

A SMARTER HELPING HAND: THE VALUE OF SHARED STRANGENESS, OBJECTS OF KNOWLEDGE AND RADICAL RECONSTRUCTIONS WITHIN INFORMAL SETTLEMENTS

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In the summer of 2008, a forty-person team representing two countries, eight universities and six disciplines traveled to Mumbai, India to help develop new architectural strategies for an Indian nonprofit that provides education and health programs for children living on the construction sites of Mumbai. During this five-week project, this team of students, artists, architects and designers would forge a collaborative effort with a people who spoke a different language, had different customs, and carried different values to address the complex and fluid set of programs, sites, and communities offered by a migratory client existing on borrowed land. The resulting effort challenged not only the architecture produced, but also the manner in which it was created, a reframing of the practice based upon the unique conditions found within the informal settlements that represent the fastest growing urban condition in the world.

Since returning to the US, the findings from the field research carried on in India have been shared with professionals, students and educators representing a wide range of fields and nationalities. In addition to the numerous presentations given as a part of architectural panel discussions and lecture series sponsored by various US universities, the research supported through this grant has been presented at numerous multi-disciplinary, international venues, including the 2008 Global Conference on Informal Settlement, the 2009 International Conference of Education, Research and Innovation (ICERI 2009) and the Third International Symposium on Service Learning. Through these presentations, and the discussions prompted by them, three findings of the research have emerged as key principles that have begun to furnish baseline information for practitioners and educators: 1) the series of educational initiatives created through this program to help the students move from the position of tourist to that of collaborator, 2) the development of a design methodology based upon the creation of what Claude-Levi Strauss terms “objects of knowledge”, and 3) the articulation of an architectural response that functions as an act of “radical reconstruction”, as described by Lebbeus Woods.

A Smarter Helping Hand: The Value of Shared Strangeness, Objects of Knowledge and Radical Reconstructions Within Informal Settlements

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1. Shared Strangeness

In 2008, forty students from eight universities traveled to Mumbai, India for a five-week project to help develop new architectural strategies for an Indian non-profit that provides education and health programs for children living on construction sites. The resulting effort challenged not only the architecture produced, but also the manner in which it was created, a reframing of the practice based upon the unique conditions found within the informal settlements that represent the fastest growing urban condition in the world.

From this project, three key principles emerged that have begun to furnish baseline information for practitioners and educators: (1) the series of educational initiatives created through this program to help the students move from the position of tourist to that of collaborator, (2) the development of a design methodology based upon the creation of what Claude-Levi Strauss terms “objects of knowledge”, and (3) the articulation of an architectural response that functions as an act of “radical reconstruction”, as described by Lebbeus Woods.

The first of these, the development of a pedagogy that can support collaborative work within informal settlements, is based upon the understanding that the chief goal of the educator is to allow the students to understand the value of their predispositions, including those related to their status as foreigners and outsiders. This necessary questioning of the known *self* (*outsider*) and the presumed *other* (*insider*) had to start quite logically, at what Jerome Bruner believes to be the root of all instruction: the predispositions held by the learner. After all, according to Bruner, if “learning depends upon the exploration of alternatives” and exploration will quite naturally be motivated and informed by the gifts, talents and experiences of the student, then these attributes, including curiosity and the drive for competence, must furnish a base for instruction.¹ As both curiosity and the drive for competence are “a response to uncertainty and ambiguity,” then it would altogether logical to agree with Bruner when he deduces that “a felt difficulty is needed to prompt thought.”² Or, to quote author Donald Schön, “It is such conjecture, in this case quite unanswerable, that produces rational, self-consciously problem-finding behavior so crucial to the growth of intellectual power.”³ Often, contrast can be used to this end. Through the judicious use of contrast, the instructor can place the previous experience of the learner in a new context, ripping the rug out from under the assumed norm and rescuing “the phenomenon of social life from familiarity.”⁴ Properly articulated, this contrasting experience can present the student with a difficulty that lies outside their experience without eroding the key role that must be assumed by their innate talents and previously acquired knowledge.⁵ To regain their balance, the learner must now negotiate between the leanings of their previous experience and the new context. As this discomfort is naturally based in part upon the predispositions of the learner, this situation quite naturally attaches the learner to the proposed difficulty.

