

DESIGNING FOR DEVELOPMENT IN AFRICA: A CRITICAL EXPLORATION OF LITERATURE AND CASE STUDIES FROM THE DISCIPLINES OF INDUSTRIAL DESIGN AND DEVELOPMENT STUDIES

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As pressure to access African resources and explore new market opportunities increases in light of a diminishing Western resource base, saturated markets and troubled economies; it is a priority for African designers to gain a better understanding of the broader and context specific issues of development. This paper explores the disciplines of Development Studies and Industrial Design in order to critically identify approaches to development best suited for African design interventions. Academics and practitioners in Development Studies tend to support one of two camps, the first, a highly critical post-Truman concept of development as a Capitalist agenda to access new markets and the second a more humanitarian approach to an equitable increase in quality of life for all. When exploring industrial design, products regularly become too style focused and fashionable, leading to increased redundancy while forgetting the ethical and political implications of design. Additionally industrial designers have been criticised for their take on development by creating products either designed with a misguided sense of charity, or designed for those in need, but remotely and without an understanding of cultural contexts. Similarly in recent conference proceedings claims of “design trawling” were raised against designers working for big corporates in impoverished communities highlighting possible hidden “Imperialistic agendas”. This raises the question of how designers should balance seemingly contradictory good intentions and commercial interests in order to create a more democratic notion of design. Many of the critics of design do not doubt its power to create positive social change and there are many documented accounts of very successful products created for a more equitable society. This paper firstly introduces a history of development and design and then utilises the recent publication *Design and Social Impact: A Cross-sectoral Agenda for Design Education, Research and Practice* (Smithsonian Institution, 2013) in order to identify gaps and challenges in current approaches to social impact design. This paper then specifically compares some of these issues under the banners of participation, and monitoring and evaluation by utilising literature and case studies drawn from the historically older discipline of Development Studies in comparison to literature and case studies from the discipline of Industrial Design. The aim of this is to identify approaches and methods for development best suited for designers in Africa.

Keywords: Industrial Design; Development Studies; Social Impact Design, Participation; Monitoring and Evaluation; and Africa

INTRODUCTION

I am an industrial design lecturer, researcher and practitioner working in South Africa within a discipline traditionally focused on the design of products and technologies for the wealthiest 10% of the population (Smithsonian Institution, 2007). Through my professional and academic development I have been involved in a range of research projects that attempt to use the power of design for positive social change. As I have explored this realm, I have been led down a transdisciplinary path that links the field of Industrial Design to that of Development Studies.

Development Studies is an interdisciplinary social science investigating the fundamental changes in Africa, Asia and Latin America as their citizens confront the challenges of extreme inequality, violence, and value transformation in a new capitalist world order. We examine the cultural, economic, environmental, political and social realities in the increasingly differentiated 'third world' to gain the critical analytical tools to understand – and improve – its peoples' lives." (University of Johannesburg).

A definition of Development Studies such as the one above, highlights the relevance of such a discipline for industrial design as it begins to shift away from a purely capitalist agenda of gaining market share through product differentiation into more democratic design interventions that attempt to bring about positive social change (Smithsonian Institution, 2007 & 2013). Of particular relevance and urgency to my research is the fact that I was born and live in a country with a complex developed and developing divide. In fact, the World Bank indicates that South Africa had a Gini coefficient of 0.63 in 1998-2002 (2012); this is a measure of inequality where 0 represents perfect equality and 1 implies perfect inequality. Although no more recent data are available, South Africa is still currently ranked with the highest Gini coefficient, and hence highest inequality, in the world. The latest South African census data (Statistics South Africa, 2012) only makes more obvious these glaringly inequalities. However, one should not completely despair since desperation has at times encouraged some innovative, creative, low-cost and practical solutions to attempt to answer some of these inequalities (AfriGadget; Maker Faire Africa; Design Indaba). Of additional relevance to this paper is the fact that design history has been documented from a predominantly Western perspective and considering its underdevelopment as a discipline in Africa (Campbell, 2008) there is an opportunity to explore design and its relevance to development at a grassroots level on the continent. This paper firstly introduces a history of development and design and then utilises the recent publication *Design and Social Impact: A Cross-sectoral Agenda for Design Education, Research and Practice* (Smithsonian Institution, 2013) in order to identify gaps and challenges in current approaches to social impact design. This paper then specifically compares some of these issues under the banners of participation, and monitoring and evaluation by utilising literature and case studies drawn from the historically older discipline of Development Studies in comparison to literature and case studies from the discipline of Industrial Design. The aim of this is to identify approaches and methods for development best suited for designers in Africa.

