Educational Possibilities of Humanitarian Architecture

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This artcle aims to question the educational possibilities in humanitarian architectural projects across the world. As a sub-set of financial aid given by the wealthier developed countries, generally those in the West, to less developed countries elsewhere, the issue of humanitarian architecture is by no means new. Responses to low-cost housing design and emergency relief structures following catastrophes have been pursued by a number of figures since the 1960s, including architect-theorists like Nabeel Hamdi, Shigeru Ban and Buckminster Fuller. An ideal advocated by Hamdi is to 'start where you can' and, at the same time, look for multipliers, because 'small may be beautiful but big is necessary and inevitable'.[1] However, the possibilities of such design and architectural initiatives as educational tools and settings for architecture students is much less explored, and this is an area that I have personally become involved in through my experiences as a project initiator and coordinator first for Architects 4 Aid and most recently attending a workshop with Architecture Sans Frontieres.

In this artcle I would like to reflect on the pressures involved in humanitarian projects and ask if they might be more creatively integrated both into the educational system in Britain and as a means to reinvigorate the architectural profession, so often driven purely by financial profit. This paper will draw on my personal experience and important reports in the field of humanitarian shelter and the conditions of informal settlements, to reflect on and draw attention to, key questions for education and practice.

[1]   Nabeel Hamdi, *Small Change* (London: Earthscan Publications, 2004).

Is There a Need for Greater Understanding of the Work of Architects Working in the Humanitarian Sector, and a Recognition of the Potential Learning Opportunities Created?

To what extent does the reconstruction period of post-disaster and informal settlement relief work offer an environment which is amenable to students to learn from? From my work in the humanitarian sector I believe that if approached in the right way with the correct guidance and ongoing support, this setting creates and provides an unparalleled stimulating and inspiring learning environment. Offering opportunities to engage directly with clients and user groups, develop a comprehensive understanding of unfamiliar and often locally available materials, and experience behaviour in a range of challenging environments working at a one-to-one level. Benefits may often include occasions to experiment with methods of communication, community consultation, cultural exchange, development of a brief and wide range of practical skills. These are the kinds of experience and skills much sought after but rarely acquired in commercial practice of architecture today. In addition to gaining a valuable insight and understanding of working across different cultures, as well as developing sustainable practice and understand the challenges faced by countries in the developing world which are set to experience much of the world population growth – the latter now estimated to be 9.1 billion by 2050. 'Almost all growth will take place in less developed regions', as has been noted by the United Nations.[2] This figure needs to be set against the estimated one billion people, or one-third of the world's urban population, who currently live in slum conditions.[3]

The term 'disaster' for the purposes of this article encompasses the results of natural or man-made catastrophes, and also the preparedness to assist in mitigating the risks of any future disasters. In almost all cases it is a setting where need greatly outweighs the means available, and skilled personnel are in short supply. This learning setting is likely to be as part of the efforts of a long running campaign or in the case of natural disaster, it will often come many months after when the immediate relief phase has passed, and when the need for strategic planning and design becomes critical for longer term interests. It is usually at this later stage that not-for-profit Non-Governmental Organisations (NGO's) and/or other well organised Community-Based Organisations (CBO's) are brought together to assist local communities to move from the transitional relief phase to medium-/longer-term recovery. It is also at this stage where the services that architects can provide are put to best use: services noted by the Max Lock Centre,[4] revolve around an understanding of the complex needs of clients and users in collaboration with multi-disciplinary teams, and then developing and realising designs based on these discussions. More specifically, the tasks involved include: inspecting and surveying sites/ existing buildings; consulting with clients and users on their requirements; coordinating the work of other professionals; testing design ideas to establish feasibility; developing selected options; preparing reports and design information ranging from site layouts to the technical details of

[2]   Official United Nations population estimates, see http://www.un.org/News/Press/docs/2005/pop918.doc.htm [accessed 2009].

[3]   United Nations Human Settlements Programme, *The Challenge of Slums: Global Report on Human Settlements* (London: Earthscan Publishing, 2003).

