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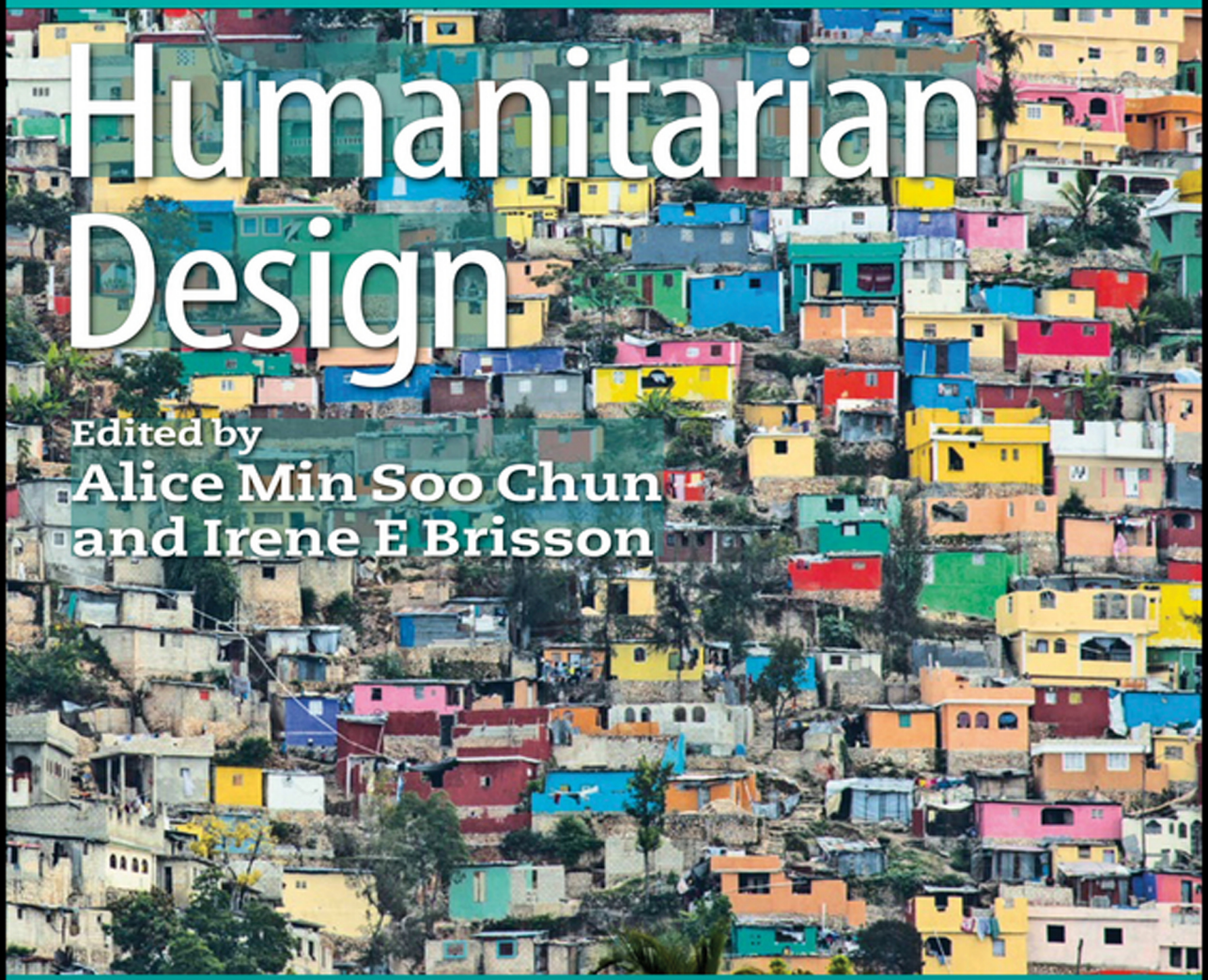
Ground Rules for Humanitarian Design



Edited by
Alice Min Soo Chun
and Irene E Brisson

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WILEY

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Front cover image: Port-au-Prince, Haiti, 2013. Rebuilt and remaining structures in informal settlements three years after the earthquake. © Damian Fitzsimmons.

