

Design Education as a practice of affiliation: facilitating dialogue between developed and developing nations

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Abstract

Exploring Design research and Design education that straddles developing and developed world contexts is the aim of this paper. It is a bold ambition to identify the key debates that inform these two significant aspects of Design – much too big to cover in the limited space here. Nevertheless we speculate on some of the issues that emerge from within Architecture, Urbanism, Philosophy, Sociology, Geography, Education and Design. We do this through the idea expressed by Lang that ‘affiliation’ is the need that links to all other human needs. We hypothesize that affiliation, and our need for belonging not only within our local communities, but also at a global scale, is a central concern that links research and education in developing and developed world contexts. Some design practitioners are shown to be tackling this problem, but too often these are single projects limited in scale. We maintain that these worthwhile and noble efforts must be scaled up to deal with problems of urban planning through first, second, third and fourth order design concerns, recognizing that whilst contemporary design is increasingly occupied with ‘interaction’ and ‘environment’, the established preoccupation with ‘symbols’ and ‘things’ remains out of reach for millions of urban poor. In fact, urban designers consider ‘symbols of affiliation’ as central to city dwelling. Design research and design education must therefore aspire to a material democracy that judges the appropriateness of each given situation on its merits, recognizing the need at times for basic material provision.

Keywords

affiliation; design education; social-actualisation; design for the dispossessed, urban design

In his depiction of the kind of design problems tackled by professional designers, Victor Papanek (1984, p. 57) showed us that professional designers are concerned mainly with a very small share of ‘real’ problems. In the 1960s Papanek indicated that the professional designer’s share is at the ‘tip of the iceberg’, sitting above a world of real problems. Since then, our understanding of design, and the work of professional designers, has moved on. But we might ask what has stopped designer from engaging with the real. The visual coincidence of Papanek’s pyramid depiction matches the same diagrammatic representations often seen in Abraham Maslow’s (1954 [1987]) ideas about self-actualization. We learn from this visual comparison that if, using Maslow’s terminology (1954 [1987], pp. 57–59), ‘motivation and personality’ is too much predicated on ‘one’s own needs’ and ‘individualism’ it is clear why so many ‘real’ problems remain unaddressed. Jon Lang (1994, p. 160) tells us that Maslow expressed dismay at interpretations of the desire to self-actualize, and a disregard for the needs of others. This demonstrates a tension between the self and the social, bringing into question the scale at which this takes place as representation and the notion of social-actualization.

Space does not allow for a full critique of Maslow’s work here, but apparently he believed that most people strive for esteem, but never self-actualize, and it has been argued that the full implications of this in terms of urban design are as yet unclear (Lang, 1994, p. 161). This paper therefore attempts to explore this by examining the step before esteem and self-actualization. Maslow called it *belonging*, but it is also named *affiliation* by Lang (pp. 158–160). Lang argues that affiliation needs are complex and interact with all other needs.

‘Participation in a supportive social system is necessary for an individual’s survival with a modicum of psychological comfort. This is particularly so in an urban world. Once their need for survival is met reasonably well, people feel most keenly the need for membership in a group or, more likely in the modern world, a set of groups’ (Lang, 1994, p. 252).

Understanding affiliation is necessary when we attempt to address the real problems identified by Papanek that professional designers are said to ignore. If better understood, this may help the scaling-up of design activity to tackle some of the urban planning challenges associated with the urban poor. See figure 1.

