

Research in crisis: new analytical tools for the humanitarian architect

Scott Gerald Shall
Temple University, Philadelphia, Pennsylvania

ABSTRACT:

In the preface to *Design Like you Give a Damn*, the much-publicized catalogue of humanitarian design edited by Architecture for Humanity, author Kate Stohr charts “100 years of humanitarian design”, starting with the government-sponsored sheds built after the 1906 San Francisco earthquake and concluding with the dozens of humanitarian projects featured in the volume itself. In the process, Stohr highlights a troubling trend. From the well-documented failures of early modernist housing to the minimal range of current work by Rural Studios and others, Stohr’s survey of over 100 years humanitarian design contains few, if any, projects that have successfully empowered, invigorated, or unified communities in the long-term.

Although designers are quite divided as to the reasons for this checkered history, recent work within the field of development communication might suggest a cause. Historically, the practices of development communication, like those of humanitarian design, have been based upon a diffusion model of practice. In this model, the chief purpose of a development campaign is to provide information that will persuade individuals to change their behavior for the good of many. For myriad reasons, this model failed to work. In response, communication experts developed the participatory model, a practice that trades the top-down processes of information transfer for techniques that promote a continual exchange of information between the players in the project. In the participatory model, the practitioner works with community members to continually reassess their needs and collaboratively design methods to address them.

This paper will use the participatory models of development communication to evaluate current practices of the humanitarian designer. As a framework, this writing will accept two methods of assessment: the work of Dr. Jacobson, who has adapted the principles of Jurgen Habermas to offer a new model of evaluation for participatory projects and the post-occupancy evaluation model commonly deployed by architects. From this evaluation, this writing will propose several techniques of pre- and post-occupancy research and evaluation for the humanitarian architect.

CONFERENCE THEME: On Approaches

KEY WORDS: “humanitarian design”, “development communication”, “participatory development communication”, “post-occupancy evaluation”, “participatory design”

INTRODUCTION

Development communication is “the strategic application of communication technologies and processes to promote social change” (Wilkins, 2000, p. 197). It is a movement founded upon the conviction that strategic communication can impact behavioral patterns, aid development projects and, thus, improve health, education, agriculture, and other matters of great concern around the globe.

Humanitarian design is the strategic application of art, architecture and other creative work to address urgent needs around the world. It is a movement founded upon a belief in design’s potential to “empower, invigorate, and unify communities” and impact health, education, and other matters of great concern around the globe (Wilson, 2007, p. 29-31).

Unfortunately, the convictions of both movements have yet to be verified.

In the preface to *Design Like you Give a Damn*, the much-publicized catalogue of humanitarian design edited by Architecture for Humanity, author Kate Stohr charts “100 years of humanitarian design”, starting with the government-sponsored sheds built after the 1906 San Francisco earthquake and concluding with the dozens of humanitarian projects featured in the volume itself. In the process, Stohr highlights a troubling trend. From the well-documented failures of early modernist housing to the minimal useful range of current work by Rural Studios and others, Stohr’s survey contains few, if any, projects that have successfully empowered, invigorated, or unified communities in the long-term.

Although designers are quite divided as to the reasons for this checkered history, recent work within the field of development communication might suggest a cause. Historically, the practices of development communication, like those of humanitarian design, have been based upon a diffusion model of practice. In this model, the chief purpose of a development campaign is to provide information that will persuade individuals to change their behavior for the good of many (Rogers, 1962). For proponents of diffusive models of practice, development was about transferring information from those in the know to those who were not. After all, as it is written: give someone a fish and you feed them for a day; teach someone to fish and you feed them for a lifetime.

Unfortunately, the knowledge transferred through this top-down method of development communication failed to take root within the populations they were intending to serve. Those receiving said wisdom felt that the innovations did not belong to them, that they were the passive receivers of knowledge, not the creators of it. Thus, when something went wrong, they felt powerless to evolve the ideas to meet new conditions, instead expecting the initiators of the innovations to provide a fix. In response, mass media and communication experts developed the participatory model, a practice that trades the top-down processes of information transmission for techniques that promote a continual exchange of information between the various players in the project. (Waisbord, 2000, p. 17) In the participatory model, the practitioner works with community members to consistently reassess their needs and design methods to address them (Morris, 2002).