To Quinn Arnold Lewis

Acknowledgements
Ground Rules for Humanitarian Design began as a discussion with students and faculty at Columbia University and became a much larger dialogue with students and faculty at Parsons The New School for Design. The global disasters caused by the 2010 earthquake in Haiti, the 2012 Kamaishi earthquake and tsunami in Japan and the 2013 Typhoon Haiyan in the Philippines had struck a cord in all of us. We could no longer stand by and watch what was happening to the environment, we had to take action. The tides, rifts and storms that had moved oceans and earth had also motivated in us a desire to create ways of deciphering such a complex and multifaceted problem.

We would like to thank Brian McGrath for his mentorship and support for this book and for proposing it on our behalf. He is dedicated to new research in urban ecosystems and is a leader in this field. Many thanks to Cameron Sinclair for the discussion we had about the lessons he had learned while at Architecture for Humanity. Kenneth Frampton was also a great inspiration, and we thank him for taking the time to be interviewed. We are indebted to the authors who contributed to this book and thank them not only for their essays but also for the many hours of work spent writing each essay. This project has taken two years to complete; we are very grateful to Helen Castle and Calver Lezama for their perseverance and patience over the past two years and their commitment to this publication.

Editorial Note
With the exception of one essay (pp 142–4), this book is an anthology of texts created specifically for this publication.

Contents

Charcoal seller in Haiti. Because of extensive poverty and the cultural tradition of using charcoal for cooking, trees have been cut down to make charcoal. The effect this has had is extreme land degradation. © Damian Fitzsimmons.

Introduction

Ground Rules for Humanitarian Design

Ground Rules or basic rules about what should be done in a particular situation or event[1] is predicated on the notion that there is a playing field on which team members are united in the adherence to specific principles. In the case of this book, the playing field refers to the ground on which we build and the environment in which we live. There have been a series of events that, like dots, have been connecting for centuries; these events, in hindsight, unveil the interconnectedness of the choices we make every day. These small and sometimes mundane choices, in multiplicity of billions, have affected the environmental and social context of our lives in the most catastrophic ways imaginable. From the elimination of hundreds of species of animals within the last century,[2] to the degradation of our ecosystem, to extreme hunger from poverty, to outbreaks of terrorism, we are all compromised. This book is conceived as a response to witnessing the catastrophic events in the past decade, in order to reconcile these ruptured grounds and start with design thinking[3] as a tool for levelling the playing field.

Humanitarian designers and anyone ambitious enough to effect a difference within the context of climate change, extreme poverty and ecological or political upheaval, may collectively play this field with a set of principles that are interconnected with regard to all of the above. This pioneering generation of architects and designers are participating in a global vision of a world where the design and the aggregate choices we make as individuals have the power to transform it dramatically. Design is always influenced by individual preferences. The design thinking method shares a common set of traits, namely, creativity and ambidextrous thinking,[4] which requires teamwork, empathy, curiosity and optimism. Hopefully we are professionals who believe that human dignity begins with an appreciation and inclusion of wonder and art, and take creative steps towards making things better because, however small to however vast, we can do so. Historically, the conventional ways of coping with complexity in human settlements are not satisfactory. Much of the difficulty comes about because hubris, population growth and technological advancement interact in a vicious cycle.[5] Architects and designers in developing and developed regions are, in a sense, problematising the past solutions, highlighting good design as a critical and necessary human right. They are instigating and inventing an active voice to lead better practices of conservation, mitigation and recovery.

overleaf: The hillsides of Port-au-Prince, Haiti, are a collage of shelters. The colours act as a codification for the nongovernmental organisations that built them. These plywood structures are called 'transitional' homes, although none have running water, sanitation or electricity. © Damian Fitzsimmons.

An orphaned girl reading with a SolarPuff, an inflatable solar light invented by Alice Min Soo Chun, designed to replace kerosene lanterns. Two million children die each year because of poor indoor air quality caused by kerosene lanterns. In areas of extreme poverty people spend up to 30 per cent of their income on kerosene to light their world at night.
© Damian Fitzsimmons.