Obviously, these difficulties were a profound part of the experience for the students and professionals attempting to work within the informal settlements of India: as visitors to a new place they may be confronted with offensive sights, abrasive sounds, and unsavory smells; as students studying unfamiliar subjects or methodologies, they might face the uncertainty offered by an unscripted and improvisational educational experience; as professionals, they will undoubtedly be exposed to new ways of practicing. The difficulty here was not to find strangeness, but to incorporate these points of strangeness into the work in a manner that would prevent a retreat into the perceived comfort of more ‘normative’ conditions, as provided by either the memorized givens of professional convention, the sharply defined and clearly delineated edges offered by isolated classroom activities or the carefully edited perspective found within an air-conditioned bus.

To accomplish this, the research in India was initiated through a lens largely unfamiliar to all participants. Ranging from fairly straightforward acts of foraging (i.e. scavenger hunt) to much more complicated activities based upon the principles of the derive (i.e. a psychogeographic cab ride), the initial stages of research prompted our team to engage different mediums, including photography, collage, mapping, sketching, modeling, and building (virtual and actual) to see the site for our work strangely (DeBord, 1958). Our team’s near-universal lack of experience with these methods provided a place of shared contrast through which all participants were able to more sensitively engage the context of the work without eliminating or prioritizing their previous experience. Those who had spent their entire lives in the neighborhood saw their home strangely, those who had never seen it before saw moments of their experience imbedded within it. Indispensable as a starting point for this collaborative work, these principals and exercises have since been adopted by educators leading immersive or collaborative projects in fields ranging from physical therapy to the study of foreign language.



Figure 1: As visitors to a new place they may be confronted with offensive sights, abrasive sounds, and unsavory smells. To incorporate these forms of strangeness, the research in India was initiated through a lens largely unfamiliar to all participants, ranging from fairly straightforward acts of foraging to much more complicated activities based upon the principles of the derive.

Since that time, those participating in this work, freed from the mandate to operate as little insiders in favor of a call to better understand and sensitively employ their unique position as foreigners, have taken ownership of the work, adapting it to their unique discipline and situation, often with increasing fervor over time. Immediately after the experience, students were given several surveys to analyze the experience. Through these questionnaires, it became clear that the program resonated with the majority of participants, with 100% of respondents stating that the program had value to them, and 92% stating that they 1) learned a great deal in the experience, 2) that the experience increased their ability to analyze and critically evaluate ideas and argument, and 3) that they gained an interest in learning more about the material. Although it is altogether likely that some of this enthusiasm can be attributed to the natural high of completing the work, the current level of involvement of team members, all of whom are currently carrying either full-time employment or full-time studies, would seem to indicate that these responses may allude to a more substantive commitment.⁶

Obviously, the research and work carried on in India is not solely responsible for this commitment; many of the students were already quite involved in various volunteer organizations and service-based projects prior to taking part in this experience. However, through individual interviews with the various members of the team, it has become clear that the program in India did significantly intensify the level of involvement of the vast majority of team members. Even more importantly, the program profoundly affected the manner of this involvement. For example, two team members have recently elected to return to university to earn a dual masters in social work and architecture. When asked why, both individuals cited the experience in India and the distinct nature of the project there as a chief reason for their decision. Over the last two years, despite many attempts to continue the work in India as practicing architects, neither found a way to do so. So, they are returning to school in order to build upon the research and work conducted in India and reposition their professional work accordingly. They, like many other members of our team, having seen the value of the distinct methodology deployed while in India, were no longer contented with isolated service-based initiatives or one-off projects that have little potential for future development. They wanted something more substantive. In the coming months, in order to move beyond this anecdotal, first-person accounts and better understand the full impact of this component of the work on the participants, I will offer a two-year follow-up survey to all members of the 2009 project team, the results of which will likely allow us to continue to build upon this work.



Figure 2: Students, day laborers, professionals, and faculty members gathered around the construction to lend their knowledge.

2. Objects of Knowledge

The second core principle that has furnished baseline information for continued research is the usefulness of creating “objects of knowledge” when creating a collaborative effort with those who have little background in matters of architecture and design. This observation stems from the fact that the most collaborative moment of the work came about during the construction of the experimental constructions funded by the 2007 AIA RFP. For it was during these points of the project that all parties involved, including students and professionals from two continents, day laborers and construction personnel from Mumbai, and local business owners, could participate in the work on more or less equal footing.

