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Designing Development: Humanitarian Design in the Financial Inclusion Assemblage

This article examines the emergence of a new group of development experts who tackle development problems in "innovative" ways: professional designers and the organizations that fund them. What has become known as humanitarian design is an instantiation of the afterlives of development, which redefines the problem of development as eliciting the needs of poor clients and creating mechanisms so that they can provide feedback on proposed solutions. This reframing results in hybrid forms of development knowledge that combine business and entrepreneurial objectives with concerns about designers' moral responsibilities in the contemporary world. The use of humanitarian design in creating formal financial products and services for the poor is analyzed through the work of the Institute for Money, Technology, and Financial Inclusion. [financial inclusion, humanitarian design, microfinance, mobile technologies]

In 1962, Victor Papanek, an innovator with a keen interest and some formal training in anthropology, designed a radio to be distributed by UNESCO in India and Indonesia (Papanek 1984). It was made of a used tin can and powered by wax or animal dung, which was burned underneath the can; it could be manufactured cottage-industry style in the same marginalized places where most of its users lived, and it cost less than 9 cents to make. The tin-can radio was an example of what is now commonly called *humanitarian design*, in reference to the creation of objects and systems that improve the lives of poor people. Papanek argued that designers must assume their social and moral responsibilities to contribute to a more just and sustainable world. He exhorted them to use local and indigenous skills and materials, to draw on and at the same time preserve craft traditions, and to reject frivolous consumer designs. Papanek's book, *Design for the Real World*, written between 1963 and 1970, provided a road map for how to achieve such socially responsible design.

Lucy Suchman recently argued that "design and innovation are best positioned as problematic objects for an anthropology of the contemporary" (2011:3). Equally called for is a critical investigation of the importance of design in international development, where it has been placed within a "humanitarian–corporate complex" (Johnson 2011:448). While humanitarian design does indeed lend itself to neoliberal critique, given its associations with market-based models of development and the growing responsibilization of the poor, this article takes a more agnostic approach

in its examination of the entanglements of design, development, and anthropology. Rather than on facile condemnation, the focus of this article is on the possibilities of these three "being drawn into relation [through] mutual projects and perspectives" (Maurer and Mainwaring 2012:178). Indeed, I argue that the precautionary principle at the heart of design (Latour 2008) offers both development and anthropology as critically informed *and* action-oriented modes of engagement with contemporary problems.

An investigation of humanitarian design should start with, however tentative, a definition of a very broad field. Most generally:

> [Design can be described as a] roadmap or a strategic approach for someone to achieve a unique expectation. It defines the specifications, plans, parameters, costs, activities, processes and how and what to do within legal, political, social, environmental, safety and economic constraints in achieving that objective. [Kumaragamage 2011]

While any mention of design most often evokes object, graphic, or fashion design, the practice also encompasses the creation of novel systems, experiences, environments, or services (Buchanan 1992). Similarly, the academic analysis of humanitarian design has until now focused on objects such as solar lights, cooking stoves, or sanitation devices (Cross 2013; Redfield 2012a, 2012b). In this article, I extend these discussions into the financial services arena by examining the design of microscale financial offerings aimed at the world's poor people, commonly known as microfinance or financial inclusion.

Financial inclusion constitutes an assemblage of diverse subjects, technics and rationalities to develop poor-appropriate financial products, such as loans, savings, and insurance (Schwittay 2011a). Shaped by calculative logics, knowledge politics, and financio-technical practices, this assemblage is built on the assumption that the 2.7 billion people who do not currently have access to formal financial services need, want, and will benefit from such offerings (World Bank 2010). Today, there are several thousand microfinance institutions (MFIs) serving approximately 200 million clients the world over. These MFIs, which range from traditional nonprofit NGOs to specialized quasi-banks, are increasingly joined by corporations (such as banks and high-tech companies), foundations, and social enterprises. Many of these are new development actors motivated by a range of causes from poverty alleviation to profit making, and humanitarian designers are increasingly taking their place among them.

Humanitarian designers' practice is concerned with innovation, and as such "is embedded within a broader cultural imaginary that posits a world that is always lagging, always in need of being brought up to date through the intercessions of those trained to shape it: a world, in sum, in need of design" (Suchman 2011:5). Design, then, is endowed by its practitioners with the power to better the world, to change "what-is [into] what-ought-to-be," to cite a now-classic description (Rittel and Webber 1973:159). This ability to improve upon a deficient status quo is especially pertinent

for contemporary humanitarian design, which has its roots in the humanistic tradition that has been part of the design field since its inception (Kruger 2008). Recent professional antecedents of humanitarian design include universal design striving for diversity, ecological design grappling with issues of complexity and uncertainty, and feminist design working toward dismantling hierarchies based on deeply held beliefs (Nieusma 2004). Today, design presents itself, as designer Bruce Mau wrote, as "one of the world's most powerful forces . . . plac[ing] us at the beginning of a new, unprecedented period of human possibility" (Suchman 2011:5). While practitioners call it a "revolution" (Pilloton 2009:46), scholars have described it as "a space of good will and progressive dreams following the decline of faith in modernist revolution" (Redfield 2012a:11). I do not subscribe to design's revolutionary power, but argue that the optimism in its ability to solve the world's most pressing problems makes it a promising domain in which to investigate the afterlives of development. By this I mean "the enduring legacies of the faith in knowledge, reason and expertise that often undergirded projects of modernization [and that now are] visible in often surprising new guises in a range of actors and sites, practices and techniques" (Rudnyckyj and Schwittay 2014, in this issue). In the introduction to this special colloquium, Daromir Rudnyckyi and I map the academic landscape of the afterlives in both anthropology and development studies.

