

New Communal Practices for Shadow Cities

Mr. Scott Gerald Shall, Lawrence Technological University

Scott Gerald Shall, AIA, is an Associate Professor and the Associate Dean of the College of Architecture and Design at Lawrence Technological University (LTU) and the founding director of the International Design Clinic (IDC, www.internationaldesignclinic.org), a registered non-profit that realizes socially-responsive creative action with communities in need around the world. Since founding the IDC in 2006, Shall has worked through this organization to complete over a dozen projects on four continents. Shall's work in this arena has been disseminated widely, including presentations at Third and Fifth International Symposia On Service Learning In Higher Education, lectures at Brown University, the University of Maryland, and the New School for Design, publications by the AIA Press and the University of Indianapolis Press and exhibitions at the San Francisco Museum of Art in La Paz, Bolivia, the Sheldon Swope Museum of Art, the Goldstein Museum of Design, the Venice Architecture Biennale and MoMA.

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Abstract

In the future, most of the world's population will live in unplanned settlements that are built with unsafe methods on land that is illegally acquired. The vast majority of these shadow-cities will be realized without the formal input of civic or private agencies, marginalizing the impact of politicians, policy-makers, planners, architects, and engineers upon them.

It is important to note that this professional marginalization is not due to a lack of expertise, nor is it due to a lack of desire. It is because the academic and professional structure supporting these professions are fundamentally counter to those used to build these shadow-cities – a reality that has helped to support the growth of extra-legal settlements at a scale that far exceeds the capacity of the governing authorities to support them. The result is the production of extra-legal settlements at a scale far beyond what can be accommodated using current means of engagement.

To meet the challenges and opportunities presented by these shadow-cities, requires an evolution of practice – one that trades the rigid hierarchies and linear approaches currently deployed for more inclusive and heterarchical terminologies and practices.

To impact this world, the architect and engineer must shift from author to instigator.

Their office must move from a place of design, to a place of design, making, use, assessment and remaking.

Their work must focus less upon the production of constructs, to which others must respond, and more on the production of smaller constructs that inspire various publics to iteratively realize a sustained address.

Part One: On the Dissonance Between Paradigms of Practice and Shadow-Cities

The informal settlement, defined as communities constructed without permission on land illegally acquired, is currently the largest and fastest growing settlement type on the planet [1].ⁱ Now, and in the future, the majority of our planet's inhabitants live in settlements that will not be mapped, permitted or otherwise documented [2].ⁱⁱ They will have no formal access to sewage or waste disposal and only intermittent access to transportation, schools, water and electricity. They will live in communities poorly constructed, posing a danger to the occupants and a significant drain on our planet's civic and environmental resources [2].ⁱⁱⁱ Their homes will be built of scrap, locally harvested, and detailed using the conventions of localized practice, based upon the knowledge of whoever is at hand and at the discernment of whoever is most vested in the construction. The structures that result will not be resistant to earthquakes, landslides, floods, extreme temperatures, or even rainfall; they will be unsafe, unsanitary and unsustainable [3].^{iv}

Unfortunately for the planner, architect and engineer who wish to positively impact these shadow-cities, the manner in which they are designed, constructed and occupied is completely misaligned with the structure of interaction favored by these professions, all of which are rooted in the long-standing need to dedicate their talents to support mostly affluent patrons. Stemming, in part, from a lack of professional stability and a related need to raise the immense resources required to realize built work, architects, engineers and urban planners have developed a deep allegiance to those who wish to leverage the built environment in order to extend influence and power over a large populace [4]. Over time, this has created a symbiotic relationship between these professions and society's most influential actors, wherein those designing the built environment have access to the highest reaches of society, resulting in opulent commissions, popular respect, and a modicum of professional security, and those in power have the capacity to shape the built environment and, transitively, the perspective and beliefs of those therein residing [5], [6].^v