Rules of Measure

The purpose of this text is to provide a survey of salient issues that will face any designer initiating work with communities in crisis. Each topic that serves as a structural section is incredibly large and broad; we hope that these parts may serve as devices for further research and reference tools by which to check one's design process. Have you considered, at minimum, each of these fields of impact within this situation? Two voices are paired in each part through essays, which are intended to elucidate disparate issues within these expansive categorisations. The issues raised and projects discussed are by no means exhaustive; rather, they barely scratch the surface and each part dovetails, contradicts and incorporates issues raised in the other parts of the text. The chapters in this publication are codified and organised to identify the primary and principal issues, which are a system of parts that should be referenced as an organic network, greater than the whole. What the contributors demonstrate is that there is a need for basic yet less linear systems that allow for creative adaptation. For instance, land and property rights are interrelated to issues of economy as well as environment. This anthology of contributed essays is specifically structured to enhance the developments that are already in place from nongovernmental organisations, such as Médicins Sans Frontière/Doctors Without Borders, to the burgeoning '*For Profit and Purpose*'[6] model that is accelerating humanitarian design movement through entrepreneurial channels.

Across socioeconomic spectrums, designers and architects take risks because of a belief in something bigger than ourselves. In Part 6: Local Materials and Local Skills, we see how the importance of shifting away from petrol-based plastics, such as polystyrene, has given birth to entrepreneurial ventures that collaborate across disciplines, inventing and investing on economic returns while resolving pressing problems. New companies such as Ecovative Design[7] are picking up momentum for this very reason. Designers are trained to understand that they have the capability to make something better, be it a policy, a structure, components made of paper, plastic bottles, grass and so on.

What Matters

Architects and designers are not only challenged but also provoked by a dehumanising environment or object — be it a plywood temporary shelter in Haiti, a cup of kerosene set on fire for light or a barren brown landscape marking hunger — to make the unimaginable come to pass. In a conversation about the themes of this book, Cameron Sinclair, cofounder of the former Architecture for Humanity, discussed the process of working for social change through design:

> cultural sustainability should be more important than environmental sustainability. If people don't feel comfortable and they don't love the places they live, they'll trash it anyway. Stick a solar panel on every one of those cookie-cutter cardboard homes and people are going to trash the environment. So it's counterintuitive to focus on a 'carbon-neutral slum'. The most perfect architect is someone who

> is a secret anthropologist. Someone who has an inherent curiosity and respect for the community they work in, and a willingness to learn from them. Part of the role of the architect is not to come in with an aesthetic focal point, but actually to understand — what does beauty mean, what does space mean for that community? It's even more nuanced than critical regionalism.[8]

Sinclair reminisced about Sam Mockbee, a significant architect and activist who left a huge legacy, with Rural Studio:

> Sam had a saying: "Work as if no one's listening." This means that the reason for actually doing this work is not because you want people telling you how great you are … you're doing it because the work needs to get done. The attention should always be focused on the work. When you start doing it because, "everyone thinks I'm cool because I'm helping others", it's no longer about actually helping or implementing. The rule should be about what the questions should be: "What is your objective?" Having a heart is not enough. Just because you care, it is not enough. You have to have the confidence that the skills that you can bring to the table will have a dramatic effect on the community in which you are serving.[9]

Architecture, more than any other art form, is a social art and must rest on the social and cultural base of its time and place. For those of us who design and build, we must do so with an awareness of a more socially responsive architecture. The practice of architecture not only requires participation in the profession, but also it requires civic engagement. As a social art, architecture must be made where it is, and out of what exists there. The dilemma for every architect is how to advance our profession and our community with our talents, rather than our talents being used to compromise them.[10]

Another key voice providing intellectual underpinnings for this project, through his early writings on critical regionalism to a current perspective is architectural historian, Kenneth Frampton. While discussing with him his thoughts on critical regionalism he said:

> I am committed to the idea of critical regionalism. Although it is not something that I speak about much these days, I'm committed to this way of looking at the world. There is a really impressive global phenomenon taking place right now, everywhere you find exceptional creativity, people are doing sensitive work in relation to a certain kind of economy. It is this concept of an architecture of resistance you know, and the fact that you can find it all over the world in a way, is something that I still believe is the case … It's very responsive to the place in which it's in — the topography, the site, the materials of the place, the light and the climate — as opposed to being driven by fashion.[11]

Haiti, aerial view of land degradation. Owing to the lack of agriculture, the brown area to the left indicates no ecology. Firewood is used for cooking food and so the poor have cut down all the trees. This leaves the bare land prone to extremely dangerous mudslides and flash flooding. © Alice Min Soo Chun.