Bruno Latour (2008) claims that design stands opposite modernizing attitudes, while others ascribe to humanitarian design "a modernist faith in the emancipatory properties of science and invention" (Johnson 2011:459). I see the tension in these statements as an avenue to explore how humanitarian design is generative of new ways of addressing poverty that present both continuities and ruptures with previous development regimes. In this article I first analyze the ways in which humanitarian designers reconceptualize development and thereby enable their own interventions. I then discuss a number of specific design practices applied in a project that aimed to create financial products for poor Mexican coffee farmers. The project was partly funded by the Institute for Money, Technology, and Financial Inclusion (IMTFI) at the University of California, Irvine. In the third section of this article, I use a number of design principles issued by IMTFI to reflect on the productive connections between anthropology, design, and development.

Established and led by Bill Maurer, IMTFI funds researchers mainly from developing countries to generate ethnographic knowledge about poor people's "everyday innovation with money and mobile technology" (Institute for Money, Technology, and Financial Inclusion 2010:1; hereafter IMTFI). It was founded in 2008 through a grant from the Bill and Melinda Gates Foundation, which has been important for its support of financial inclusion (focusing on the development of better savings mechanisms) and humanitarian design (funding initial forays into this arena). Together with Paul Braund, I was part of the first cohort of IMTFI-funded researchers, and attended the institute's annual conference in 2010. There I learned about the Mexican design project, which is somewhat atypical among IMTFI's mainly research-oriented projects, and subsequently had a number of conversations with the project leader. When IMTFI issued its design principles as part of its first annual report, I interviewed Maurer

about them and the context in which they emerged. These investigations were driven by an interest in humanitarian design stemming from my previous interactions with humanitarian designers in Silicon Valley, where I had cofounded the RiOS Institute, which applied design and social science methods to development. My subject position is thus a complex one as I am more than a distanced observer, but not quite a participant; as an engaged interlocutor, I see value in humanitarian design while at the same time recognizing its limitations.

A Problem of Innovation

The problem of development has been conceptualized in a variety of ways, each offering its own interventions to fix it. Explained as a shortfall of foreign aid, advocates argue for increased funding, dispersed in accordance with better international and national poverty-reduction strategies that are planned by national governments and multilateral organizations (Sachs 2005). By contrast, if one considers such grand schemes as the misguided ambitions of development planners pursuing the elusive goal of ending world poverty through technical, top-down solutions, "searchers in markets" will be seen as more effective in producing development (Easterly 2006:5). Markets are also at the heart of the critique brought forth by philanthro-capitalists (Bishop and Green 2008), who argue that market institutions have neglected to see the poor as potential consumers (Gates 2008). Philanthro-capitalists call for a humane form of market capitalism that is thought to provide the necessary mechanisms, such as listening, distribution, and pricing, to alleviate poverty in effective and efficient ways (Brainard and Chollett 2008; Schwittay 2011b). Preceding all of these critiques was the argument that development technocrats are not taking the poor and their realities into account, resulting in the call to put the "last first" (Chambers 1983). In this section, I show how humanitarian designers build on these critiques while fashioning their own practices, which are grounded in a rationality called design thinking.

Enabling Humanitarian Design Interventions

Humanitarian designers and their interventions show both continuities and ruptures with previous development regimes. Continuities are evident in the fact that the import of Western expertise and technology is still presumed to hold the key for solving the majority of the world's problems. Ruptures are visible in novel conceptualizations of the problem of development, which is now defined as "a paucity of creative ideas" (Hempel 2007:10) and "flaws in the overall design of the system" (Brown and Wyatt 2010:31). In addition, humanitarian designers argue that many development interventions fail to take the needs of poor clients into account and do not give them the opportunity to comment on proposed solutions before these interventions are implemented. Humanitarian designers' recognition that contemporary problems are so complex and fast-changing that traditional ways of practicing development are ill-equipped to provide solutions deserves closer attention (Walters 2010). Consequently, development efforts must now harness the forces of innovation and creativity, which

entails collaboration across a wide spectrum of experts that includes poor people themselves. However, by constituting the problem of poverty and development as one in need of innovative solutions, humanitarian designers are positioning themselves as experts best placed to provide these interventions.

They see design as a discipline that by its nature integrates different perspectives, and therefore as well-suited to solve the "wicked, fundamentally indeterminate" problems presented by global poverty (Buchanan 1992:16). Interestingly, the idea of "wicked problems" was first raised in the context of planning (which is a quintessential modernist practice), where the social questions addressed by planners were seen as categorically different from the problems tackled by scientists and engineers (Rittel and Webber 1973). Planners concern themselves with "open societal networks of systems... [where] the waves of repercussions generated by a problem-solving action directed to any one node in the network... induce problems of greater severity in some other nodes" (159). Humanitarian designers will find in these words echoes of systems thinking and unintended consequences, which inform their own practice.

Rittel and Webber used the "the poverty problem" (161) to demonstrate the importance of context and of "incessant judgment, subjected to critical argument" (162). Such argumentation is situated within valuative frameworks, implying a normative stance at the heart of the project. More than forty years later, poverty still remains, and moreover has moved into the public spotlight as never before. Indeed, "the new millennium can be understood as the age of poverty, one in which the concern for poverty not only shapes social life but also serves as a key part of the remaking of the global economy" (Roy 2012a:105). Continuing this line of thinking, Latour's observation that "the more matters of facts are turned into matters of concerns, the more they are rendered into objects of design through and through" (2008:2) presents another case for humanitarian design interventions to solve the continuing problem of poverty. To do so, practitioners draw on a rationality called design thinking.