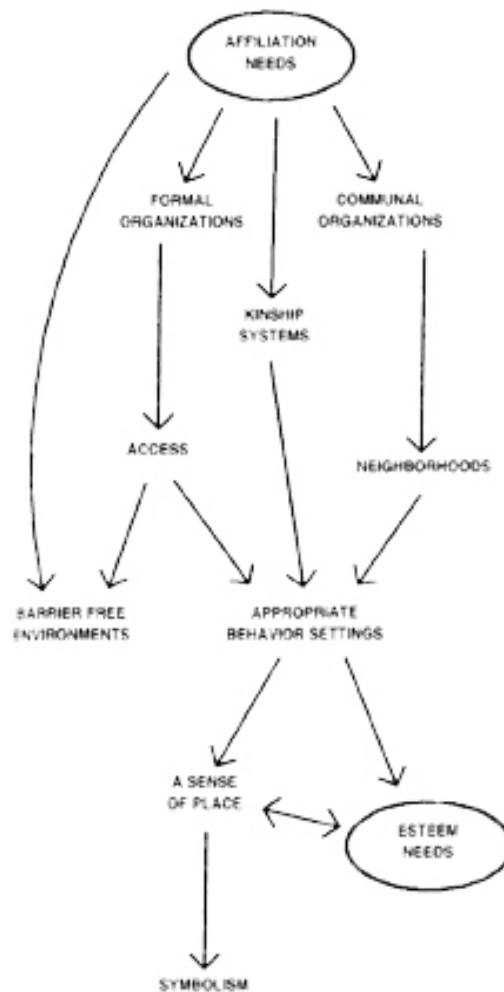


Figure 1. Affiliation Needs
Source. Lang, (1994) p. 253.

This work in progress is being undertaken in the context of developing an approach to design education that can straddle developed and developing world contexts. The potential for knowledge exchange in design research between developed and developing countries is immense. Developed countries have the benefit of history on their side in using design to create prosperous social, cultural, and economic contexts. However, as developed nations aspire to explore the potential for design and 'immateriality', rather than the traditional concerns for material objects, there is the potential for opportunities to be lost, or at very least, disjointed. Especially so when many people remain without basic material needs such as shelter. Developing countries are still yet to mature in their use of design for material gain that benefits the majority. Think of the increasing prevalence of the informal housing and urban homelessness across the world, and the need that millions of people still have for basic amenities that are realized through design in the physical sense. 'A society cannot claim to be harmonious if large sections of its population are deprived of basic needs while other sections live in opulence' (UN-Habitat, 2008). How much do

we value affiliation in design, research and education? In this paper, it is argued that emphasis on 'affiliated' design research is critical if more social- rather than self-actualization is to be achieved.

What do we mean by affiliation?

The word *affiliate* originates from the Latin *affiliare*, meaning 'adopted as a son'. In modern terms it is commonly associated with officialdom, in the sense that it conveys a formal attachment to an organization, either in person, or as an organization, connected to a larger group or body. Lang (1994, pp. 158–160) uses the term *affiliation need*, placing importance on the process of 'identity-formation' for individuals as part of a group, as much as a need for individual distinctiveness. Special significance is given to the concept of the individual being part of a 'social and moral order' through the sense of belonging to a group. 'People need to have a sense of belonging, community, and relatedness, as well as to receive affection and approval from other people' (p. 158). Critically, this desire places value on participation rather than isolation, and engenders a 'feeling of psychological security' as opposed to worry and withdrawn tendencies. (Privacy is part of this in the sense that public participation also requires private periods of recuperation). The presentation of symbols, unconscious and conscious, subtle and clear, as representations of group membership, is important until the individual and group are synonymous with each other (at which point the display of symbols is less important). In direct relation to the built environment 'the symbolic aesthetic of the places we inhabit is fundamental to our group identities'. It is generally thought that in terms of urban design this is represented in the social interaction that happens in social places such as cafés, bars, pubs and plazas (Lang, 1994, p. 159).

With this in mind, we are concerned in this paper with the symbolism associated with affiliation, in terms of how a *symbolic place aesthetic* is constructed, and whether it is desirable. In this sense we turn to design, and a perceived need for design education that is sensitive to the importance of symbolic representation, through a process of development. This is in respect to how some symbols associated with habitat may project negative impressions, and yet possess positive human values. For example, we might assume that the image of a shantytown, or favela, is a negative symbol, despite the close affiliation of inhabitants with each other. And yet the individuals who occupy these dwellings may be far from negative!