MASS Design Group, Housing for Doctors, Butaro, Burera District, Rwanda, 2012. This construction for permanent housing has basic amenities, such as running water, electricity and sanitation. Yet beauty, wonder and design are the principles for Ground Rules. © Iwan Baan.

Parameters of Engagement

Today, the ambition of reducing the world's ecological and sociopolitical vulnerability, and producing a more humanitarian architecture, is driving design innovation among professionals and enlightened schools of architecture across the world. While still at college, many North American and European students are now being given the opportunity to participate directly in programmes that provide vital facilities for impoverished or disaster-stricken communities. As well as showcasing traditional knowledge and new technologies, which are leading design in a socially active direction, this text seeks to lay parameters for engagement at a time when these international initiatives remain largely ad hoc. The integration of culture, art, architecture, economy, ecology, health and education, are absolute necessities for design and architecture. In each section, essays speak on key issues surrounding humanitarian or social design, touching on the political, the social and the technical.

We do not design buildings as products optimised to serve one need, but rather we create platforms through our buildings to address the complex ecological, economic and social force facing all the underserved — most pressingly the poorest, most marginalised and most vulnerable of our population. Humanitarian design is about commonality and an endgame of resilience; regardless of race, economy or religion, we are all interconnected and must be united in the pursuit of a designed alternative promoting human dignity. Once you see what is possible, once you experience the power of it, you become not only an advocate but also an addict of good design and a member of a global design ethic. And thus we are motivated to begin, to establish Ground Rules from which to operate.

Notes

1 Merriam Webster Dictionary online, www.merriam-webster.com/dictionary/ground%20rule (accessed 10 January 2015).
2 This timeline of extinctions shows more species were made extinct in the past two centuries than there were since the Ice age, http://en.wikipedia.org/wiki/Timeline_of_extinctions (accessed 10 January 2015).
3 Design Thinking, http://en.wikipedia.org/wiki/Design_thinking (accessed 10 January 2015).
4 Rolf A Faste, 'Ambidextrous Thinking', *Innovations in Mechanical Engineering Curricula for the 1990s*, American Society of Mechanical Engineers, November 1994, p 1.
5 Willem van Vliet, *Cities in a Globalizing World: Global Report on Human Settlements 2001*, United Nations Center for Human Settlements, Earthscan Publications (London; Sterling, VA), 2001, p 27.
6 'Profit with Purpose', *The Economist*, 26 January 2013, www.economist.com/news/business/21570763-how-profit-firm-fosters-protest-profit-purpose (accessed 10 January 2015).
7 The factories are truly revolutionary, they harness the power of nature – the cleanest technology on Earth – eliminating pollution generated across the petroleum-based plastics supply chain, www.ecovativedesign.com (accessed 10 January 2015).
8 Cameron Sinclair, interview by the author, New York, New York, July 2012.
9 Ibid.
10 Sam Mockbee, Rural Studio, 1998, www.samuelmockbee.net/work/writings/the-rural-studio (accessed 10 January 2015).
11 Kenneth Frampton, interview by the author, New York, New York, September 2012.

Histories of Humanitarian Design and Aid

1

The essence of humanitarian design, which may be shifting to the label of public interest design, is long and deep in our professions, but has moved in and out of different identities, and been carried forward by proponents of varying moral impulses. In 'Notes for Definition' the authors begin to sketch out the forking and reconverging histories of the idea. What we can claim is that fundamentally, building has always focused on the provision of comfort and utility and providing for people's 'life and safety'. In some sense, all design is humanitarian design because it is expected to provide all of these things; but time and again shelter available to different populations fails to live up to the same standards of comfort and care. Humanitarian design is, unfortunately, a necessary genre of architecture that takes as its focus the marginalised, underserved, crisis-threatened people of the world, because mainstream practices and industries have failed them.

The history of humanitarian design is in some sense challenging to trace, as in various utopian or idealistic guises it tends towards an ahistorical point of view. Given our current struggles, the argument may be made that historical methods have failed to sustainably open a space for the current problem solver. As any historian – or engineer for that matter – will tell you, prior failures are the beginnings of a solution. And more radically, it is possible that prior strategies were not flawed but their implementation, context or simple lack of interest from necessary parties at past moments may have doomed them. We must understand why and where humanitarian design, by many names, has improved people's situations, harmed natural ecosystems, caused relief, conflict and so forth in order to move forward in heady and enthusiastic times.