Development Design Thinking

Design thinking has a long history in the discipline, arising first in the context of the field's professionalization. According to Buchanan (1992), it represents a shift of the field from a trade activity to a "new liberal art of technological culture [that is] integrating useful knowledge from the arts and the sciences alike, but in ways that are suited to the problems and purposes of the present" (6). It also draws attention to the social aspects of design work, connecting to anthropological insights about the importance of the material and social circumstances of "situated actions" stemming from the use of designed products (Suchman 1987:50). Recently, design thinking has been popularized and become a style of creative thinking-in-action, "a loosely-structured organizational process to stimulate innovation" (Kimbell 2010:3). It has also become commercialized and infused with the language of market opportunities. This raises the question of translating design thinking into a methodology for social change rather than commercial gain.

This translation happens when humanitarian designers reconceptualize constraints as "creative springboards" from which to explore alternatives to mainstream products and services (Brown 2008:7). Among such constraints can be the existence of enormous unmet needs or the inability of poor people to pay for necessary services. A systems approach addresses social problems by paying attention to the complexity of cultural and economic issues (Brown and Wyatt 2010). Such a holistic view, while aiming for a more complete understanding of poor people's situations, falls short of addressing the structural drivers of poverty. Instead, the focus is on the needs and wants of the poor reimagined as clients, thereby individualizing what are often social, infrastructural problems. In the process, collective mobilization or resource redistribution are foregone for projects that put the onus on the poor to improve their lives. A good example of this is the LifeStraw, a thin blue plastic tube containing a filter that removes most contaminants from polluted water sources (Redfield 2012b).[1] An individual can use this elegant design solution to drink from stagnant pools of water, but Redfield shows that the LifeStraw's simplicity hides a complex "shifting ecosystem of ethics and enterprise" (12). What gets celebrated by humanitarian designers and their supporters is the innovativeness of their solutions, sidelining larger political questions, for example the lack of potable water, and the constraint on how any solution is developed, implemented, and affects the lives of its intended users.

IDEO, a large international design firm headquartered in California's Silicon Valley, has claimed ownership of the term *design thinking*. Together with its nonprofit spinoff IDEO.org, it has been driving the corporate version of what they call "social innovation design" in the search for new, profitable markets provided by foundations and companies targeting the poor. This is another example of market creation at the so-called Bottom of the Pyramid (BoP), an approach that has been critiqued for its marketization of poverty (Schwittay 2011b), risk generation (Roy 2012b), and instrumentalization of poor people's social and cultural resources (Elyachar 2012). IDEO is a central, if not uncontested, node in the "emerging humanitarian design movement" (Johnson 2011:455), where it is joined by a growing number of small, mainly non-profit design consultancies and university design departments in the United States, Europe, Brazil, South Africa, and other places that cater to social-minded students.[2] Cedric Johnson locates the movement's emergence in the crucible of the defeat of socialism, neoliberal restructuring, and the counter-globalization movement. The presence of conventional, profit-driven companies in humanitarian design serves as an important reminder of the elitist and market-driven nature of mainstream design and more broadly complicates the new development regime's intentions. It shows that global capitalism's expanding frontiers, both geographic and conceptual, have resulted in new ways to exploit poor people's precarious situations, as shown by the recent growth of commercial microfinance and its attendant over-indebtedness (Roy 2012b).

Unlike these large companies, smaller humanitarian design organizations are often more exclusively socially oriented. An example of this is the Following the Bean project, which aimed to create financial products for poor coffee farmers in Mexico.

Following the Coffee Bean

This IMTFI-funded project was proposed by a group of development practitioners with varied backgrounds, ranging from anthropology to communications. Their work was guided by design thinking and methods, which was in keeping with the team leader's professional background as a designer. Among these methods, ethnographic research, participatory design, and prototyping were of central significance. My analysis draws on the team's presentation at IMTFI's 2010 conference; subsequent conversations, interviews, and email exchanges, especially with the team leader; and project files and publications.

From App to Cash

The original proposal was for the creation of a visual financial management tool for farmers of a fair-trade coffee cooperative in Oaxaca, Mexico. This was based on the team's assumption that poor people are financially savvy yet often illiterate and need nontext-based tools to help them manage their money. The proposal was very technology focused, which was in keeping with the team's location in the techno-centric culture of Silicon Valley, IMTFI's interest in mobile technologies, and the general belief that Information and Communication Technologies (ICTs) hold the key to the further expansion of financial inclusion (Maurer 2012).

Not unsurprisingly, during field research with members of the co-op, the group discovered that farmers' greatest need was not for technological applications but for cash. Consequently, technology took a back seat to better understanding the experiences, livelihoods, and hopes of the farmers. Emotions, broadly conceived, played a role in this process, combining the designers' empathy with an elucidation of farmers' sentiments about their lives and futures. Empathy is a central component of both design thinking and humanitarianism (Kruger 2008). Just as humanitarianism works through the mobilization of empathy (Wilson and Brown 2009), an empathetic dimension animates humanitarian designs, which "clearly embody, convey and manipulate moral affect" (Redfield 2012b:3). For the designers in Oaxaca, empathy helped to understand co-op members' lives at an experiential level. This included understanding the gaps between what they said about their financial practices and did with their money and other valuables, uncovering the needs created by insecure livelihoods, and unearthing aspirations for a better future. The designers saw this as leading to informed intuition, which would allow them to keep the perspectives of their clients in constant view.

