needs".*

There were also several participants who did not believe that 'humanitarian innovation' exists as a distinct set of activities or area of practice, seeing it as little more than programmatic problem solving, the newest buzzword to get donor dollars, or a "*very, very wide catch-all for just technology, and often just experimentation"* (P11). One

participant, an employee of a large iNGO that focuses on acute rescue and response, shared that the organization had "*recently merged our research and our innovation arms, which was formerly like R & D departments, and it's been quite contentious. And it's been very eye opening for me to learn about the different approaches of humanitarian innovation versus research. Even though I think in a lot of spaces, we do some of the same things"* (P40). Participant P28, working within the UN system, highlighted the particular challenges that come with the *"terminological fuzziness often in this conversation and the fact that tech and innovation are often used interchangeabl*y" and their own experiences of the "*tremendous pressure to, as I said, link anything you're doing to an innovation agenda. So I will propose research, and it will be [deemed] an innovation project, even [if it is] traditional research"*. Throughout the interviews, we observed many participants use or interpret the term 'technology' (ICTs, drones, apps, big data) as synonymous to 'innovation'. Moreover, technologies and product innovations were typically the primary example of an "innovation" highlighted in the narratives of participants, with far fewer sharing instances of engaging in "low tech" or process innovations.

It was also interesting to note that, when later prompted to share their experiences of engaging in humanitarian innovation, some participants who seemed to reject 'humanitarian innovation' as a unique concept or set of practices could still describe activities they had undertaken using the language of innovation (piloting, scaling, etc). Some participants explicitly acknowledged this inconsistency, recounting experiences where "*It was called innovation,* [but] *we didn't call it innovation. And we didn't feel it*

was important to call it innovation" (P34). Participant P40 mirrored this sentiment, suggesting the very categorization of an activity as "Innovation" can be detrimental to the aim of the project, leading them to avoid the term altogether: "s*o to frame it in the language of the humanitarian innovation field and make sure that we're using the terminology that people within that space are using [...] I find innovation terminology to be very market oriented [rather than] making sure that we have the most effective approach that's going to allow us to reach that sort of optimum solution as fast as possible [...] I do think the culture piece is a huge component of it"* (P40). Another participant further elaborated on this "cultural component" as being rooted in English-speaking, market-driven, high-income contexts - "*when you sit down to try to translate the word innovation into Somali, Sudanese, Congolese, and a number of other languages we had to do for our surveys, you find that that innovation is a very culturally loaded term. And when it's separated from that traditional kind of Silicon Valley, TED Talk, management studies discourse [...] they wouldn't say I'm conducting bottom up innovation as a community member* " (P28).

Despite the lack of clarity surrounding what exactly humanitarian innovation as a discrete set of practices may entail, participants seemed to agree that innovation (as a general concept) would serve to improve the humanitarian sector. This was rooted in a common perception that the status quo of tools, technologies, and processes are failing to meet the growing needs, and are in fact far behind what is perceived as general practice in other sectors. P09, speaking on over a decade of experience and policy leadership in the

humanitarian sector, cited the shortcomings of the system as it stands as the very reason they chose to engage with innovation; "*that's what drove me into the innovation/large scale systems change space, was that we can do this better and our failure to try is in fact unethical*". As P02, a senior employee in a humanitarian innovation funding organization summarized, "*That's the first thing. If there's a humanitarian system, it should be perfect and efficient and fast and carbon neutral and gender equal, and therefore no innovation should be needed. We only need innovation because the system is broken. So the system shouldn't exist, and then the system should be good, and none of those two necessities exist. So that's why we need innovation, because the system needs to change*". Thus, when the definition of innovation is distilled down to the simple charge to *"do better"* (P16) or to refuse to accept the system as *"ok the way it is"* (P18), participants explicitly used the language of *"moral obligation"*(P16) and *"moral responsibility"* (P18) to characterize the imperative to innovate in the humanitarian sector.

Barriers to Ethical Humanitarian Innovation

Participants identified a number of barriers to ethical humanitarian innovation practice while reflecting on their most salient experiences. These barriers are presented below in pairs of closely linked concepts: Funding and Donors, Metrics and Evaluation, and Risk and Failure.

Funding and Donors

The most frequently discussed barrier throughout the interviews was the role of donors and funding structures within the humanitarian innovation ecosystem. Several participants identified the existing funding mechanisms as a key factor that inhibits innovation from occurring at the structural level that is necessary to create widespread impact. "*The biggest ethical challenge I see for ethical humanitarian innovation is that it is all piecemeal [...] they're not seriously considering the underlying system [...] you have a system that creates projects and proposals and is funded to do that, and so if you're going to build an innovation, you're going to have to say what are the incentives of the system and how do they work, and what are they actually looking like and how is this going to [...] really change the way that we deliver humanitarian assistance*" (P09). The overwhelming sentiment was that donors fund in a way that is designed for pilots and projects, but expect impact and scale. "*I think that there's a desire by organizations to not be locked into these five year funding cycles, which are very common[...] It's a sticking point the way that most humanitarian development programs are funded right now stifles innovation and it's very counterintuitive with the way that people work and, and create these days*" (P15).

Such funding structures can also lead to fraught relationships between donor and humanitarian innovators, where innovators take on financial burdens and ethical risk out of a sense of desperation to remain in good favour with the donor. As P07 shared, "*The ethical breach was essentially that we should have turned around and said no, we're not*

going to deliver this contract for that much money. But because we were so desperate to maintain a good relationship with [Donor], desperate to maintain our foothold in [Country], because we actually needed to show certain donors we were active in many countries and had targets on that, I think we were - we took on a manufacturing project that couldn't be delivered [...] in the end what we did is we put our own money into the project, unrestricted funds which are very, very, very precious to us because they're so rare because we don't do public fundraising". P33 echoed this sentiment, replacing desperation with fear; *"I generally find that humanitarian actors are very... I want to say scared of donors? [We] have this really weird relationship, with some apprehension and nervousness around "what will the donor say" - I feel like it could be much, much more collaborative and less of an unequal relationship.*"

This unequal power dynamic between donor and humanitarian innovators influences not only the use of unrestricted funds, or the efforts to be transparent, but the very nature of the innovations themselves. "*The donor environment because I think probably that has the ultimately, unfortunately, the biggest impact on program design and innovation within that*" shared one UK-based humanitarian scholar (P29). Another participant who is both an innovator and researcher at a Canadian university more explicitly linked the role of donor agendas to the types of technology-driven innovations that seem to pervade the market, *"funders want to see that you have a new app, a new widget that is going to change this, you can now know, you can scan for malaria, a blood sample using this phone camera. Maybe that was never really a big need and sometimes*

the opportunity or story of the technology is driving the agenda" (P26). Participant P22 put a name to this type of techno-neophilia - *"it's what Morozov will call solutionism[...] here's a tool, what can we solve with it?*" As Participant P34 states, "*innovation for innovation's sake is, it is a problem. And we see a lot of instances of people who have a new tool or new, new process and they're looking for a problem to apply it to rather than having a problem and looking for the best and most kind of contextually appropriate solution*".

When donor agendas determine what problems are addressed or which needs are worthy of consideration, participants share a concern for the directionality of accountability in the humanitarian sector. "*The data feeds into the whole idea of accountability to affected populations, [but] very often organizations are not really accountable to affected populations, they're much more accountable to donors. To the source of money... and because the affected populations are not the source of income, that accountability link or incentive for that accountability link is broken"* shared P33. Another participant, in a leadership position at a humanitarian innovation funder, shared their own mental delineation for maintaining such lines of accountability; "*donors think that we work for them, and contractually and legally we do, but morally I work for populations suffering from a humanitarian crisis*".

Metrics and Evaluation

Closely linked to the topic of donors are the concept of metrics, evaluation, and impact as they pertain to humanitarian innovation, and the tension this may have with metrics of the concerned population. Participant P04 succinctly connected these concepts drawing on their own experiences as part of a global network of humanitarian innovation accelerators; *"it's a big problem at the global level for innovation - we're still stuck on metrics that always look at scale, and judge success by reach, and by number of endline beneficiaries, and impact. And I'm sure you know this very well, impact is what everybody is after. Impact is not something you can demonstrate in the short run, you can't see it in the pilot - if you define impact as sustained change, that is something that comes at the very end of an innovation process, or really outside of the innovation process when an innovation goes mainstream that's when you can talk about impact. But if you're working on 6 month pilot funding, it's going to be very, very difficult for you to articulate your results in that language of impact and reach, because you're not going to be terrible value for money"*. This sentiment is similar to those presented in the previous section regarding donor roles, but brings in the concept of impact and measuring impact against timeframes that are ill-suited for the purposes of innovation. Participant P09 highlights this dilemma of aligning metrics to needs identified by communities affected by crisis rather than donors agendas - "*the metric of how we do something better isn't what my donor thinks is better, it's what the person I'm trying to help thinks is better. There's a genuine tension between those things*".

Looking beyond the challenges posed by measuring innovation using standardized donor imposed metrics, we see that there are broader challenges with measuring innovation in general. As P18, a humanitarian innovator based in Canada, explains, *"the whole idea of innovation is around like putting something in the world that doesn't exist yet. So it's any metrics at the very beginning for really early stage companies are challenging and a lot of funding proposals are asking you how you're going to measure success, at a stage when you really just don't know*". They went on to explain the dilemma faced by early stage innovators trying to determine how to measure their own work *"The RMAF [Results-based Management and Accountability Framework] stuff we have to fill out feels really forced and unethical. I just feel like I'm pulling numbers out of my ass because I have no idea. It's a pilot for a prototype of something that's never been done before. So I have no idea what numbers to put down [...] and anytime you're like making something up, it doesn't feel very ethical".* These frameworks or "*hard and fast indicators"* (P34) were consistently cited as being inappropriate for use in the innovation space, "*because it's not one size fits all"* (P31). Participant P07 shared a common frustration - "*Every application form I get these days asks "how many lives is this going to save" or "how many lives is this going to impact?" I want to be able to say zero. Because it's an innovation. Come on".* One participant linked the importance of finding more diverse, contextually appropriate metrics to the localization agenda, saying that measuring for generalizability and scale exclusively can "*become too much of a*

straitjacket, and we start disregarding the value of localized innovations, I think it's a little counterproductive." (P28).

Some participants believed that the roots of these scale-oriented metrics of impact could be found in the Silicon Valley roots of "Innovation". As participant P22 observed "*we keep acting like we have to retrofit this Silicon Valley approach onto things. No, we need to be humanitarians about it in the best sense. What does that mean? It means science. It means public health focus. It means feedback loops.*" Reflecting on the retrofitting of Silicon Valley approaches, Participant P22 felt that such an aim is fundamentally misaligned with the aims of the humanitarian; "*we have taken on the gospel of disruptive innovation being the goal. It's not and never was, and actually I think it's an antithetical to our ethics and values*". Here we take the ethics and values being referred to as accountability to affected populations, impact-orientation, context-specificity, and do-no-harm approaches to innovation that were highlighted throughout the interviews, in conjunction with fundamental principles of humanitarian response.

Risk and Failure

In addition to the pursuit of disruption, the practice of "failing fast" has come to be the clarion call of Silicon Valley innovators, leading one humanitarian field professional to reflect on their experience of working with a globally renowned innovation & design thinking firm.*"It just left me with the impression of like, when you're*

moving so fast, and I understand that you want to innovate and you want to disrupt [...] you're going to have a lot of a lot of failed, failed tools and failed approaches. But that is risky when it's you're dealing with human beings and the asymmetry of power of information or agency of all of these things. And, and I think that way of moving is sort of light and fast and innovative and it might not be right for this type of setting" (P39). When considering what is at stake in humanitarian settings, as many interview participants grappled with the role of failure in innovation, and the implications of failing or not failing. As one manager in the UN system observed, attempts to meaningfully integrate discussions of failure in the humanitarian and humanitarian innovation communities have turned shallow in the absence of ethical grounding: *"people had learned how to write about failure so it became self-aggrandizing. Admitting failure is fine, but it can't just be "how great am I for admitting failure" - like "I admit failure more than anyone else". It's one of those things where people learned how to write it, and it detracted from what it was trying to achieve"* (P07).

This inability to share failures in a clear and transparent manner was seen as a barrier to humanitarian innovation both internally (within organizations) and externally. Internally, the inability to capture and reflect on failure was presented as an underlying cause for redundant efforts and a lack of institutional learning, "*every failure illuminates some barriers in the existing ecosystem that prevent innovation from happening [...] I don't really see that kind of relationship, or critical engagement with failure in the humanitarian sector. No one talks about failed innovations, like I wouldn't be able to give*

you an example of an innovation that failed" (P33). This is externally reinforced by the role of donors and the real or perceived repercussions of honest reporting and inflexibility for adapting to changing circumstances. Participant P09 links this donor hesitancy to a sense of responsibility with public funds "*you can't say anything failed with public funds*" but that very fact feeds into a cycle that forces the same mistakes to be made with those public funds. Participant P32 shared a similar sentiment, "*a lot of the times like it's hard to kind of report back on any results or impact if there are multiple failures before you come to a point of success [...] just because there's a pot of money available does not always going to mean that it's going to succeed, [...] so how do you report back on failure while still not having it backfire on you [...] that kind of language just isn't accepted"*.

In a system lacking (or fearing) the language to adequately address and learn from failure, the concept of risk appetite (the degree to which failure can be tolerated) became incredibly important. There was near consensus among interview participants that innovation as a general endeavour carries a certain amount of inherent risk; as P08, a manager within the UN system reflects, "*there's always a risk that is attached to an innovative budget, or program, and it might fail. And that's a risk we cannot take*". Almost all of the participants agreed that the humanitarian sector and its constituent entities could be classified as "risk averse" (P04, P08), particularly if the risk in question was a compromise of the "do no harm" principle. Many innovators felt the need to "de-risk" innovations - however these conversations were often oriented towards the donor rather than de-risking for themselves as innovators or the population affected by

crises. Participant P07 explained "*you have to de-risk the innovation, you have to show that the donor isn't taking a risk by funding the innovation, and that's where the ethical breaches emerge*". The ethical breach comes once again when the focus of the innovators efforts are drawn away from the affected population (whose lives are the thing "at risk") to the donor (whose reputation or bottom lines are the thing "at risk").

Recommendations to Foster Ethical Humanitarian Innovation

Despite the numerous challenges faced by humanitarians seeking to innovate new products or processes, participants remained mostly optimistic about the need for innovation, and offered their recommendations on the key areas of opportunity where change could occur to foster more ethical humanitarian innovation. Unsurprisingly, their most significant recommendations closely mirrored the most commonly perceived barriers.

Improving Donor Relations

Participants had a number of ideas for more innovative and adaptive funding structures and how donor relations could be improved to foster more ethical, accountable, and impactful humanitarian innovation. The most common recommendation from participants was the need to shift from the project-driven, short term funding schemes that currently dominate the sector to longer-term, flexible, and collaborative agreements. Participant P12, a leading scholar in the humanitarian innovation sector, was among these

voices, "*[it's about] getting donors to really understand, it's almost like you need a version of those ads that they said that they have on TV, ahead of Christmas time, if you want to get a cute puppy or kitty, you need to understand that you need to keep it, take care of it, this is like a lifelong thing [...] I think the same thing should be done for innovation with donors, if you want to fund these innovations [you have to stick with them]*". Participant P22 linked the problem of short term funding cycles to the pervasive "challenge" model and reiterated the importance of moving away from Silicon Valley style thinking; *"I think the first thing is we gotta stop with challenges. We've got to end challenges, matching funds, etc. And I think we need to create three types of methodologies for funding that work in phases [...] we need to never say disruption again."* Of the three methodologies suggested, "*one is small money, research, academic research institutions, lawyers, and humanitarian organizations with sectoral coordination, identifying a triage of priority r&d areas that come from community feedback", "[a] second type of funding, which is [for] an organization [that] is going to take the lead on trying to go mainstream",* and "*third is having support across organizations for absorption capacity - we need to never say disruption again".* Others echoed the need for more diverse funding mechanisms, citing the current state of innovation siloed by organizations (and therefore lacking the third funding "methodology" above. "*If you're at MSF they have an innovation platform and you can apply for it and likewise for Oxfam. The humanitarian system is so dominated by fifteen or twenty large agencies that are Western or International [NGOs], not grass roots. If*

you're not from one of those agencies, if you're from an affected community, there's very few opportunities for you to apply for innovation funding" (P02).

When only a handful of donors are available, they are able to determine the indicators of success and the tools used to attain them. As Participant P32 shares, this leads to humanitarian innovators being forced to use outdated mechanisms to produce "innovative" results - "*I'm supposed to be doing quote unquote groundbreaking work, but following systems that are 40 years old [...] I don't have the answers to that. The ideal contract with the ideal relationship with a donor [needs to] enable change [and we need a] shift in the donors appetite but also the organization's appetite to change a lot of structural, business processes.*" P29 provided their own detailed description of what they would see as an optimal relationship with donors "*your relationship with your donor makes quite a big difference for innovation. If people have a one way relationship with the donor where the recipient of funds perceives the donor to be kind of like the boss or in charge and doesn't feel able to discuss the realities of working in a crisis with them, they will a probably distort results in order to meet the expectations and stick rigidly to the proposal that they put together for the donor. But you won't learn as much because the learning will not be reported. If you have a donor who checks in informally with the recipient and establishes a relationship of trust and makes it clear that they want to know about things that go wrong and that there will be no financial consequences if things go a little bit awry, then I think you have a much better climate for innovation and kind of iterative improvement."* These foundations of trust, transparency, and learning from

failures/challenges were common themes throughout participant accounts of ideal donor relationships.

Ethical De-Risking & Saying No

One anecdote that arose in three separate interviews was the dilemma of bribery, and how it was a known reality of working (and in turn, innovating) in certain regions, but is something that could never be honestly presented to donors. In these situations, the onus of reconciling field realities and principled action fell exclusively on the innovators, allowing donors to maintain official stances of "not funding terrorism with taxpayer dollars" while effectively transferring the risks and compromises associated with response and innovation in complex humanitarian settings. In response to the risk aversion detailed in the *Barriers* section above, several participants highlighted the importance of risk distribution, with one introducing the concept of "ethical de-risking". As P07 shared, "*ethical de-risking to me would be to make sure there is some negotiated way [for innovators to say] it can't be done for that price, or them giving us more money [...] what would have been ethical was a way to renegotiate the scope after the contract has been signed, according to what has been uncovered during the innovation process. In humanitarian innovation funding [language], they'd call that a pivot. [...] I would like to see more relationships like that, where either the amount of money changes or the scope changes, or where recognition of changes in the risk profile, that was really the thing*".

Changes such as those proposed by P07 would represent a significant departure from what other participants presented as the current state of affairs. One participant, feeling that there is a lack of political will amongst donors to make these large, structural adaptations towards more ethical, collaborative, agile partnerships flipped the responsibility for change onto their peers, asking *"this is always the test - are people willing to say no to money if it's not going to do the right thing?"* (P09). In a sector driven by principles and values but severely lacking the resources to realize those values in their work, humanitarian actors often engage in exactly this calculus and similar moral dilemmas. Humanitarian innovation is no different, where such dilemmas present options that are all flawed in some way; choose to compromise their values so that some individuals receive aid, obscure the realities of their practice (potentially jeopardizing access and safety), or "say no" and leave affected populations entirely without access to aid.