Dilapidated tower block. © Imageplus/ Corbis.

Humanitarian Design
Notes for a Definition

Christian Hubert and Ioanna Theocharopoulou

Christian Hubert and Ioanna Theocharopoulou both ground and destabilise the basic definition and history of what this volume discusses at great length as 'humanitarian design'. Looking at the historical genealogies of appropriate technologies and 'good' design, as well as the contemporary discourse and emerging practices of participatory citizenship, Hubert and Theocharopoulou position humanitarian design within a broader social movement, rooted in late 19th- and 20th-century experimentation but once again emerging at the forefront of professional exploration, and argue it is important to substantively acknowledge the human component of its current manifestation.

> We must elevate 'design for the greater good' beyond charity and toward a socially sustainable and economically viable model taught in design schools and executed in design firms, one that defines the ways in which we prototype, relate to clients, distribute, measure, and understand. We must be designers of empowerment and rewrite our own job descriptions. We must design with communities, rather than for clients, and rethink *what* we're designing in the first place, not just *how* we design the same old things. We must constantly find ways to do things better, through both our designs themselves and the ways in which we operate as designers.
>
> Emily Pilloton[1]

Is there such a thing as *humanitarian design*? Can design thinking that typically only responds to crises help provide new models of more equitable and socially responsible living? To think through these questions, it is important to uncouple the phrase *humanitarian design* from too close an identification with benevolent or charitable interventions on behalf of the poorest and most vulnerable, even if those dimensions must remain a crucial part of the humanitarian project. Instead, we will focus on those features of the humanitarian impulse that extend to all humans qua human beings. If we do in fact live in the geological era of the Anthropocene, in which humans have become the dominant influence on the planet, those humane qualities and universal values must extend not only to humans as a whole, but to all living species and to the environment at large.

By exploring the outlines of a humanitarian design project, our purpose is not to promote a catchphrase or even to define a particular theory of practice. Instead, we hope to indicate some features that any effective definition of this project would require. Even in its broadest sense, design can be only one small part of the humanitarian project, but as it is currently practised, design serves primarily to promote consumption, to materialise

status and to manipulate desire. The humanitarian design project must address the just allocation of wealth and resources, not only in the present but also in the future. It must make plans for rapid global urbanisation and the very real possibilities of massive dislocations of urban populations, particularly in coastal areas. It must be informed by an ethos of sustainability. Most of all, it must be broad enough to address all humanity.

We see two main paths or features, emerging as characteristics of this larger conceptual project that sees design as a humanist activity. The first requires a fresh look at the history of the idea of 'intermediate' or 'appropriate' technology, as it was articulated in the early 1970s, to create a richer background against which to view today's efforts. The second needs 'humanitarian' design to be seen within a broad movement towards participatory citizenship, which is emerging from many different quarters worldwide. In combination, these two paths can inform a concept of humanitarian design that bridges both ethics and aesthetics — a 21st-century definition of *Good Design*.

Appropriate Technology and Design for the Other 90 Per Cent

> What are these machines? … various solar devices, almost all hand tools, biogas digesters, wind machines, greenhouses, various pedal-powered machines (including, of course, bicycles), composting toilets, and so on. The origin of these devices is largely either from less developed countries (what used to be called 'village technology') or from the youth culture. The categories are not hard and fast; hand tools are preferred over machines, but small machines are preferred over big machines, and even big machines are viewed more favorably than very large plants.
>
> Witold Rybczynski[2]

The 'Appropriate Technology' movement emerged as a popular cause in the late 1960s and early 1970s. As the first moment when designers and other thinkers self-consciously tried to figure out ways to bridge social inequality through design, the Appropriate Technology movement is a crucial precursor to today's *humanitarian design*. We could say that humanitarian design, as we are trying to define it here, is not so much a radical departure but a re-engagement with some of the same issues that have been lost since the 1970s, with a different emphasis and new contexts.