For example, in response to the immense amount of pollutants on site, the unconditioned space of the school, and the need to relocate every three years, our team proposed developing a portable earth wall that could clean the earth deposited within it. Although quite interesting as a hypothetical, we had no idea if this proposal could be executed using the means and materials available to the client. To answer these questions, another student gathered a team of local laborers, individuals who would largely be responsible for building versions of this wall should it prove useful, and constructed several versions of the wall. Students, day laborers, professionals, and faculty members gathered around the construction to lend their knowledge (and a hand) and realize the promise offered by matters of commodity (i.e. how the proposal spoke to the site, program and budget), firmness (i.e. how much deflection could be accommodated before the wall would crumble), and delight (i.e. how the unique deflection offered by this proposal animated the wall both immediately through the play of shadows and over time as the wall moved to accommodate different forces).

Through the construction of experimental works (the creation of things), those involved in the work in India discovered the framework for their studies. The once abstract idea (the promise of a portable earth wall), now crystallized through physical construction (the construction of various versions of it), becomes elastic, helping all parties involved to engage in other methods of investigation. This inquiry effectively transcends the immediate image, forming a dialogue between acts of making and thinking and rendering “a sequence of acts and images unitary and simultaneous.”⁷ The stuff built and the thoughts that now describe it become a “tool for reflection,” through which the student, laborer, architect and local volunteer might consider propositions rather than objects.

In response to these findings, those involved with the project have attempted to use subsequent exhibitions to allow other parts of the design process to incorporate objects of knowledge. For example, in the spring of 2009, several members of the team mounted an exhibition of the work. Entitled, *Projection Mail: Uniting Systems In The Public Sphere* this exhibit employed hundreds of \$3 projection systems to present patrons a myriad of perspectives on the aforementioned project. The size and weight of these projectors, as well as the nature of the projected image, will allow patrons to cultivate new overlaps between these perspectives and their own, convergences which will both reflect and rearticulate the relationship between the work, those viewing it, and, invariably, those responsible for recreating it. As patrons [re]positioned the work into unknown contexts, [re]projected the image onto unanticipated surfaces, [re]purposed the box (through graffiti or the substitution of images) to new ends, and [re]presented their movements, insights and photos to an growing body of online contributors, they used physical, social, and intellectual methods of exploration to create an infrastructure through which others might stimulate a new set of negotiations between the structures offered by our work in India and those inherent within new sites, programs, and publics. We have recently received an invitation to exhibit a version of *Projection Mail* at an international exhibition highlighting alternative mediums of art and design. It is hoped that this exhibition, as well as similar investigations related to invitations to exhibit at *Small Architectures*, *Big Landscapes* at the Sheldon Swope Museum of Terre Haute, Indiana and *Fertile Ground* at the Crane Arts Center in Philadelphia, will allow us to continue to develop this work and provide an expanded design palette based upon the promise held by objects of knowledge.



Figure 3: Entitled, Projection Mail: Uniting Systems In The Public Sphere this exhibit employed hundreds of \$3 projection systems to present patrons a myriad of perspectives on the aforementioned project.



Figure 4: The third core principle related to the construction of work that could bring together many systems and flows and generate the “unpredictable regenerations.”

3. Radical Reconstructions

The third, and final, core principle to emerge from our research is related to the construction of work that could bring together many systems and flows and generate the “unpredictable regenerations” described by Woods (1997). Motivated in some measure by the fact that our nonprofit partner did not require a school, but a language through which they might realize many schools for years to come, this impetus compelled our team to resist becoming fixated on immediate needs, no matter how pressing, and instead focus upon those conditions that would remain in place for long enough to stimulate new generations of the work. To point, during our first conversation with the director of Mumbai Mobile Crèches, our team learned that, in order to get permission to construct a crèche, our client had to first convince a developer to support the project through funding and land allocations.