Rather than empathy being pre-existing, however, it was created through the use of human-centered design. The team employed ethnographic observations, interviews using stories and images, and home stays. These anthropological methods were supplied by a team member with a degree in material anthropology. They were complemented by more design-centric techniques such as story boarding, which involved the sketching of stories about desired futures; and by behavior journey models, which mapped and ultimately sought to shape the financial behaviors of the farmers and their families. Empathy also animated the incorporation

of multiple perspectives, as the designers paid attention to the diversity of co-op members. While the co-op's leaders, all older men, were central to the interactions, care was taken to also capture the perspectives of rank-and-file members and women.

Once the designers had identified people's need for cash, they worked to create new income streams. While this reorientation may manifest a sense of "humility" that distinguishes design from more foundational activities such as construction (Latour 2008:3), it was presented as a "huge opportunity area for all stakeholders in the system" (Cliver et al. 2010:10). This language reveals the market-based idiom of designers constrained by commercial considerations, which firmly frames their practices in a business logic. More interestingly, it illuminates the process of reconceptualizing the farmers' needs as an opening for creative action. Indeed, in the process of field research, the designers were forced to reframe some of their prior assumptions; for example, about small side jobs being a source of pride rather than a burden, or about vulnerability as a state of being rather than resulting from a particular event. In the end, having control over their lives emerged as the core hope for the future for farmers and their families, which the designers translated into a state of financial empowerment. This reframing was partly the result of a design process undertaken together with the co-op members

Codesigning a Desired Future

As the team leader explained to me, the codesign process resulted in participatory design workshops, which were held separately for men and women. Participants were seated around tables covered with large sheets of paper and marker pens, and were asked to sketch, in either words or drawings, the different ways in which they made a living and the challenges they faced. Small groups first presented their findings to the whole group, and then the designers elaborated their own project ideas. This mutual interchange was an important aspect of the codesign process. It was followed by stories about how people spent money, managed the multiple demands on often inconsistent and varied income, and kept track of it all. Workshop participants were then asked for how the financial vulnerability that emerged from the drawings and discussions could be addressed. These exchanges, which were documented with photos and video, moved from a general to a specific level, forming the basis for initial design suggestions.

Participatory design taps into the long-standing practice of participatory development, which, as articulated in Chambers's (1983) foundational critique of development experts, stands at the beginning of the shift away from modernist development regimes. Today, humanitarian designers continue to draw on development scholars to better understand the promises and limits of participation (Oosterlaken 2009). Countering the cooptation of participation by the World Bank, such scholars have critiqued participation as abandoning its radical roots to become a mere series of methodological technologies applied mechanically to reach preset objectives (Leal 2007). As such,

participation is informed by simplistic concepts of power that neglect how social control operates to exclude complexity and difference within groups (Cooke and Kothari 2001). These critiques can equally be applied to participatory design, where designers often continue to interpret the information gleaned from interviews and immersions, thereby constituting their clients as subjects spoken for by experts (Sanders 2002).

One way in which the designers in Oaxaca attempted to counter these limitations was to remake the farmers and their families as expert innovators. In the constitution of such native expertise, farmers were seen to draw on their own experiences, interpretations of their lives' circumstances, and especially on their knowledge of manifold agricultural systems. In other words, the farmers became "experts, active experimenters and critical judges of modern technology" (Mosse 2005:31). This raises the question of access to the often tacit knowledge where local expertise is seen to reside, which designers hope to gain through the use of "generative toolkits to enhance collaborative communication" (Caruso and Frankel 2010:6). Exemplary of these are the two how-to manuals developed by IDEO, which can be downloaded for free from its website[3] and which walk DIY humanitarian designers step-by-step through various design techniques. However, creating local expertise is not just a matter of having the right tools and methods. What is at stake are the politics of development knowledge production and legitimization, where "what counts as professional expertise is not primarily founded on in-depth geographic knowledge about places and people, but is located in technical 'know-how'" (Kothari 2005:430). Humanitarian designers create rapid ethnographical knowledge to produce technical interventions, but endowing poor people with the ability to assert their own ideas remains a political challenge that cannot be overcome by the technological solutions offered by designers.

Furthermore, constituting the poor as innovators raises the need to rethink intellectual property practices in development, especially when combined with free access models. As Julia Elyachar argues for poor people's social infrastructures, which are central to financial inclusion practices, "[when] those who created these social infrastructures can begin to claim them as their own . . . more options for creative thought—analytic and political—can appear" (2012:122). There is an ongoing tension between Papanek's observation that everyone is a designer, which inspires ideas of codesign, and the continued insistence by humanitarian designers that they "possess the toolbox to deliver solutions" (Pilloton 2009:10). This insistence does not question the "privileged place of specialists" (Johnson 2011:459). These specialists continue to be mostly located in the Global North, and their technological solutions to the Global South's problems represent the strongest continuity of humanitarian design with modernist regimes of development. Part of the reason is that indigenous design efforts often get sidelined because their creators cannot capitalize on the same networks of support and publicity as their Northern counterparts (Cross 2013). While the Following the Bean designers tried to decenter their authority by codesigning and emphasizing farmers' expertise, their framing of the problem and its solution reasserted itself throughout the process. Still, using design-thinking methods allowed them to gain novel insights that were then translated into concepts and prototypes.