Learning from Failures and Improving Metrics

In discussing the importance of longer-term, adaptable, and transparent donor relationships, participants often focused on improving metrics and having more honest discussions on failures, and how these two elements would lead to improved learning in the humanitarian innovation space. Offering suggestions for more ethical metrics, participant P12 wondered if *"the broader concept should be: is it achieving this objective better than the other alternatives that we have at the moment? You could also look at it in*

terms of efficiency, maybe it's just as effective or maybe it's even slightly less effective, but it's much cheaper, right? So let's just combine those and say cost effectiveness, right? Or you can think about quality, maybe you can't really assess the effectiveness and efficiency of an innovation. But you can say that it's leading to a better quality response in the eyes of aid recipients" This foregrounding of more qualitative metrics, defined by the members of communities affected by humanitarian crises was also a common suggestion amongst interview participants. P13, a leading voice in US disaster management innovation, shared a similar sentiment - " *if the community is not happy, even if you've given 500 [vaccination] shots, if the community is unhappy with you for doing that, the donor might be happy for that quantitative measure, but from a qualitative standpoint [...] this community didn't want this thing".*

On the topic of failure, P15 shared their aspirations for a system that is more open and forward looking - *"I would love to see [a donor] say how did you fail? And then how did you fix it? We as a community try to champion failure and recognize that failure is just the first step on the road to success. Because you can't learn if you don't fail."* Another participant, who has extensively researched the innovation sector, offered their reflections on different "types" of failures; "*we will talk about 'oh you have to fail' but then what is a good fail? We [see] a good fail as being an innovation where you have an idea, you try it, maybe it didn't work, but you packaged the learning in a way that could be shared, you didn't just kind of sit with it. And so it could be used more widely so that A) people don't repeat the same mistakes you did and B) maybe people can use that and build a more*

successful innovation off the back of it. So for us, a bad fail, a waste of innovation money, and an unethical innovation, is one that fails and then does not produce any structured learning for anyone else to us about that innovation experience" (P12). Another participant recommended doing away with the language of failure altogether, suggesting that it was too reductive "*we don't even use the word failure anymore, because it's only a failure if you haven't walked away with any sort of learning that you're going to take moving forward. [So for us], there's absolutely no failure*" (P30). Furthermore, this learning should not only come at the end of a project, but rather be integrated throughout the process, as P25 proposed - "*if the innovation fails after trying and they have gotten good support [...] I would consider that a success, and we should learn from that process to improve the next innovations. But if the innovation doesn't notice and doesn't get help and waits until the end of two years to say this didn't work, that point I could consider failure."*

Meaningful Collaboration and Participation

Based on these recommendations, an innovation's "success" becomes contingent on the collaborative efforts of the donor, the innovator, and other innovators working in a similar problem space, by building on the efforts of one another. As P09 put the responsibility to do so in moral terms, and recognized their own role as a leader in the sector: "*it's also an ethical obligation for those of us with power and privilege to talk about this openly [...] we need to take collective action [...] it's the only way to de-risk*

pathways to scale - to spread failure across enough people that we can always tell a story of success." Or as P09 succinctly put it, *"what matters is how people in the humanitarian sector collaborate, to improve the lives of our clients. So [ethical innovation] has more to do with the willingness of colleagues and partners to collaborate than anything else"*.

Such a collaborative approach inherently contradicts market-logic, where participant P09 sees the roots of this challenge, and the moral implications of failing to shift towards learning and improving as a sector: "*we took the small, spread your money wildly, build up a portfolio, and hope something wins [approach from Silicon Valley]- which is the wrong approach because actually what we're looking for is cross portfolio learning and not taking the patience and adaptability. So we literally managed to take everything that is irrelevant and inappropriate, and build a system around that, and ignore everything that is appropriate and relevant and would allow a pathway to scale. That is to me, an ethical failure. It's an ethical failure to look at ourselves, an ethical failure to reflect, and an ethical failure to say hang on we shouldn't be doing this, we need to change the way we're doing this in order to be better."* The ethical failure to reflect and improve resonates strongly with participants' presentation of the moral obligation to work towards the improvement of the lives of affected populations.

There are however some early examples of what such a community may look like, one participant in particular shared an optimistic perspective; *"we're trying to create a community space at the response level that is open to any collaborative, totally open-ended partnerships, that will be fostered through our processes, including a focus*

on non-traditional actors. So [we're] not just getting the clusters together, but looking at actors within the response space, academic institutions, tech accelerators, start-up incubators, private sector in general, to offer them an opportunity to come into the response space and collaborate with more traditional humanitarian actors to solve problems" (P04).

Notably missing from P04's community was explicit mention of people affected by humanitarian crises. Most participants mentioned some form of "participatory", "user-centred", or "community-based" approach as being foundational to ethical humanitarian innovation. One participant with many years of experience in user-centred approaches offered the following praise of the methodology "*the connection between ethical innovation user centered approaches to innovation is very strong. If you can take the user centered approach, I think that already kind of brings you very much closer to addressing ethical gaps [by directly involving] the users to help work through ethical dilemmas"* (P33). This is consistent with the comments shared in earlier sections recommending a shift to qualitative metrics such as community satisfaction from donor determined measures. Participatory approaches to innovation were characterized in a number of ways. First, early engagement was seen as critical - prior to the development of the solution, at the problem recognition stage. As P12 explains we *"need to have good problem recognition upfront [and] clearly consider the end users as well as the other people affected by the innovation [...] someone who is going to benefit from your*

innovation. If there isn't someone who's benefiting from the innovation, you've got a problem."

Participants held no false preconceptions as to the scale of change they were hoping to see, nor the resources required; "*it's very easy to talk about partnerships, but like true inclusion and design actually takes a lot of work and money"* (P18). Another participant warned against half-hearted efforts to adopt such approaches *"it's always worth trying to do participatory research or human centered design or involving the beneficiary in the innovation process, provided you have the resources and can do it beyond a tokenistic way. Otherwise it can actually be unethical to raise expectations about involvement in the co-design of a project when you don't have the budget, the project, breathing room, the staff capacity to do it right"* (P28). In light of these cautions such efforts remain critical - as P08 suggests, they ultimately lead to a deeper alignment of values between innovation and humanitarian response: *"the participatory aspect and the ownership and operating with the knowledge that, at the core of what we are doing, human dignity is what we want to preserve. It's what we want to preserve in the contexts we are operating in".*

<u>*Resources Needed*</u>

We concluded the interviews by discussing what participants felt was needed in terms of guidance and tools to overcome the perceived barriers and enact the recommendations to foster more ethical humanitarian innovation. Responses varied

widely, which reflected the diverse technical backgrounds and levels of engagement (ranging from the directors of iNGOs to sole innovators) that our participants have in the humanitarian sector. In general, their requests could be broken down into two categories; interactive tools/resources (checklists, guidance notes, exercises), and community resources (peer forums, expert networks, formal mechanisms).

Interactive Tools/Resources

Participants were quick to say that no one solution would be able to address the broad diversity of ethical challenges they face while innovating. "*I don't think there's one thing that solves the problem. There's always a list of things that needs to be applicable to a local context. So I [would suggest] a range of tools and initiatives and even discussions that could help narrow down some of the solutions [...] don't have a one size fits all approach, be mindful of contexts"* (P19). The interplay of these tools was also critical to their success. One participant offered the following metaphor for their design - *"[it's like a] matryoshka theory of ethics, a russian nesting doll, it's really all about nesting these things and understanding how they fit together. [...] Because if you don't have some degree of consistency [...] how does it nest all the way down from the executive to the innovator?"*

The effectiveness of checklists as a format to engage innovators in ethical deliberations was a point of contention amongst study participants. Among those in support of checklists, participants shared an appreciation of the simplicity of the format,

as well as the ability to quantitatively assess the level of work an innovation may need. They did however recognize that an oversimplified checklist could be treated as a rubber-stamp exercise that would not stimulate any meaningful reflections. P11, who holds a leadership position within an accelerator/lab space, offered a more nuanced approach as part of an innovation development program: "*I think that there's the checklist, which is useful in some respects to say, okay [this innovation has] 18 of the 20 points that we would like to see, and these two further points are something that we will encourage them to work on as they develop their program. But there is then clearly the danger that you know, it is just a tick box exercise [so] it might be better to have slightly more modular approaches to some of these key issues [like] expectation management, engagement with vulnerable populations, data privacy, sustainability, or commercialization"*(P11). P16 expanded upon the idea of a modular set of checklists, focusing instead on innovation stage and capacity; *"I think checklists would be great [...] depending if you're prototyping, piloting, or scaling, you can choose one and then depending on your capacities and expertise, you can also choose different tools. I think that's quite a useful way to go about it so that you can cater for a lot of audiences."*

Others felt a sense of "checklist fatigue" (P04), with one participant encouraging us to engage in the very process of innovation we were studying - "*We've had guidelines, guideline documents, we have checklists [...] try to think more innovatively and think out of the box"* (P38). They went on to recommend the creation of a shared document ("something that's almost like a Wikipedia page as opposed to a PDF" [P18]) or guidance

notes, with multiple versions for different languages and different stakeholders. Other resources that were recommended included slide decks and activity templates for innovation teams to use (P16, P23, P40), decision trees (P35), or most commonly, case studies (P05, P16, P26).

In terms of the actual language used in these resources, there was near consensus amongst all participants. The tools must be written in clear, accessible, non-technical language; be designed for computer-based and hard-copy use; and must be interactive in nature. Many participants suggested that in order to answer the "what now" question that often follows engagement with such tools, community resources should also be made available to complement the interactive tools/resources.

Community Resources

Perhaps the most important community resource recommended was the development or facilitation of live forums through which humanitarian innovators could share their common experiences and ethical dilemmas in an honest and transparent manner. As Participant P29 envisages, *"I actually think stories [are] quite powerful [...] to a degree that [ethical] reflection is already happening among humanitarians because quite commonly, people will go home or to the guest house, have a beer and talk about all of the things that are actually ethical dilemmas basically, but we're not framing it as such. So I think helping people to realize that they grapple with this all the time and it's those conversations over beer that are actually ethical dilemmas that we want to have people*

more openly discuss and kind of frame in an ethics mindset". Such a community was also seen as a critical step towards the necessary learning and openness around failure that were highlighted in previous sections of this paper. One participant recounted their experiences of such a community in an academic setting, and the impact it had: "*having an actual community, maybe that doesn't meet up regularly physically but one that is that is active, able to share challenges and opportunities and lessons learned dearly, the things that never to try again, but these things all take a lot of trust [...] I think looking at the humanitarian innovation ecosystem, I think that is one thing that would be really helpful"* (P27).

Looking beyond this network of peers to share successes and learn from dilemmas and failures, participants also highlighted the need for consultative networks of subject matter experts, ethicists, and lawyers. Participant P08 believed these networks were the bigger priority, reflecting on their own dilemmas faced in the field "*it took me years to realize the problems I was facing were ethical dilemmas, where I didn't know what the right thing to do was. Everyone told me it was a logistics problem, a management problem, an admin problem, a finance problem. No, it's none of that! It's a dilemma! So we need more qualified people who can start that debate and who infiltrate those organizations! I have a health coordinator, I have a watsan coordinator, I should have an ethicist. Not that they would be the ones making the decision - I would need to have access to that person, like an ombudsman when we run into a problem, call the ombudsman. I need a reference person that can help us. The tools, people can't apply*

them because they have absolutely no idea what we're talking about." Participant P31 also enthusiastically recommended such a consultative network *"I would like that kind of body of trusted experts, the best people that I could call and can call right now.*"

Lastly, participants recognized the value of a more standardized review process similar to REBs, albeit one that was more oriented towards ongoing support than approval. As participant P29 shared, *"there's obviously value in the formal process as well, I'm not saying to do away with that, but I'm saying that that creates the impression that the end of ethics is when you've got the proposal approved, and I think it's the reverse. I think it's when you get the proposal approved, that's when ethics starts."* This type of iterative, adaptive ethics support also fits well with the aforementioned need for more collaborative relationships between donors and innovators. Such an approach would allow for more regular checkpoints rather than single-stage approval, and encourage innovators to adapt to changing circumstances in an ethical and timely manner.

Discussion

In this article, we provided a qualitative description of key stakeholder perspectives on innovation in humanitarian contexts and what is needed to facilitate greater ethical deliberation and support decision making.

We found that participants provided fairly consistent conceptions of what they considered humanitarian, offering broad and inclusive descriptions that focused on urgency, severity of needs, fundamental principles, and the importance of the

humanitarian- development nexus. Participants were less consistent in their ability to define humanitarian innovation as a discrete concept or set of activities, with some actively avoiding the term due to the western cultural connotations and values connected to capital ‘I’ Innovation. This is consistent with previous scholarship, as Scott-Smith (2016) found that “even the proponents of humanitarian innovation admit that is a nebulous concept”. This vagueness is reflected in the World Humanitarian Summit’s (WHS) definition of innovation as “[doing] things in new or better ways” (World Humanitarian Summit, 2014 a & b), or ALNAP’s “iterative process that identifies, adjusts and diffuses ideas for improving humanitarian action” (Obrecht, Warner & Dillon, 2017). While the latter offers more stages and introduces the goal of improvement, it can be hard to differentiate it from quotidian problem solving in resource-constrained humanitarian settings, research, and innovation. Attempts to find those defining elements has led funding and research institutions such as the HIF and ALNAP to lean on scholarship in business and management literature to help them “speak the language of innovation” (Obrecht, Warner & Dillon, 2017). However as Scott-Smith (2016) reflects, “the language of innovation” carries intrinsic ties to its roots in capitalist aims and values, in the same way that the language of humanitarianism is linked to the fundamental principles and associated aims. Combining these two value-laden terms without critical reflection on the intersection of these aims and values may lead to humanitarian innovation aligning more with an approach that is more focused on the corporate rather than corporal survival (Krishnaraj, In Development). This shift is already evident in the language being used to

justify innovation as a worthwhile endeavour. A 2014 WHS position paper stated that "without innovation, the humanitarian community will either become irrelevant or too rigid to function effectively" (WHS, 2014) suggesting that the irrelevance of the community was something to work against. This stands in stark contrast to the contrast to Hugo Slim's assertion that an ethical humanitarian system's end goal should be a world where there is no need for its services (Slim, 2015).

Perhaps most commonly discussed barrier to ethical humanitarian innovation was funding structures and donor relations. Participants highlighted the issues of competitive project/proposal-based funding mechanisms, which establish relationships between donors and NGOs that were characterized as fraught, lacking transparency, and starkly unequal in terms of power and risk. Participants felt that donors were also a key factor in the spread of the "Silicon Valley approach" to innovation, orienting funding agendas to new, fast, disruptive, and commercial innovation, but continuing to use standardized metrics and maintain a risk-averse position. Currion (2019) cautions against such approaches, drawing direct reference to Facebook's motto of "move fast and break things", writing that this "is the opposite of what we want to achieve, since breaking things is how humanitarian crises are created, not how they are resolved". He also draws attention to the critical need for new innovation structures, stating that "unless we innovate a new financial model, then humanitarian innovation will be on life support from institutional donors indefinitely". The ineffectiveness of current funding mechanisms is far from an innovation specific issue - it has long been a mainstream topic of

humanitarian reform, perhaps most visible as one of the 24 key transformations identified through the WHS "shift from funding to financing (Core Responsibility 5: Invest in Humanity)" (UN, 2016). Even within business literature, there has been a growing faction of scholars who are challenging the gospel of disruption and destruction, going so far as to adopt the ethics language in advocating that "Minimum viable products" must be replaced by "minimum virtuous products"" (Taneja, 2019). While one may be naturally wary of such close juxtaposition of 'virtues' and 'products', it does suggest that other approaches to innovation are possible.

Lastly, the concept of failure was also prominently featured in participant discussions of barriers to ethical humanitarian innovation. When humanitarian innovators are compelled to adopt "fail fast" approaches (Obrecht, 2016), but occupy a system in which failure can have significant human costs as well as reputational costs, ethical breaches are inescapable. Participants shared that failure is either presented as a success or kept internal to avoid losing future opportunities, leading to what Obrecht & Warner (2016) label a 'bad' failure - whereby an "innovation 'fails' *and* does not contribute to greater learning or evidence because of a lack of appropriate learning systems". This is in contrast to the ideal (widespread adoption) and "missing middle" (lacking adoption but generating learning) that Obrecht (2016) outlined in a special edition of the Humanitarian Exchange focused on innovation. The ability to have "good fails" and benefit from the missing middle is inextricably linked, once again, to funding mechanisms. As McClure writes in a 2019 Global Alliance for Humanitarian Innovation (GAHI) report, the "Third

Generation of Innovation" in the humanitarian sector will need to take an ecosystem approach, the building of which "will require coordinated action across the sector and even beyond its normal bounds". McClure goes on to state that such shared action will rely on longer term, flexible, and collaborative relationships between donors and innovating organizations - which was also the most common recommendation from study participants when asked what would be the greatest facilitating factor in a shift towards more ethical humanitarian innovation processes.

Relationships and learning were the most prominent themes in participant recommendations for key areas of improvement and change. In addition to the aforementioned donor-innovator relationship, participants believed that more open discussions of failure and innovation experiences in general would serve to foster relationships between innovators and innovating organizations. These collaborative peer learning networks stand in fundamental opposition to the values of capitalist innovation, but exemplify the values of humanitarian partnership. In a 2020 article entitled Governing the Humanitarian Knowledge Commons, Femke Mulder writes that trust is the critical factor in determining establishing such commons, as actors "must sacrifice personal benefits (control over information) for a collective good (shared learning)". This trust is formed through robust action that establishes a common purpose and shared identity, as well as decentralized trial and error learning. Decentralized, networked knowledge sharing finds strong theoretical cohesion with GAHI's Innovation 3.0 Ecosystem (McClure, 2019), as well as participant recommendations from this study.

Notably missing from the GAHI Innovation 3.0 report is the critical demographic of people affected by humanitarian crises. The term "people affected by crisis" appears only three times throughout the document, and much of the framing continues to position the "innovator" as being external problem context, rather than being of the community. This is a central issue in humanitarian literature, wherein people affected by crises are listened to primarily as holders of problems, but rarely as holders of knowledge or ideas, constituting a form of epistemic injustice known as testimonial injustice (Krishnaraj, In Development; Fricker 2007). Participants in this study continuously highlighted the importance of engaging people affected by humanitarian crises in innovation processes, and as innovators themselves. They suggested that participatory (used interchangeably "user-centred" or "community-based") approaches preemptively mitigate some of the inherent ethical dilemmas of humanitarian innovation - but they are only if they are initiated early on in the innovation process, adequately resourced, and remain accountable throughout. From these participatory approaches, we can begin to address the underlying assumptions of who holds knowledge in the humanitarian system, and begin to engage in what is known as "paradigm innovation" (Tidd, Bessant & Pavitt, 2005), shifting the underlying mental models which shape the endeavour of humanitarian response at large.