The impact of this arrangement on the architect, engineer and planner is significant, defining the manner in which these professionals are educated, organized, deployed and supported. This has created a patronage-driven framework of practice, sharply focused upon the concerns of society's leaders, and those portions of the urban environment that they control – concerns that are in direct opposition to, and somewhat responsible for, the conditions faced by those living at the fringes of these environments. Thus, it is not surprising to note that when these professionals have attempted to address the issues faced by those living within these shadow-cities, the results have been mixed. In fact, researchers have begun to study the negative impacts of these interactions, including Theime and Kovacs [7] who investigate these concerns under the term “malevolent urbanism.”^{vi} Although unfortunate, this professional impotence is altogether logical. After all, when read through the biases of the frameworks already described, informal activities, whether they are designed to provide food, shelter, water, or trade, are not something to be studied so that they might become the foundation for a systematically more permanent address. Rather, they are, at least relative to the more formalized environments shaped through the efforts of the professional and their patrons, irregular, casual, precarious, and, often, illegal activities - addresses that are best ignored [7]. This perspective separates the architect, planner and engineer from the residents of illegal settlements, causing the former to retain their identity as state-sponsored actors, even when they are working voluntarily or under the auspices of a community group. Within such an arrangement, the professional can only impose solutions; grassroots initiatives are impossible [1].

Part Two: On the Cost of Professional Misalignment within Shadow-Cities

The misalignment between those who design the formal sectors of our urban environments and the growing population of those living in the peripheral, informal fringes of it have several outcomes:

First, and perhaps most fundamental, are the ways in which this misalignment encourages the rapid proliferation of shadow-cities. As outlined earlier, the pace of interaction currently supported by the training, professional structure, and compensation of the architect, engineer and planner demands a clearly-delineated interaction of pre-determined actors within a project,

wherein the design develops through the accumulated wisdom of these parties until it is complete and the project constructed. In this model, study drives design, which, in turn, drives construction. Inhabitation is external to the process, occurring after it has concluded and bearing limited impact upon it. In contrast, the shadow-city operates much more fluidly, prioritizing inhabitation, which drives construction. Design, and the study sound design demands, only occurs in the margins, when the conventions of construction demand evolution, such as when new resources emerge, old resources become scarce or the context of inhabitation changes. This fluidity of process has allowed these fringe settlements to grow at a rate that far exceeds the capacity of the governing authorities, who are operating in the much more linear study-then-design-then-construction approach, to support them. This forces a desperate population to improvise with whatever is at hand, resulting in the production of illegal settlements at an incredible scale, far beyond what can be accommodated using current means of engagement [7].

Second, the slow, deliberate pace of interaction favored by the architect, engineering and planner compels these professionals to seek out alliances with more powerful actors in order to have significant influence upon large-scale concerns. After all, with so much time and effort attached to each project, the professional impact of all actions will be proportional to the scale of the work itself, as opposed to the number of times this work is executed, developed or virally propagated. This scalar bias ties the socially-conscious architect, engineer, and planner to those governmental and private entities who are capable of sponsoring these elaborate and massive projects. This creates a bias in the work, privileging the highly technocratic leaning of these sponsoring agencies as well as the individualized, highly-engineered solutions they are designed to support, rather than hybridized addresses that span multiple departments, donors, or ministries. As a result, projects that attempt to provide greater access to municipal water, city-wide waste disposal, affordable housing and other civic amenities tend to be technocratic and isolated from the patterns found within the illegal urban environments, despite the obvious benefit of overlapping these concerns with one another and the prevailing tendencies of the settlements they intend to serve [7].

Finally, the hierarchy established by these patronage-based processes effectively limits the influence held by the residents themselves, many of whom lack the time, energy, training and status to enter the process in a meaningful manner. This can lead to the subtle, but persistent, reallocation of benefits throughout the design process, resulting in public- and state-assisted efforts benefiting urban middle- and upper-class residents – population groups who are generally well-represented within the process and thus have ample impact upon it – as opposed to those to whom the aid was originally pledged [3].^{vii} The unfortunate result is the perpetuation of the conditions that have come to typify, and define, life within these shadow-cities – a situation that, not coincidentally, benefits the landlords of said settlements, most of whom belong to a different class of urban dweller [7]. This has led some experts to argue that the growth of illegal settlements is driven not by the supply of jobs, but by the reproduction of poverty [3].^{viii}



Figure 01: projectionMAIL is a \$2 projector made from commandeered postal service boxes. (Image courtesy of the International Design Clinic).

Part Three: On Building an Authentic Dialogue through Practice

To address the misalignment between the frameworks that direct the work of the architect, engineer, and planner and those that guide the formation of shadow-cities requires the creation of design platforms that “draw on the knowledge of stakeholders involved in the improvement of slums” and “facilitate information and experience exchange as well as peer learning opportunities [1].” Only then will those engaging these settlements allow “for meaningful negotiations and encounters between local communities, local authorities, development agencies and the entrepreneurial sectors” to emerge [7]. To illustrate, the projectionMAIL project by the International Design Clinic created a \$2 projector from commandeered postal service boxes and other undervalued resources (newsbins in off-hours or the shadows generated by park benches) to expand the space of a traditional gallery and, transitively, the definition of patron, artist, curator, and critic (Figure 01).