Prototyping Savings

As the team leader told participants at the 2010 IMTFI conference, the key finding from the field research was that co-op members' various ways of spending money stand in special relationships with how that money is earned. Income from coffee and corn covered everyday expenses, while extra money made from enjoyable activities like selling flowers was spent on enjoyable things like butter, and hard-earned cash from the United States was used for serious work like house construction. This realization led the designers to endow cash streams with "personalities," defined as "emotional and habitual allocations based on where and how the money has been generated" (Cliver et al. 2010:10). Importantly, what is usually referred to as savings, namely putting money aside for an undefined future, as opposed to for specific occasions such as weddings or religious ceremonies, had a low priority, and therefore no funds were allocated to it. Women in particular felt that there was never enough left over for general savings. In addition, the obligation of the co-op to distribute all income equally among its members at regular intervals stood in the way of creating savings at a collective level. The challenge for the designers then became to make abstract savings tangible and to create a paired cash stream. The question of how the latter would materialize was once again probed through images, such as the photo of a house under construction, with the caption: "[I]f remittances look like this, what would savings look like?" [field notes, 09/30/2010]. The result of such juxtapositions was the "dislodging of common, top-down financial inclusion assumptions, such as 'all the poor need is access to a savings account.' Instead, participants' own concepts of livelihood and the virtues of community, family, and faith were foregrounded."[4]

Upon the designers' return to California, the cash stream findings were synthesized into a concept called Send the Change. In this concept, when a U.S. consumer bought the co-op's fair-trade coffee, change would be rounded up and the difference would be sent electronically to the co-op, where it would be allocated to an especially established and agreed-on savings scheme. Send the Change, which was based on a technology platform, was to connect the co-op in Oaxaca with coffee importers, sellers, and consumers in the United States (Cliver et al. 2010). Creating such a cross-border concept was important for the designers, as it acknowledged and worked with the dependency of farmers' livelihoods on fair-trade and other coffee organizations, and ultimately on the willingness of U.S. coffee consumers both to pay premium prices and to send their spare nickels and dimes to Mexico. In this way, the proposed solution was an (alternative) consumption-based model that firmly remained within the preexisting commercial system with its established structures and relations.

Next was the creation of a prototype of the Send the Change concept. Prototypes introduce the material aspect of design into development discussions that are often devoid of it. As "artifact[s] with particular performative characteristics" (Suchman 2011:8), prototypes materialize in rough and quick designs using whatever is at hand to give physical form to ideas, in order to examine their strength and weaknesses, possible implementation problems, and unintended consequences (Brown and Wyatt 2010). Because humanitarian designers usually work in foreign cultural and linguistic situations, and with people geographically and materially distant, and socially distinct,

prototypes become an important technology to elicit client feedback. Low literacy levels and few infrastructures further test the applicability of many Western-born innovations. In such circumstances, prototyping makes explicit in material form unarticulated and unfamiliar ways of living and doing; designs are finalized through repeated processes of testing, iterating, and refining prototypes. While prototyping brings into focus the poor as humanitarian design clients whose input into design solutions is sought, the creation of concepts and prototypes usually takes place in designers' home offices. The results are then taken back into the field, and this spatial separation manifests again the ultimate location of expertise and technological innovation. This was the case for Following the Bean.

However, the designers were never able to test their prototype in the field, because, as the project leader told me, "Coffee is big business and us poking around with a bunch of disruptive ideas was basically not cool" (email conversation, 05/07/2013). They ran aground of commercial interests, especially those of coffee importers, who were weary of a direct connection between coffee farmers and consumers. This reveals that prototypes are not only technical objects, but are also political creations in the sense that their deployment is shaped by questions of power and access to technologies, sites, and organizations. Following the Bean was not undertaken for a corporate or foundation client, but was funded by IMTFI and carried out by a small, independent team in partnership with fair-trade organizations in Canada. All of the (non)participants of this project had different objectives, logics, and values. Translation among them was not possible, starting with the unclear middle ground occupied by the design team, which in the end made it hard for established interest groups to fully understand the project's agenda and ultimately stood in the way of the final product design. This shows that the success or failure of design projects is not inherent, but results from their "ability to continue recruiting support and so impose a growing coherence on those who argue about them or oppose them" (Mosse 2005:8). The new relationships between producers and consumers that the design team aimed to create did not alter the structural relations of coffee commerce, yet were challenging enough to limit its work. Codesign, then, involves processes of translation and negotiation among all stakeholders, and it is these "wider networks of support and validation" that ultimately failed Following the Bean (18). Nevertheless, the work of the project's humanitarian designers contributed to the broader design principles issued by IMTFI, to which I now turn to explore the entanglements of design, anthropology, and development.

Forging a Space for Cautious Practice

In anthropology, design informs the idea of a model space offering "a material means of experimenting with alternative forms" (Marcus 2012:436), where students of *anthropos* (the human) can become equipped with a "toolkit" that enables the sensibilities necessary to make sense of our contemporary world (Rabinow et al. 2008:133). Here, the emphasis is on long-term research, attention to the particularities of field sites, and research thinking free from established theories. This ensemble resonates equally in the halls of the University of California (UC) Berkeley and UC

Irvine, where the two currently-existing anthropological design spaces are located, as in the studios of humanitarian designers. Design, then, can shape anthropologists' and development practitioners' understanding of the contemporary condition at home and abroad, and can offer an avenue of careful action to change those conditions whose status quo cannot be accepted. It also opens up new opportunities for ethnographers, both academically and professionally. IMTFI's design principles are examples of such action that constitute one possible way in which anthropologists can critically engage with their objects of analysis.