[4]   Max Lock Centre, ' The Role of the Principal Professions', *The Built Environment Professions in Disaster Risk Reduction and Response. A Guide for Humanitarian Agencies* (London: Max Lock Centre, Westminster University, 2009), p.12.

construction and specification for estimating costs; meeting regulatory requirements; ensuring good project performance; guiding construction processes; and aiding future maintenance. From what I have understood from my architectural peer group, and my own experience, the current practice of architecture in the UK manifests itself in a very substantial percentage of British architects working on commercially-focused developments which benefit a relatively small percentage of end users. Again, from my observations, the current culture of architectural practice all too often appears to encourage students and trainees in such basic activities as scheduling, codifying, arranging, repositioning elements, and selecting building items from catalogues; there is far less encouragement in terms of listening, learning, understanding, constructing briefs and community collaboration. And with a period of recession now upon us, the current situation severely diminishes and limits the ability of architectural practice to inform the educational curriculum in any positive manner. Clearly, something has to be done to break this vicious circle.

Fig. 1. A typical alternative meeting space and educational field setting, Kericho, Kenya. Photo: Andrew Powell

Specific Case Studies and Approaches Adopted

The case studies outlined below in this article are of projects which I have personally been involved in an architectural capacity, and highlight the kinds of approaches practiced and adopted, as well as critically identifying the additional skill shortage experienced at the time. Although not always explicitly conceived in advance, the approaches noted here are reflections of the specific needs that transpired in each case:

'Enabler/problem solver' approach

This project was sited in the Rift Valley, Western Kenya, and carried out in 2006/07; it was for a low-cost/high-value education building. I was part

of team of two architectural staff working with a UK-based NGO, *Hand in Hand*, along with a locally active NGO on direct involvement with the school committee and local community members.

'Skilled supporter' approach

This project was sited in Romania, and is from 2007. It focused on a more humanitarian approach to heritage, assisting communities in sensitively moving forward as is desperately needed without losing long held and important values. Here I was part of team of eight architects working with another UK-based NGO and the 'Mihai Eminescu Trust', a locally based NGO, and the local community.

'Catalyst' approach

This project was sited in Myanmar/Thailand, in 2007, and was for a community bridge. My involvement and intervention led to a successful private practice secondment from members of Buro Happold to provide specialist bridge knowledge and to assemble a competent and appropriate design team. It involved working together with a UK-based NGO, a US-based NGO called 'Whispering Seed' and of course again the local community.

To get a context for how a period of work experience in the international humanitarian sector may form a viable architectural education model, it is worth citing the current guidance for architectural schools given in the Royal British Institute of Architect's 'Criteria for course validation at Part 2', which covers postgraduate architectural education. The RIBA's Part 2 Criteria requires that that every UK student (or overseas student on a RIBA-validated course) must demonstrate knowledge, gain understanding and complete a portfolio to show competence in the following five topic areas: Design, Technology & Environment, Cultural Context, Communication, Management Practice & Law. Of these, it could be argued that Design is the topic area least incubated by a period of field-based learning – but if the aim is not to challenge established successful models, but to compliment and add diversity for those students who desire greater engagement with the social and environmental aspects of design, then clearly a field-based setting can provide more overt connections and opportunities for learning about Design as well as the other topic areas.

As a student studying in London I became familiar with the daily commute on public transport to university, packed up close to smartly dressed business commuters. Following completion of my formal university studies I became familiar with a journey of a different kind. This daily journey consisted of a 45-minute journey along a mud track following a turning off the main tarmac road between Nairobi and Kericho in a highland area famous for its tea plantations, west of the Rift Valley in Kenya. The existing site designated for a proposed primary school provided me with an educational experience of a different kind, one which cannot be gained within university. On my arrival on site in Kenya, the scale of the need and the importance of assessment and priority became