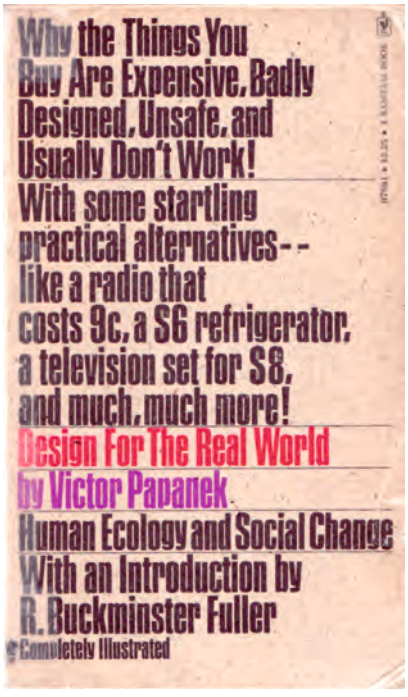
The political events of the late 1960s acted as a trigger for seeing a link between design and society more clearly. Opposition to the Vietnam War, the student protests of 1968, and particularly the 1973 to 1974 energy crisis, were the backdrop to the emergence of an American 'counterculture' that rejected conventional society and uncritical technological 'progress'. Publications such as Rachel Carson's *Silent Spring* (Houghton Mifflin, 1962), EF Schumacher's *Small Is Beautiful* (Blond & Briggs, 1973) and Buckminster Fuller's extensive writings, were formative influences on what we now think of as early instances of environmentally conscious design; the most well-known examples of which include the first 'intentional communities', Paolo Soleri's Arcology, the 'droppers' of Drop City, Trinidad, Colorado, and Michael Reynolds's Earthships.[3]

While American counterculture did not invent appropriate technology, its 'environmental pragmatism' promoted 'tinkering' and improvising solutions to design problems. The best illustration of this approach to technology was the *Whole Earth Catalog*, published between 1968 and 1972. Its founder, Stewart Brand, 'hoped to create a service that would blend the liberal social values and technological enthusiasm of the counterculture with the emerging ecological worldview he cultivated as a Stanford University biology student'.[4] Brand provided information on emerging ideas about appropriate technologies, along with common-sense advice for those who wanted to participate in what he saw as a new environmental culture. His innovative idea to provide *access* through a new information system, the *Whole Earth Catalog*, aimed to empower individuals about alternative paths and tools to achieve them:

> By reclaiming an amateur tradition of invention and technological development and celebrating an ecological focus to technological research, the *Whole Earth Catalog* provided moral support for young optimists working to map a brighter future free from flaws of technocratic thinking but not free from technology. These appropriate technologists believed a survivable future was still a possibility if technological development could be wedded to insights emerging from ecology and environmentalism while avoiding the political entanglements of Right/Left ideologies…
>
> Andrew G Kirk[5]

Whereas the ideas of the Appropriate Technology movement were varied and diffuse, they shared an approach to technology that was low-tech, inexpensive, simple and ecologically safe. Rather than identifying with either of the two poles of 'tradition' and 'modernisation', the appropriate technology pioneers were interested in establishing an 'intermediate' zone that could use and modify existing technology in simple and inexpensive ways, in order to help human society more broadly. One of these pioneers, British economist Ernst Friedrich Schumacher (1911–1977), had spent a great deal of time in poor parts of Southeast Asia. He saw 'intermediate' technology as a step towards the alleviation of poverty in the so-called developing world. Borrowing from the Buddhist concept of the 'Right Livelihood', in a highly influential essay entitled 'Buddhist Economics', written in 1966, Schumacher argued that appropriate technology can be a third way, a better path *between* tradition and rapid modernisation. Schumacher, who had also been influenced by the writings of Mahatma Gandhi, believed that appropriate technology ought to be small- rather than large-scale, people-centric, labour intensive, environmentally sound and locally controlled.[6]

Another important thinker from the 1970s who deserves attention today is Victor Papanek (1923–1998). A Viennese-born designer, teacher and prolific author, Papanek called for design to take a radically different approach, away from the goal of aesthetically pleasing objects. Papanek's first book, *Design for the Real World: Human Ecology and Social Change*, was published in 1971. It included an Introduction by Buckminster



The cover of the seminal work by Victor Papanek, first published in 1971, inspired a generation of designers and activists. © Random House LLC.

Fuller and extensive references to Fuller's work. To underscore Papanek's critique of mainstream design practice, on the cover of the first edition, in large fonts, we read that the book is about '*Why the Things You Buy Are Expensive, Badly Designed, Unsafe, and Usually Don't Work! With Some Startling Practical Alternatives – like a radio that costs 9c, a $6 refrigerator, a television set for $8, and much, much more!*'[7]

Design historian Victor Margolin notes that Papanek's book, 'came hard on the heels of the student movement of the 1960s and embodied the simultaneous rage and hope of that period'.[8] His design thinking was closely informed by local knowledge and techniques from which he actively sought to learn. In the early 1970s, Papanek suggested working closely with people in developing countries to invent and construct products using simple technology, and he called on designers to counter the growing environmental problems of his time.