Designs on Poor-Appropriate Savings Schemes

Maurer himself has no formal background in design; he told me that his interest in the field was prompted by collaborations with colleagues at Intel Corporation (headquartered in the United States) and the Royal College of Art in London, UK. Still, the suggestion of a program officer at the Gates Foundation to use design as a way to make IMTFI's findings actionable was originally met with resistance by the institute's leadership, which was committed to producing open-ended ethnographic research. It is here where the distinctions between design and anthropology reveal themselves. First, it shows the differing temporalities of theoretical academic knowledge, which "is supposed to endure, and to transcend the moment" (Maurer and Mainwaring 2012:178), and of practical development knowledge, which is often used within tightly timed program and funding cycles.[5] Second, this resistance also illuminates the refusal of much anthropological knowledge production to be (made) instrumental through direct application. The possibilities of such refusals are not straight forward, but are shaped by questions of status and expertise, as well as by the expectations of and power relations between donor and recipient. These are, in turn, channeled through processes of negotiation that find final expression in legal contracts.

Maurer then embraced the design idea somewhat ironically, using it to make financial inclusion practitioners question their assumptions about the benefits of savings for the poor, especially in monetary form. The resulting principles were developed in collaboration with members of IMTFI's external board, which is comprised of industry practitioners, and issued as part of the IMTFI's first annual report in early 2010 (IMTFI 2010). They were meant to be, in Maurer's words, "self-consciously un-actionable," in the sense that they did not come with how-to manuals for easy construction (email, May 4, 2013). Although some principles are more straightforward, such as capitalizing on lucky numbers and using meaningful symbols to illustrate local currencies, the majority are a set of relatively abstract recommendations for how to incorporate poor people's "monetary ecologies and repertoires" (IMTFI 2010:2) into the design of poor-appropriate savings products and services. These recommendations are grounded in IMTFI Fellows' ethnographic research, often undertaken in their own countries, where their intimate knowledge of local contexts, and occasional participation in the very transformation they study, contributes to the depth of IMTFI's findings. The resulting understanding of financial transactions tied to religion, rituals, and rites, as the most important sites of poor people's monetary practices, materialized in design concepts focused on codes, conversions, and cycles.

Of Obligations, Conversions, and Discipline

Design principles that address the importance of codes are based on an understanding of the role of social status, hierarchy, and sanctions in poor people's lives. Starting with observation that "poor people's existing savings behavior involves social obligations," effective savings products should enable them to meet these obligations (IMTFI 2010:1). For example, designs that account for social ranking might be more appropriate than those that aim to level rank, which could be seen as selfish or antisocial. In other words, savings products that work with people's social positions, not against them, acknowledge the "security, predictability and order" they provide and might therefore be more meaningful to the poor (IMTFI 2010:2). The proposed solution is firmly situated within existing local, often unequal, structures; similarly, humanitarian designers often work with local leaders, which can limit their potential for radical change. Paying respect to poor people's placement in social webs of obligations confirms that design is not a revolutionary but a more cautious, "remedial" approach to social change (Latour 2008:5). That does not have to make the practice a handmaiden of neoliberalism (Johnson 2011), but rather speaks to distinct anthropological, design-based and political sensibilities.

Convertibility principles are based on research findings that reveal the different value scales (interval, ordinal/categorical, volumetric) and standards (livestock, land, jewelry, state currency) used by poor people, often in complementary ways. This understanding can lead to the design of savings systems that work across these differences, aiming to make them commensurable. Any leftover resulting from exchanges among different value scales could be saved. Conversion calculators and visual aids show poor people when enough has been saved. Such designs for convertibility takes poor people's calculative practices serious and can foster practices of financial decision making that are grounded in their own logics. The results are new agents of reason; beyond applying calculative rationalities to remake poor people's lives, the poor are also recognized as calculating subjects in their own right. In the end, the sophisticated monetary management skills that poor people have developed to deal with the smallness, uncertainty, and fluctuation of their incomes are now becoming tied to formal financial products and services (Collins et al. 2009).

Cycles can inform design principles by drawing attention to the significance of temporal rhythms, be they religious, ritual or life cycles, in poor people's lives and to the financial obligations that are tied to them. As with Following the Bean, saving becomes reframed from a general activity to one tied to particular relationships, events, or goals. This entails acknowledging "the rationality of these cycles" (IMTFI 2010:30) rather than discounting them as cultural obstacles in the formation of rational fiscal subjects. It also reveals, however, the corrective aspect of financial inclusion manifested in the inculcation of a fiscal prudence poor people are seen to be to be lacking, as Maurer himself reminded participants at the IMTFI 2010 conference. In one way, humanitarian design interventions shore up this function, and thereby partake in disciplining the poor. In another way, they complicate it by working from within poor people's understanding of their financial lives. The result is a particular form of hybrid knowledge characteristic of the afterlives of development, one that

seeks to enable the coexistence of calculative and cultural rationalities in the financial inclusion assemblage.

Codes, conversions, and cycles speak to the complexity of poor people's monetary practices, a recognition that comes from anthropological research. It is through holding this complexity in view rather than simplifying or trying to erase it that humanitarian design can best inform development practice. Even though the results are technological solutions, which do not address social inequality or the need for wealth redistribution, they can challenge financial inclusion practitioners to think differently. In the case of IMTFI's work, which operates on an open-source model, they "reinvigorate a notion of publics" in the face of the marketization and financialization of poverty (Maurer 2012).