While paradigm innovation may be the ultimate aim of an ethical humanitarian innovation system, it was important for us to recognize the issues that are faced by innovators today, and the ethical guidance needed to respond to these daily dilemmas. A review of the literature suggested that while there have been a handful of efforts to define

high-level principles to guide the endeavour of humanitarian innovation, there is a general lack of actionable, practitioner-oriented tools to facilitate the enacting of these principles (Krishnaraj, In Development). Participants in this study echoed this observation, calling for two general categories of resources: online/physical tools such as checklists and interactive exercises; and live supports such as peer forums, expert consultations, and formal review mechanisms. The tools ideally will serve to establish a common vocabulary or set of resources around which communities may form. While paradigm shifting innovation lies outside of the scope of our research group (or any sole entity), the interviews presented in this study have directly informed the development of a set of ethics tools, hopefully taking the first step towards the establishment of knowledge sharing communities and an ethical, accountable, and impactful innovation ecosystem.

Limitations

It is important to note the limitations of our purposive sample - specifically, the bias towards individuals from high income country [HIC] contexts (n=32) compared to low or middle income country [LMIC] contexts (n=8). This was due to a number of factors, ranging from the geographic concentration of innovation focused roles in HIC-based headquarters, to the ongoing COVID-19 pandemic, which limited our ability to conduct interviews at the community level. This was partially mitigated through the lived experiences (personal and professional) of the study participants, and it is also our

hope that when the toolkit becomes publicly available, directed efforts will be made to disseminate to, reflect with, and iterate based on, innovators based in LMIC contexts.

We also wish to note the potential impact of the funder involvement in this research, which may have influenced participants willingness to participate in, and the nature of their comments during, the interview process. In addition to reinforcing the voluntary, informed, and ongoing consent process, we took all possible efforts to ensure the anonymity of participant reflections, holding all data within the HHE group.

Conclusion

The interviews presented in this article informed the ethics toolkit development process being done by HHE for the Humanitarian Innovation Fund as part of a consultancy-grant agreement. There is a direct line that can be drawn between the recommendations that have been made by participants in this study and the resources that were iteratively developed through a series of workshops with HIF and HGC funded innovators. More interpretive work will follow the analysis presented in this text, as well as critical reflection on how the tools are adapted (as an innovation in and of themselves) to various contexts. As the resources become available through the HIF website for the wider humanitarian audience, we hope to see a community of practice develop around humanitarian innovation ethics, fostering the transparent and collaborative knowledge sharing that seems to be missing from this sector. The tools developed through this research will contribute to the establishment of that community by fostering ethical

deliberation with a common set of resources and language that is broadly accessible rather than limited to a certain innovation domain or innovating organization.

Without this reflection and learning, the practice of humanitarian innovation will continue to be defined by restricted resources, risk aversion, and redundancy of efforts. The participants in this study demonstrate the urgent need for micro (practitioner oriented resources), meso (restructured funding mechanisms), and macro (shifting of who holds power and knowledge) level developments to improve the humanitarian innovation ecosystem. These developments will not only improve the humanitarian innovation community, but help orient the sector as a whole towards more accountable, ethical, and impactful responses.

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Chapter 5. Discussion

The opening chapter of this dissertation cited Dr. Paul Spiegel, who wrote in a 2017 editorial to The Lancet that the humanitarian system is “not just broke, but broken”. This has only become more true in the three years during which the research presented in the preceding chapters was conducted. Beyond the ever-widening gap between funding and needs, the broken-ness of the system has been exposed in several striking and inter-related ways. Most significant among these has been the tectonic effect of the COVID-19 pandemic on nearly every nation in the world. Widespread loss of life, complete overhauls of existing ways of working, and a complete reconceptualization of “where" humanitarian work happens (as well as increased local hiring and engagement of local NGOs) and are just a few of the enduring impacts. Looking beyond COVID-19, we have seen the growing impact of climate change on natural disaster severity and frequency and how socio-political shifts in nations such as the USA and Great Britain led to the deprioritization of humanitarian and development agendas (Heinrich, Kobayashi & Lawson, 2019). Furthermore, as the Black Lives Matter movement brought racial inequity to the fore of international consciousness, the neocolonial history and ongoing structural racism in humanitarian systems is being challenged, criticised, and slowly changed (Currion, 2020).

To use the language of innovation, it has been a period very much defined by our ability (and inability) to adapt and pivot, as a society, as a sector, and as researchers. I,

along with various members of the HHE research group, had to find ways to move forward with our research agenda in light of these global changes. We shifted the interviews, workshops, and pilot testing to online platforms; took time to be part of domestic and international COVID-19 response efforts; and engaged in our processes of self-reflection surrounding the colonial legacies on both the fields of bioethics and humanitarian response. We also struggled to find ways to engage individuals who were not already “in” the humanitarian context, as our ability to identify and engage with grassroots, community-based innovators was restricted. These changes have only served to further highlight the importance of the research being conducted. Humanitarian innovation endeavours to “identify, adjust, and diffuse ideas for improving humanitarian action" (elrha, 2018) and with so many new obstacles and opportunities arising, careful ethical consideration becomes even more critical to guiding that endeavour towards accountability and impact.

The primary objective of this dissertation and program of research was to generate an evidence-informed set of ethics tools through an iterative, empirically-driven, reflexive research approach. This was done through three concurrently conducted methodologies one of which, the Critical Interpretive Review, is not included in this dissertation. The studies presented in here included: an exploratory scoping literature review guided by the question “what is known about the ethics of humanitarian innovation?”; and a qualitative description study consisting of key stakeholder interviews seeking to determine what ethical considerations currently inform humanitarian innovation, and what values,

principles, and methods can best support ethically-robust humanitarian innovation processes? All three studies informed the development of a set of five ethics tools that were piloted and iterated through discursive, innovator-driven workshops and feedback sessions. This research took an integrated knowledge translation approach, whereby the end-users of the product were active collaborators in the research process. In our case, the UK-based Humanitarian Innovation Fund (HIF) were both collaborators and funders of this research, in addition to the 100+ humanitarian innovators and key stakeholders who contributed through interviews, workshop feedback, and pilot testing.

The three original research articles presented in this dissertation contribute in unique ways to the body of literature surrounding ethical innovation in humanitarian contexts. This final chapter summarizes the principal findings of these chapters; highlights the substantive, methodological, and theoretical contributions of this work; and reflects on the strengths and limitations of the research approach. It concludes by reviewing the policy and practice implications to date, and suggests future directions for this research and the resources created.

Principal Findings

In Chapter 2 (*User-Driven Development of an Ethics Toolkit for Humanitarian Innovation*) we presented our overarching research architecture to illustrate the strengths and limitations of taking such an integrated Knowledge Translation (iKT) approach to developing a novel set of ethics resources. The research architecture presented in Chapter

2 briefly describes the scoping review, critical interpretive review, and qualitative description of key stakeholder interviews, and focuses on the iterative series of workshops and feedback sessions. Each of these elements were conducted concurrently, and mutually informed the progression of the other. While the HIF was closely involved in the overall design of this research architecture, they were not involved in the recruitment, interviewing, nor analysis of the key stakeholder interviews, to preserve the integrity of the findings and the independence of the research process.

The main strength of the iKT approach lay in our ability to consult consistently with the end-user (Graham & Tetroe, 2007), and to draw on the HIF's extended network to iteratively test and implement provisional versions of the ethics resources with a broad diversity of humanitarian innovators. The HIF team themselves also held a wealth of knowledge as innovation managers, designers, and humanitarian professionals, and provided us with consistent and meaningful input. It also provided me as a researcher and graduate student with an intimate understanding of how humanitarian innovation funding works, and appreciation for the HIF's dedication to generating knowledge and creating impact in the humanitarian sector. The challenges of the iKT arose where practical and academic timelines and expectations did not align. The primary example of this was the need for an expedited preliminary scoping review to produce a project inception report for the HIF. This review needed to be repeated several months later (due to the rapidly growing nature of the literature) with a higher degree of methodological rigour (multiple blinded reviewers) for the purposes of preparing a manuscript for publication. Another

common point of feedback from the HIF to the HHE team was that the language used in the Toolkit, Manual, and Handbook was “too academic”, however we note that at times, certain groups within the HIF sought out further theoretical depth to the resources being developed while others wanted more actionable and accessible resources. This was particularly a challenge towards the end of the consultancy period (which was also one year later than anticipated due to expanded scope of piloting, COVID-19, and shifting priorities) where the Toolkit, Manual, and Handbook all rapidly shifted in form in the design process.

Overall, the benefits of this approach far outweigh the challenges that I experienced. The diversity of expertise, networks, and resources afforded to this project resulted in the production of a higher quality, evidence-based, practice-oriented end product that can meaningfully promote ethical humanitarian innovation processes. Reflecting on the strengths and limitations of taking an iKT approach also allows our research group to improve upon partnership strategies for future collaborative research efforts.

Chapter 3 *(Ethical Considerations Across the Humanitarian Innovation Cycle: A Scoping Review of the Literature)* sought to explore what is currently known about the ethics of humanitarian innovation processes, and to position those ethical challenges (and opportunities) across the various stages of the HIF Innovation Guide’s stages as a general organizing logic.

We found that presentations of ethical dilemmas and challenges often included activities undertaken across multiple innovation stages, suggesting that the boundaries between these stages are porous and the stages do not necessarily proceed in a linear manner. The discussions presented in the texts did tend to focus on activities the 'latter' half of the innovation cycle, during Adaptation, Pilot, and/or Scale. In these stages, the most significant areas of ethical concern were moral alignment between the values and aims of the "source" innovator and the "adapting" innovator; risk aversion and distribution; and cultural/contextual specificity respectively. Receiving less attention in the literature were the Recognition, Search, and Invention stages, however there were some major ethical issues identified - namely solutionism and neophilia. Solutionism (loosely defined as a situation where the solution precedes the problem, or generates the problem) precludes a good-faith effort to engage in participatory, user-driven innovation approaches, as the solutionist's aim is to facilitate buy-in rather than identify genuine need within the community. Solutionism is driven by techno- and neo- philia, whereby the novelty of a product or process is treated as the primary metric of its innovativeness or appropriateness for use.

Our review also showed that there have been efforts to reconcile and respond to these ethical challenges, primarily in the form of high-level articulations of principles, or organizational frameworks for innovation. There have also been innovation-specific ethics frameworks, including the Signal Code for Humanitarian ICTs, and Digital Do No Harm. What was missing from the literature were broader scope, actionable,

practitioner-oriented, values-driven tools, aimed at engaging innovators and fostering ethical sensitivity and reflexivity within innovation teams. This review reinforced the need for the resources being developed through this doctoral program of research, as well as providing insights for how to proceed.

Chapter 4 (*Barriers and Facilitating Factors of Ethical Humanitarian Innovation: Key Stakeholder Perspectives*) provided an opportunity to learn from key stakeholder perspectives on their experiences of engaging in humanitarian innovation, as well as to determine what is needed to support ethical reflection in humanitarian innovation contexts.

Firstly, we found that there remains a lack of consensus among humanitarian professionals as to what "humanitarian innovation" entails and includes. Some participants identified highly formalized processes and activities undertaken in their respective organizations, while others rejected the premise that Innovation (as a set of formal practices, culturally aligned with Silicon Valley approaches) occurs in humanitarian settings altogether. Despite the lack of a common understanding or definition of humanitarian innovation as a formal concept, participants seemed to be in agreement that innovation in the humanitarian sector is necessary, and in some cases a moral obligation to improve upon the status quo of operational programming. The primary barriers to ethical innovation presented by participants include inadequate and inappropriately structured funding mechanisms, the lack of meaningful metrics for innovation, a lack of trust and transparency surrounding failure which in turn inhibits

institutional and sectoral learning. Participants highlighted the critical importance of establishing more collaborative relationships with donors, and the need for more appropriate metrics for innovation. With regards to specific ethics resources to be created, participant requests could be broken down into two categories: interactive tools/resources (checklists, guidance notes, exercises) that are written in clear, accessible, non-technical language and designed for digital or physical engagement; and community resources (peer forums, expert networks, review mechanisms) to foster sharing and learning across the humanitarian sector.

The qualitative description methodology that was applied for this study brings specific value with regards to our aim of producing resources in a user-guided manner, allowing us to draw clear lines from the experiences and recommendations of humanitarian innovators to the resources developed. By presenting the key stakeholder interviews with minimal interpretation, we generated a source document of user perspectives that allows us to ground our decision making in their actual words, as well as provide a foundation for future analysis and interpretation of these interviews.

Common Themes

Reflecting on the principal findings from the three chapters presented above, I would like to focus on the connection between the themes of humanitarian marketization, solutionism, and the participation in humanitarian innovation. In Chapter 1, I highlighted the reflections of Bessant et al (2014), who pointed out a critical difference between the

type of innovation that is driven by capital markets, and innovation in humanitarian contexts. In the former, demand-side survival pressure forces innovation, as firms compete to maintain market share and avoid obsolescence. In the latter, the obsolescence of the "firms" (NGOs, humanitarian organizations) is a desirable outcome - whereby there is no demand for their services because governments are able to provide for their citizens (Slim, 2015). If obsolescence of the humanitarian firm is indeed the goal of ethical humanitarian response, it follows that ethical humanitarian innovations should be rooted in communities rather than those firms, and work to dismantle the marketization of the humanitarian space. However, in Chapter 4, when discussing ethical considerations in the "Invention" stage, many participants identified "disruption" as an example of a metric that has been broadly adopted from market-driven innovation, despite the fact that aiming for disruption can be deeply inappropriate in the already disrupted state of humanitarian contexts (Madianou 2019 a&b). Disruption, as one interview participant pointed out, is antithetical to the values of the humanitarian sector. It destabilizes markets, imposes a firms' idea of what is needed, and makes the provider of the disruptive service or product indispensable to the system (Christensen, Raynor & McDonald, 2013). Even more dubiously, disruption theory compels innovators to "let go of the past" (Linkner, 2014) - which can be particularly dangerous in a sector seeking to meaningfully reflect on its colonial past and the ongoing challenges of structural racism. Instead of disruption, as one participant noted, humanitarian innovation would be far better served by aiming for

absorption - establishing resilient, accessible, and locally-driven solutions to locally-identified problems.

Closely linked to the concept of disruption and retrofitting Silicon Valley approaches is the concept of solutionism, which also arose in both the literature review and key stakeholder interviews. Solutionism, loosely defined as an approach in which the solution precedes and/or precludes the need for an investigation of the problem (Morozov 2013), was linked to the key ethical considerations across all stages of the innovation cycle, and is deeply linked to the techno- and neo- philia that dominates the humanitarian innovation landscape. Much of this techno- and neo- philia is seen as being driven by donor agendas, of high income countries that stand to gain from myopic problem definitions that ignore the larger socio-political landscape that forces the continued existence of the humanitarian sector, and solutions that promote expansion of market interests. This approach of innovation for innovation's sake was highlighted as a major issue by interview participants, with many questioning the lack of ethical consideration prior to adopting Silicon Valley values and practices into the humanitarian system. In taking up the tools of market driven innovation without full ethical consideration of the implications of doing so, humanitarian innovators are at best, "involuntary collaborators" (Polman 2010) in the promotion of market values and globalization agendas.

Standing in opposition to the globalization agenda, we find localization. At the 2016 World Humanitarian Summit, the UN Secretary-General called for humanitarian action to become "as local as possible, and as international as necessary" (WHS, 2016),

spurring on a number of 'localization' initiatives throughout the humanitarian community. In 2020, the Black Lives Matter movement re-centred ongoing racial inequity as a topic of global concern, causing many to reflect on the metafunctions of the humanitarian sector and amplifying calls for the "decolonization" of aid (Currion 2020). If humanitarian innovation is, as Skeels (2020) writes, to be a "North Star" orienting the sector as a whole towards being more "accountable, ethical, and impactful", it must align with the localization and decolonization agendas. Part of this is responding to and dismantling the epistemic injustice (Fricker 2003) that was discussed in Chapter 3 of this dissertation.

Ramalingam, Scriven & Foley (2009) state that "indigenous knowledge [is] systematically undervalued by international agencies", representing what Fricker calls *systematic testimonial injustice*. These themes resonate strongly with interviewees reflections on 'participatory' or 'user centred' approaches, which are most successful when adequately resourced, centre ownership and dignity, and challenge rather than conceal inequities. In her discussion of another form of epistemic injustice, hermeneutic injustice, Fricker (2003) focuses on the interpretive resources that are available to communities to make sense of their experiences, and form communities around these experiences. In the central case example for hermeneutic injustice, she presents a dialogue between women who had experienced sexual harassment, and how the sharing of stories and establishment of a common vocabulary for a distinct set of social experiences was critical to their ability to advocate for themselves. The recommendations made by

participants in Chapter 4 provide support for the critical importance of stories - both among current humanitarian innovators to transparently share experiences of ethical dilemmas and failures, as well as among innovators in affected populations. Bringing these communities together to form a more diverse collective understanding of who and what humanitarian innovation entails would in turn position affected populations as holders of knowledge and solutions, and begin to foster the establishment of common language and concepts. The iKT approach that guided this research and toolkit development process aligns well with participatory approaches, and when done well, positions users as knowledge holders. Through interviews with innovators who were part of populations affected by crisis, as well as conducting workshops with innovators from LMIC and conflict contexts (as well as one workshop physically in the Philippines), we begin to embed some of that indigenous knowledge that has been systematically ignored.

How then do the tools and knowledge generated through this research contribute to shifting these systems? Each contributes in a unique manner. The Virtuous Circle seeks to support innovation teams in establishing these environments of transparency and accountability at the micro-scale within organizations by asking innovators to reflect on ethical expertise, guidance, and practices, while prioritizing learning. The Stages Tool prompts ethical considerations across the innovation journey, explicitly pointing to questions of power, equity, ownership, and accountability. The Values Clarification tool works towards the establishment of clear communication and common language when

discussing the values an innovation team wants to uphold, and feeds into the Foresighting Tool which translates those values into strategies and actions. Lastly, the REACH tool provides a structure for deliberation, resource gathering, and reflection. As a set of resources, these tools can be seen as a common platform or vocabulary to foster collaboration, critical reflexivity and openness. As a community of practice forms around these tools, isolated conversations become unified, and macro-level change becomes possible.

In the section below we detail some of the impact to date, and how innovators have begun to use these tools to the ends described above.

Impact to Date

While the primary users of this research remain the HIF's Innovation Managers, prospective and existing grantees, and external reviewers, there was a clear mandate to generate evidence and resources that would be accessible to the wider humanitarian sector. This mandate was integrated into the design and development of the toolkit itself - through the interview and workshop process, we had contact with over 50 unique innovation teams, consisting of one to four organizations each. In these workshops, we were able to see the tangible impacts of this research and the tools being generated in a number of ways. These impacts included policy change at the HIF through integration of the tools into their funding process (as well as predicted policy change at GCC), practice

change in a number of innovation projects, and contributions to the literature through publications included in this dissertation.