So that this arrangement might be as palatable as possible to the developer, our client generally limited their demands upon the built environment to the absolute minimum. Thus, Mumbai Mobile Crèches had very little control over these variables. This forced them to develop their school from other means and placed great importance upon any points that fell within the influence of our client. Correspondingly, these points of constancy or influence furnished the foundation for our work. Although the resulting proposals varied widely, from small-scale furniture prototypes or curricular strategies to large-scale urban interventions and autonomous mobile schools, this reliance upon persistent conditions in favor of pressing issues led to some curious gaps within the work; areas that one would think to be incredibly important to the idea of the ideal crèche, but somehow were missed. Although our team did work diligently to bring attention to these underdeveloped areas, we did so with the knowledge that this development would only be realized by attaching our work to areas of strength, as generally found within matters of curriculum, programming, and interior environment.

Over the last two years, we have remained in contact with our international partners in order to assess whether or not our work was able to function well in this capacity. Through these interviews, we have uncovered much about our work's ability to be possessed and evolved by our partners over a long period of time. For example, in a recent email discussion with the director of Mumbai Mobile Crèches (MMC), I mentioned that I, with a few members of our team, would be interested in returning to Mumbai to assess the work carried on there two years ago, see which projects resonated most profoundly, and, if warranted, help MMC develop new proposals and work based upon this project. Immediately, the director expressed an interest in pursuing the mobile school platform that we had developed while abroad. This is noteworthy for two reasons. First, it was a project that was of little interest to our nonprofit partners two years ago. In fact, while working abroad, this director questioned our development of this project, urging us to spend most of our time working on more traditional questions of building envelope. Although we did honor the wishes of our nonprofit partner and develop a complete architectural response to their call (and address pressing concerns), we never stopped working on the Mobile Mobile Crèche and other projects that addressed what we believed to be more persistent concerns.

Now, two years later, when asked which projects MMC would like to develop now, they cite this work. Apparently, to create a sustainable address, capable of regenerating over time, is less a matter of addressing pressing concern than it is about relating well to persistent conditions. Secondly, in all work, including the Mobile Mobile Crèche, we wanted to provide a vision that could be possessed and evolved by our partners without our assistance. The fact that we are now being asked to return to this work means that we were not successful in this regard. Although the fact that we completed this work covertly did lead to a less complete vision than offered by other projects (which generally included potential partners, manufacturers, etc), it remains a point of concern that we were not completely successful in our bid to craft self-regenerating work. Thus, as we continue this work, as well as realize new projects in Bolivia and the US in 2010, it is altogether likely that our process will shift to place even greater emphasis upon finding and employing these most persistent conditions, even if in the face of more pressing concerns.⁸

- ¹ Jerome Bruner, *Toward a Theory of Instruction* (Boston, Massachusetts: The Belknap Press of Harvard University, 1966) 43. Author John Dewey also cites these predispositions as a core principle in learning: “training must, however, be itself based upon the natural tendencies, - that is, it must find its point of departure in them ... Training, in short, must fall back upon the prior and independent exercise of natural powers; it is concerned with their proper direction, not with creating them.” For both, the predispositions of the learner are the primary point of departure for any act of teaching and a fundamental attribute in any theory of instruction.
- ² Bruner, 43.
- ³ Donald Schon, *Educating the Reflective Practitioner* (New York: Jossey-Bass, 1990) 159.
- ⁴ Bruner, 94.
- ⁵ When teaching language development to children, Bruner uses the contrasting manner in which humans and animals send signals to help his students define the nature and structure of their system of communication. “...by contrasting how humans and animals manage to send and receive messages.” Bruner, 77.
- ⁶ Since returning to the US, eight team members volunteered their time so as to be directly involved with realizing the an exhibition about the work, two team members have recently decided to return to school in 2010 to earn a dual masters in social work and architecture, another team member has established a Freedom By Design initiative at their university and one team member moved to India to practice architecture. Many more have continued to work with the nonprofits involved in the work, several of whom will likely take part in a related 2010 summer program in Bolivia to redesign education with the Shoe Shine Boys of La Paz.
- ⁷ Bruner, 65. “...with the help of a symbolic notation that remains invariant across transformations in imagery, the learner comes to grasp the formal or abstract properties of the things he is dealing with...nonetheless continues to rely upon the stock of imagery he has built en route to abstract mastery.” Bruner, 68.
- ⁸ To quote Lebbeus Woods, our work will draw its “sinews from webbings of shifting forces, from patterns of unpredictable movement, from changes of mind, alterations of positions, spontaneous disintegrations and syntheses” and attempt to produce an “architecture resisting change, even as its flows from it.”