poignantly clear. After meeting with a collection of stakeholders connected with the school, from committee members, community elders, teachers and end users, the tasks and roles that would be required began to take form.
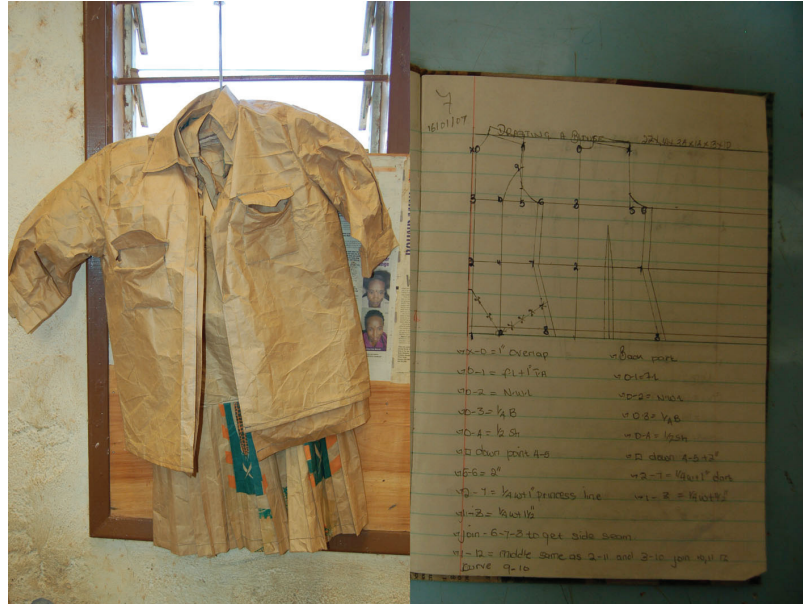

Fig. 2. Improvisation of materials for design, Kericho, Kenya.
Photo: Andrew Powell

Simple activities due to the context became rich multi-layered educational tools. Conversations with students attending the existing educational facilities became a direct source of architectural engagement with an all important end user – the ultimate jury as to the success of a building. It revealed much about their needs, hopes, the activities important to them, the qualities of space they enjoy, and the ideas and visions they have for viable solutions to go forward.

A day spent working alongside builders assembled from the local community revealed the often overlooked basic problems of producing consistent, evenly shaped building blocks from locally available materials. The first task was to construct formers which could produce efficient block volumes from a locally available mix of mud and natural compounds. Tried and tested methodologies were developed for quantities, additives, baking times, cooling times, etc., based on skills retained by members of the community though viewed by others as outdated. An intimate understanding of these basic technologies alongside more contemporary design strategies began to reveal a more sophisticated use of the building materials available.

The daily routine would typically involve the journey to site with the locally based NGO, usually beginning with sessions working with one or more of the stakeholders, individually or as groups, intermittently spliced with reflective sessions working with my fellow colleague. Periodically we would be present for, or facilitate meetings with the local authority representatives, local architectural students and practitioners from the

Fig. 3. Gathering, interpreting and collecting from the context, Kericho, Kenya. Photo: Andrew Powell

Fig. 4. Gathering, interpreting and collecting from the context, Kericho, Kenya.   Photo: Andrew Powell

region, as well as other development organisations active in the region in the hope to extract relevant information. We looked for ways on how to most successfully communicate and over time began to invent methodologies to aid our data collection and analysis; enabling use of qualitative and quantitative questionnaires, structured interviews and game play. For example using a postcard from our homes that reflected key aspects of our familiar and cultural landscape as a prop, asking participants to draw and create their own to highlight aspect and features of their environment they considered important. The NGO introduced us to more tried and tested collection and analysis methods, such as a

Fig. 5. Example of current existing school, Kericho, Kenya.
Photo: Andrew Powell

transect walk and SWOT analysis: broken down as strength, weakness, opportunities and threats, used to gain insight of the site and context of any future design.

Remaining aware of limitations, not least the obvious budget restraints, the daily routine later in our posting involved greater time spent on proposals and presentation/workshops of potential design interventions, accessing, collecting thought and testing location and material propositions. At times enabling use of an impromptu workshop located on the school site used for constructing school furniture, as a facility to test feasibility of material and construction ideas on small scale. After school hours, my colleague and I would return to our residences. Often using the time to write up and establish ways to present our findings. At key stages communicating and exchanging information via email and Internet based virtual platforms to our UK base and partners in the UK. In this way we were engaged in a two-way dialogue with stakeholders and coordinators at our UK base. Whereby in an educational model the coordinators at a UK base could be suitably replaced by university based supervisory tutors. Although in this instance, my time working in Kenya was framed as pro-bono built environment service for the recipient and host community, what also became increasingly clear was that it was I that learnt greatly from this experience. In this context, stakeholders were at the same time both students and teachers, and my role took on that of both enabler/problem solver and student. I had received a wealth of educational capital and hopefully I had imparted some useful ideas and knowledge. I still remain in touch with the members of the local based organisation that hosted and assisted me, and an invitation has been made for me to return in the future when another opportunity exists.