Most significant among these is the impact that this research and its outputs have had on the Humanitarian Innovation Fund and its grantees. We have had the privilege of working with a number of Innovation Managers at the HIF, who have provided invaluable feedback throughout the research process. Many of them have taken to integrating the tools into the portfolios or individual innovation teams for which they are responsible. We are particularly grateful for the input Anna Skeels and Ian McClelland for their championing of this work across all HIF portfolios; for Sophie Van Eetvelt when piloting the toolkit at the HIF Funding Cohort Kick-Off in Jan 2020 with Gender Based Violence (GBV), Incontinence, Menstrual Health & Hygiene (MHM), and Disability & Older Age Inclusion (DOAI) Innovators; Abi Taylor during the Journey to Scale (J2S) Innovator Cohort from July - September 2020; Cecilie Hestbaek during the WASH Evidence Challenge Innovator Cohort in October 2020; and Bjorn Rust with the DOAI Cohorts in 2021 (Appendix 7). The HIF has made this set of ethics tools part of their policies and workshops that are delivered to grantees across all of their portfolios. A particularly notable milestone was HIF Innovation Manager Bjorn Rust leading a workshop with the tools in early 2021 without the support or briefing of the HHE team.

Each of these events also provided us with the opportunity to schedule one-to-one sessions with innovators who identified specific ethical challenges. In the GBV/I/MHM/DOAI group, one innovation team in particular changed their research

practices based on this session to have better inclusion and accountability mechanisms, and Dr. Anna Skeels (HIF Programme Manager) told us in a private communication that the HIF received requests following our sessions from innovators seeking additional funds to improve their ethics protocols and inclusion practices. In another one-to-one session with an innovator in the J2S programme, we supported the development of a clear values-driven strategy with the innovation team, which aligned abstract values into tangible activities that they integrated into their project plan. In the WASH Evidence Challenge group, one innovation team was so enthusiastic about the questions arising from the Virtuous Circle and Stages Tools that they independently committed to integrating these tools and reflections into their monthly team meetings. These are just a few of the impacts that this research has already had on innovation practices. At a more macro level, the Humanitarian Innovation Fund has made significant efforts to integrate this work into all of its innovation portfolios, and to embed ethical reflections and resources into their existing Humanitarian Innovation Guide. These resources, publicly available through the HIF website, will be a foundational piece of ongoing efforts to reflect and improve upon the state of humanitarian innovation practice.

We have also seen uptake of this research through the Humanitarian Grand Challenge at Grand Challenges Canada, who were a source of initial inspiration for this dissertation and a constant champion of this work within the humanitarian innovation sector. We have presented this research to two of the three funding cohorts during the Humanitarian Grand Challenge x World Food Programme Innovation Acceleration Week

(2020 & 2021), and had similarly fielded requests for one-to-one mentorship sessions with innovators upon request. In one of the last sessions prior to submission of this dissertation, one of these innovators adapted their pilot strategy based on ethical deliberation conducted with our support. I highlight these individual innovator shifts in policy and practice for two reasons - each innovation team represents a number of organizations (often a mix of iNGO, research institution, and local partners), and their decisions in turn directly impact populations affected by humanitarian crises. In the aforementioned example, the innovation pilot in which several thousand households who were to be part of a control group and not slated to receive anything for their participation was restructured to better reflect the innovator's priorities of inclusivity and participation, resulting in a different approach being taken that ensured all participants received some form of intervention, even if on a delayed timeline. In this example, we illustrate how the use of the tools promoted a values-driven strategy, tangible course of action, and an improved outcome for thousands of individuals.

Beyond the humanitarian innovators and innovation funders, we also engaged in a number of academic and professional forums to present, and solicit feedback on our work. Perhaps most significant among these was the presentation of this research as part of an internal consultation panel with the Director of Health and Care at the International Federation of the Red Cross and Red Crescent (IFRC) to guide the IFRC/ICRC's input to the joint Lancet and Financial Times Commission, *Governing Health Futures 2030: Growing up in a Digital World.* The recommendations made by GK at this Commision are

set to be published by the Lancet & Financial Times in 2021/2022. Other venues in which this research was presented can be seen in Appendix 7.

Lastly, conducting this research informed my perspective as a researcher and expert in the field of humanitarian ethics and innovation. For the last two years I have served as an external reviewer for Humanitarian Grand Challenge Seed Stage applications, and provided ad hoc ethics support to the due diligence process for Transition to Scale applications. I also served as an expert reviewer for the European Commission's *Horizon 2020 High Tech for Humanitarian Aid Prize*, focusing on Health Innovations, and providing some preliminary ethics input on the final shortlist. In both of these capacities, I drew on the tools that were developed through this research to guide my thinking and to assess the innovations from an ethical standpoint. In this way, I became an end-user of the very resources I had helped develop.

Strengths and Limitations

The first and most significant strength of the research presented in this dissertation is the close and sustained involvement of end users. This began at the "recognition" phase - both the Humanitarian Grand Challenge and Humanitarian Innovation Fund identified the need for such resources and research, remained close partners throughout the iterative development process, and are committed to promoting the tools to scale. However the strength of this collaboration with the end user also posed certain challenges and limitations to our work. First, the shift to centering the HIF and its grantees as the end

users represented a narrowing of scope from the broader humanitarian innovation audience that I initially envisioned. Second, while there are a number of reasons that the Innovation Guide “stages” were used to structure the Stages Tool and the findings of the scoping literature review, the primary influence was the mandate to create resources that were consistent with the HIF’s existing portfolio. Then, over the course of the consultancy, the HIF has also started to recognize the limitations of the stages model, and the final iteration of toolkit reframed the “Stages” tool as the “Ethics for Actions” tool, indicating future directions of the HIF. It is our hope that the final products, while branded to HIF language and structures, are applicable and relevant to the broader humanitarian innovation audience.

The most significant limitation of this research was the limited representation of affected populations throughout this research process. While our primary users and audience are humanitarian innovators, we recognize that many innovative approaches to problems faced in humanitarian crises arise from the communities themselves, and that these individuals do not always self identify as humanitarians nor innovators. If such communities are not “brought in” to the system through an iNGO of funder, they can be difficult for researchers (such as ourselves) to identify or engage with, short of going into communities and walking around to see what is being done. We had one opportunity to do this (facilitated through the HIF), when Dr. Hunt met with the Centre for Disaster Preparedness (CDP) in Manila and a number grassroots, community-level innovators were present and engaged with the tools. We intended to do more of this type of

engagement (had planned a return to the Philippines, and an in-person workshop partnered with ALNAP in Nepal), but the COVID-19 pandemic made this untenable. It is our hope that by disseminating the resources through the HIF website, anyone facing an ethical challenge with their innovation anywhere in the world can have access to the basic questions and guidance to support their decision making process.

Lastly, this structure of the agreement with the HIF presented a number of strengths and challenges to my experience as a doctoral student conducting research funded through a consultancy-grant agreement. As a co-lead on the project with Drs Schwartz & Hunt, and with the support of an even larger research team, my learning went beyond the academic knowledge presented in this dissertation. As I took on the research coordinator capacity a few months into the consultancy, I learned to manage multiple parts of a study that were being conducted concurrently. A good research coordinator or project manager excels in delegating tasks - whereas a doctoral dissertation requires that the majority of the research and writing is done by the student. While there were enormous benefits to being able to draw on the wealth of knowledge of my collaborators, there were moments in which the contract time-frame made it impossible for me to do the majority of the work on all projects. This was ultimately reconciled through committee meetings focusing on drawing out the unique elements I would lead, and communicating this to the research team and HIF as a priority. Despite these efforts, there were times where I felt a lack of control over the project, and struggled to maintain clear lines between what needed to be done for the consultancy and what needed to be done for my

dissertation. Similarly, the audience, focus, and level of methodological rigour required for organizational publications and peer-reviewed publication differ. As the consultancy period came to a close, the HIF contracted a design agency (Soapbox) to align our work with HIF brand guidelines and for online audiences, and we have focused more on communicating the work for academic audiences. The final form of some tools are significant departures from the resources that we provided, and despite our ongoing consultation, it remains to be seen if the substantive integrity of the tool has been preserved. Further feedback upon public dissemination will be a determining factor in the ongoing impact of this body of work and set of resources in the coming years. Overall, the resources, expertise, and dedication to ethics and impact that the HIF brought to this research were an enormous asset, and a level of support and dissemination that I am incredibly grateful for.

On a more personal level, I believe that being a co-lead on the consultancy-grant with the HIF gave me a greater degree of confidence and comfort when challenging the perspectives of more experienced researchers and committee members. While it could certainly be part of the growth that all doctoral students' experience in establishing their own scholarly aims, this shared leadership role felt like an acceleration of the shift from trainee to colleague. There were also notable exceptions to my role as a co-lead, such as not being privy to discussions of budget distribution or contract negotiation with the university. While I believe that these are important elements of establishing oneself as a researcher and navigating the more operational facets of academic research, I was grateful

to have my supervisor and committee members manage these aspects. I benefited greatly from this type of learning environment, and appreciate the efforts made to allow this to happen.

Future Directions

Each of the chapters presented in this dissertation contribute to the foundation of knowledge that is being laid for further investigation. First, we offer our methodology as a reference point for other researchers who may be looking to develop their own ethics resources in another sub-sector of humanitarian research, or in another field entirely. As previously mentioned, there are relatively few examples of methodology papers focusing on the development of evidence-based ethics policies and resources, particularly within the humanitarian sector (e.g. Fraser et al, 2015). We welcome critical reflections on our process, on the nature of the partnership with the end-user in collaborative research efforts, and the iterative improvement of this methodology.

As noted by HIF Programme Manager Anna Skeels (2020), there is a significant body of critique around humanitarian innovation as a western, neocolonial, and private-sector driven endeavour - and responses to that critique have included efforts to increase participation and diversify the key stakeholders involved in humanitarian innovation. These efforts represent the beginning of a slow process of evolution that is underway in humanitarian innovation and humanitarian response as a whole, to shift the status quo from one of epistemic injustice to one where affected populations are holders

of knowledge, power, and resources to effect change. As such, further research on the "Search" and "Recognition" stages of innovation, and recommendations for how affected communities can initiate and lead rather than participate and buy-in to innovation will be critical. Lastly, the qualitative description presented in this dissertation offers a grounding for future interpretive work from our research team, as well as a reference point for future critique and iteration of the ethical innovation toolkit that has been generated.

In one particularly impactful interview, a participant encouraged us to bend back the ethics tool on our own process - to see the toolkit as an innovation itself. By engaging in this reflexive process, we asked ourselves the very questions we were asking of others: whose voices were heard and whose voices are missing? How are conflicts of interest identified and managed? Who are we piloting for? How will ownership and IP be managed at scale? These questions also form the starting point for future research. Whose voices are missing and how can they be brought into the discourse surrounding the toolkit? How was scaling managed, and who takes responsibility for wider adoption and adaptation? Ultimately, the toolkit that is released by the HIF to the broader humanitarian community will be most impactful if seen as a living set of resources that is open to adaptation and iteration. As this community and body of knowledge surrounding ethical humanitarian innovation evolves, so too should the toolkit.

Conclusion

I began this dissertation with the intent to respond to a specific need for ethics resources focused on the specific challenges faced by humanitarian innovators, and to build resources that framed innovation as a facilitating rather than inhibiting factor for innovation. These goals were firmly rooted in practice change - leading to the ultimate aim of improving the lives of people affected by humanitarian crises through more "ethical, responsible, and impactful" (Skeels, 2020) innovation processes. At every stage in the research process, we remained closely connected to innovators, funders, and users of these resources. The tools that were created are the first (to our knowledge) set of interlinked ethics resources that are aimed at humanitarian innovation practitioners. Through the many workshops and individual sessions, we have seen how these resources have led to tangible impacts as innovators have modified pilot study design, inclusion criteria, and demonstrated the ability to foresee and mitigate the negative impacts of anticipated ethical challenges. Each of these changes directly improve the lives of individuals in affected communities.

While this is certainly promising evidence of success in my personal research goals, the true test lies ahead. There is immense potential for future work that reflects on the uptake of the ethical innovation toolkit, how it is adapted to different contexts, and whether it contributes to the lowering of perceived barriers to ethical innovation. As these tools are released into the world, it is my hope that they will build a community of practice that fosters broader learning and collaboration amongst innovators, and are

treated as a dynamic set of resources to be iterated and developed as contexts and needs change. This will require commitment and leadership from the HIF as the owners of these resources to "forge new spaces" (Skeels, 2020) that promote sustained engagement with a global community of humanitarian innovators. I look forward to seeing how these resources grow and evolve, and to contributing to the process of improving humanitarian response through innovation.

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APPENDIX 1 - HiREB and McGILL IRB ETHICS APPROVAL LETTERS

May-31-2019

Project Number: 7251

Project Title: Ethical Innovation in Humanitarian Contexts

Principal Investigator: Dr. Lisa Schwartz

This will acknowledge receipt of your letters dated May 10, 2019 and May 30, 2019 which enclosed revised copies of the Information/Consent Form along with a response to the additional queries of the Board for the above-named study. These issues were raised by the Hamilton Integrated Research Ethics Board at their meeting held on May 1, 2019. Based on this additional information, we wish to advise your study had been given ***final*** approval from the full HiREB.

The following documents have been approved on both ethical and scientific grounds:

Document Name	Document Date	Document Version
Appendix 1_Invitational Email_Version1_April9th_2019	Apr-09-2019	1
Appendix 2_twitterpost_Version3_May30_2019	May-30-2019	3
Appendix 3_InterviewGuide1_Version1_April9_2019	Apr-09-2019	1
Appendix 4_Interview Guide2_Version1_April9th_2019	Apr-09-2019	1
Appendix 5_Participant_ConsentForm_Version2_May8_2019	May-08-2019	2
Appendix 6_flyer_Version3_May30_2019	May-30-2019	3
HiREB Protocol - HIF Ethical Innovation Tool (Final Version)	Apr-09-2019	1

The following documents have been acknowledged:

Document Name	Document Date	Document Version
tcps2_core_certificate L Schwartz	Feb-22-2016	1
HIF_Budget_Version1_April9_2019	Apr-09-2019	1

Please Note: All consent forms and recruitment materials used in this study must be copies of the above referenced documents.

We are pleased to issue final approval for the above-named study for a period of 12 months from the date of the HiREB meeting on May 1, 2019. Continuation beyond that date will require further review and renewal of HiREB approval. Any changes or revisions to the original submission must be submitted on a HiREB amendment form for review and approval by the Hamilton Integrated Research Ethics Board.

PLEASE QUOTE THE ABOVE REFERENCED PROJECT NUMBER ON ALL FUTURE CORRESPONDENCE

Sincerely,

Frederick A Spencer

Dr. Frederick A. Spencer, MD
Chair, Hamilton Integrated Research Ethics Board

The Hamilton Integrated Research Ethics Board (HiREB) represents the institutions of Hamilton Health Sciences, St. Joseph's Healthcare Hamilton, Research St. Joseph's-Hamilton, and the Faculty of Health Sciences at McMaster University and operates in compliance with and is constituted in accordance with the requirements of: The Tri-Council Policy Statement on Ethical Conduct of Research Involving Humans; The International Conference on Harmonization of Good Clinical Practices; Part C Division 5 of the Food and Drug Regulations of Health Canada, and the provisions of the Ontario Personal Health Information Protection Act 2004 and its applicable Regulations; For studies conducted at St. Joseph's Healthcare Hamilton, HiREB complies with the Health Ethics Guide of the Catholic Alliance of Canada

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RE: IRB Study Number A06-E37-19B
Ethical innovation in humanitarian contexts

Dear Dr. Hunt,

Thank you for submitting the above-referenced study for an ethics review.

As this study involves no more than minimal risk, and in accordance with Articles 2.9 and 6.12 of the 2nd Edition of the Canadian Tri-Council Policy Statement of Ethical Conduct for Research Involving Humans (TCPS 2) and U.S. Title 45 CFR 46, Section 110 (b), paragraph (1), we are pleased to inform you that ethics approval for the study (Proposal version 1: April 9, 2019 and Participant Information and Consent Form, version 2: May 8, 2019) is granted via an expedited/delegated review on 07 June 2019. The ethics certificate is valid until **June 2020**. The study proposal will be presented for corroborative approval at the next scheduled meeting of the Institutional Review Board, at which time a certification document will be issued.

A review of all research involving human subjects is required on an annual basis in accord with the date of initial approval. The annual review should be submitted at least one month before **June 2020**. Please inform the IRB promptly of any modifications that may occur to the study over the next twelve months.

Kind regards,

Roberta Palmour, PhD
Chair
Institutional Review Board

cc: A06-E37-19B

Faculty of Medicine
3655 Promenade Sir William Osler #633
Montreal, QC H3G 1Y6

Faculté de médecine
3655, Promenade Sir William Osler #633
Montréal, QC H3G 1Y6

Fax/Télécopieur: (514) 398-3870
Tél/Tel: (514) 398-3124

CERTIFICATION OF ETHICAL ACCEPTABILITY FOR RESEARCH INVOLVING HUMAN SUBJECTS

The Faculty of Medicine Institutional Review Board (IRB) is a registered University IRB working under the published guidelines of the Tri-Council Policy Statement, in compliance with the Plan d'action ministériel en éthique de la recherche et en intégrité scientifique (MSSS, 1998), and the Food and Drugs Act (17 June 2001); and acts in accordance with the U.S. Code of Federal Regulations that govern research on human subjects. The IRB working procedures are consistent with internationally accepted principles of Good Clinical Practices.

At a full Board meeting on 10 June 2019, the Faculty of Medicine Institutional Review Board, consisting of:

Frances Aboud, PhD	John Breitner, MD
Alain Brunet, PhD	Patricia Dobkin, PhD
Carolyn Ells, PhD	Anthanasios Katsarkas, MD
Catherine Lecompte, BSc	Sally Mann, M.S.
Roberta Palmour, PhD	Alexandra Pasca, LL.M.
Maida Sewitch, PhD	Margaret Swaine, BA

Examined the research project **A06-E37-19B** titled: *Ethical innovation in humanitarian contexts*

As proposed by: Dr. Matthew Hunt (Applicant) to ____________ (Granting Agency, if any)

And consider the experimental procedures to be acceptable on ethical grounds for research involving human subjects.

10 June 2019	[signature]	[signature]
Date	Chair, IRB	Dean/Associate Dean

Institutional Review Board Assurance Number: FWA 00004545

APPENDIX 2 - RECRUITMENT EMAIL TEMPLATE

Email subject: Invitation to research study investigating ethical innovation in humanitarian contexts

Dear [NAME],
We would like to invite you to share your experiences and perceptions of ethical innovation in humanitarian contexts for a research study led by Matthew Hunt, PT, PhD (McGill University), Lisa Schwartz PhD (McMaster University) and Gautham Krishnaraj MSc. (McMaster University). The study will inform the development of an ethics toolkit to support the innovator grantees of the Humanitarian Innovation Fund (of ELRHA), as well as informing innovation ethics across the humanitarian sector.
Our interdisciplinary research team is working collaboratively with knowledge users from the Humanitarian Innovation Fund to answer the following research questions: *What ethical considerations currently inform humanitarian innovation? What values, principles, and methods can best support ethically-robust humanitarian innovation processes?*
A key component of the project are interviews with humanitarians of all professional backgrounds that have been part of the innovation process, including by not limited to health professionals, coordinators, policy-makers, managers, and granting agency administrators. Each participant will be invited to participate in one interview lasting 45-60 minutes. We will also be holding group consultations in certain cities, and interview participants will be invited to provide additional feedback at these group consultations depending on availability. The interviews will be conducted at your preferred location and in your preferred format. It can be conducted in person, over Skype, or by telephone.
Please note that your identifying information will be kept confidential and that your participation is strictly voluntary.
Attached is a document with detailed information about the research study. Please take your time to make your decision. Feel free to discuss it with colleagues, the research investigators, or anyone else you choose.
If you are interested in participating, please contact the research coordinator, NAME, at EMAIL ADDRESS AND PHONE NUMBER, or the research team leader, Gautham Krishnaraj, listed below. Alternatively, you can respond to the research coordinator who will be following-up to this letter within two weeks. Thank you in advance for your time and consideration.