COMMUNICATIVE ACTION: THE ROOTS OF PARTICIPATORY DIALOGUE

In 1970, Brazilian educator Paulo Freire (1970) postulated that the central goal of communication is not persuasion, but “conscientization” - a free dialogue that prioritizes cultural identity, trust and commitment. (Freire, 1970) In Friere’s mind, communication should provide all parties with a sense of ownership over the ideas explored – a call that describes well the goal of most participatory models of development communication. Around the same time, planners and architects, inspired by writers like Jane Jacobs (*Death and Life of Great American Cities*, 1961), Rachel Carson (*Silent Spring*, 1962), and Robert Venturi (*Complexity and Contradiction in Architecture*, 1966), were attempting to replace modernist, top-down planning practices with more community-centered approaches. (Schuman, 2005) Unfortunately for those in development communication, planning and design, Friere’s free dialogue has proven quite difficult to achieve. Thus, while some projects have achieved a fairly high level of success using the principles espoused by proponents of participatory planning and development communication, creating collaboratively generated, locally rooted and sustainable projects of fair utility, most have failed to reach even the modest level of success realized by their diffusive predecessors.

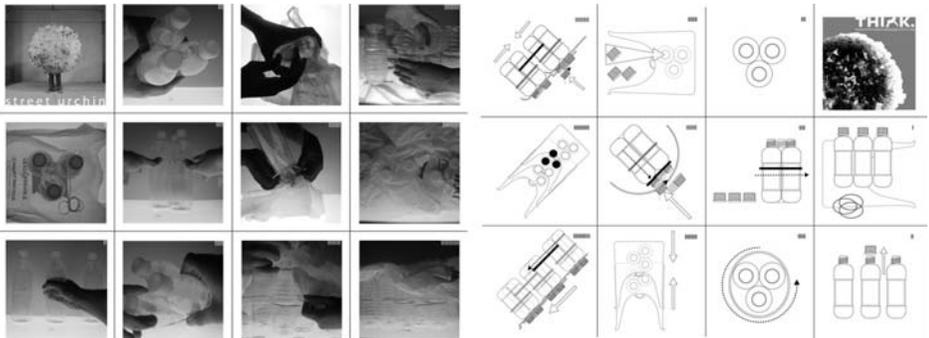
To build off the successes of the former and address the weaknesses of the latter, writer and educator Tom Jacobson (Jacobson, 2010) proposes an evaluative framework capable of assessing the dialogic variables that make participatory development possible. As a foundation for this work, Jacobson uses the seven elements of communicative action proposed by sociologist Jurgen Habermas. For Jacobson, Habermas’s theory of communicative action, which proposes an undistorted, non-ideological communication structure (originally designed to provide a basis for confronting systematically distorted communication), is inherently participatory.

The first four principles offered by Habermas - *validity claims* – all focus upon the assumptions that make action oriented toward understanding, which Jacobson refers to as “participatory dialogue”, possible. According to Habermas’s theory, individuals exchange speech acts because they believe said

acts are: (a) true, (b) normatively appropriate, (c) sincere, and (d) comprehensible. Without these four conditions, effective communication is not likely. After all, it is quite difficult for someone who is constantly concerned that he/she is being insulted to engage in valid speech acts. It is equally difficult to do so if one is confronted with insincere or incomprehensible language. This is not to say that all acts of communication fulfill all four categories. Rather, it is to identify those expectations that make communication possible. When met, said expectations operate in an unconscious way; when breached, for example, when one believes they are being lied to, they are made conscious. Either way, in Habermas's view, they furnish the substructure of communication.



Image series 1 streetURCHIN uses simple, repetitive techniques to create a completely watertight and easily transported urban tent from nothing more than discarded plastic shopping bags, rubber bands, and used water bottles. Although many streetURCHINS have been constructed, the chief manner of disseminating this work is an image-based and pocket-sized manual that describes the twelve-step construction process. Hundreds of these manuals have been distributed in galleries in the US, Poland and various online venues, creating an open-source platform has created new forms and better designs. [images courtesy International Design Clinic, www.internationaldesignclinic.org]



The second three principles offered by Habermas - *speech conditions* - outline the circumstances necessary to entertain more complex dialogues. The first condition is intended to ensure freedom of expression and is founded upon the ability to “express any attitudes, wishes or needs”, to “introduce any proposal”, and to “call into question any proposal”. The second condition, which Habermas identifies as the “symmetrical distribution of opportunities to contribute”, speaks to the necessarily egalitarian nature of the ensuing dialogue. The third condition offered by Habermas speaks to the mechanisms used to judge the points raised, privileging the determination of outcomes through the “force of a better argument”.