Despite the ongoing allure of 'living off the grid', contemporary interests are not so concerned with extolling 'self-sufficiency' or creating a counterculture. They are more resolutely global in intent and local in implementation. New terms, such as 'leapfrogging' and 'crowdsourcing', and a new emphasis on advanced communication networks are enabling these shifts to happen. While a sense of impending crisis and an ethical discomfort in the face of unfair distribution of wealth continues to inform humanitarian design impulses, these are also coloured by a sense of possibility – that there are real possibilities for social, technological and political change.

There have been a plethora of recent initiatives, exhibitions and publications that make a case for such humanitarian design impulses. Examples include the publications by Architecture for Humanity (a United States-based charitable organisation launched in 1999 and closed in January 2015), *Design Like You Give a Damn* (2006) and *Design Like You Give a Damn II* (2012); the exhibition *Design for the Other 90%* (Cooper-Hewitt, National Design Museum, New York, 2007); Katie Wakeford's *Expanding Architecture: Design As Activism* (2008); Emily Pilloton's *Design Revolution: 100 Products that Empower People* (2009) and the exhibition *Small Scale Big Change: New Architectures of Social Engagement* (MoMA, New York, 2010). These initiatives are rooted in the history of 'social' design as already mentioned[9] but with a sidelong glance to the history of the appropriate technology pioneers from the 1970s. At the core of the projects documented in these collections is a renewed shared sense that design must be for the greater good of all human society.[10]

But human society is created through community, and this new hopeful emphasis promotes community, not only in terms of ways of life, but also through scale, means of production and materials. Examples of these community-oriented projects range from immediate responses to crisis like the earthquake emergency housing projects by Shigeru Ban from the early 1990s, using recycled paper tubes; to a variety of projects that deployed unused shipping containers to create housing for earthquake victims in Haiti in 2010; to longer-lasting design solutions that help communities in the daily struggle for existence and cover aspects or sectors, such as health and education.

Some of the most notable examples of the latter may include the Emergency Paediatric Clinic in Darfur by the firm TAMassociati (Massimo Lepore, Raul Pantaleo and Simone Sfriso) from 2011, and the ongoing work of Diébédo Francis Kéré in Gando, Burkina Faso. The Darfur clinic is built around an enormous baobab tree (*tabaldi*), adopting principles of Mediterranean and Arab architecture, such as shading the building facades from the sun, and creating a large courtyard with smaller pavilions. The building combines traditional and modern techniques and technology in new ways.[11]

Diébédo Francis Kéré was awarded the Gold Global Holcim Award in 2012 for the secondary school in Gando, Burkina Faso. Going back to Burkina Faso and working with the local community, Kéré used traditional forms that work with the local climate, using local materials and techniques. Another notable aspect of Kéré's work is his involvement with the whole community: we may think of him more as a master builder than an architect, teaching and disseminating skills to a younger generation.[12]

The Danish-based INDEX Design Awards, created to award 'design to improve life' are another forum for the support and dissemination of design solutions that help whole communities. Looking through the list of INDEX Design Award finalists since 2005, one sees some of the best socially conscious, technically advanced designs, ranging in scale from a city to a small object. Recent examples include Sanergy (2013), a model for viable sanitation infrastructure in the slums of Nairobi,[13] and Mexico City's 'Plan Verde', a 15-year strategy 'to develop new transport, water, waste, land conservation and alternative energy programmes for the city'.[14]

below: DHK Architects and Two Think Architecture, Ahmed Baba Centre, Timbuktu, Mali, 2009. © Iwan Baan.

overleaf: DHK Architects and Two Think Architecture, Ahmed Baba Centre, Timbuktu, Mali, 2009. Timbuktu's association with 'a place at the end of the world' is ironic considering that the city was once the main intellectual centre of Islam in Africa. Timbuktu is a city in Mali, born in proximity to the Niger River, at the intersection of 10th-century trans-Saharan trade routes. © Iwan Baan.