Sincerely,

Gautham Krishnaraj MSc. PhD(c)

Humanitarian Health Ethics Research Group, McMaster University
Co-Lead, Ethical Innovation in Humanitarian Contexts Study
Email: krishg1@mcmaster.ca

Dr. Lisa Schwartz PhD
Humanitarian Health Ethics Research Group, McMaster University
Co-Lead, Ethical Innovation in Humanitarian Contexts Study

1-905-525-9140 ext. 22987;
Email: schwar@mcmaster.ca

Dr. Matthew Hunt PT PhD
Humanitarian Health Ethics Research Group, McGill University
Co-Lead, Ethical Innovation in Humanitarian Contexts Study

1-514-398-4400 ext. 00289;
Email: matthew.hunt@mcgill.ca

APPENDIX 3 - RECRUITMENT BUSINESS CARD

ETHICAL INNOVATION IN HUMANITARIAN CONTEXTS

SEE REVERSE FOR RESEARCH STUDY DETAILS

Funded by: HIF | elrha

AS PART OF A PROJECT TO DEVELOP AN ETHICS TOOLKIT ON HUMANITARIAN INNOVATION PROCESSES, THE HUMANITARIAN HEALTH ETHICS RESEARCH GROUP IS CONDUCTING RESEARCH ON ETHICAL INNOVATION PRACTICES AND CHALLENGES. WE'D LIKE TO LEARN ABOUT YOUR EXPERIENCES AND PERSPECTIVES!

Contact Gautham (krishg1@mcmaster.ca) or Rachel (yantzir@mcmaster.ca) to learn more!

or visit https://humanitarianhealthethics.net/

This study has been reviewed by the Hamilton Integrated Research Ethics Board (REB# 7251). Version 30.05.2019.

APPENDIX 4 - TWITTER RECRUITMENT TEMPLATE & POST

APPENDIX 5 - LETTER OF INFORMATION AND CONSENT

PARTICIPANT INFORMATION AND CONSENT FORM

Title of Study:

Ethical Innovation in Humanitarian Context

'A study of values, principles, and methods informing humanitarian innovation'

Locally Responsible Investigators and Co- Principal Investigator:

Dr. Lisa Schwartz

Professor of Health Research Methods, Evidence & Impact (HEI), McMaster University

1280 Main St. W., (CRL 224) Hamilton, Ontario L8S 4K1

Email: schwar@mcmaster.ca

Tel: (905) 525-9140 Ext 22987

Co-Principal Investigator:

Dr. Matthew Hunt, School of Physical and Occupational Therapy, McGill University

3654 prom Sir-William-Osler, Montreal, QC, H3G 1Y5

Email: matthew.hunt@mcgill.ca

Tel: (514) 389-4400 ext. 00289

Co-Principal Investigator:

Gautham Krishnaraj MSc. PhD(c)

McMaster University

1280 Main St. W., Hamilton, Ontario L8S 4K1

Email: krishg1@mcmaster.ca

Tel: (514) 796-4259

Co-Investigator(s), Department/Hospital/Institution:

Dr. Donal O'Mathuna, Ohio State University

Dr. Ali Okhawat, ex-Director WHO Innovation Hub

Dr. John Pringle, McGill University

Rachel Yantzi, McMaster University

Sponsor: Enhancing Learning & Research for Humanitarian Assistance (ELRHA)'s Humanitarian Innovation Fund

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INTRODUCTION

The Humanitarian Health Ethics Research Group at McMaster University and McGill University (Canada) are working with the Humanitarian Innovation Fund (UK) to

research the values, principles, and methods that inform ethical innovation in humanitarian contexts. You are
being invited to participate in an interview that will contribute to the findings of this study, and ultimately inform an ethics toolkit for use by the Humanitarian Innovation Fund and other humanitarian agencies worldwide. In order to decide whether or not you want to be a part of this research study, you should understand what is involved and the potential risks and benefits. This form gives detailed information about the research study, which will be discussed with you. Once you understand the study, if you wish to participate, you will be asked to sign this form. You will be given a copy of this form for your records. We will be happy to answer any questions you may have. Please take your time to make your decision. Feel free to discuss it with your colleagues, the research investigators, or anyone you think would help you in your decision. You are completely free to accept or refuse to participate in this study. If you choose to participate, you can withdraw from the study at any time without explanation.

WHY IS THIS RESEARCH BEING DONE?

There is a growing awareness of the risks and potential harm generated by the introduction of new actors, products and technology along with 'innovation' to humanitarian settings. This requires us to set clear parameters for the kind of humanitarian innovation we want to see. There's also an urgency to translate these parameters into practice, to address real-time ethical dilemmas and to support ethical

innovation 'on the ground'. Specific efforts to develop draft principles and frameworks for ethical humanitarian innovation have begun this work for the humanitarian community at large and this commissioned work will need to clearly articulate its relationship with these.

This Humanitarian Innovation Ethics Tool commissioned project will work in conjunction with the existing HIF Humanitarian Innovation Guide to support innovators and organizations in the innovation cycle. The tool will be focused on humanitarian innovation and grounded in the Draft Principles and frameworks for ethical innovation in the sector. This tool will include key ethical questions for all stages of the innovation process and navigation through the choices humanitarian innovators may need to make. This new tool will complement the other practical tools featured in the Humanitarian Innovation Guide and reinforce its strong strand on ethics and the management of risk. These goals will be achieved by working with HIF funded grantees and other key partners to operationalize the tool, providing real-time support on ethical innovation in the field as part of a broader collaborative agenda addressing the ethical challenges of humanitarian innovation.

WHAT IS THE PURPOSE OF THIS STUDY?

- To develop evidence clarifying ethical and practical possibilities, challenges, and

consequences of innovation in humanitarian contexts

- To determine what values, principles, and methods can best support ethically-robust humanitarian innovation processes
- To develop an ethical innovation tool for use by grantees of the Humanitarian Innovation Fund as well as other Humanitarian Organizations seeking ethical support and resources

WHAT WILL MY RESPONSIBILITIES BE IF I TAKE PART IN THE STUDY?

If you volunteer to participate in this study, we will ask you to participate in a semi-structured interview conducted by one of the research team members that will last approximately 60-120 minutes. The interview will be conducted at your preferred location and in your preferred format. It can be conducted in person, over Skype or telephone. You will be asked to comment on do questions that relate to the following:

- What ethical considerations currently inform humanitarian innovation?
- What values, principles, and methods can best support ethically-robust humanitarian innovation processes?
- How can existing standards be adapted to support delivery of ethically and contextually appropriate innovation in/for humanitarian contexts.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

There is a possibility that participants, when retelling past events, may become emotional. There is also the chance that due to the specifics of a story being retold, a participant's identity may be revealed. In these cases, we will take extra precaution in the process of anonymization, and transcripts that cannot be adequately anonymized will be withheld from public dissemination.

If you choose to take part in this study, you will be told about any new information which might affect your willingness to continue to participate in this research.

HOW MANY PEOPLE WILL BE IN THIS STUDY?

We anticipate interviewing between 25-40 individuals.

WHAT ARE THE POSSIBLE BENEFITS FOR ME AND/OR FOR SOCIETY?

We cannot promise any personal benefits to you from your participation in this study. We anticipate our study will provide the necessary empirical information with which to develop effective and practical ethical practice. We aim to encourage humanitarian innovators and organizations to consider integrating ethical analysis into their innovation processes and to inform them on how best to do so. The introduction of ethics resources into humanitarian innovation processes can help shift attitudes and expectations, better prepare humanitarians to meet growing global humanitarian needs.

IF I DO NOT WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

It is important for you to know that you can choose not to take part in the study. There are no alternatives to participation, but if you prefer to provide a response in writing we will take that into consideration.

WHAT INFORMATION WILL BE KEPT PRIVATE?

We will be gathering your name, email address, and/or telephone number as well as organizational affiliation where applicable. This data will not be shared with anyone except with your consent or as required by law. All personal information such as your name, email or real address (where applicable), phone number, will be removed from the data and will be replaced with a number. A list linking the number with your name will be kept in a secure place, separate from your file. The data, with identifying information removed will be securely stored in a locked office or in a password-protected file on a password protected computer. Electronic audio files will be deleted and paper files with identifying information will be destroyed after 10 years. Transcripts, with all identifying information removed, will be archived and made available to

other researchers via Scholars Portal Dataserve network through McMaster University (http://dataverse.scholarsportal.info/dvn/).

If the results of the study are published, your name will not be used and no information that directly discloses your identity will be released or published without your specific consent.

CAN PARTICIPATION IN THE STUDY END EARLY?

If you volunteer to be in this study, you may withdraw at any time. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

WILL I BE PAID TO PARTICIPATE IN THIS STUDY?

You will not be paid to participate in the study.

WILL THERE BE ANY COSTS?

Your participation in this research project will involve no additional costs to you.

IF I HAVE ANY QUESTIONS OR PROBLEMS, WHOM CAN I CALL?

If you have any questions about the research now or later, or if you think you have a research-related injury, please contact the locally responsible investigator.

Locally Responsible Investigator and Co-Principal Investigator:

Dr. Lisa Schwartz

Professor of Health Research Methods, Evidence & Impact

McMaster University

1280 Main St W, Hamilton, Ontario, L8S 4K1

Tel: (905) 525-9140 Ext 22987

Email: schwar@mcmaster.ca

If you have any questions about your *rights as a research participant*, please call the

Office of the Chair, Hamilton Integrated Research Ethics Board at 905.521.2100 x 4201

CONSENT STATEMENT

Participant:

I have read the preceding information thoroughly. I have had an opportunity to ask questions and all of my questions have been answered to my satisfaction. I agree to participate in this study. I understand that I will receive a signed copy of this form.

Name	**Signature**	**Date**

Person obtaining consent:

I have discussed this study in detail with the participant. I believe the participant understands what is involved in this study, and understands that s/he can withdraw from the study at any time. I am committed to honor what has been agreed upon in this consent form, and to give a signed copy of this consent form to the participant.

Name, Role in Study	**Signature**	**Date**

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HIREB). The HIREB is responsible for ensuring that participants are informed of the risks associated with the research, and that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the Chair, Hamilton Integrated Research Ethics Board at 905.521.2100 x 42013

APPENDIX 6 - INTERVIEW GUIDE

Total participant time required: 40-75 minutes

Break: As many as necessary

Pre-interview briefing

The goal of this interview is to explore your experiences and perspectives related to ethical innovation in humanitarian contexts, and your views on what may be necessary to support that process.

Through today's interview we are hoping to learn about your experiences and your perceptions about funding, innovating, implementing, or reviewing innovation in humanitarian organizations, and connections with values and ethical considerations. Identifying information related to yourself, and other names mentioned , will be kelp confidential and anonymous.

Please feel free to look over the consent form and ask any questions that you may have about the process.

General guide for leading the interview

Before the interview begins conduct the informed consent process.

Introduction

Welcome participant and introduce myself;

Explain the general purpose of the interview and why/how the participants were chosen;

Explain the presence and purpose of recording equipment

Outline general ground rules such as that participants can end the interview at any time they want or exercise their right to refuse to answer any question(s);

Address the issue of privacy and confidentiality;

Inform the participant that information discussed is going to be analyzed as a whole and that participants' names will not be used in any analysis of the discussion;

Interview overview

This interview will consist of semi-structured questions. During the interview I may ask you additional questions to further clarify or elaborate your answer. You may choose not to answer a particular question; in that event please feel free to inform me. We can take a break, or end the interview anytime you would like.

Any information identifying you as a participant of this research will be kept confidential.

I would like to record this interview for data analysis and to ensure that the responses were captured and transcribed accurately.

Do you have any questions for me, before we begin?

Main research questions (Probes in Italics)

To begin, can you please describe your experience in relation to humanitarian innovation? E.g professional role, organization, collaboration with humanitarian organization, community involvement?

How long have you been working in this capacity?

How has your title and role changed in that time with the organization?

In what humanitarian settings have you worked/ been involved?

What was the nature of the services you provided/received?

What was the nature of your interactions with the organization?

In what ways have you engaged with or in humanitarian innovation? Please describe these experiences in detail.

What was the context?

Why was there a need to innovate?

Did you feel involved / excluded?

How transparent was this process?

Where did the innovation process take place?

How was the innovation implemented?

Who was involved?

What steps were taken?

What were the implications/consequences? For whom?

What do you think was done well in this situation/these situations?

Are there things that you think you would do differently/should be done different?

Were there ethical challenges that you faced? That others faced?

How do you think humanitarian innovation should be done? What would constitute a 'good' innovation process in humanitarian contexts??

Who should be involved?

What process should be followed?

What values/considerations should be taken into account?

How should this be adapted to different contexts?

How do you think an ethical humanitarian innovation process should be implemented?

What would constitute a 'good' process for innovating in humanitarian contexts?

What values are important?

What steps should be taken?

Who should be involved?

How should this be tailored in different contexts?

How could humanitarian health organizations better support their staff to foster innovation? What guidance would be helpful?

Debriefing (5-10 minutes)

Is there anything else that you would like to say about anything we've discussed today?

Thank you very much for your time. At any point if you would like to revisit your participation in this study, do not hesitate to contact us. Would it be ok for us to contact you for clarification in the future? We have learned a lot from your story and appreciate gaining your perspective on these topics.

APPENDIX 7 - WORKSHOPS, INVITED PRESENTATIONS, CONFERENCES

Dates	Event/Conference	Audience Composition	Material Presented
Jun 26-27, 2019	HumanityX, The Hague NL	Researchers, Innovation Funders, Accelerator and Innovation Hub Representatives (n≈12)	Preliminary Scoping Review & Interview Findings, “Gallery Walk” Exercise
Sep 9-12, 2019	R2HC Forum, London UK	HIF/elhra, Researchers, Innovation Funders and Advisory Board Members (n≈10)	Preliminary Scoping Review & Interview Findings, Stages Tool
Oct 17, 2019	Canadian Red Cross, Ottawa CAN	Canadian Red Cross National Headquarters (n≈20)	Preliminary Scoping Review & Interview Findings, Stages Tool
Oct 28-31, 2019	Centre for Disaster Preparedness (CDP), Manila PH	CDP Representatives, HIF Funded Grantees (n≈25)	Preliminary Scoping Review & Interview Findings, “Gallery Walk” Exercise, Stages Tool, Values Mapping exercise
Dec 9-13, 2019	Humanitarian Grand Challenge x World Food Programme Innovation Accelerator Week, Munich DE	Humanitarian Grand Challenge Cohort 2 Innovators, World Food Programme Innovation Accelerator Representatives (n≈40)	Preliminary Scoping Review & Interview Findings, Stages Tool, Values Workbook
Jan 20-23, 2020	Humanitarian Innovation Fund Kick Off Week, Amsterdam NL	Humanitarian Innovation Fund Cohort - Disability & Old Age Inclusion; Incontinence; Gender Based	Preliminary Scoping Review & Interview Findings, Stages Tool, Values

		Violence; and Water & Sanitation Innovators (n≈20)	Clarification Tool, Foresighting Tool
Feb 18/26, 2020	Humanitarian Innovation Fund Open Webinars (Online)	Humanitarian Innovation Fund Grantees, Innovation Managers (n≈25)	Preliminary Scoping Review & Interview Findings, Stages Tool, Values Clarification Tool, Foresighting Tool
Mar 5-8, 2020	European Commission High Tech for Humanitarian Aid Prize - Horizon 2020, Brussels BE	Informal discussions with Horizon 2020 Officials and Grant Reviews	Expert Review of Health Innovation Award Finalists
Jun 3-5, 2020	Canadian Bioethics Society Conference (CANCELLED)	Accepted to present standard concurrent session to audience of bioethics researchers/scholars, Recipient of abstract award	Research Findings (Key Stakeholder Interviews)
Jun 16-26, 2020	International Federation of the Red Cross & Financial Times Imagining Digital Futures Commission Consultation (Geneva, Online)	International Federation of the Red Cross & Financial Times high level representatives and other invited speakers (n≈25)	Preliminary Scoping Review & Interview Findings, Stages Tool, Values Clarification Tool, Foresighting Tool
Jul 21 2020	Humanitarian Innovation Fund Journey to Scale Program (Part 1, Online)	Humanitarian Innovation Fund Prospective Grantees, Innovation Managers (n≈15)	Research Findings, Stages Tool, Values Clarification Tool, Foresighting Tool,
Sept 11 2020	Humanitarian Innovation Fund Journey to Scale Program (Part 2, Online)	Humanitarian Innovation Fund Prospective Grantees, Innovation Managers (n≈15)	Research Findings, Stages Tool, Values Clarification Tool, Foresighting Tool,

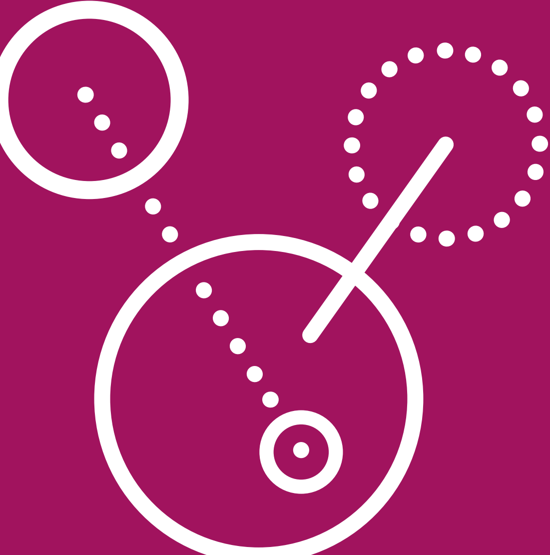
Oct 5 2020	Humanitarian Grand Challenge x World Food Programme Innovation Accelerator Week, (Online)	Humanitarian Grand Challenge Cohort 3 Innovators, World Food Programme Innovation Accelerator Representatives (n≈40)	Research Findings, Stages Tool, Values Clarification Tool, Foresighting Tool, REACH Tool
Oct 2020	Humanitarian Innovation Fund WASH Evidence Challenge (Online)	Humanitarian Innovation Fund Grantees, Innovation Managers (n≈9)	Stages Tool, Values Clarification Tool, Foresighting Tool, REACH Tool, Organizational Virtuous Circle Tool, Case Study
Nov 23 2020	McMaster University New Frontiers in Health Policy Conference (Online)	Researchers, Graduate Students(n≈25)	Research Findings, Stages Tool, Values Clarification Tool, Foresighting Tool, REACH Tool, Organizational Virtuous Circle Tool

APPENDIX 8 - THE HIF ETHICAL HUMANITARIAN INNOVATION TOOLKIT

NOTE: UPDATED VERSION TO BE APPENDED TO THE FINAL VERSION OF THE DISSERTATION PRIOR TO UPLOADING ON MACSPHERE. THIS IS THE LATEST WORKING DRAFT SHARED BY THE HIF IN APRIL OF 2021.