Taken with the validity claims cited above, these three conditions describe well the expectations necessary for effective communication. It also describes why the top-down methods proposed by diffusive models have failed to provide the desired results (Morris, 2003). After all, it is quite difficult to have a symmetrical distribution of opportunities to contribute when the conversation is framed in a manner that privileges the insight of one party (those offering the wisdom) over another (those receiving said wisdom). Given the alignment between Habermas’s seven principles of effective communication and the stated goals of both participatory (development communication) and community-centered (planning) models of practice, it seems reasonable to agree with Dr. Jacobson when he argues that Habermas’s conditions can be used as an evaluative frame. Through surveys, questionnaires and interviews, participants could share if they believed the organizing agency to be knowledgeable about local conditions (truth), whether or not the staff behaved in an appropriate to the local culture (appropriateness) and to what extent the participants understood the proceedings (comprehension). They could also share if they felt free to raise proposals (free to raise any propositions) and whether or not their viewpoint was treated equally (equal treatment of propositions). This data could then be compared to other existing metrics, such as citizen buy-in or the achievement of the goals held by the project itself (to provide a more hygienic environment, to get people to immunize, etc), to determine the impact of participatory processes in realizing successful work.

PARTICIPATORY PRACTICES IN ARCHITECTURE

In architecture, participatory practices have provided a fundamental manner of working for community-centered design practices, alternatively called socially-responsive design, humanitarian design, and design as activism. For the community-centered design practitioner, participatory practices are of critical importance in all phases of design, from conception to, and often including, construction. To date, the format of these practices is largely borrowed from similarly intentioned practices found within the larger field of architecture. Although aspects of all phases of design have been so incorporated, this paper will focus upon the two phases most commonly engaged to this end: post-occupancy evaluation and community-centered design charrettes.²

Wolfgang Preiser defines post-occupancy evaluation (POE) as a “means of collecting data on which to base future programs” (Preiser, 1993, 369). Edith Cherry describes POE as a manner of comparing “intentions of the architectural program to the resulting situation after the project has been in use for some time” in order to fine-tune the approach of new work based upon disconnect between existing building(s) and existing use(s). (Cherry, 1998, 89-90) POE methods, which range from highly formal to more casual, often include individual interviews, surveys, walk-throughs, report and study reviews, visits to other facilities and observational audits, are largely intended to document the interaction between the work and those who inhabit it, including not only the users, but also the general public. (Preiser, 1993, 380) Here, perhaps more than any other phase of design, the input of the public, expressed both explicitly, through interviews, surveys and questionnaires, and tacitly, through occupation of the work, is offered clearly and concisely, in a manner that would permit the wisdom of many to play a key role the design process.

The second method favored by many community-centered designers, the public charrette, is widely accepted as the primary vehicle for including public input in the design process. In fact, Cherry uses the public charrette almost synonymously with participatory practices. In terms of executing a public charrette, the first step is to obtain the owners permission to design in this manner. If approved, the designer requests that the owner select a building committee consisting of representatives from each of the major interest groups and determine the ultimate purpose of the group: to make design

decisions, to offer recommendations, or to simply highlight important issues. Finally, if deemed appropriate by the owner, mechanisms for including the insight of others who wish to impact the project are established. (Cherry, 1999, 54-6)

HIERARCHICAL CONVERSATIONS AND GROUPTHINK

It is important to note that neither of the mechanisms described above necessarily allow the public to have any real role in the work. In both post-occupancy evaluation and community reviews, the client remains the unquestioned authority, deciding whether or not to even include either mechanism in the design process and to what extent the findings uncovered will impact the work. Although the hierarchical relationships established through these client-centric processes are arguably appropriate when completing some works of architecture, they become quite problematic when utilized in more community-centered projects. For example, returning to Habermas's theory of communicative action, it is quite difficult to believe that the members of a committee formed under the conditions outlined above could possibly feel that their propositions would be treated equally to those offered by the client. Said doubts would likely call into question the sincerity of the meeting, greatly reducing the possibility that communicative action, or effective dialogue, would be possible.