DEVELOPMENT & DESIGN

It is generally accepted that the term ‘developed’ or rather its antithesis ‘underdeveloped’ was first made popular after the Second World War in American President Harry S. Truman’s inaugural address to the nation (1949):

...we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas..

President Truman went on to define a virtual divide between the ‘developed’ North and the ‘undeveloped’ South and how the technologies and production capabilities of the North should be used to “...relieve the suffering of these people” (Truman, 1949). It was a cleverly framed call to further the mission the American founding fathers had left to the nation (Sachs, 2010, p. xv). For this very reason the term ‘development’ is contentious and has been extensively interrogated in literature. There are however two distinct camps that tend to underpin the concept of development as a post-Truman concept (Esteva, 2010): on the one hand there is the critical tradition that stretches from Karl Marx to Arturo Escobar (Sachs, 2010), and on the other there are the humanitarians and the growth theorists, who have a more positive outlook on development, although not uncritical; both Amartya Sen (1999) and Robert Chambers (2008) would fall into this camp.

Rist (1999, p. 13), who could be classified as a member of the first more critical camp, defines development in his seminal book *The History of Development* as:

...a set of practices, sometimes appearing to conflict with one another, which require – for the reproduction of society – the general transformation and destruction of the natural environment and of social relations. Its aim is to increase the production of commodities (goods and services) geared, by way of exchange, to effective demand.

He then terms this a “scandalous definition” (Ibid. p. 19) due to its seeming contradiction to the commonly held belief of development as being focused on the equality of humanity. Rist explains this discrepancy by metaphorically equating religion to development and how a “social phenomenon inevitably appears in a different light from that in which it is experienced by the participant” (Ibid. p. 21). Roland Bunch from the non-profit organisation World Neighbours, which operates in Asia, Africa and Latin America, has a far more practical and empowering definition of development, which he describes as:

... a process whereby people learn to take charge of their own lives and solve their own problems. Development is occurring where people are gaining the self-confidence, motivation, character traits and knowledge needed to tackle and solve the problems they have by actually tackling and solving those problems. (1991, p. 30).

Rist's definition of development could easily be interchanged for a description of traditional mass-produced industrial design and Bunch's for more socially orientated design. This discrepancy exists in the discipline of design due to the origin of the discipline being purely linked to a capitalist agenda of product differentiation versus the more contemporary ideals of design for social impact (Smithsonian Institution, 2013). Richard Buchanan explores these ideals in an article on the topic of human dignity, human rights and the principles of human-centred design (2001). After attending a South African design conference presentation by Dr. Kader Asmal, then South African Minister of Education, Buchanan was inspired to recognise how "design... finds its purpose and true beginnings in the values and constitutional life of a country and its peoples" (Ibid. p. 36). Buchanan goes on to highlight that design regularly discusses principles of form, composition, aesthetics, usability, market economics, business operations, or mechanical and technological principles that underpin products, forgetting the primary principle of the ethical and political implications of design (Ibid. pp. 36-37). A purely capitalist design agenda moves away from this considered problem solving to a more style-focused, fashionable and therefore quickly obsolete design of mass-produced products (Bonsiepe, 2006, p. 28). Both Buchanan's and Gui Bonsiepe's positions build on the seminal works of Victor Papanek's *Design for the Real World* (1984), written in reaction to the conspicuous consumption evidenced in post-industrial American society, and Nigel Whiteley's *Design for Society* (1997). More recently, both Bonsiepe (2006) and Victor Margolin (2012) explore the link between *Design and Democracy* in a paper and lecture respectively. Both explore design beyond the artefact to the creation of systems that promote positive social agendas; this approach to design for social impact could be ideologically linked to Sen's capabilities approach (1999) and Chambers' (2008) participatory approach to development.