Unfortunately, for the reasons already described, the frameworks traditionally deployed by the architect, engineer, and planner are not designed to create such peer-learning opportunities nor the reversal of process demanded by authentic dialogue, as evidenced by the biases found within the tactics often used by both fields to design community-based work. Take, for example, focus groups or community charrettes – two arrangements often used by the professional to allow residents to offer insight into the dilemmas they face and the strategies through which they might be addressed. Although both meetings have the appearance of an open, inclusive dialogue, there are several factors substantially compromise the inclusivity and dialogical nature of both events. First, the sponsoring agency – whether a governing official, private organization or non-profit – will be popularly regarded as the unquestioned authority of the meeting, deciding whether or not to even include gathering in the design process and to what extent the findings thereby uncovered will impact the work. It is quite difficult to believe that the members of a committee formed under this hierarchical arrangement could possibly feel that their propositions would be treated equally to those offered by the client, which naturally calls into question the sincerity of

the meeting and greatly reduces the possibility of communicative action or effective dialogue [8]. Secondly, the participants in such groups will have been recruited using particular forms of advertisement, most of which will have been selected by the sponsoring group or their agents. Given the difficulties of positioning this advertisement campaign in a manner that will gain the interest of all groups impacted by the work, it is highly likely that those gathered will have a pre-ordained bias based upon the nature of the advertising used to promote the gathering. Thirdly, the parameters of the meeting itself, in terms of time, place, and format, have a tendency to skew participation. 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 or lack transportation.

These factors will severely limit the diversity of the group – creating a relatively homogenous gathering and a strong foundation for groupthink. As noted by 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 [9].” 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. A false consensus thus emerges, as “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 [9].” Over the course of the meeting, groupthink steels the minds of the participants, closing them from ideas offered by the minority or overlooked by the group as a whole. In so doing, ideological communication has effectively compromised the ability of the group to realize effective dialogue [8].

Even consensus-building, a seemingly inclusive and participatory approach to design, is an inherently flawed aspiration, more often leading to ill-founded conclusions and faulty recommendations than useful insight [10]. The reasons for this extend past the intent of the deliberation and into the structure of the debate sociologically. First, without thoughtful framing to combat natural tendencies, any discussion or debate will encourage 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 tendency naturally prioritizes the points raised first, instead of those that are judged to be most prudent through argument or thoughtful consideration, granting the most outspoken participants an exaggerated impact upon the course of the deliberation, and, thus, the conclusion reached. This occurrence is made especially dangerous by the fact that groups tend to polarize through discussion [9]. This is due to the fact that, during a deliberation, people tend to compare their position to that held by the group and believe that if lots of people support a certain option, they must have a good reason for doing so – a tendency known as ‘herding’ [11].^{ix} This tendency is exacerbated by the exaggerated influence of extremists - who tend to more rigid and are generally convinced of their own rightness – within such a discussion [9].

As group members shift their positions in accordance with the beliefs of the group, they tend to leave behind points and ideas that are unique. This results in consensus-driven groups eschewing debate in favor of the familiar, creating tepid solutions which offend no one rather

than exciting anyone. 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 [12]. It is important to note that, at times, this tendency to conform can even 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 [13]. One can only imagine the impact of this tendency when dealing with matters of greater dispute and consequence than the length of a line.

Part Four: On Five Core Principles to Realign Practice with Shadow-Cities

In order to address these patterns, the architect, engineer and planner must reposition their practices so as to encourage healthy, inclusive dialogue. To start this transition and begin moving these fields toward a more fruitful interaction with the residents of future-cities, professionals should pursue five core concerns:

First, those who wish to develop a dialogical design process cannot 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 dialogical work. Instead, those who wish to positively impact the construction of shadow-cities must develop methods that allow wisdom to be collected at a variety of points and times, all of which are located, in time and space, in accordance with whatever facts of the work are known. Whether in the form of smaller, street-side gatherings, large-scale negotiable installations or text-based events, the creative professional must find ways that the wisdom of a wide range of people can be collected simultaneously without prioritizing the views of the majority, the powerful or the convicted. For example, in order to design a school system with the migrant workers living on the construction sites of India, the International Design Clinic created a design process that leveraged various small-scale creative actions to reveal the perspective of all parties who might one day be a part of this system. From this based, projects such as a \$2 water filter and foldable school-scape developed – ideas that are not obviously related to education, but emerged through the process as fundamental to the exercise of any educational activities within this specific community (Figure 02).