A shantytown or favela is a representation of a certain kind of economic, social and cultural identity. They are associated with poverty, rapid urbanization and the growth of mega-cities such as Mumbai or São Paulo, and smaller cities such as Nairobi. These environments have become 'symbols' of rapidly developing urban environments in developing countries, characterized in familiar images of the modern high-rise building adjacent to shacks. These kinds of image show the habitat of the 'haves' and 'have-nots', and demonstrate the difference between formally and informally designed environments. Design education, or lack of it, is clearly a significant factor in the expectations and quality threshold of occupants in both cases. These images depict in material terms the formal and informal economy.

In this paper we discuss the need to reconcile the intentions of formal design education with the needs of those generally found to be living in conditions associated with the 'informal sector'. Although this distinction might be found in any city in the world, it is most prevalent in those that have significant shantytown populations. It is a worldwide phenomenon. The 2008 UN-Habitat State of the World's Cities 2008/2009 states:

'One out of every three people living in cities of the developing world lives in a slum. UN-HABITAT estimates indicate that in 2005, more than half of the world's slum population resided in Asia, followed by sub-Saharan Africa and Latin America and the Caribbean. Slum prevalence – or the proportion of people living in slum conditions in urban areas – is highest in sub-Saharan Africa; 62 per cent of the region's urban population lives in a slum or suffers

from one or more of the five shelter deprivations that define a slum. In Asia, slum prevalence varies from a high of 43 per cent in Southern Asia to a low of 24 per cent in Western Asia, while in Latin America and the Caribbean, 27 per cent of the urban population was classified as living in slum conditions in 2005.' (UN-Habitat, 2008, p. 90).

Finally, concomitant to these figures there is also the uncountable occurrence of homeless street people, mainly living in the city centre of the contemporary metropolises. It is a troublesome social problem, a human tragedy that prompts design responses to change the situation, in practice and education.

'Developed' and 'developing'.

The use here of 'developed' and 'developing' are terms consistent with those used in Geography in recent decades, although for some time 'North' and 'South' were prevalent in the 1980s and 'Third World' has also been used at times (but less so now). These terms relate to economic wealth. However more recently social well-being has become more a factor, as well as economic growth, and this has resulted in countries being designated as 'more developed', 'newly industrialized' and 'less developed', before the adoption in the 1990s of 'high', 'rapidly increasing' and 'low' classification of Human Development Index that indicates 'quality of life' rather than 'standard of living' (Waugh, 2000, p. 630). A fundamental contribution to broadening the concept of development as well-being and freedom has been the preoccupation of Amartya Sen. According to him development and freedom are intimately related. By freedom he means well being in five categories: political participation, economic well being, social integration, information access and personal security. Thus 'development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy' (Sen, 1999, p. 14). Here, we use the term 'developed' and 'developing' in relation to the concept of world development, and the need for continental affiliation between, made explicit here:

Few can deny that the world's wealth is highly concentrated. The populations of North America and Western Europe eat well, consume most of the world's fuel, drive most cars, live in generally well serviced homes and usually survive their three full score years and ten. By contrast, many people in Africa, Asia and Latin America are less fortunate. In most parts of these continents a majority of the population lack balanced diets, reliable drinking water, decent services and adequate incomes. Many cannot read or write, many are sick and malnourished, and too many children die before the age of five.'
(Waugh, 2000, p. 630, citing Gilbert's 'An Unequal World')

It is reasonable to assume most people agree that action is required to change this situation. According to Simon (1981, p. 129), and his broad definition that design changes existing situations into preferred ones, the activity of design is critical in creating 'preferred' situations. How this is done is of major significance. We value close affiliation between the 'developed' and 'developing'; 'North' and 'South'; 'less', 'newly' and 'more' developed countries, in the sense that all humans must benefit from affiliation no matter how close or distant they may be. Social-actualization on a global scale is the ultimate goal.

The design of cities has never been so important than now, at a time when predictions about half the world's population living in urban environments have been surpassed. Educating the 'designers' of cities must deal with two distinct aspects of urban form: what has already come into existence, and what will be created in the future.