SOCIAL IMPACT DESIGN

It is clear that social impact design has become a burgeoning field from the professionalization of socially responsible design through programmes such as at Massachusetts Institute of Technology's D-Lab and Design Matters at the Art Centre College of Design in Pasadena, California (Smithsonian Institution, 2013, pp. 32-34) which build on a history of literature that explores socially orientated design interventions (Pilloton, 2009; Whiteley, 1997; Papanek, 1984). Of great interest to this paper is a recent publication titled *Design and Social Impact: A Cross-Sectoral Agenda for Design Education, Research, and Practice* by the Smithsonian Institution (2013). It was the outcome from the Social Impact Design Summit held at the Rockefeller Foundation headquarters in New York on the 27 Feb 2012. People representing academic programmes, government agencies, and non-governmental organizations were brought together to discuss the progress of design focused on social good and the various issues faced by practitioners in such an arena (Smithsonian Institution, 2013). Documenting a 50 year history of social impact design through a timeline of various seminal publications; conferences and exhibitions (Ibid. pp. 12-18); exploring the development of educational offerings focused on socially orientated design (Ibid. pp. 33-35); and explaining various models and methods (Ibid. pp. 26-31), this publication is a crucial stepping stone in the development of "a holistic and systems approach into

existing disciplines that are involved in socially responsible design” (Ibid p. 32). Of particular interest to this paper are the various gaps and challenges in social impact design that were raised by the various summit attendees. These issues include: a lack of a clear definition (Smithsonian Institution, 2013, pp. 20-21); the need for better knowledge sharing (Ibid pp. 21-22); a lack of standards and ethics (Ibid p. 22); issues of cultural bias (Ibid pp. 22-23); long-term sustainability (Ibid p. 23); implementation issues (Ibid p.24); and the measurability of value and impact (Ibid pp. 24-25). Why these issues are of interest to this paper are the similarities and overlap of many of them with problems that have been grappled with by practitioners in the field of Development Studies over its slightly older 90-year history. For the purpose of this paper I will specifically focus on participation, and monitoring and evaluation through an exploration of literature and case studies.

Participation

There are instances of what Klaus Krippendorff describes as technology-centred design where the designer or client decide what improvements are required for a product with no client consultation (2006, pp. 31-32). However, the majority of both the capitalist and socially responsible paradigms of design have greatly influenced design research methods, ironically in similar ways. Capitalist-focused design tends to use participatory and observational methods (Clarke, 2011; Ireland, 2003; Plowman, 2003) to better understand target markets in order to design products to gain market share. Methods utilised by designers for social change are also typically participatory such as Universal Design (Lidwell, Holden, & Butler, 2010) and Human-Centred Design (Buchanan, 2001; Krippendorff, 2006, pp.31-32). These are utilised to better understand the problems of the people for whom the product is being designed in order to design solutions with them that will broadly be adopted. The method of human-centred design, described under many guises, is aimed at trying to surmount many of the issues identified by the 2012 Design For Social Impact Summit attendees but tends to be used as a textbook panacea for all design in a developmental context. It is presented under the brand names of large international design consultancies or educational institutions such as IDEOS’s *Human-Centred Toolkit* (IDEO), Stanford d.school’s *Bootcamp Bootleg* (Stanford d.school), and frog’s *Design for Social Impact* (Frog Design), ironically all institutions based in the North. Some of the socially orientated work that has emanated from these organisations has been criticised as being undertaken with ulterior economic motives under the banner of charity (Arad, 2012). This can result in the target population denouncing what they consider a new form of imperialism through design (Nussbaum, 2010). And although human-centred design models seem to highlight user participation as a priority, many of these methods propose relatively fast turnaround from concept to solution, by designers who come from distinctly different social-cultural backgrounds, to ‘solve’ the problems of local ‘underdeveloped’ communities through design. Many of these methods encourage, although not necessarily intentionally, the distinct separation or ‘user’ and ‘designer’. More focused ethnographic methods of long-term community integration may be more productive in attempting to overcome cultural bias and breaking down this expert/user divide by truly integrating the designer into the issue at hand while building trust and breaking down power structures (Nelson &