Just as alarming, the owner-centric processes commonly deployed in community-centered work dramatically increase the probability that the people gathered in this manner will lack true diversity, potentially paving the way for *groupthink*. That is, any group hand-picked by a single person or body of people will necessarily be limited by the experiences of said person or group. This creates a strong leaning toward certain sectors of the public – a bias that is only intensified by the methods used to advertise the meetings held, all of which will also be necessarily limited to the forms of advertisement known by the client and their hired help. When combined with the difficulties of positioning this advertisement in a manner that will communicate relevance to a wide audience and gain the interest of all people impacted by the work, these leanings can have a huge impact on who decides to participate. Finally, the parameters of the meeting itself, in terms of time, place, and format have a tendency to similarly skew the participants. For example, holding a meeting at night may welcome those who work during the day, but will limit the participation of those with children, night jobs, or extra-curricular responsibilities. Similarly, holding the meeting in one part of town will bias the proceedings toward people who have easier access to the space; those with cars, along the bus route, or within walking distance, will be far more likely to attend than those who are located less conveniently.

These factors severely limit the diversity of the group – a fact that will significantly impact the ensuing conversation. According to James Surowiecki, author of *Wisdom of Crowds*: “homogeneous groups are great at doing what they do well, but they become progressively less able to investigate alternatives.” (Surowiecki, 2004, 31). Radical ideas or unpopular notions are quickly overlooked, regardless of their validity, in favor of those points or beliefs held by the majority. Popularity, not the soundness of argument prevails, creating *groupthink*: “the important thing about groupthink is that it works not so much by censoring dissent as by making dissent seem somehow improbable ... even if at first no consensus exists – only the appearance of one – the groups' sense of cohesiveness works to turn the appearance into reality, and in doing so helps dissolve whatever doubts members of the group might have.” (Surowiecki, 2004, 37) Over the course of the meeting, this false consensus steels the minds of the participants, closing them from ideas offered by the minority or overlooked by the group as a whole. Under such circumstances, ideological communication has effectively compromised the ability of the group to realize effective communicative action. (Surowiecki, 2004, 180)

THE ILLUSION OF THE EXPERT-ARCHITECT

According to experts in the field of participatory design processes, it is the responsibility of the facilitator to ensure that the conversation is run in a manner that respects Habermas's three speech conditions. It is the job of the facilitator to make sure that all parties have an equal opportunity to raise issues and voice questions as well as providing an environment that ensures all proposals are



Image series 2. In the summer of 2008, a forty-person team representing two countries, eight universities and six disciplines traveled to Mumbai, where they worked closely with local tailors, activists, vendors, students, artists and architects to create a vision for education tailored to the lives of the thousands of children who live on the construction sites of India. The resulting work, which ranged from a **portable earth wall (a)**, a **\$2 water filter (b)** and a **negotiable floor surface** realized using autorickshaw upholstery techniques (c) described not a single school, but a vision that might be used by our non-profit partner, Mumbai Mobile Creches, to inform many schools over a long period of time. [images courtesy International Design Clinic, www.internationaldesignclinic.org]

treated equally. At the same time, the facilitator, a role often filled by the architect or designer, is counted on to overcome some of the harmful, groupthink tendencies brought about by the formation of the group itself: to make sure that minority opinions are given fair hearing and to suggest any ideas that the group might have overlooked in their deliberations. Paradoxically, it is also the facilitator's responsibility to make sure to find "common ground on opinions" and encourage those who differ in position to put aside their differences and "build on the ideas they share." (Cherry, 1999)