Open-Sourcing Innovation

Even though the institute's design principles were meant to provoke development and industry practitioners, Maurer told me that, to his surprise, the principles were taken up with much interest by both groups. He recalled that when the principles were made public, his phone rang off the hook with people asking, "Can we use these? Are they free?" A call to UC Irvine's Office of Technology Alliances confirmed that this indeed was the case, as IMTFI's work is for public consumption, in keeping with its contract with the Gates Foundation and with the spirit of the public UC system. On the one hand, this makes the impact of the design principles hard to track, as their use by others can remain unknown or can itself become subject to commercial nondisclosure. In a recent email, Maurer did confirm that IMTFI's findings "definitely percolated into the design and payments technology communities," having become part of the Gates Foundation's discussions and mobile money industry reports (email, May 4, 2013).

On the other hand, this public-ness stands in marked contrast to the usual confidentiality arrangements of industry actors, and it makes IMTFI itself a sought after place for "honest discussion and debate unencumbered by the strictures of non-disclosure and intellectual property" (IMTFI 2010:8). In creating a space where corporate and development participants can interact with and benefit from the work of academics, IMTFI is following models more common in the life sciences or business departments of universities. Social scientists often continue to view these arrangements with skepticism and accusations of "going native." From a different angle, though, they hold out the potential for new forms of "collateral, collaborative praxis" between anthropologists and development practitioners, enabled by design (Maurer and Mainwaring 2012:182).

Conclusion

Latour argues that "designing is the antidote to founding, colonizing, establishing or breaking with the past" (2008:5). Conversely, humanitarian design has been characterized as a form of "soft cultural imperialism" (Johnson 2011:463; Nussbaum 2010).

Instead, this article has focused on the productive practices of humanitarian design and its novel ways of looking, listening, and learning, and has foregrounded how it might offer new solutions to age-old, wicked problems. Humanitarian design begins with an experimental approach that questions the very assumptions that most development interventions take for granted. Rather than presuming to know what people need, humanitarian designers wonder if they are even asking the right questions. They learn what people value through collaborative processes that account for power and knowledge dynamics, and that at their best embrace indigenous and collective ways of knowing and living. Once problems have been unearthed, they are often redefined in ways that align with an understanding of how differently people are affected by design interventions.

Following the Bean set out to create a technological money management tool and ended up with an unfinished prototype to create funds farmers and their families could accumulate. IMTFI transformed ethnographic research findings into design principles to show the Gates Foundation that putting money into bank accounts for unknown future use is not how poor people save. In both cases, social realities, made knowable through anthropological and design methods, shaped practices that were informed by poor people's accounts of their financial lives and circumscribed by funding, access, and power issues.

I am not advocating for an unquestioned embrace of humanitarian design. Application of Western expertise and technology to solve the problems of development privileges outsider, technological, and often commercial solutions over political action or indigenous practice. In this way, humanitarian design constitutes a continuation of modernist development interventions and also shows their current embrace by global market forces. However, as a location where "materiality and morality [are] finally coalescing" (Latour 2008:5), humanitarian design can begin to create alternative development figures within the existing apparatus. It acknowledges the messiness and complexity of any project of change and recommends proceeding with caution.

Notes

1. I thank Peter Redfield for sharing his presentation paper with me.
2. IDEO itself has close ties to the dschool Institute of Design at Stanford University, which offers courses such as Design for Extreme Affordability.
3. http://www.ideo.com/work/human-centered-design-toolkit/, accessed January 27, 2014
4. See Interaction and Service Design, http://www.melissacliver.com/recommendation, accessed Oct 19, 2011.
5. This is distinct from development studies, which is scholarly research into the field and often more of an academic nature, although much of this knowledge occupies a hybrid space.

References Cited

Bishop, Matthew, and Michael Green
    2008   Philanthrocapitalism: How the Rich Can Save the World. New York: Bloomsbury Press.

Brainard, Lael, and Derek Chollet, eds.
    2008   Global Development 2.0: Can Philanthropists, the Public, and the Poor Make Poverty History? Washington, DC: Brookings Institute.

Brown, Tim
    2008   Design Thinking. Harvard Business Review (June):1–9.

Brown, Tim, and Jocelyn Wyatt
    2010   Design Thinking for Social Innovation. Stanford Social Innovation Review 8(1):31–35.

Buchanan, Richard
    1992   Wicked Problems in Design Thinking. Design Issues 8(2):5–21.

Caruso, Christine, and Lois Frankel
    2010   Everyday People: Enabling User Expertise in Socially Responsible Design. Paper presented at Design Research Complexity, Montreal, July 7–9, http://www.drs2010.umontreal.ca/data/PDF/024.pdf

Cliver, Melissa, Catherine Howard, and Rudy Yuly
    2010   Cash Streams with Personalities. http://issuu.com/melissacliver/docs/new_organizational_models_aug23_imtfi_sm, accessed January 16, 2014.

Collins, Daryl, Johnathan Morduch, Stuart Rutherford, and Olivia Ruthven
    2009   Portfolios of the Poor: How the World's Poor Live On $2 A Day. Princeton, NJ: Princeton University Press.

Cooke, Bill, and Uma Kothari, eds.
    2001   The Case of Participation as Tyranny. *In* Participation: The New Tyranny. Pp. 1–15. London: Zed Books.

Chambers, Robert
    1983   Rural Development: Putting the Last First. Essex, UK: Wiley.

Cross, Jamie
    2013   The Hundredth Object: Solar Lighting Technology and Humanitarian Goods. Journal of Material Culture 18(4):367–387.

Easterly, William
    2006   The White Man's Burden: Why the West's Efforts to Aid the Rest have Done So Much Ill and So Little Good. New York: Penguin Press.

Elyachar, Julia
    2012   Next Practices: Knowledge, Infrastructures, and Public Goods at the Bottom of the Pyramid. Public Culture 24(1):109–129.