Under the heading of *Design* in RIBA-approved Part 2 courses, their

Criteria (in summary) state that a student *will produce and demonstrate coherent and well resolved architectural designs that integrate knowledge of:*

- Social, political, economic and professional context;
- Briefs, critically appraised to site, sustainability and budget constraints;
- Regulatory requirements, accessibility, health & safety by way of building codes & Local Authority;
- Philosophical approach, revealing an understanding of theory in a cultural context;
- Test, analyse and critically appraise design options;
- Work as part of a team

I would argue that a period of learning in an alternative field setting achieves and even extends the ambitions set out by the RIBA. It adds knowledge and skills that enable the qualified architect to benefit from more relevant challenges being faced across the world in modern times. In each case the experience with the field-based NGO proved to be invaluable and deeply educational, and allowed an opportunity for me to gain a rapid awareness of the local design context and environment. This formed the basis for a set of dynamics that seem to be eminently suited to raise important questions and suggest specific skills and solutions.

Here are some examples of the learning outcomes resulting from these experiences – an increased awareness of a varied design approaches, hands-on making, improved social and communication skills, an idea about reflective practice, awareness of the impact of global issues, a greater understanding of the physical and social context of design, exposure to multi-disciplinary models, as well as generally feeling far better equipped to deal with concerns about architectural sustainability in tough situations. It is in contrast to these experiences that the role of practicing architects and trainees in British firms has been slowly eroded, to the extent that the benefit of such a comprehensive learning package is almost impossible to find here. The sorts of initiatives I have been describing would help to increase the awareness and presence of architects, both within other academic courses and wider society, and could give a more positive public perception of what architects do. The better form of reflective practice and learning resulting from these case studies would also inherently assist in creating a more collaborative form of practice and learning. The most recent Presidential inaugural address for the RIBA noted that 'collaboration' was the big word and challenge for industry and practice today. The same speech noted that the RIBA acronym should stand for 'Relevant, Influential, Bold and Adding value', qualities which I believe an adoption of such forms of learning from humanitarian projects overseas would help to reinforce in our profession.

I would also argue that a greater understanding of the position of architects and architecture within a globalised market would result. My experiences in the case study projects highlighted that while UK-educated architects have many skills to offer, there are many complimentary skills

that currently are often sadly lacking. These include skills in areas such as stakeholder analysis, effective consultation, holding workshops and forums, opening up minds, managing expectations and limitations, extracting and articulating opportunities.   It is not just a case of what valuable lessons might be learnt, but the meaningful way in which such lessons energise awareness and become woven into one's mind. Such experience promotes additional skills and knowledge of local and national political contexts, and of political obstacles, conflicts and/or barriers that may exist. Many of these skills are highly sought after and effective when returning to the UK construction industry setting. In addition, there is an opportunity to gain experience and integrate related skills often associated with engineering, planning and surveying.

Potential Example Mechanism to Move Forward

STUDENT <> Northern-based HEI <> Southern-based HEI <> Locally-based NGO/CBO
         (School of Architecture)   (School of Architecture)

Fig. 5. Proposed example mechanism.

Building on these existing positive interfaces, I believe the above model could be developed to facilitate a mechanism to allow the preparation, support and monitoring of a more successful learning environment for architectural students. The student could receive and assist in constructing preparatory information via this mechanism and line of communication. This could then be developed prior to embarking on the placement on the overseas humanitarian project. Hence the aims, objectives, references, methods, programme and draft submission materials could all be outlined in advance. This data could then be built upon and monitored as the project develops, and as experience informs the design proposals. Many trans-spatial technologies and electronic platforms have developed in recent years that could aid this form of learning, including widely used communication tools like email, inter-university extranets, electronic virtual blackboards, through to secure information exchange hosting areas and online group discussion forums. It could propagate a transfer of knowledge and understanding in both directions for architectural students, architectural schools, architectural practices and host communities.