Ethics for Humanitarian Innovation

Toolkit



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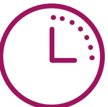
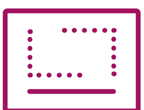
Virtuous Circle

How will you support ethical humanitarian innovation across your work?

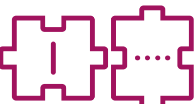


30–45 minutes

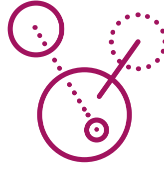


A4 Print

Focus:
Organisations and partnerships



Use with:
— Values Clarification
— Ethics For Action
— REACH



Toolkit

Introduction

The virtuous circle of organisational ethics

In ethics, a virtuous circle occurs when ethical acts positively reinforce future ethical acts. The Virtuous Circle tool helps identify policies, processes and people that support ethical reflection or decision-making within an organisation or team – reinforcing the virtuous circle.

The tool highlights three important areas that can influence your organisation's 'ethical climate':

- Ethical resources
- Ethical practices
- Ethical expertise

And it asks vital questions to prompt discussion. These three areas create the foundations for how people respond when facing ethical issues.

This exercise is intended to help you mainstream ethical consideration in your organisation, through both formal and informal structures. It should also serve to help create a system for accountability for innovators and oversight of innovation projects.

By regularly reviewing these **implementation questions** and updating the three **foundational areas** (through ensuring adequate resourcing, reviewing procedures, and developing expertise through training etc), an innovation project can be sure of a strong ethical base.

Understanding the tool

The What, Why, Who and When will help you understand the purpose of the tool.

The **step-by-step guide** on page 3 and **Guidance notes** on page 4 will lead you through the discussions and questions this tool presents.

For the conceptual background and development process of this tool see **page** xx of the **Background paper**.

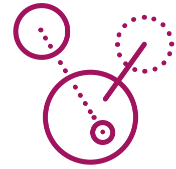
What: A set of questions to review and address periodically, to ensure that organisational plans, policies and processes are grounded in principles of ethical humanitarian innovation, and contribute to a virtuous circle.

Why: Ethical issues are best addressed in an environment where transparent and accountable systems exist. Organisations can work proactively to establish structures and an organisational climate that foster ethical innovation.

Who: The points raised by the tool are relevant to all innovation stakeholders working in any capacity around innovations. This includes members of innovation teams and their partners, as well as organisational leaders and decision makers.

When: Ideally, the questions in this tool would be addressed before embarking on **Ethics For Activities** tool for a specific project, and then periodically reviewed once innovation-related work has begun.

Introduction
Understanding the tool
Using the tool
Guidance notes
Canvas



Toolkit

Using the tool

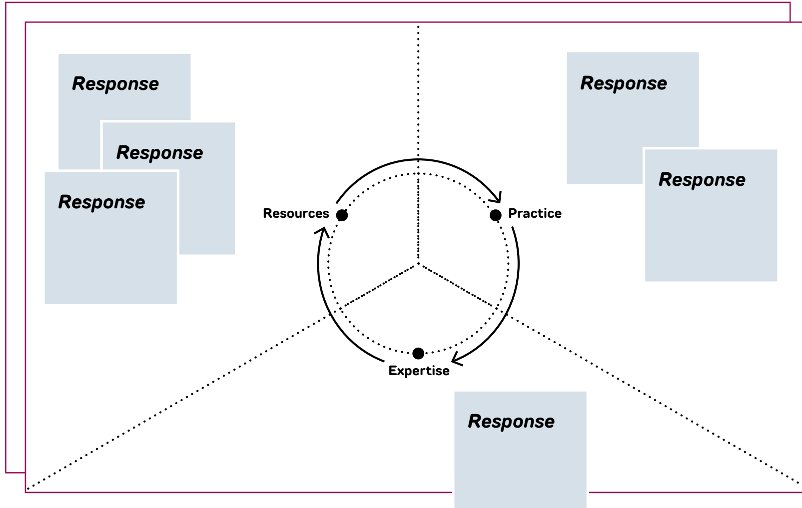
→ **1.** Start by asking an **open question** from the **resources column** in the **Guidance notes**. For example:

What high-level policies do you have in place that might guide ethical decision-making?

2. Capture each response on a sticky note and place them in the **Resources** section on the canvas. Respond to all the questions that are relevant to your team or organisation.

3. If you get stuck or need some inspiration, pick a related question from the **checklist** in the **Guidance notes**. For example:

Do you have a set of core values?



4. Once you've completed the **open questions** for the **Resources** section, repeat for the **Practice** section, this time using the **open** and **checklist questions** from the **practice column** of the **Guidance notes**. For example:

How do you facilitate timely access to resources that support ethical innovation practices?

5. Finally, complete the Expertise section using the **open** and **checklist questions** from the **expertise column** in the **Guidance notes**. For example:

Who can you draw upon to support discussions and deliberations around ethical issues?

6. Once you have responded to all the questions that are relevant to your organisation or team – and this sticky-note canvas is complete – revisit the **checklist questions** on page 6. Use the answers from your sticky notes to think about these questions:

What are you missing? What do you commit to putting in place to build an ethical climate?

7. Set a specific schedule for revisiting this tool, with named individuals responsible for organising and participating. Document your discussions and use these as a starting point next time you use the tool.

Introduction
Understanding the tool
Using the tool
Guidance notes
Canvas

Toolkit

Guidance notes

When using or facilitating this tool, start with the **open questions** on page XX in order to identify any relevant resources, practices and expertise that you have in place to help create a strong ethical basis for your work – and to identify what is missing. Then use the **checklist questions** to spark further discussions of what you need to have in place.

	Resources	Practice	Expertise
Open questions	**What** high-level policies do you have in place that might guide ethical decision-making? **What** other organisational documents might have ethical dimensions?	**How** do you facilitate timely access to resources that support ethical innovation practices? **How** do you document experiences and maintain institutional memory about ethical issues? **How** do you learn from ethical challenges, and share what is learned with others?	**Who** can you draw upon to support discussions and deliberations around ethical issues?
Checklist questions	**Do you have** a set of core values? **Do you have** a code of conduct? **Do you have** a policy on conflicts of interest or who you will accept funding from? **Do you have** guidance for data protection and stewardship? **Do you have** resources in place to support staff in navigating ethical issues and facilitating ethical practices? **Do you have** clearly defined accountability commitments that link to your core values?	**Do you have** regular, protected time to discuss issues of concern and reflect on the ethics of your actions? **Do you have** an ethics review process that project stakeholders can access? **Do you have** a system to report ethical issues related to your project? **Do you have** processes in place to solicit and respond to feedback, including complaints and recommendations, from end-users?	**Do you have** specific individuals or groups, such as ethics advisors or a review committee, that support ethical reflection? **Do you have** someone allocated to manage ethical concerns, support ethical practice, and document learning?

Introduction
Understanding the tool
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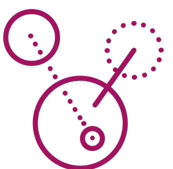
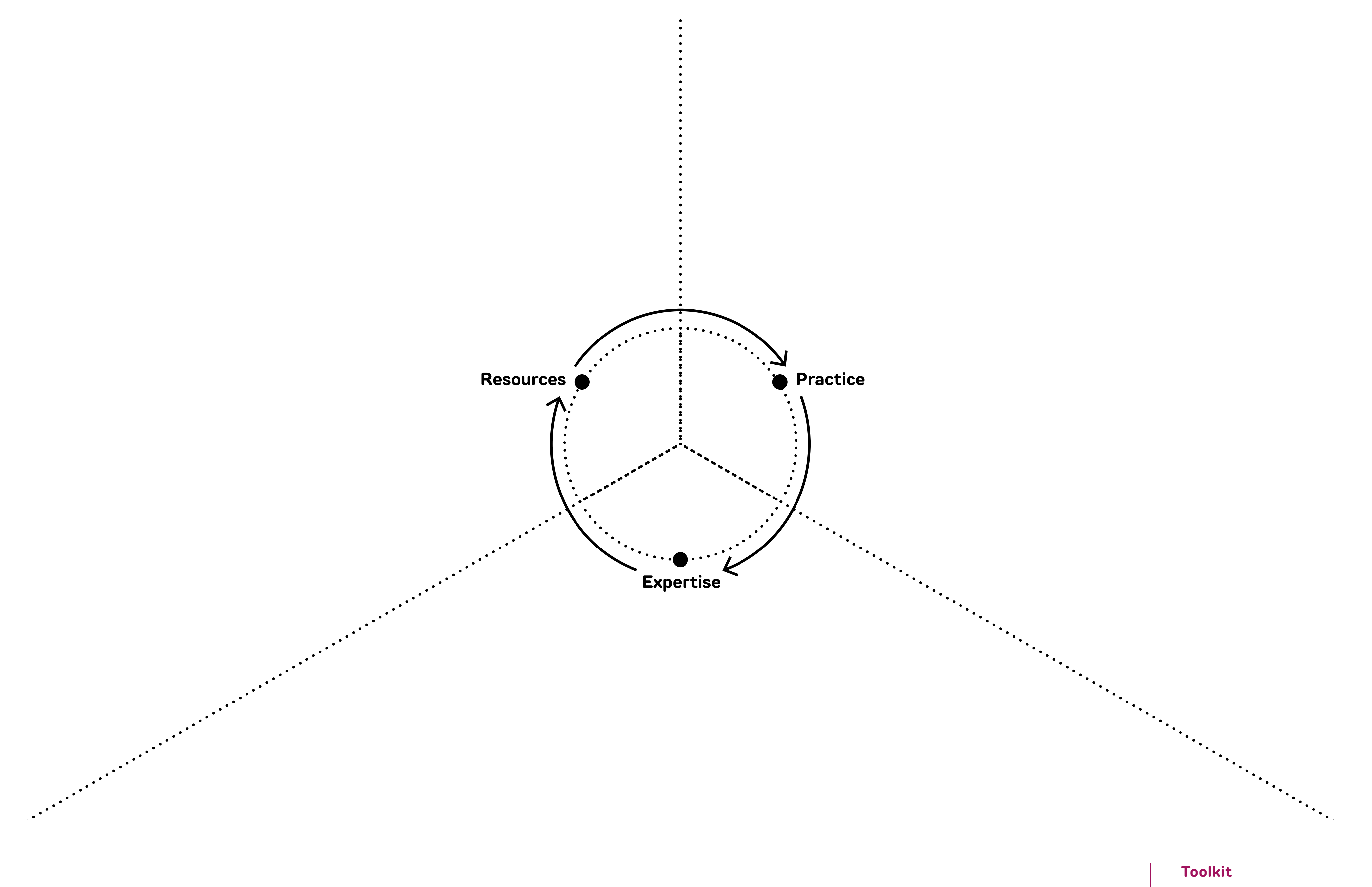
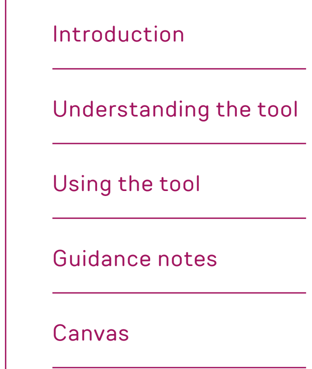
Canvas

Note: If you don't have a facilitator, nominate one person in your team to lead the use of this tool.



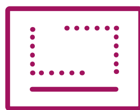

Resources
Practice
Expertise



Ethics For Activities

How will you support ethical humanitarian innovation in every activity?

45–60 minutes



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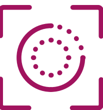
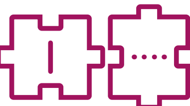
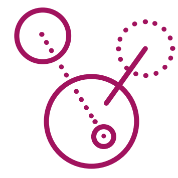


Focus:
Summary of focus to come



Use with:
— Virtuous Circle
— Values Clarification
— Foresighting
— Case studies



Toolkit

Introduction

Ethical considerations for every activity

Ensuring that ethical considerations are taken into account from the outset of designing an innovation project, and attended to as a project progresses, is essential. By drawing attention to salient features of innovation projects and helping teams anticipate potential ethical issues, this tool aims to support the articulation of a well-considered and ethically sensitive project design.

The questions included in this tool should act as a prompt toward clarifying key issues related to engagement, communication, accountability, fair practices, and preparation for managing uncertainties. Some questions are there to spark discussion and encourage shared decision-making. Others will need to be revisited and revised based on new information and changing circumstances. They are meant to draw attention to significant issues, and can act as an aide-mémoire for your team to ensure vital questions are not overlooked.

Understanding the tool

The What, Why, Who and When will help you understand the purpose of the tool.

The **step-by-step guide** on page XX and **Guidance notes** on page XX will lead you through the discussions and questions this tool presents.

For the conceptual background and development process of this tool see **page** xx of the **Background paper**.

What: A suite of questions that correspond to different sets of activities in an innovation project, and some that span the project. They promote planning and reflection to develop ethically robust projects.

Why: There are cross-cutting as well as specific ethical considerations for different activities in the innovation journey. This tool invites preparation, reflection and articulation of how they will be addressed at each stage in order to help build a project that aligns with articulated values.

Who: This tool can be used by all innovation stakeholders. It is best if it is part of an inclusive process involving members of communities affected by crises.

When: Ideally at the outset of any new phase of work. This tool should be revisited regularly throughout the innovation journey.

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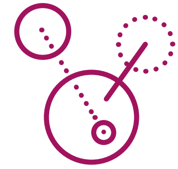
Cards



Using the tool

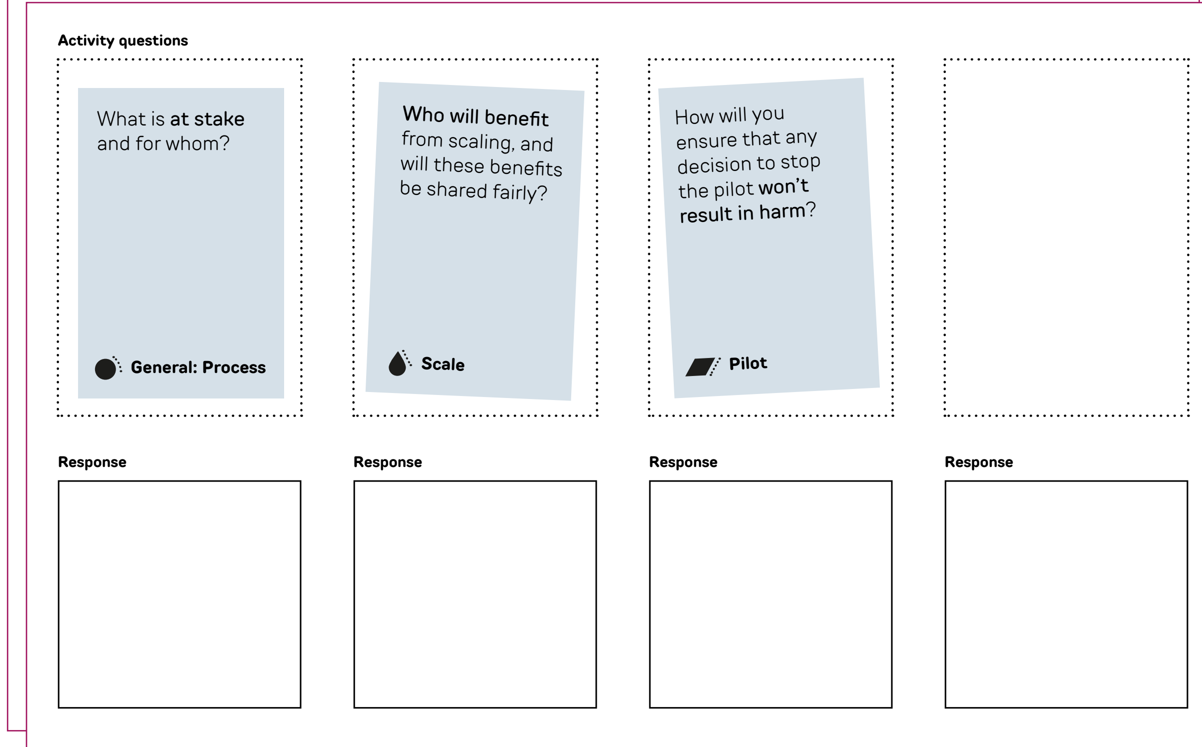
1. Start by printing pages xx–XX, and cutting out the individual cards. Identify the activity cards that best match the **activity** you are interested in (Pilot, Scale, and so on). Put the rest to one side.

2. **Sort your chosen cards in the order that you wish to address them.** You might lay them out for all to see in order of most important to least, or leave them in a pile with the card you wish to address first face-up on the top of the pile.

3. Read the first card – your highest priority – aloud to the participants and place it in the **Questions** field on the canvas. (If you can't decide on a priority, start with a **General** question.)

Who is owed a duty of care?

General: People



4. Each canvas is designed for four questions. Place the question card above one of the four **Response** fields and capture your response in the space provided.

5. **Repeat for each card** in your priority decks.

6. Start a new canvas for each set of four cards.

   Before moving on, consider **taking a photo** of the canvas you've just completed.

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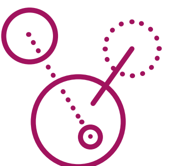

Guidance notes

When using or facilitating this tool it is essential to recognise that teams are likely to be engaged in multiple activities at any one time and will likely move back and forth between them. Some teams may want to focus their attention on just one activity or insist that their project does not face ethical challenges. In these cases, facilitators should use the card deck – and case studies – to encourage a healthy discussion about the different ethical challenges a project might face.

Using the cards

1. Print

Print pages xx–XX on card, rather than paper, if possible. Paper is fine, but shuffling will be more difficult and the cards will tear more easily.

2. Cut

Cut out each card (with scissors, craft knife/ruler, or whatever is available).

3. Use

Collect all cards of the same type (identified by the **action indicator** in the box at the top of each card); you should arrive at seven piles. Place them all face-up, ready to be used by the participants.

4. Add

Encourage the team to add their own ethical questions on the blank cards, and include these in your discussions.

Anatomy of a card

What is **at stake** and for whom? · · · · · · **The question**

General: Process · · · · **Activity indicator**

This is the primary way to group cards. There are six activity sets (one for each innovation action as described in the Humanitarian Innovation Guide) and one general set.

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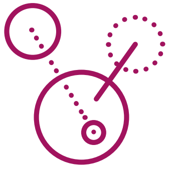
Note: If you don't have a facilitator, nominate one person in your team to lead the use of this tool.