Aside from asking the architect to simultaneously uphold conflicting demands (for example, by representing the minority while also building consensus), these roles install the architect as a second point of authority within a supposedly public forum. Although it might seem appropriate for the architect, as the design expert for the project, to assume such a position within a design charrette, current research would indicate that this is a suspect conclusion at best. For example, a recent study comparing the performance the most respected mutual fund experts to the Wilshire 5000 index found that between 1984 and 1999, almost 90% of the experts underperformed the index. Another study found that "the between expert agreement in a host of fields, including stock picking, livestock judging and clinical psychology, is below 50 percent, meaning that experts are as likely to disagree as to agree." (Surowiecki, 2004, 33) Although exceptions do exist, as past success is no guarantee of future results, it seems that the long-term potential of the expert remains somewhat suspect. This has led some to conclude that "... there's no real evidence that one can become an expert in something as broad as 'decision making' or 'policy' or 'strategy.' Auto repair, skiing and perhaps even management: these are skills that yield to application, hard work and native talent. but forecasting an uncertain future and deciding the best course of action in the face of that future are much less likely to do so." (Surowiecki, 2004, 32) Moreover, given the findings in a study by Terrance Odean, which indicate that purported experts like physicians, nurses, lawyers, engineers, entrepreneurs, and investment bankers routinely overestimate their knowledge within their field of study, the installation of the expert-architect within design charrette might actually serve to exacerbate the groupthink already present, only in a manner that falls in line with the thinking of the architect in charge.

These difficulties are compounded by the fact that the same authority figure is also responsible for overseeing the conversation in a manner that meets Habermas's four validity claims: it is the architect who makes sure they are knowledgeable about local conditions, that all parties behave in a manner appropriate to the local culture, that they demonstrate sincerity when attempting to help the group solve local problems and that they communicate effectively to all participants. Unfortunately, this is a role that is impossible to fill. That is, even though the processes of group selection currently used do limit the number of cultural groups present, it is quite difficult to be completely knowledgeable about the problems faced by a single cultural group, let alone two or three. It is equally difficult to make sure that one behaves in a manner simultaneously appropriate to the belief systems of said

cultures. Obviously, the greater the cultural differences of the players, the more profound these inadequacies become. Knowing well these difficulties, Cherry suggests that the architect read several ethnographies on the participating cultures in order to become knowledgeable. (Cherry, 1999, 63-4) Unfortunately, even assuming the architect has the time to read the ethnographies this call would require and is able to avoid poor or out-of-date accounts, it remains quite difficult to image that this method would allow for the facilitator to gain any knowledge on under-represented or newly-emergent subcultures. Surely, reading several ethnographies on Americans would hardly take into account the vast number of subcultures that define the country. As Cherry admits, “a client group does not have to be from a foreign country to have cultural values unlike your own. In many ways, neighborhoods in the same town have different cultures.” (Cherry, 1999, 66) How then would one find accounts of these neighborhoods? These questions become particularly vexing when one practices in a neighborhood completely foreign to previous experience, as is the case with the work of many community-centered or humanitarian designers.

To overcome these limitations, Cherry suggests working with a colleague from that culture, or “informant.” (Cherry, 1999, 66). Unfortunately, this still brings up significant questions: Should one find an informant from each subculture involved or only the important ones? How do we select them? How are these individuals different from the other representatives in the group and what is their place within the decision-making hierarchy? In light of these quandaries, it seems reasonable to ask one final question: Would not the entire process be a lot simpler if the foreign architect just got out of the way?

The answer, quite simply is yes. At least under the auspices of this arrangement.

THE FAILINGS OF CONSENSUS

In the world of participatory design, consensus-building is the ultimate goal: “In terms of maximum participation, consensus decision making is the most inclusive.” (Cherry, 1999, 57) Unfortunately, consensus building is an inherently flawed method of creating dialogue, more often leading to ill-founded conclusions and faulty recommendations than useful insight. The reasons for this extend past the niceties surrounding the deliberation and into the structure of the debate itself. That is, putting aside for a moment the impossibility of so doing, even if a facilitator is able make sure that the group fulfills all seven of Habermas’s conditions, the structure of the open-forum itself will greatly diminish the ability of the group to create the debate and offer the wisdom these conditions are intended to cultivate.