Learning and human nature

How can design and design education improve the lives of those living in the poverty of shantytowns, and other less desirable urban environments? We can learn about the environment by studying the environment. But Kaplan (1973, p. 64) points out that this process is vulnerable to self-perpetuating institutionalized views, and 'Man is, in these terms, what he has learned.' Another approach is to recognize that despite the lack of macro design planning that has resulted in the spread of shantytown developments, an innate creativity and design awareness resides in the

activities of the urban poor, who demonstrate creative ways to adorn their dwellings using image making techniques applied in the arts, such as collage (R. Harland & Loschiavo do Santos, 2008, p. 12). This important aspect of human nature is acknowledged by Kaplan who suggests *human nature* is an important factor in change making. Though not specifically talking about shantytowns, he argues that 'all programs for reform and all proposals for burning-it-all-down-and starting-over rest alike on certain implicit conceptions of human nature' (p. 64). Through this, he is arguing for a more 'intuitive' (and, perhaps, design lead) response guided by four major types of knowledge:

1. *Where one is*. The identification of one's current situation is a critical starting point for adaptive behaviour. This requires both perception of the present stimulus array and memory of immediately preceding events.
2. *What is likely to happen next*. The identification of a range of future situations and the estimation of the relative probabilities of occurrence are the essence of prediction.
3. *Whether it will be good or bad*. The question of evaluation of the goodness or badness (or payoff) of predicted situations is also critical in decision making.
4. *Some possible courses of action*. The adaptive organism must not allow himself to become lost in thought

Intuition is part of the designers approach to problem solving, and 'intuitive' knowledge offers a framework for dealing with the kind of 'wicked problems' (Rittel & Webber, 1973, p. 155–169) likely to occur in attempts to improve of living condition for shantytown dwellers. Design education is in a unique position to make explicit the difficulties and the enormous human tragedies associated with these sorts of problems. The understanding of these wicked problems that shape our times challenge design students from all over the world that are aware of their social responsibility, thus facing the broader issues of our contemporary societies. In these terms, design cannot be ignorant of issues such as homelessness, environmental degradation, social injustice and so on. An interesting example that attempts to collectively address these challenges is the *Moonlight* project for affordable LED Lighting in rural Cambodia. The authors are Industrial Design students from the TU Delft: Ana Maria Alvarez, Loucas Papantoniou, Stephanie Wirth e Doortje van de Wouw. They proposed a new paradigm, from the hegemonic Western approach of design, they provide us with the opportunity of looking at an urgent need in a Cambodian rural village. From the dominant approach of design in urban areas, they invited us to consider the design intervention in rural areas. So, the team had the ability to think and design sociologically, they proposed a shift of values and they have worked based on an ethnographic and participatory research methodology. In cooperation with the local company Kamworks they designed an affordable solar-powered LED lamp for the rural population in Cambodia. This project was awarded the CIFIAL Feel the Planet Earth Award in the year 2009, in Portugal (see figure 2), and offers an example of how design students want to be affiliated to the main pressure issues of our societies, stressing concretely the making dimension of design.



Figure 2. The Moonlight is an affordable solar-powered LED lighting solution for the poor rural population of Cambodia that has no access to the electricity grid. Awarded the CIFIAL Feel the Planet Earth Award in the year 2009, in Portugal.

We have given an indication about *where we are*. What happens next is speculative. But if we allow ourselves to speculate, it is likely that problems associated with poverty will be compounded in the face of continued population increase in the urban environment, especially due to the continuing development of so called ‘megacities’. This is not an original speculation, simply one well-worth restating from the design education and design research perspective. For example, it is forecast that the number of megacities will increase between 2007 and 2025 from 19 to at least 26 (see Table 1). Significantly, Moscow is the only European city, and one other city, Istanbul, is likely to exceed 12 million people over the next 15 years.