In addition, this more reflective method of practice and learning is well within the remit of many if not all of the current criteria for validation at UK Part 2 course, and indeed its potential for building up skills has far greater reach. As has been suggested in this paper, there exists a demonstrable need from the NGO community for greater numbers of built environment professionals. This has been outlined in various leading shelter sector reports, for example the pamphlet on *Mind the Gap!* that was produced for RICS by Max Lock Centre at the University of Westminster,[5] along with the influential and forward-looking overview titled Gaining a Sense of the Sector 2006.[6] The conclusion of the latter document notes that: 'The conversation repeatedly emphasized the need

[5]   Mind the Gap! Pg 12 – 'In the foreseeable future, in most low-income developing countries, professional skills and expertise in the built environment will remain a scarce resource, particularly in the more remote regions'.

[6]   Charles Setchell & Tom Corsellis, *Gaining a Sense of the Sector: A Participatory Workshop on Shelter and Settlements Activities*, (USAID, InterAction, 2006).

p.3 - In which Charles Setchell (OFDA/USAID) states: 'The limited presence of shelter experts within humanitarian organisations and insufficient numbers of external consultants have led to shelter decisions increasingly being made by generalists ill-equipped to do so.'

p.5 - In the same report Tom Corsellis (Senior Director, Shelter Centre): 'Ongoing constraints include;… underdeveloped relationships and coordination with the academic and private sectors. A preference for product-based versus research and dialogue based funding makes it difficult for knowledge development initiatives to get financed. Efforts at developing a relationship of trust between the private sector and the humanitarian community require greater attention in order to incorporate available technological advances'

[7]   Widely acknowledged throughout student community. Also understood through conversations of myself and fellow professionals with students at various levels from university studio level, pier groups to views explicitly expressed at 2008 UIA congress in Turin by students and young professionals of both sexes, many complaining of too few outlets for their sense of commitment to working in developing countries on social and economic development projects.

for more skilled professionals in the shelter sector and the need for donors and institutions to be proactive in launching such courses'. Architects already possess vital skills sets and their abilities are much needed and often currently the least affordable within the international development setting. It has also been widely acknowledged that an appetite exist amongst architectural students to assist in this area of practice,[7] which would result in the numerous positive learning outcomes as have touched upon. All that currently appears to be missing is a proper mechanism to facilitate more of these learning interventions.

I understand that a responsibility exists in education to prepare students for the British marketplace, but I believe there also exists an equal responsibility to serve the needs of society at large. Based on my research and observed successes, my view is that the framework and mechanism outlined in this paper demonstrates a method by which architecture-orientated individuals and organisations can make positive contributions to reconstruction programmes activities. Any limitations of formal job roles currently appears more to do with lack of appropriate knowledge across cultured, and a misconception of what architects can offer by many within NGO community, rather than any real hindrances.

Today, we hear every day of apocalyptic forecasts of environmental disaster, and such predictions, whilst highlighting important concerns in public consciousness, may also be obscuring rational policy discussion. Indeed, focusing attention primarily on a longer-term and worldwide phenomenon could mask the more immediate problems of current conditions. Now, with many architectural students and trainees likely to find it very hard to get jobs in British practice over the next few years, in what appears to be an extremely deep economic recession, why then should not more of them offer their skills and be able to learn from working in useful humanitarian projects across the world?

If as a profession, it is felt we have skills to offer in this wider global setting, then why shouldn't the profession respond? And if it were indeed to decide to respond in this way, isn't the locus of this response most likely to come from within the academic community in countries like Britain? Humanitarian activity maybe unable to solve disparity in wealth and opportunity in the world, but it certainly is able to mitigate the worst effects. And might it in fact bring other potential gains to the profession, addressing issues which are often ignored but which are crucially important to its future survival? Might existing as yet unresolved questions such as gender inequality and greater ethnic/socio-economic diversity in British architectural practice also be in part addressed by the forms of overseas practice and learning such as I have been describing?

So, to conclude, might there be a more sustainable and ethically balanced approach to humanitarian architecture that could mutually benefit universities and architectural practices alike? This mutually beneficial relationship could create in turn a more challenging and inspiring professional environment, providing a setting in which to develop knowledge and design responses that might raise ambitions and be more

sensitive to the vernacular and the needs of the built environment in poorer developing nations. Individual acts in themselves are often only small-scale interventions, but as a culture of practice, together many small acts can initiate and contribute to solutions to the wider context – and thus address increasingly urgent environmental dilemmas and the continued social disenfranchisement which seems unfortunately to so typify our modern age.