First, the format of the open forum encourages two very harmful group patterns: *information cascade* and *polarization*. Information cascade is a result of the linear process of conversation, in which each insight offered is impacted by that which preceded it. This situation naturally prioritizes the points raised first, instead of those that are judged to be most prudent through argument or thoughtful consideration. Thus, the first person speaking has a profound impact upon the course of the deliberation, and, thus, the conclusion reached. This occurrence is made especially dangerous due to the fact that groups to polarize through debate. According Cass Sunstein, who conducted numerous studies on this phenomenon: “As a general rule, discussions tend to move the group as a whole and the individuals within it toward more extreme positions than the ones they entered the discussion with.” (Surowiecki, 2004, 185) There are three explanations for this. First, during a deliberation, people tend to compare their position to that held by the group. Second, people tend to believe that if lots of people believe a certain thing, they must have a good reason for doing so. This is called “herding” and is demonstrated clearly through an experiment by Milgram, Bickman and Berkowitz. In it, they placed a single individual on a street corner, and asked them to look skyward. As others passed, a few stopped to look skyward as well. After a time, they placed five people on the corner looking skyward, which caused four times as many people to gaze skyward. They then placed fifteen skyward-looking people on the corner, resulting in almost half of all passersby following suit. As they continued this progression, more and more people were convinced to stop and look at the sky, until 80% of the passersby ended up so doing by the end of the experiment. (Milgram, 1969) Third, within a deliberation, extremists, who “tend to more rigid” and are generally “convinced of their own rightness” tend to have greater influence than moderates. Eventually, due in large part to



Image series 3. Projection Mail, a \$3 projection system with a range of over 10'-0", was created to exhibit work without encouraging the voyeuristic tendencies that usually accompany a gallery-based show. The resulting exhibitions, rather than feature a few key images of the final work in a given space, featured hundreds of images that can be focused (or blurred), enlarged (or shrunk) and overlapped (or isolated). Just as importantly, through acts of, [re]positioning (stealing a box and putting it in a new location), [re]projection (projecting the image onto unanticipated surfaces), [re]purposing (through acts of graffiti or the substitution of images) and, [re]presentation (mounting photos of new installations onto Flickr and contributing to the online gallery), the face of the work shifts radically, creating a mobile trans-personal experience that both reflects and rearticulates the relationship between the work, those viewing it, and, invariably, those responsible for re-creating it. [images courtesy International Design Clinic. www.internationaldesignclinic.org/]



the first two tendencies, their conviction is transferred to the group, pulling the debate toward one end. (Surowiecki, 2004, 188)

As people shift their positions in accordance with those held by the group, they tend to leave behind points and ideas that do not find the perceived beliefs of the group. This results in consensus-driven groups squelching debate in favor of the familiar and creating “tepid, lowest-common-denominator solutions which offend no one rather than exciting everyone.” (Surowiecki, 2004, 203) Rather than confront the convicted, the moderates follow suit. Garold Stasser demonstrates this tendency through a simple experiment in which he asked eight people to rank the performance of 32 psychology students. He supplied all participants with two common pieces of information (grades, etc). He also gave two members two extra pieces of info (i.e. performance in classroom) and one member another two pieces. Stasser found that the ratings of the group were based almost entirely upon the two pieces of shared information. All other pieces of data, despite the fact that they were actually quite telling, were discounted entirely. The reason: in unstructured, free-flow conversations, the information that tends to be discussed the most is that which is shared. Any new or innovative messages are generally either modified to fit old messages or discounted altogether. (Stasser, 1985)

At times, this tendency to conform can lead the group to embrace ideas that are blatantly wrong. In Solomon Asch’s famous experiment, he asked nine people to select the longest line on a sheet of paper. The first eight respondents, who were in on the experiment, had been previously instructed to select the wrong line. This caused 70% of the subjects (the final respondent) to select the wrong line at least once and 33% to do so over half the time. Rather than believe their eyes, these respondents believe the group. (Asch, 1956) One can only imagine the sway of the group when dealing with matters of greater dispute than the length of a line.

FINAL ANALYSIS

In order to address the harmful patterns propagated by current participatory practices the architect must shift their practices in a manner that will cultivate a more useful dialogue. This address starts with the recruitment of a much wider body of participants. The community-centered designer can no longer rely upon a single source to determine the correct body of people to invite. Nor can they rely upon mechanisms of advertising for recruitment or a single time and space for discussion, both of which have biases that will not permit the diversity of participation required in a truly community-centered work. Instead, the architect must construct methods of instigating and collecting wisdom at a variety of points and times. Whether in the form of smaller, street-side events or large-scale negotiable installations, the designer must find ways that the wisdom of a wide range of people is collected simultaneously without prioritizing the views of the majority, the powerful or the convicted (image 1). Done correctly, this will minimize groupthink and cascade thinking, both of which occur when decisions are made sequentially. It is worth noting that in Solomon Asch's experiment, when the scientist instructed just one other respondent to select the correct line, the subject did likewise to an overwhelming degree. Apparently, allowing a single voice of difference is enough to encourage most people to stay true to their convictions. Just as homogeneity creates pressures toward conformity, diversity contributes to difference, making it easier for everyone to offer their ideas and truly dialogue.