Toolkit

Activity questions

Response

Response

Response

Response

Who stands to benefit? General: People	Who is being heard and who is not being heard? General: People	Who is accountable and to whom? General: People	Who is owed a duty of care? General: People	What is at stake and for whom? General: People
What risks are being created and for whom? General: People	What are the expressed needs and goals of the affected community? General: People	Who is accountable? How? And to whom? At each stage in the innovation journey General: People	What are the costs and benefits of acting now? General: Process	What is the best way to invest the resources you have available? General: Process

How are **power dynamics** considered and accounted for? **General: Process**	How can you ensure **meaningful collaboration** with the community you seek to serve and other stakeholders? **General: Process**	How will you **learn** from what goes wrong or doesn't work? **General: Process**	How will you **monitor, mitigate and respond** to ethical issues and risks? **General: Process**	How will you ensure **equity and fairness** in the distribution of benefits, costs and risks? **General: Process**
How will you **monitor progress** against objectives? **General: Process**	How will you ensure **inclusive practices**? **General: Process**	How will you ensure **responsiveness** to the needs and demands of the community you seek to serve? **General: Process**	How will you work to support and maintain **equitable partnerships**? **General: Process**	How will you **communicate** your ethical response with others? **General: Process**

How will you manage expectations of the community you seek to serve and other stakeholders?

General: Process

How will you consider issues of fairness in participation?

General: Process

How will you ensure you always respect the dignity of people affected by crises?

General: Process

What permissions or consent are needed for a given activity?

General: Process

How will you assess the likelihood of your strategies being successful and sustainable?

General: Process

How might your principles inform your choices, designs and strategies?

General: Process

How will you evaluate the trade-off between risks/ potential harms and benefits at each stage?

General: Process

How will issues of ownership, authorship and intellectual property (IP) be managed?

General: Process

How will you ensure your strategy or process is appropriately **robust and responsive** to the community you are working with?

☐ **Recognition**

How will you manage any **conflicts of interest** in prioritising and selecting problems?

☐ **Recognition**

Who will be **included** in the identification of problems?

☐ **Recognition**

What are your **criteria** for prioritising and selecting problems to respond to?

☐ **Recognition**

How will you ensure your problem identification process is **inclusive** of underserved groups?

☐ **Recognition**

What is your plan for identifying **priority problems** to respond to?

☐ **Recognition**

What is your plan for **identifying existing solutions** or ideas?

Search

How will you **identify others** who may already have pursued this path and developed a solution?

Search

Who will you **engage in your search** for solutions or ideas?

Search

How will you assess whether an identified solution **can or should be sourced locally**?

Search

How will you assess whether a solution is **a good fit** for the problem at hand?

Search

Who do you need to involve in **adapting the solution** to the context?

Adaptation

What aspects of the proposed solution, its management and the setting for deployment require attention?

Adaptation

What adaptations might be required to ensure **accessibility and inclusivity**?

Adaptation

What might be displaced if a new solution is implemented in the context?

Adaptation

How will you assess **relevance** of the solution to the context?

Adaptation

How will you take into account the particular **needs of the affected population** in adapting the solution?

Adaptation

How will you **identify any new risks** created with the application of a new solution to the context?

Adaptation

Who are the **stakeholders** that should be involved in this process?

Invention

Who are you designing for, and how will you make **access** to the solution equitable?

Invention

How will you ensure **alignment of your intentions** with the aims and priorities of your organisation or other stakeholders?

Invention

How will you ensure the invention process and resulting solution is **responsive** to needs and demands?

Invention

How will you determine whether the invention process and resulting solution requires **ethical review**?

Invention

What measures are in place to **reduce the risk** of harm and to manage any instances that might occur?

Pilot

How will you determine whether deployment of your innovation means an **external ethics review** is warranted?

Pilot

How will you manage expectations in relation to the **uncertainties inherent in the pilot** as well as its temporary nature?

Pilot

How will you **evaluate the pilot** and ensure learning and feedback is generated and used in decision making?

Pilot

How will you ensure that any decision to stop the pilot **won't result in harm**?

Pilot

How will you **ensure appropriate research methods**, consent processes and confidentiality measures are being applied?

Pilot

What will be the **criteria** for making a decision on whether to scale?

Scale

What level of scale is **appropriate and relevant** for this solution?

Scale

How will you evaluate the **trade-off between risks/ potential harms and benefits** in scaling the innovation?

Scale

How will you **evaluate the success** of your scaling strategy?

Scale

How will you determine your **scaling strategy**?

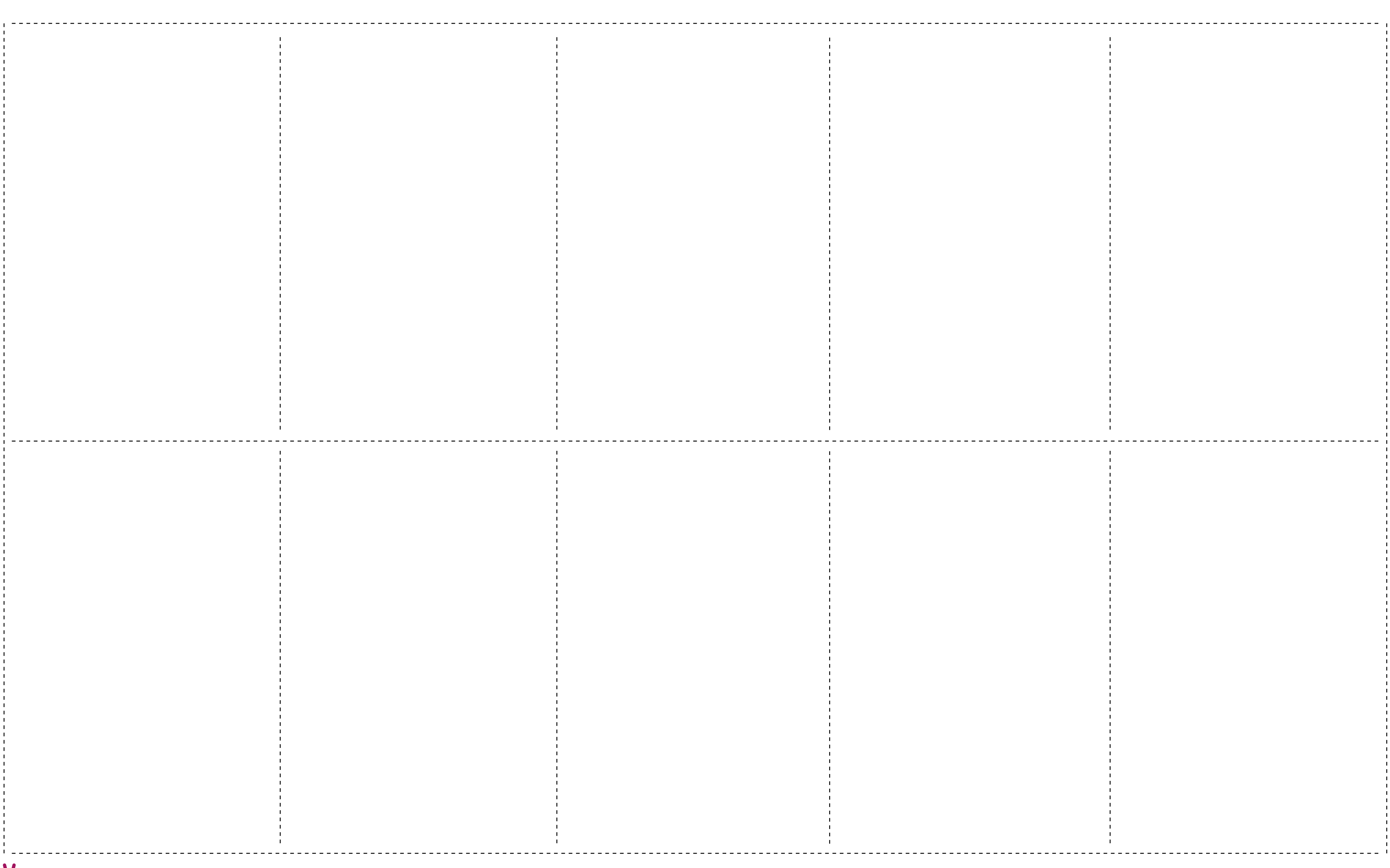
Scale

Who will decide that scaling is justified and lead on your scaling strategy?

Scale

Who will benefit from scaling, and will those benefits be shared fairly?

Scale

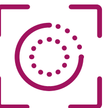


Values Clarification

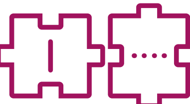
What key values will you prioritise and operationalise?

15–30 minutes

A4 Print



Focus:
Summary of focus to come



Use with:
— Foresighting
— REACH
— Case studies

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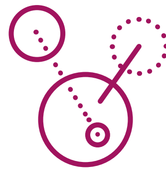

Toolkit

Introduction

Clarifying your values

The Values Clarification tool will help you articulate and refine what really matters in your project. It encourages a clear, actionable, consistent language around values; language that will be used and understood by every member of the team.

Articulating your values helps your team (and others) to distinguish right actions from wrong, and understand what is truly important in a project. In using this tool, you should reflect upon and discuss the values you have identified for your project, and write a short statement about why each one matters. This helps you to express your values in terms that are relevant to your work, with meaning for your team and beyond.

You might draw on resources such as organisational resources or guidance documents, or guidelines specific to your particular domain of innovation (eg, digital innovation) in creating your values. The **Guidance notes** on page 4 also provide insights into some of the most common values we have identified in humanitarian innovation. It is not an exhaustive list, but might offer some inspiration.

The responses to the **Ethics For Activities** tool can help identify ethical challenges in the **Foresighting** tool. Values addressed as part of the Values Clarification tool can then be taken into the **Foresighting** tool. The Values Clarification tool can also be a resource for use of the **REACH** tool, as an articulation of the values of the project and examination of how they may be in tension with one another, or with the values of other stakeholders.

Understanding the tool

The What, Why, Who and When will help you understand the purpose of the tool.

The **step-by-step guide** on page 3 and **Guidance notes** on page 4 will lead you through the discussions and questions this tool presents.

For the conceptual background and development process of this tool see **page** xx of the **Background paper**.

What: Helps teams to identify and clarify the ethical values they want to uphold in their innovation project. The tool helps teams to develop a shared articulation of these values, using accessible, actionable and consistent language.

Why: Clear, common values are the foundation of project-design decisions and of value-sensitive or values-based approaches. Having values specific to a project can help bring abstract concepts into operational reality, and can foster closer collaboration and discussion between project partners and others.

Who: This tool can be used by humanitarian innovation teams and their partners and collaborators, and to support engagement with members of affected communities.

When: The tool is most relevant in the earlier phases of a project. It can also be used later on, including in combination with the **Foresighting** or **REACH** tools.

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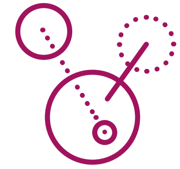
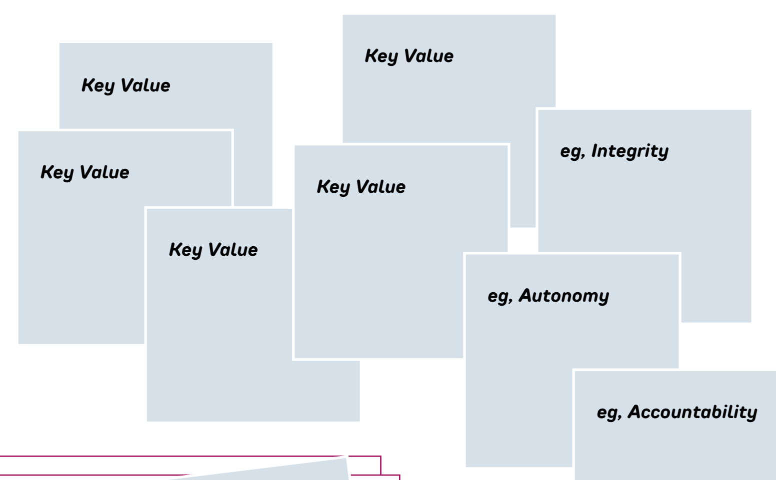


Using the tool

1. Begin by capturing values on pieces of paper of sticky notes (one value per note), drawing from organisational guidance or common values from the particular domain of innovation. If you do not have any identified values, use the table of suggested values in the **Guidance notes** as a starting point. A brainstorming exercise (see **Guidance notes**) will help you to come up with your own.

2. Arrange your values face-up on a flat surface.

3. Identify your values and consider how they might relate to one another. Try to identify six that you'd like to develop into a statement.



Value:

[example] Key Value

Value statement:

Value:

[example] Integrity

Value statement:

Value:

eg, Integrity

Value statement:

Value:

Key Value

Value stater

Value:

Value statement:

Value:

Value statement:

4. Move the sticky note to the space on the value canvas, or write the value directly on the canvas.

5. Now describe how and why this value is important for your team and for the work you are doing. Repeat this step until you have filled the page, or when you are satisfied that you have captured all your relevant value statements.

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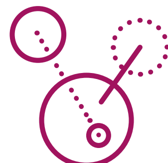

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Guidance notes

Some participants/teams will find it easy to identify five or six values, while other groups may not. For those that struggle, lead them in a brainstorming exercise. Start by asking participants to generate their own priority values on sticky notes. What are the principles that guide their organisation or sector? What qualities do they consider important in their partners and colleagues? If they continue to struggle, offer some inspiration from the table below. All participants should be encouraged to prioritise their values. How they prioritise is up to them, but you might like to ask about project or organisational priorities or how their values might clash with one another, and which would take precedence.

Some common values in humanitarian innovation projects

Accountability	Equity	Integrity	Trust	
Autonomy	Experimental rigour	Justice		
Collaboration	Honesty	Openness		
Dignity	Humility	Ownership		
Do no harm	Inclusivity	Sustainability		

Value suggestion
These values are only suggestions. Use these as inspiration for your own, or use your own if you already have them in place.

Blank fields
Space for your own project and organisational values.

You can cut out these values and place them on to the values canvas if you wish.

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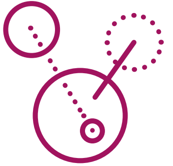
Note: If you don't have a facilitator, nominate one person in your team to lead the use of this tool.



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Value:

Value statement:

Value:

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Foresighting

What ethical challenges do you anticipate and how will you address them?

30–45 minutes

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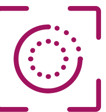
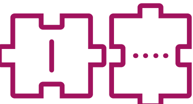
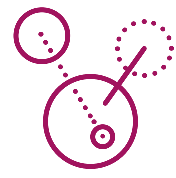


Focus:
Summary of focus to come



Use with:
— Values Clarification
— Ethics For Activities



Toolkit

Introduction

Planning for the future

The Foresighting tool helps teams to structure a system of accountability before decision-making begins, clearly linking the team's values – as identified in the **Values Clarification** tool – with an approach to mitigating ethical challenges (as defined below). This tool, and the values-based strategy, can be revisited later in the innovation journey, when an ethical challenge has arisen and the strategy is successfully enacted.

If a decision made while facing an ethical challenge leads to a negative outcome, this tool can also be revisited to assess why that outcome may have transpired and to determine how the strategy can be adapted to mitigate future risks.

Most projects will face challenges that threaten or complicate a team's ability to complete their activities while remaining true to their values. These can be considered 'ethical challenges' if one of the following is true:

— the ethically preferred response is unclear – or it is clear but cannot be enacted.
— the 'right thing to do' is also wrong in some important way.
— every course of action violates one or more moral principles

Such challenges can result from external forces such as political instability, or internal forces like a communication breakdown with a community.

Example: One of your key project values is 'inclusion', so you have planned to form a representative advisory group as one of your project activities. However, you have identified that it might be difficult to engage with a particular marginalised group within the community. Your strategy should address this challenge.

Understanding the tool

The What, Why, Who and When will help you understand the purpose of the tool.

The **step-by-step guide** on page 3 and **Guidance notes** on page 4 will lead you through the discussions and questions this tool presents.

For the conceptual background and development process of this tool see **page** xx of the **Background paper**.

What: A tool that prompts anticipation of ethical challenges in three workable sections associated with planned project actions, and bases mitigation strategies in team values.

Why: Values need to be made explicit, and applied in a consistent and tangible way to the innovation project activities. This will help prepare teams with a system of decision-making that encourages accountability.

Who: This tool is best suited for use by humanitarian innovators, and may be used as a reference point in consultations with donor liaisons/ grant managers.

When: This tool is most useful in the design phase of an innovation journey, when the problem and team have been defined, and there is a need to develop strategies for risk mitigation. It can be returned to at various points in the innovation journey, for example when an ethical challenge has been encountered and there is a need to confirm the effectiveness of the strategy, or to consider when it might be appropriate to make values-driven adaptations.

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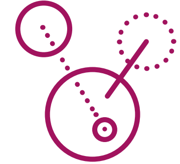
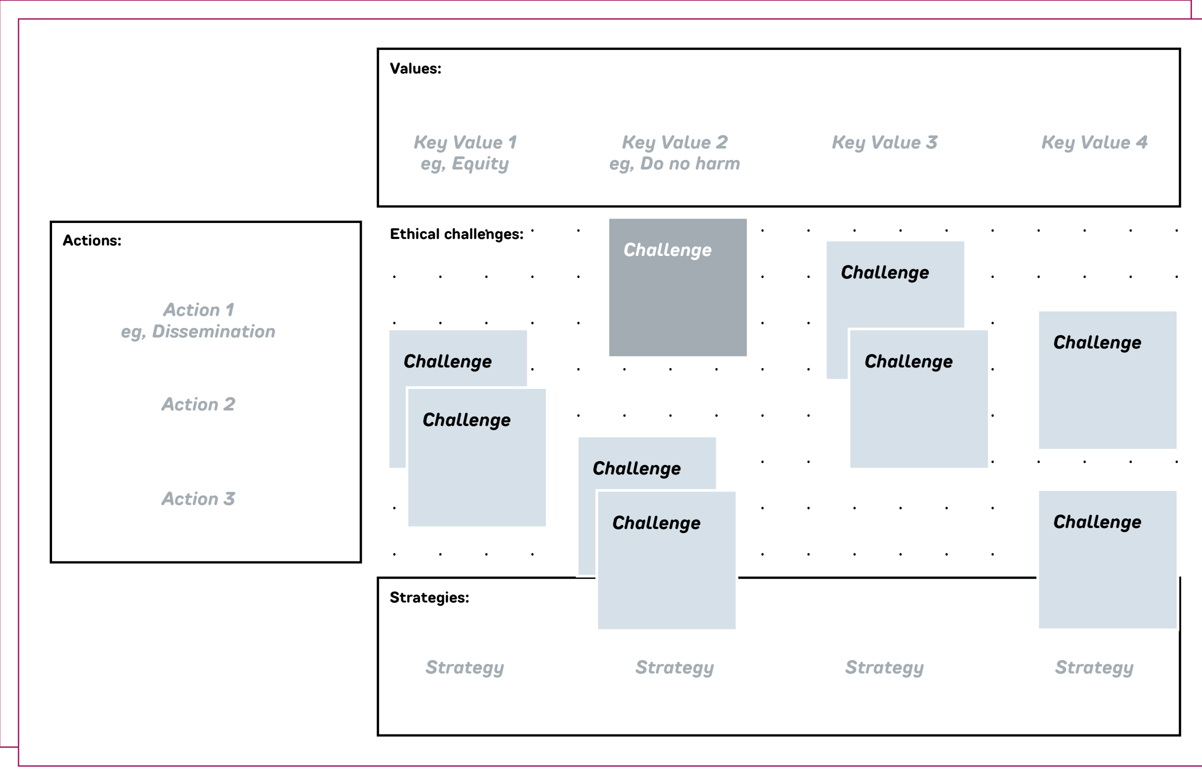


Using the tool

→ **1.** Begin by capturing your first project or organisational value here. You can use the values identified through the Values Clarification tool, or draw from existing values.