Figure 02: To design a school system the International Design Clinic used small-scale creative actions to reveal the perspective of all constituents. (Image courtesy of the International Design Clinic).

Done correctly, projects that adopt this position 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 [13]. Apparently, allowing a single voice of dissent 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 help to realize healthy dialogue.

Second, the architect, engineer, and planner who wish to work well in future-cities must develop design and construction practices that allow this diverse body of contributors to independently offer their ideas and explore as many alternatives as possible – a process that 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 consumer, through their purchase, judges some ideas to be better than others. Businesses respond to these trends, causing a Darwinian shift in investment, until a much smaller set of products have each found a niche within the market. Similar processes can be found within the manner in which people help to establish a betting line or bees locate honey [9]. In each case, the process allows for the generation of lots of losers, which are quickly recognized as such and killed off. 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 the ideas that result too often fail to produce meaningful change.

Third, the architect, engineer, and planner must allow the work to gather size, complexity and cost over time, as contributors come in contact with the work and offer their wisdom and support. This not only naturally increases investment in the work, but allows the professional to leverage the ability of the built environment to act as a social organizer, so that its inherent influence might support the cultivation of authentic dialogue, the accumulation of wisdom and, inevitably, its own evolution. More importantly, by shifting the manner of determination for use (as well as location, size, complexity, and cost) the creative professional provides the latitude necessary for the work to align with the social practices of the people, rather than the inverse. This allows the work, albeit in a very rudimentary and humble state, to have a liberating function. To illustrate: to provide parks within the unplanned community of El Alto, Bolivia, the International Design Clinic borrowed the architecture and rituals of vending culture. Interestingly, the need for this PARK-IN-A-CART was not revealed in the project brief not through initial meetings with any of the core constituents. Instead, it emerged through research on a completely different project, as did mobileMAKERSPACE – a related project that provided educational and vocational opportunities in wood-, metal, and fabric-working for the residents (Figure 03). As the influence of the value structures promoted by this project, and the built environment in general is subject to the practices of those residing within it – a reality Foucault spoke of in his interview with Paul Rabinow – this unique evolutionary pattern is of substantial concern [14].^x



Figure 03: PARK-IN-A-CART borrows the architecture and rituals of vending culture to provide parks within the unplanned community of El Alto, Bolivia. (Image courtesy of the International Design Clinic).

Fourth, the engaged professional must find ways through which the design process might encourage residents and other constituencies to leverage the improvement of the built environment to create new partnerships. This will shift the measure of value held by the built environment from symbolic and economic capital to social and cultural [15].^{xi} The work that results, which is designed to instigate participation through its redefinition, becomes an instrument through which the residents might mobilize to address land challenges, urban planning, management and governance issues [7].^{xii}

Finally, those working in shadow-cities must allow for measured failure within this dialogical process. After all, if the size, cost, complexity, location and program of the work are truly up for discussion, then the option to stop the conversation, at any point, must also be allowed. At times this call to stop an aspect of the growing dialogue, manifest in the people ignoring or destroying the created work, will occur at the beginning of the conversation; at times it will occur near its end. Either way, the voice of those living within the community must be respected and the destruction of the work permitted. For it is through such failure that knowledge is generated. And, provided that the creative professional did not permit the work to prematurely exceed, in cost, complexity or determination, the conviction held by its authors, the knowledge gained will more than offset its cost.

So established, the work will gather strength from the resources of its site, allowing for the architect, engineer, and planner to operate less as a provider of wisdom than its instigator. That is, by systematically repeating the cycle of increased engagement, the engaged professional supports the development of both the design and the people who surround it. At the same time, with each successful campaign, those surrounding the project strengthens the viability of the work and diminishes the perceived risk of involvement. This increases the number of people involved, enabling the movement to take on larger and more decisive encounters, which, in turn, leads to great viability and enrollment. In this way, by designing experiences that leverage an ever-growing number of people to become vested in their movement, the architect, planner, and engineer allow the work to increase in size and capabilities in a manner that is supported by larger, more powerful forces – a process that can be continued for as long as this alignment exists [8].^{xiii}

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ⁱ According to a 2013 UN-Habitat report, "since 1990, 213 million slum dwellers have been added to the global population [1] p. 3.",[2]

ⁱⁱ Politically, the areas occupied by informal settlements are rarely mapped with any detail and the edges left undefined, often purposefully [2].