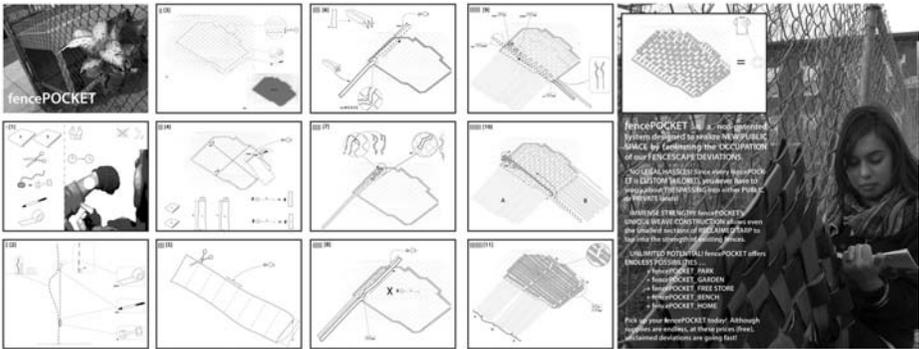
Secondly, the architect must develop practices that allow this diverse body to independently offer their ideas and explore as many alternatives as possible. This notion actually occurs quite often in the world of business. At the birth of a new technology - the automobile, the television, the Internet - there is generally a boom in the number of businesses that grow around the promise therein offered. More businesses than can possibly succeed vie for supremacy, each attempting to offer the best product to the consumer and make the case for their existence. Over time, the customer, through their purchase, judges some ideas to be better than others. Businesses respond to these trends, causing shifts in purchasing, until a much smaller set of products have each found a niche within the market. The market has been developed. Interestingly, bees use a very similar method to find honey. Rather than sit in the hive and discuss the alternatives, gradually choosing a prudent course of action, they send all members of the hive out in every direction. Once the scouts find a nectar source, they return to the hive and perform a waggle dance, the intensity of which is based upon the excellence of the supply. This dance attracts a corresponding number of scouts, which follow the bee to the source. They then return to the hive and perform a similar dance, until the entire hive has effectively divided itself to harvest the most nectar (few bees tending the smaller sources, more tending the larger sources). Although seemingly inefficient, this method is generally quite productive: if a nectar source exists within 2km of the hive, bees will find it over half the time. The bees, like the business market, succeed because they allow everyone to operate independently, in accordance with their own wisdom. This generates lots of losers, which are quickly recognized as such and killed off (image 2). Compare this to the process used by the community-based designer, who attempts to form groups which debate, using only abstractions of the idea (drawings, arguments, etc), and then decide upon a single course of action. It is not surprising that these ideas often fail to produce the desired results. A hive sending out a single forager will likely not realize better.

These new patterns of working will shift the architect's chief responsibility from that of expert, who receives all knowledge and then dispenses it to the group, to that of facilitator, who simply makes specific knowledge globally accessible and then allow the public to determine the best course of action. They will function like a street-based Google, establishing a framework whereby myriad independent sources offers a small bit of knowledge, which is then aggregated to determine the most appropriate result for any given search (image 3). Linux, which was developed by providing an open-source code and allowing anyone with even a small bit of knowledge to contribute their specific knowledge to the global application. To quote author and Linux advocate Eric Raymond: "Given enough eyeballs, all bugs are shallow." (Surowiecki, 2004, 72-3)

It not coincidental that these arguments pull into suspicion other practices of the socially-responsive designer, which generally position the designer as a single point of wisdom, tasked with understanding "the available resources, tools, desires and immediate needs of their potential users" and to "design



image series 4. fencePOCKET Every time a chainlink fence deviates from the edge of a site, it creates a thickened line between public and private. fencePOCKET uses simple, repetitive techniques and reclaimed tarp to instigate the occupation of this site. fencePOCKET can be tailored to any size deviation and welcome practically any program, including fencePOCKET|FARM, fencePOCKET|GARDEN, fencePOCKET|freeSTORE, and fencePOCKET|BENCH. [images courtesy International Design Clinic, www.internationaldesignclinic.org]



simple, functional, and potentially open-source objects and systems” for the good of many. (Bloemink, 6)⁴. Yet, the hero architect may not have a place in the world of participatory design. A study on the role of intelligence within group dynamics by political scientist Scott Page would seem to give some credence to this belief. In this experiment, Page created placed computer-simulated problem solving agents of varying intelligence into teams. He then asked these teams to perform problems of ranging complexity. Page found that teams consisting of some intelligent agents solved better than teams with all intelligent agents. (Surowiecki, 2004, 30) It seems that successful participatory design practices, like successful development communication is not about the brilliance of the few, but of accumulating the wisdom of the many (image 4).