2. Now, identify your first project action.

Identify the challenges associated with this action.



3. Next, identify the anticipated **challenges** associated with the first project action and value. Responses from the **Ethics for Activities** tool may inform the challenges generated in this step.

The challenges fall at the intersection of an activity and a value.

Start by capturing as many challenges as you can think of, then sort them so that they line up with the corresponding activity and value, as shown in the example (the darker sticky note on the canvas relates to Action 1 and Value 2).

4. Finally, generate a **strategy of actionable items** in response to the anticipated challenges. This can be a sentence, paragraph or bullet points

Your strategy should resolve the challenges in a way that promotes the key values you have identified – ideally addressing a number of challenges to each value under a single strategy.

5. If **additional space** is required for further activities, you may connect additional template sheets or extend with blank paper and sticky notes.

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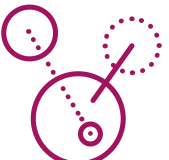

Guidance notes

Page 3 gives instructions for how an innovation team should work through this exercise. The main steps are explained in more depth below:

Values	If the team has worked through the **Values Clarification** tool already, they should use the results of that discussion in the **values** fields here. Other teams who may have well-established values already may not need the Values Clarification tool and can add their own to the **values** fields.
Actions	In this section innovation teams must think about the specific **project actions and tasks** they will undertake. The actions do not need to be in chronological order, and do not need to span the entirety of the innovation cycle (eg, all the actions could relate to piloting). However, the team will benefit from addressing the most complex and important activities – those they see as critical to the success of the innovation. The activities can be shared in as much, or as little detail as desired.
Anticipated challenges	This section requires innovation teams to examine the project actions they have identified as being critical to the success of their innovation, and to consider the ethical challenges they may face while pursuing these actions. Responses from the **Ethics for Activities** tool may inform the challenges generated in this step. Once the teams have identified their anticipated challenges, and written these on sticky notes, they should arrange these in relation to the **values** and **actions** (sorting them into their corresponding rows and columns – see step 3 on page 3). The aim of this step is to link values and challenges to actions, and prioritise them – certain values may be more important to uphold with certain actions, or certain challenges may be applicable to more than one action.
Values-driven strategy	This is the critical last step in linking all three sections. Innovation teams should consider each of the challenges in turn, and how they could adapt project plans to minimize or mitigate the anticipated ethical challenges. They should consider how the identified values could inform their responses.

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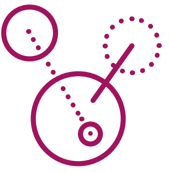
Canvas

Note: If you don't have a facilitator, nominate one person in your team to lead the use of this tool.



Values:

Actions:

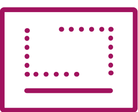
Ethical challenges:

Strategies:

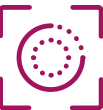
Responding to an Ethical Challenge (REACH)

How should you respond to an immediate ethical challenge?

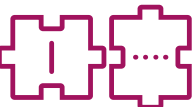
60–90 minutes



A4 Print



Focus:
Summary of focus to come



Use with:
— xxx

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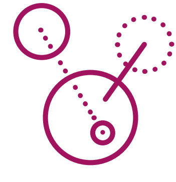
Canvas (2 pages)



Toolkit

Introduction

Responding quickly and responsibly to ethical challenges

REACH (Responding to an Ethical Challenge) helps teams work through ethically challenging situations and make considered decisions supported by clear ethical rationales. It supports a spirit of learning, accountability and improvement and is not about assigning blame. Though designed for use as a team, it can also be used for individual reflection or training activities – for example, to analyse a case study (see www.URL-to-COME.com for relevant case studies) - or for team debriefing after a challenging situation has passed. We recommend that teams document their process, the options and rationales considered and selected, and how the situation unfolded.

Understanding the tool

The What, Why, Who and When will help you understand the purpose of the tool.

The **step-by-step guide** on page 3 and **Guidance notes** on page 4 will lead you through the discussions and questions this tool presents.

What: A tool to structure team deliberation or individual reflection when confronted by an ethically challenging situation.

Why: Having a structured approach to respond to an ethical challenge supports well-considered decisions making based on clearly articulated ethical rationales.

Who: Humanitarian innovators and their partners, and to support engagement with members of communities affected by crisis.

When: Can be used at any point in an innovation process when the team encounters an ethically challenging situation, especially one they had not anticipated and/or when there is uncertainty or divergent views about how to respond.

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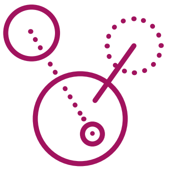


Using the tool

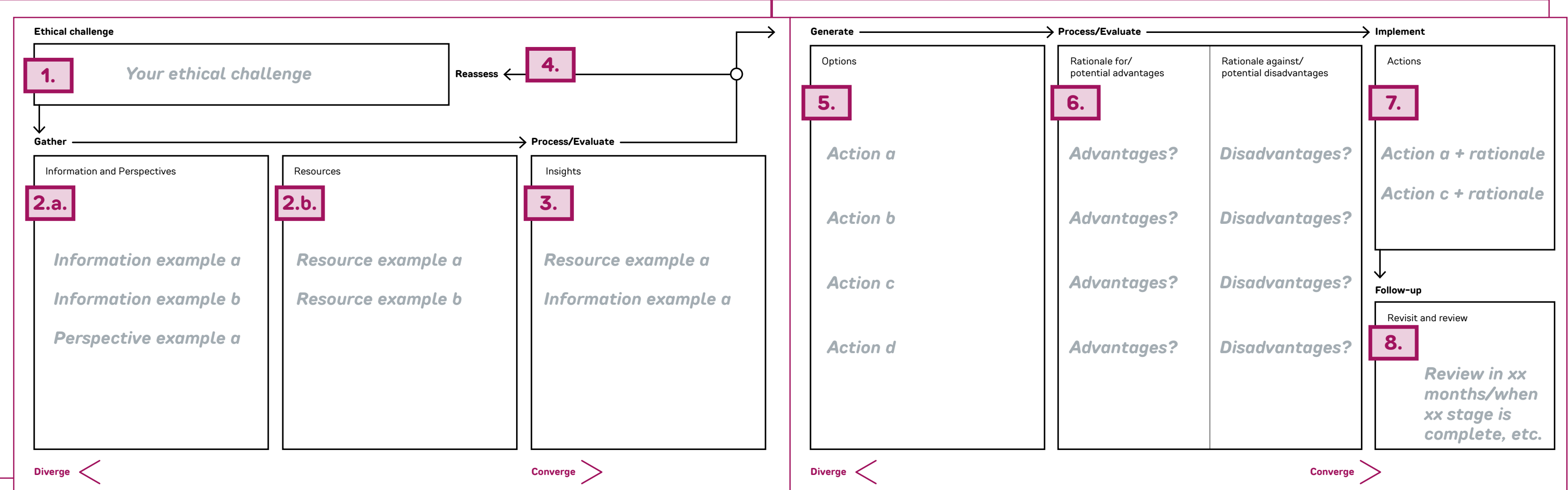
1. Write the challenge you are responding to in the **Ethical challenge** box. What are the ethical dimensions to this situation? What project or organisational values are at stake?

3. **Evaluate** all the data points and resources you found. Prioritise the most important and think about how they can support you in moving forward on the innovation journey.

4. Does the **ethical challenge** need to be revised, in light of the information you've gathered? If so, rewrite the ethical challenge and start the **Gather** process again. If not, move on to step 5: **Generate**.

6. Now, make a case **for and against** each of the options you have generaged.

7. Finally, evaluate each of your options and identify those with the most favourable case for **implementation**. Use this field to develop clear, actionable and ownable tasks.



2.a. Gather more **information** and seek out other **perspectives** that might help inform your understanding of the situation. Write directly on to the canvas.

2.b. Continue by gathering all the relevant **resources** available to your project, team or organisation.

5. Next, think about how your information and resources can fill knowledge gaps and generate options for action, eg, by asking "How might we overcome the challenge?" Write your options in the **Options** column.

8. Remember to **come back to this tool** to evaluate the outcome of the implementation. Consider taking a photograph of the completed tool for your records or audit trail of decision making, and to facilitate learning.

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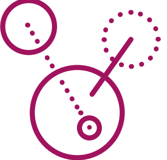

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Guidance notes

Step 1. Clarify the ethical challenge

When confronted with an ethically challenging situation, it is easy to narrow our focus to just two options: “Should we do X or Y?” We need to resist that impulse. In this first step, we’re trying to assess the ethical content of the situation, including what values are at stake or in tension, and for whom. We can start by naming or reviewing the ethical values or humanitarian principles and identifying those that might be in tension or threatened in this situation. For instance, might efforts to be accountable actually lead to harm for members of a local community? We must consider how the situation is seen from different perspectives, that might include partners, collaborators and community members, taking into account their views and, as much as possible, involving them in this process.

Step 2. Identify data, information and resources

a. During step 1 you’ve identified the information and data that you need, to understand what is happening and why. The next step is to gather that relevant information. This can be done in different ways, depending on the context; this might mean referring back to a Memorandum of Understanding or formal agreements, or finding out more details about community structures.

b. Different innovation teams will have different ethical commitments and ethics resources available to them, such as humanitarian principles, your team’s core values (see the Values Clarification Tool), mission statements, professional codes of ethics, the NGO/Red Cross Code of Conduct, or other key policy documents. The important thing to ask is: “How do these resources shed light on this ethically challenging situation, and what insights can they offer?” We must also consider local or international laws and regulations, so we are aware of any legal implications.

This step will help identify points of uncertainty and where knowledge gaps exist. This might include gaps that cannot be filled within the time frame in which a decision must be made.

Step 3. Process, evaluate and focus

Next we need to review all the resources and information collected, and discuss and decide which are the most important – that is, “Which ones are most likely to help us respond to the problem we’re facing?” Choose the most relevant notes and put them in order of priority (most important at the top) in the Focus column.

By now we might be developing a better understanding of the ethical challenge from step 1. This can be a good moment to go back and revise that ethical challenge to something more accurate or nuanced.

Step 4. Generate options

You can move on to listing the possible options (including, perhaps, doing nothing) or clusters of options – the actions you might take to respond to the challenge.

Step 5. Explore the ethical arguments for and against each option

Think about the ethical rationales that could support or oppose each option. Consider the possible consequences of each option – its risks and its benefits.

Step 6. Implement

Now you’ve outlined the arguments for and against each option, and their possible consequences, you can think about which, if any, you want to implement. You need to critically review and look at which

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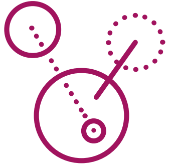
Note: If you don’t have a facilitator, nominate one person in your team to lead the use of this tool. When facilitating this tool, discuss each step as you come to it, using the additional information on these pages.



Toolkit

option is supported by stronger ethical rationales. The goal is to identify the best option under the circumstances.

Then you need to plan for implementing the chosen option/s: What will be done? By whom? When? And who should be informed about the decision? It is possible that you will need to explain the decision-making process and reasons for the choice to partners and other stakeholders.

Step 7. Evaluate and follow-up

What needs to happen after the decision is implemented? For example, some people may need support if the situation was stressful or if there was conflict in the decision-making process. You should consider a timeline for revisiting the decision in order to review, refine, or reconsider, if necessary. It is important to see the process of ethical deliberation as an opportunity to learn as a team and improve your capacity to respond to future challenges. Are there any appropriate channels for sharing your experiences with others, to deepen the knowledge around humanitarian innovation ethics?

Finally, it is a good idea to document this ethical decision-making process. A photograph of the completed canvas and a thorough write-up is a good starting point. If the outcome of the decision is questioned, the rationales will be clear, and they can be revisited and improved upon as needed.

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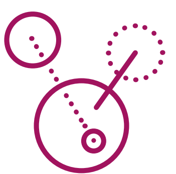
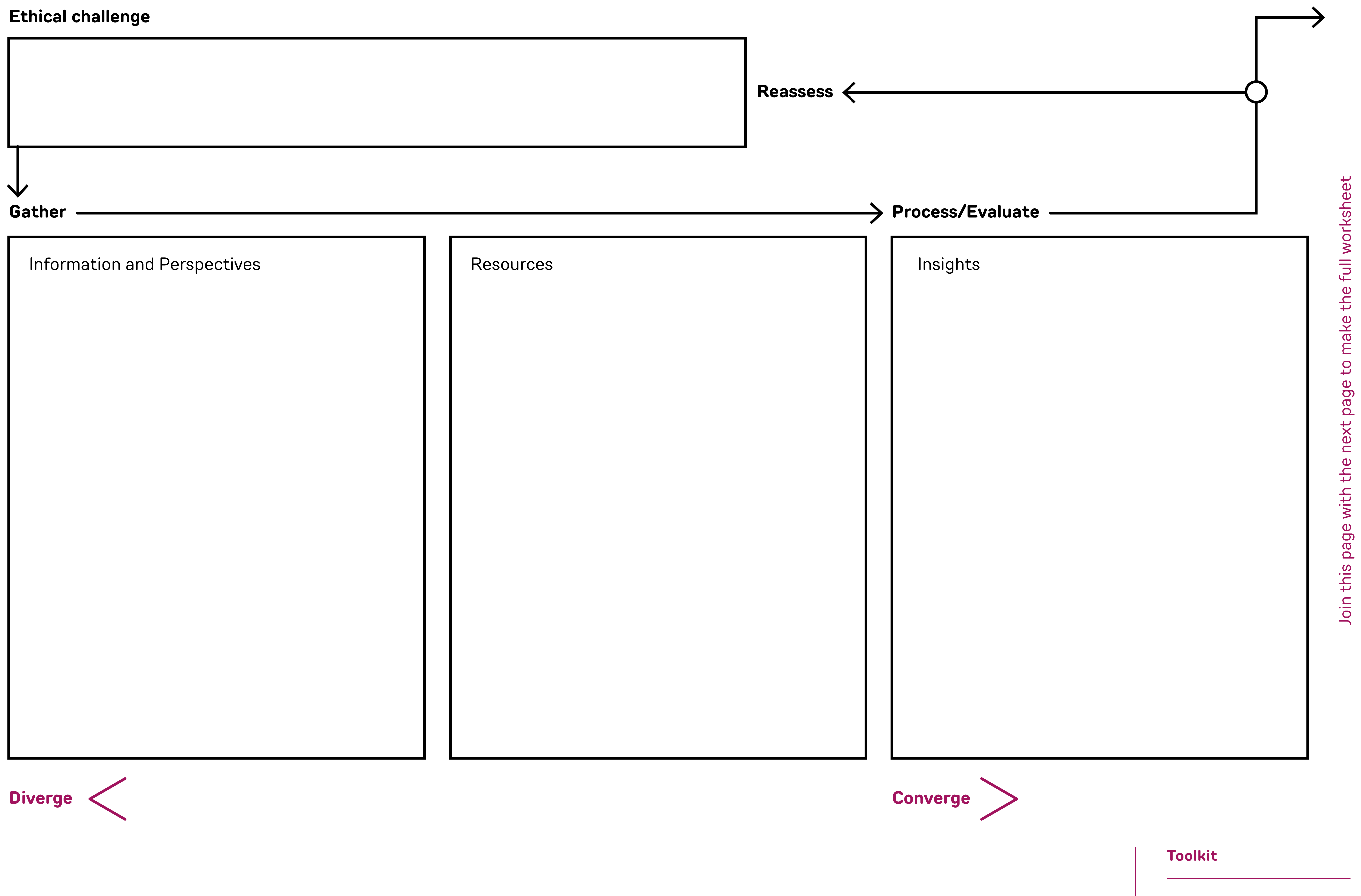



Ethical challenge
Reassess
Gather
Process/Evaluate
Information and Perspectives
Resources
Insights
Diverge
Converge
Join this page with the next page to make the full worksheet

Join this page with the previous page to make the full worksheet

Generate → **Process/Evaluate** → **Implement**

Options

Rationale for/
potential advantages

Rationale against/
potential disadvantages

Actions

Follow-up

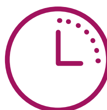
Revisit and review

Diverge <

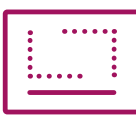
Converge >

Icebreakers and exercises

How do you open and close a workshop?



5–10 minutes



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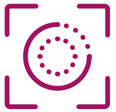
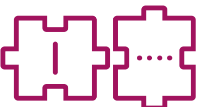


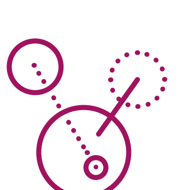
Focus:
Setting the tone
Parting message



Use with:
Any and all

Icebreaker

Closing exercise



Toolkit

Icebreaker: Ethical experience

Adapted by Gautham Krishnaraj

Materials
List of movement statements

Setup
Participants stand in large open space, tables around the outside perimeter

Description

Have all innovators stand in a circle, facing inward, and close their eyes. For each statement that they believe applies to them, they take a step forward. After people have moved an adequate amount, have the innovators open their eyes, to realise that ethical challenges are common (and in this exercise, recognising that fact literally brought them closer together) and that they are not alone in their experiences.

Statements (facilitator may choose at random):

— I am not sure what ethics is.
— I am not sure what the differences are between ethics, values and principles.
— Sometimes, I have to compromise between what I think is right and what my team thinks is right.
— Sometimes, I have had to do things just because a donor expected it.
— I have presented outcomes or expected impact that I am uncertain of.
— I have encountered challenges with bribery.
— My innovation may put my own safety at risk.
— I have ignored an ethical issue hoping that it would just 'resolve itself'.
— My innovation may put the safety of my staff or implementation partners at risk.
— I have faced situations where the right, or ethical, thing to do is not the legal thing to do.
— My innovation may put the people who we aim to serve at risk.
— I am concerned about partnering responsibly.
— I have faced challenges finding a way to pilot my innovation in the context it was designed for.
— I am not sure what mechanisms or resources exist in my organisation to resolve or escalate ethical challenges.
— I feel a pressure to scale my innovation beyond the context it was designed for.

... feel free to add more statements!

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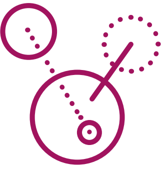

Closing exercise: Taking the thread home

Adapted by Gautham Krishnaraj

Materials

— Ball of yarn
— Scissors

Setup

Participants stand in a large open space, tables around the outside perimeter

Description

Step 1

One participant starts with the ball of yarn, and is prompted to say one thing they learned about ethics, or would like to go home and discuss with their team. They then toss the ball to another person, while holding onto the thread in the other hand. This repeats until everyone has engaged and a web is formed. The facilitator discusses the literal web of connections that each of the innovators has contributed to, and how ethics works best in a relational sense – when we hold each other and ourselves accountable.

Step 2 (optional)

The facilitator then pinches and cuts at the centre, leaving everyone holding a thread of the network. This thread represents the start of the conversation at home. While many workshops will leave participants with worksheets or paperwork, when they reach into their suitcase, pocket or wallet after this session and find this bright thread, they'll be reminded of the conversation around ethics, and prompted to start weaving their own web of accountability and ethics at home.

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