2007 population (thousands)		2025 population (thousands)	
1 Tokyo	35,676	1 Tokyo	36,400
2 Mexico City	19,028	2 Mumbai	26,385
3 New-York Newark	19,040	3 Delhi	22,498
4 São Paulo	18,845	4 Dhaka	22,015
5 Mumbai	18,978	5 São Paulo	21,428
6 Delhi	15,926	6 Mexico City	21,009
7 Shanghai	14,987	7 New York-Newark	20,628
8 Kolkata	14,787	8 Kolkata	20,560
9 Buenos Aires	12,795	9 Shanghai	19,412
10 Dhaka	13,485	10 Karachi	19,095

Table 1: The world's megacities, 2007 and 2025
Source: UN-Habitat, 2008, p. 6

It is of major significance that European cities are not generally growing anymore, according to data spanning 1991–2001 (UN-Habitat, 2008, p. 13). In fact many inner cities are decreasing in size in countries such as UK, Germany, Italy, and Poland, allegedly for reasons associated with increased suburbanization in the surrounding areas. This is attributed to low population increase and decentralized urban development. This is no accident.

The presence (or absence) of design makes a significant contribution to this contrasting scenario. The meaning of design in this context is not only as a ‘visual phenomenon’, but also what Punter and Carmona (1996, p. 2) define in terms of broader social and environmental terms, as well as ‘design as a process’. The attitude to design by metropolitan authorities is therefore critical if it is used for positive affect. ‘Metropolitan growth can happen spontaneously, or by design’ (UN-Habitat, 2008, p. 187).

Materiality and immateriality, and the new ‘order’ in design.

When we talk about ‘material’ or ‘immaterial’ there are two distinct meanings. Material is about the matter used to make something. Immaterial is not – it is not physical (in philosophical terms it means spiritual). There is often-used dual terminology to describe the contrast: for example ‘physical’ or ‘metaphysical’, ‘tangible’ or ‘intangible’. The difference is usually associated with things perceived through the senses or through the mind respectively. We will not examine this in detail here. But although ‘design’ is a ‘disputed’ term (Salustri, undated) it is concerned with what Buchanan (2001, p. 9) offers in his formal definition: ‘Design is the human power of conceiving, planning, and making products that serve human beings in the accomplishment of their individual and collective purposes’. In the conceiving, planning and making, there is a distinction between cognitive (conceiving, planning) and concrete (making) practices that result in material things (or systems). This distinction is shown here in basic diagram form in figure 3, whereby that which is not so visible (cognitive) is indicated with a dashed line, and that which is solid (concrete) has a solid line (R. G. Harland, 2009, p. 10). Some may prefer to separate the two in terms of a division of labour, but we do not differentiate in this way preferring the view that ‘making is thinking’ (Sennett, 2009, p. ix). In this sense design is craft, technology, making and thinking residing in a

singular domain. Archer (1976, p. 11) captured this in his definition of design as ‘the area of human experience, skill and understanding that reflects man’s concern with the appreciation and adaptation of his surroundings in the light of his material and spiritual needs.’

- A. Immaterial (conceiving and planning)
- B. Material (making)