Gates, Bill
    2008   A New Approach to Capitalism in the 21st Century. Speech Delivered at the World Economic Forum, Davos, 01/24/2008. http://www.microsoft.com/en-us/news/exec/billg/speeches/2008/01-24wefdavos.aspx

Hempel, Jessi

    2007   Designing Change: How Venture Philanthropy Fund Acumen Uses Design Thinking to Help Solve Real-World Problems. Bloomberg Businessweek, March 11. http://www.businessweek.com/stories/2007-03-11/designing-change, accessed January 16, 2014.

Institute for Money, Technology and Financial Inclusion

    2010   First Year Report and Design Principles. Irvine: University of California, Irvine.

Johnson, Cedric

    2011   The Urban Precariat, Neoliberalization, and the Soft Power of Humanitarian Design. Journal of Developing Societies 27(3/4):445–475.

Kimbell, Lucy

    2010   Design Practices in Design Thinking. www.lucykimbell.com/stuff/Practicedesignthinking.pdf, accessed January 16, 2014.

Kothari, Uma

    2005   Authority and Expertise: The Professionalisation of International Development and the Ordering of Dissent. Antipode 37(3):425–446.

Kruger, Runette

    2008   Design and Empathy. South African Journal of Art History 23(3):113–125.

Kumaragamage, Don

    2011   Design Manual. Volume 1.

Latour, Bruno

    2008   A Cautious Prometheus? A Few Steps Towards a Philosophy of Design (with Special Attention to Peter Sloterdijk). Proceedings of the 2008 Annual International Conference of Design History. Pp. 2–10. Boca Raton, FL: Universal Publishers.

Leal, Pablo Alejandro

    2007   Participation: The Ascendancy of a Buzzword in the Neo-Liberal Era. Development in Practice 17(4/5):539–548.

Marcus, George

    2012   The Legacies of Writing Culture and the Near Future of the Ethnographic Form: A Sketch. Cultural Anthropology 12(3):427–445.

Maurer, Bill

    2012   Mobile Money: Communication, Consumption and Change in the Payments Space. Journal of Development Studies 48(5):589–604.

Maurer, Bill, and Scott Mainwaring

    2012   Anthropology With Business: Plural Programs and Future Financial Worlds. Journal of Business Anthropology 1(2):177–196.

Mosse, David

    2005   Cultivating Development: An Ethnography of Aid Policy and Practice. London: Pluto Press.

Nieusma, Dean

    2004   Alternative Design Scholarship: Working toward Appropriate Design. Design Issues 20(3):13–24.

Nussbaum, Bruce
  2010   I Is Humanitarian Design the New Imperialism? Does Our Desire to Help
          Do More Harm Than Good? http://www.fastcodesign.com/1661859/is-
          humanitarian-design-the-new-imperialism (accessed January 17, 2014).
Oosterlaken, Ilse
  2009   Design for Development: A Capability Approach. Design Issues 25(4):91–
          102.
Papanek, Victor
  1984   Design for the Real World: Human Ecology and Social Change. Chicago:
          Academy Chicago Publishers.
Pilloton, Emily
  2009   Design Revolution: 100 Products that are Changing People's Lives.
          London: Thames and Hudson, Ltd.
Rabinow, Paul, et al. George Marcus, James Faubion and Tobias Rees.
  2008   *Designs for an Anthropology of the Contemporary*. Durham, NC: Duke
          University Press.
Redfield, Peter
  2012a   Bioexpectations: Life Technologies as Humanitarian Goods. Public Cul-
          ture 24(1):157–184.
  2012b   Beyond the Bush Pump: Microworlds of Humanitarian Design. Paper pre-
          sented at Max Planck Institute for Social Anthropology, Halle, 07/18/2012.
Rittel, Horst, and Melvin Webber
  1973   Dilemmas in a General Theory of Planning. Policy Sciences 4(2):155–169.
Roy, Ananya
  2012a   Ethical Subjects: Market Rule in an Age of Poverty. Public Culture
          24(1):105–108.
  2012b   Subjects of Risk: Technologies of Gender in the Making of Millennial
          Modernity. Public Culture 24(1):131–155.
Rudnyckyj, Daromir and Anke Schwittay
  2014   Introduction. Political and Legal Anthropology Review. 37(1)
Sanders, Elizabeth
  2002   From User-Centered to Participatory Design Approaches. *In* Design
          *a*nd the Social Sciences: Making Connections. J. Frascara, ed. Pp. 1–9.
          London: Taylor and Francis.
Sachs, Jeffrey
  2005   The End of Poverty. New York: Penguin Press.
Schwittay, Anke
  2011a   The Financial Inclusion Assemblage: Subjects, Technics, Rationalities.
          Critique of Anthropology 31(4):381–401.
  2011b   The Marketization of Poverty. Current Anthropology 52(S3):71–82.
Suchman, Lucy
  1987   Plans and Situated Actions. Cambridge: Cambridge University Press.
  2011   Anthropological Relocations and the Limits of Design. Annual Review of
          Anthropology 40:1–18.

Walters, Helen

    2010   Rockefeller Foundation's Push Toward Design and Innovation. Blooms-
             berg Businessweek, January 5, http://www.businessweek.com/innovate/
             next/archives/2010/01/rockefeller_foundations_push_toward_design_
             and_innovation.html, accessed January 16, 2014.

Wilson, Richard Ashby, and Richard D. Brown

    2009   Humanitarianism and Suffering: The Mobilization of Empathy.
             Cambridge: Cambridge University Press.

World Bank

    2010   Microfinance at a Glance: Washington, DC: World Bank.