Wright, 1995). In Development Studies there are two distinct pathways identified for community development:

The first, which begins by focusing on a community's needs, deficiencies and problems, is still by far the most traveled, and commands the vast majority of our financial and human resources. By comparison with the second path, which insists on beginning with a clear commitment to discovering a community's capacities and assets..., the first and more traditional path is more like an eight lane superhighway. (Kretzmann & McKnight, 1993, p. 1)

The second more emancipatory method is termed Assets Based Community Development (ABCD) and is aimed at identifying local opportunities in a community as opposed to presenting preconceived notions of what is needed (Kretzmann & McKnight, 1993). This approach aims to uncover the assets and strengths in a community as a means for sustainable development, but additionally empowers the community to make changes as opposed to the disempowering approach of external 'experts' identifying a need and then communally exploring a solution.

With a focus on people-centred agricultural improvement, Roland Bunch provides a very focused and considered approach to development under the banner of Participatory Technology Development (Bunch, 1991). Bunch is highly critical of any project or programme that offers any free equipment or incentive to communities in the name of development; in a design intervention this could be extended to the promise of a product that results from a human-centred design process. As an example Bunch uses the first project undertaken by the non-profit organisation World Neighbours, whom he worked for in Colombia in 1965. When returning to the community twenty years later, all that was left as evidence of their project was discarded, broken and in some cases completely unused farming equipment and an empty co-operative building. As one reason for the failure of give-aways Bunch refers to the phrase echoed in many different cultures, that people don't care for things they never needed to work for (Ibid. p. 25). In my opinion he goes on to explain how the complexity of human nature and working with people makes developmental projects so difficult. Bunch identifies how the promise of give-aways may indicate an enthusiasm, but inevitably without the intention to adopt a single innovation (Ibid.). Bunch further explores a much more harmful side to give-aways, where communities become dependant on outside 'help' which creates a feeling of incapability to do anything themselves (Ibid.). Additionally by focusing on those most in need, divisions can be created within communities through the jealousy of those who did not receive something. But one of the most harmful effects of give-aways are their ability to "divert people's attention from the underlying demographic, institutional or political problems that, sooner or later, they must face if permanent progress is to be made." (Ibid.).

Also drawing from the field of agriculture, Dr. Paul Richards in his book *Indigenous Agriculture Revolution* (1985), demonstrates through multiple case studies how many of the most successful innovations in food-crop production in the 20th Century had had indigenous roots. "There should be less emphasis on

‘teaching’ farmers how to farm and supplying ‘improved’ inputs, and more emphasis on how to foster and support local adaptation and inventiveness” (Richards, 1985, p. 194). This highlights the importance of local knowledge and input to answer local problems. Richards, does not however negate the benefit of outside input or research, but rather proposes a more thorough understand of the ecology of a context in order to augment local trends and interest (1985, p. 14).