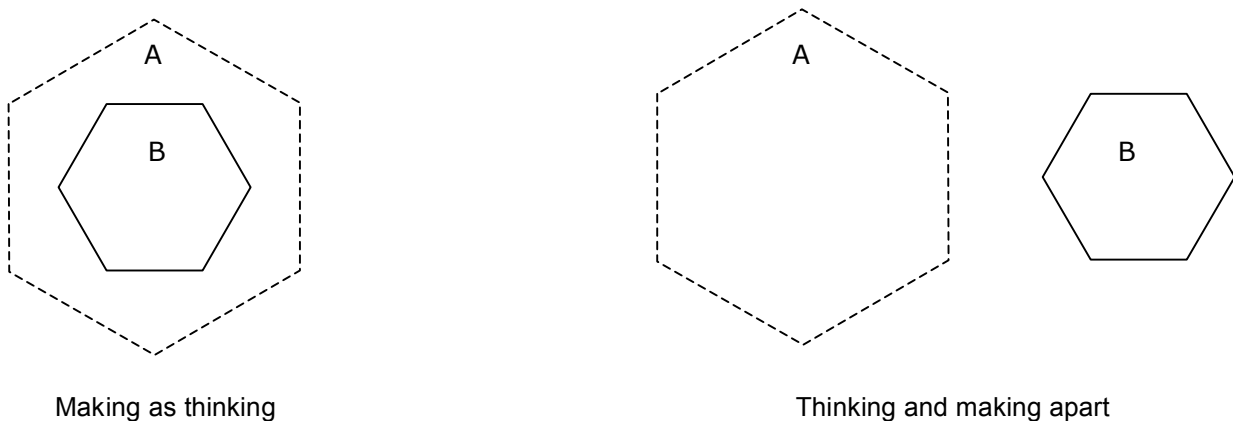


Figure 3. The material and immaterial dimension of design
Source: Harland, 2009

We place emphasis on this because Buchanan (p.12) argues that the focus in the early part of the twenty first century is no longer on ‘material systems’ (or systems of ‘things’, as he also puts it) but on ‘human systems, the integration of information, physical artifacts, and interactions in environments of living, working, playing and learning’. He goes on to say:

We are now in the early formative stage of understanding how third- and fourth-order design will transform the design professions and design education, but the beginning has been made. It is difficult to see how design thinking can go back to its earlier centers of attention without a sustained period of exploration of interactions and environments.’ (p.12)

The differentiation between material and immaterial concerns is still highly relevant, but clearly non-material concerns are becoming increasingly significant and expansive. Buchanan’s first and second order concerns of ‘symbols’ and ‘things’ remain important but ‘action’ and ‘thought’ form the basis of third and fourth order future concerns. He states that the ‘visual symbols’ and ‘things’ that so concerned design in the twentieth century in terms of ‘form, function, materials and manner of production’ remain important, but this must now be informed by inquiry into ‘usefulness, usability, and desirability’. Affiliation is one approach to this. For example, Lang (1994, p. 274) discusses how ‘symbols of affiliation’ adapt to formal and informal applications and settings. We might therefore ask the question how do we scale up this approach to resolve the large-scale problems in cities? Or is it that some urban environments are already well advanced in their understanding of third and fourth order design priorities, having addressed first and second order needs at earlier stages in their development process. For example, think of the significant slum clearing activities in major UK cities in the twentieth century.

Working towards a material democracy

How will this development of third- and fourth-order concerns address the basic needs of millions of people? Many are still yet to benefit from first and second-order design thinking. Some are attempting to deal with this through design for social change, or what is often referred to as 'human-centred' approach, now being undertaken by various organizations and individuals in the private and public sector. We identify some of these initiatives here.

IDEO have developed their programme of 'design for social impact' that aspires to have social and environmental impact for 'under-served and disadvantaged lower income communities worldwide' (IDEO, 2009). Since 2002 staff and postgraduate students at the Faculty of Industrial Design Engineering at TU Delft University of Technology in The Netherlands have been undertaking projects focused in developing countries for the benefit of the estimated four billion poor people in Asia, Latin America and Africa who live on less than \$3260 per year (Kandachar, de Jongh, & Diehl, 2009, p. 7). This responded to the Millennium Development Goals adopted by the United Nations, and the failure by the 'World Bank, donor nations, various aid agencies, national governments, and civil organizations' since the 1950s to eradicate poverty. The variety of project work is wide-ranging and situated in many countries in the southern hemisphere.

Further to work in industrial design and engineering, since 1999 Architecture for Humanity (www.architectureforhumanity.org) bring together the efforts of 40,000 professionals who dedicate time and services in design, construction and development services for the benefit of those who otherwise could not afford design. Their work in inclusive design aspires to create lasting change in communities through:

- Alleviating poverty and providing access to water, sanitation, power and essential services;
- Bringing safe shelter to communities prone to disaster and displaced populations;
- Rebuilding community and creating neutral spaces for dialogue in post-conflict areas;
- Mitigating the effects of rapid urbanization in unplanned settlements;
- Creating spaces to meet the needs of those with disabilities and other at-risk populations;
- Reducing the footprint of the built environment and addressing climate change.