For the architect, who cannot possibly be fully knowledgeable in all areas touched by participatory design practice, this is likely good news.

REFERENCES

- Architecture for Humanity, ed (2006). *Design Like You Give a Damn: Architectural Responses to Humanitarian Crises*. New York: Metropolis Books.
- Asch, S. E. Studies of independence and conformity. *Psychological Monographs*, 1956, 70 (9, Whole No. 416)
- Chang, L. and Jacobson, T. (in press). Measuring participation as communicative action: a case study of citizens' involvement in and assessment of a city's smoking cessation policy-making process. *Journal of Communication*.
- Cherry, E. (1998) *Programming for Design*. New York: John Wiley & Sons.
- Freire, P. (1970, 2000) *Pedagogy of the Oppressed, 30th anniversary edition*. London: Continuum.
- Jacobson, T. (2010) A case for the quantitative assessment of participatory communication programs. *Glocal Times*, May. Available: <http://glocaltimes.k3.mah.se/viewarticle.aspx?articleID=134&issueID=0>
- Milgram, S., Bickman, L., & Berkowitz, L. Note on the drawing power of crowds of different size. *Journal of Personality and Social Psychology*, 1969, 13, 79-82.
- Morris, N. (2003). A comparative analysis of the diffusion and participatory models in development communication. *Communication Theory* 13(2), 225-248.
- Preisner, W. (1993) *Professional Practice in Facility Programming*. New York: Van Nostrand Reinhold.
- Rogers, E. M. (1962). *Diffusion of Innovations*. NY: Free Press of Glencoe.
- Schuman, A. (2005). Introduction: the pedagogy of engagement. In M. Hardin, R. Eribes, and C. Poster [Eds.], *From the Studio to the Streets: Service-learning in Planning and Architecture* (1-16). Sterling: Stylus Publishing, LLC.
- Stasser, G & Titus, W (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology*, 48, 1467-1478.
- Surowiecki, J (2004). *The Wisdom of Crowds*. NY: Doubleday.
- Waisbord, S. (2001). Family tree of theories, methodologies and strategies in development communication: convergences and differences. Report prepared for the Rockefeller Foundation, May. Available: <http://www.comminit.com/pdf/familytree.pdf>
- Wilkins, K. G. (2000). Accounting for power in development communications. In K. G. Wilkins [Ed.], *Redeveloping Communication for Social Change* (pp. 197-209). New York: Rowman & Littlefield Publishers, Inc.
- Wilson, B. (2008) *In Expanding Architecture: Design as Activism*, edited by Bell, B. New York: Metropolis Books.

ENDNOTES

¹To an extent this is an altogether tactic. After all, many practitioners have argued that all works of architecture are of interest to the general public and, thus, should employ participatory practices. To quote author Edith Cherry: "Buildings, almost without exception, are for people ... [therefore] we use the term clients to mean all of the people associated with a facility. Clients are owners, agencies, users of facilities, and the general public." Cherry goes on to say that "architecture is the most public art...there is an implied responsibility to have projects serve the more positive values of a community." (Cherry, 1999, 51-3)

²Although not all designers share the conviction that architecture is an inherently public art or that the public should be involved at all in the process of designing and constructing architecture, several widely-accepted architectural practices would seem to indicate that the public remains a concern. However, it seems equally obvious that socially-responsive practices are not isolated to those who practice community-based design, as evidenced by the number of field as a whole has adopted several techniques of data gathering that speak directly to these concerns.

³In most cases, they also play a key role in determining even the methods used to execute either mechanism. In regards to post-occupancy evaluation, Preisner postulates that (the) commitment to clients and how they prefer to gather information is more successful than any particular technique."