ⁱⁱⁱ "Living in these settlements often poses significant health risks. Sanitation, food storage facilities and drinking water quality are often poor, with the result that inhabitants are exposed to a wide range of pathogens and houses may act as breeding grounds for insect vectors. Cooking and heating facilities are often basic, with the consequence that levels of excessive exposures to indoor pollution may occur. Access to health and other services may be limited; overcrowding can contribute to stress, violence and increased problems of drugs and other social problems" [2].

^{iv} To quote author Mike Davis, "the cities of the future, rather than being made out of glass and steel, as envisioned by earlier generations of urbanists, are instead largely constructed out of crude brick, straw, recycled plastic, cement blocks, and scrap wood. Instead of cities of light soaring toward heaven, much of the twenty-first century urban world squats in squalor, surrounded by pollution, excrement and decay [3] p. 86."

^v "By distancing themselves from contractors and builders with economic control of the field, they (architects) also effectively repudiated the interests of moderate-income clients. Instead, the profession linked its professional identity to large-scale monumental commissions requiring

wealthy patrons. This left architects dependent on the restricted group of clients who could afford to support their ambitions: the hoped for, but only occasionally awarded, patronage of the state (far less active than in Europe), but more often, the backing of large business and corporate interests [4] p. 30.”

^{vi} “Particularly when it comes to basic service provision, a form of ‘malevolent urbanism’ has generated across urban areas in the global South, where unequal access to and use of the city is prevalent. At the same time, a mosaic of actors, sectors, and initiatives seek to address the ‘challenges of slums’, usually purporting to work *with* local communities, but often misunderstanding how everyday practices and expectations might differ from externally defined development goals and impact measures [7] p. 1.

^{vii} “Both ‘poaching’ and fiscal bias, of course, are expressions of the poor majority’s lack of political clout throughout most of the Third World; urban democracy is still the exception rather than the rule, especially in Africa. ... A consensus of urban scholars agrees that public- and state-assisted housing in the Third World has primarily benefitted the urban middle class and elites, who expect to pay low taxes while receiving high levels of municipal services [3], p. 68-69”

^{viii} “Overcrowded, poorly maintained slum dwellings, meanwhile, are often more profitable per square foot than other types of real-estate investment ... speculators are developing the urban periphery at ‘monopoly prices’ and enormous profits [3] p. 16.”

^{ix} “Herding” is demonstrated clearly through an experiment by Milgram, Bickman and Berkowitz. In it, the researchers 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 [11] p. 79-82.

^x [MF] “If one were to find a place, and perhaps there are some, where liberty is effectively exercised, one would find that this is not owing to the order of objects, but, once again, owing to the practice of liberty. Which is not to say that, after all, one may as well leave people in slums, thinking that they can simply exercise their rights there.

[PR] Meaning that architecture in itself cannot resolve social problems?

[MF] I think that it can and does produce positive effects when the liberating intentions of the architect coincide with the real practice of people in the exercise of their freedom [14].”

^{xi} As noted by UN-Habitat: “Physical upgrading of slums with street networks and improved access to municipal basic services through augmentation of physical infrastructure has proven to make formidable positive social and economic changes in many cities. Socially, upgraded slums improve the physical living conditions, improve the general well-being of communities, strengthen local social and cultural capital networks, the livelihood generation opportunities, quality of life, and access to services and opportunities in towns and cities [15].”

^{xii} “...what ties the rural and urban slum experience in relation to the nexus are the prevalence of social networks and social capital as the dominant albeit informal platform for self-organizing and provisioning that determine *how* things get done [7].”

^{xiii} “Guerrilla warfare or a war of liberation will, in general, have three stages: the first, a strategic defense, in which a small hunted force bites the enemy; it is not protected for passive defense in a small circle, but its defense consists in limited attacks which it can carry out. After this a state of equilibrium is reached in which the possibilities of action of the enemy and the guerrilla unit are stabilized; and later the final moment of overrunning the repressive army that will lead to the taking of great cities, to the great decisive encounters ... [16] p.210.”