In the context of the 'wicked problems' related to the housing situation described above, small gestures of design can bring relevant accomplishments, stressing thus the importance of keeping the connection between the cognitive and practical dimensions in design. For example, consider the design of a shelter for the homeless. It must be a practical concern of design practitioners and we must maintain sight of the need to improve the material experience of less fortunate people. In this situation, design can help to create a sense of dignity and belonging for people who may have few social connections. Also design enables communities to understand and accept the location of homeless facilities overcoming the 'nimbyism' – not in my backyard – always present in the neighborhoods close to these shelters.

Some examples of the notion of design in relation to material benefits can be pinpointed in the work of architects Janna Leavitt, Osamu Ishiyama, Sam Davis. In this context, Japanese architect Osamu Ishiyama has undertaken an outstanding project - the House of Hiroshima in Phnom Penh, Cambodia, located in the compound of the largest Buddhist, Temple Unalom, Cambodia. It is a school, an orphanage, a factory of prostheses for amputees and an art gallery, where people can reflect on PEACE. The architectural approach combined the alternate layers of concrete and red brick in a rough building without any kind of finishing or polished material. At the façade he used hollow brick exploring different directions and textures, making the structure light and the space airy. At the top of the building there are two cover structures that bring light to the core of the building. The programme is placed in two blocks: one for services and the other for housing and

living rooms. It is remarkable the way he placed the bath area under a mushroom/flower shaped structure giving the user a feeling of taking a bath inside/outside, due to the presence of natural light and visual contact with the outside environment.

Canadian architect Janna Levitt has another innovative project to provide housing to adult people previously living on the streets or in shelters. The Strachan House project, in Toronto, Canada– The project is an 80-bed residence, divided into four to seven bedroom shared 'houses' in a three-storey brick and timber turn-of-the-century warehouse. The project is comprised of 12 houses – 4 on each floor – with a main "street" or corridor connecting the houses on each level. At either end of each floor level, the street terminates at a stair built in a three-storey atrium space. These open areas provide a strong vertical connection, linking the community as a whole.

American architect Sam Davis also was involved in the design of innovative solutions for the problem of homelessness. He designed the Larkin Street Youth Center in San Francisco, California, providing thus safe temporary housing for most vulnerable youth ages 12-24.

Designs for social relief encompass not only the design activity for the urban homeless, but also the design for the refugees of all kinds of catastrophes. In this sense it is relevant to mention the work of Habitat for Humanity that has been active in hurricane and tsunami relief; Madhousers engaged in building temporary emergency shelters for the homeless; the Rural Studio, based in Auburn, Alabama, has helped provide housing for the rural poor since 1993; and Shelter for Life, a volunteer group based in Oshkosh, Wisconsin that built houses in Afghanistan.

Conclusion

The scope of this paper is wide. Too wide. We have attempted to identify some key concerns moving forward that enable the continuation of a design education and dialogue between northern and southern hemisphere continents. Affiliation has emerged as a potential focal point around which a design education and a design research agenda can be built. This links together design educators, design students, and the less fortunate people who must benefit from their efforts. The idea of affiliation scales up and down, and crosses many disciplines. In this sense it is a social concern that demonstrates potential for social-actualisation, realised in a material democracy. We have seen that some are already working towards this by using their design abilities for good causes. In this sense design and designers are increasingly foregoing the self for the social, and addressing the kind of problems Papanek spoke of. As design continues to be explored across a wide range of disciplines in the spirit identified by the likes of Bruce Archer, increased recognition of design education as a practice of affiliation may be a central concern. We have seen that design for social responsibility is an increasingly frequent practice among young students, and affiliation could serve as a force to bind them together.

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