Returning to Bunch, he provides a variety of methods to overcome the many hurdles of a developmental project. The driving force behind development, he identifies as enthusiasm (Bunch, 1991, p. 27) and the source of enthusiasm through recognisable success (Ibid. 28). Bunch defines a recognisable success as “the solution of a felt need with results that are both readily observable and desirable according to a cultures own value system.” (Ibid.). In order to achieve this, designers need to consider projects on a scale that is achievable, both practically and financially. By biting off small chunks, achieving recognisable success can be evidenced quickly, as opposed to long drawn out projects, and hence breed enthusiasm in a community for a project. In Nabeel Hamdi’s seminal book on urban participatory development titled *Small Change* (2004), he describes case studies where planners and designers create opportunities for development or emergence, as he prefers to describe it, to take place (Ibid. pp. xvii-xviii, p. 73). He explores this through many small design interventions that, as per Bunch’s description, create enthusiasm through quickly recognisable success. One of the examples Hamdi uses is how by simply moving a bus stop they were able to catalyse community emergence. Initially the decision to move the bus stop was based on the need of members of a community, particularly fishermen, to access transport to get to city markets. But, through prior observation Hamdi had also noticed “the density of life and commerce which clusters around places where buses stop.” (Ibid. p.74). By moving the bus stop, a cheap, quick, useful and visible intervention, not only was access to market improved for those that needed it, but through a process of emergence, entrepreneurship flourished and brought with it the benefits employment brings to a struggling community (Ibid. pp. 73-76). Where social impact design may need retrospection, is in the designer’s ability to accept that sometimes what is required for positive social change in communities is something very small and not necessarily a mass-produced highly technological product.

Again returning to Bunch, he further explores how although enthusiasm is the driving force of development, increasing participation should be the goal of any programme or design project. By working with enthusiastic community participants when a project ends at least there will be people left in the community with intimate knowledge that will ensure a sense of permanence for the intervention (Bunch, 1991, p. 29). Additionally by actively working through a community-identified problem with community participants, they are exposed to a process that may be utilised by the community in the future without the need for external input. Bunch however does identify another side to participation, that of destructive participation; examples include a single leader whom overpowers other community members; communal inability to deal with dishonesty amongst community leaders, and limited experience in making communal decisions (Ibid. p. 30). Bunch highlights the fact that constructive participation is a gradually

learnt skill and that this is where outside expertise is necessary in guiding projects while consciously avoiding suffocating paternalism (Ibid. pp. 31-32). He reiterates “early recognisable success is a crucial ingredient in making participation constructive.” (Ibid. p. 32). For those interested in a detailed unpacking of the evolution of participatory methods and practice in development, a thorough exploration is provided in *Revolutions in Development Inquiry* (2008) by Robert Chambers, research associate at the Institute for Development Studies, University of Sussex. Chambers identifies a pervasive paradigmatic shift from things to people and “how theories of chaos, complexity and emergence resonate with, shed light on and underpin the evolution and spread of PMs [participatory methodologies]” (Chambers, 2008, p. 167).

Participation by encouraging enthusiasm through visible success has been identified as an important consideration for design practitioners. The utilisation of some of the participatory methodologies from the field of Development Studies could impact on some of the issues identified in the Social Impact Design Summit, these include: a better awareness of cultural bias, a better understanding of standards and ethics; and increased long-term sustainability. The next gaps and challenges identified in the Social Impact Design summit that will be focused on are implementation; the measurability of value and impact; and dissemination, through an exploration of Monitoring and Evaluation.

Monitoring and Evaluation

Monitoring and evaluation (M&E) is relevant to and can directly impact these last three issues. In the Social Impact Design Summit Benjamin de la Peña, Associate Director for Urban Development at the Rockefeller Foundation, used the field of:

public health, as a historic example of an undervalued emerging discipline that had proved its worth and as a result gained credence and authority. Public health had done so, he said, by demonstrating the economic costs of not having public health programs or policies: “What is the cost of so many people dying of malaria every year in terms of the national productivity? What are the costs of undernourishment in terms of economic growth?...What may be missing – and I don’t know if you will find it – is the question of what are the social costs of lack of or bad design? Until you come up with that, then you are stuck with objects and processes that have no way of capturing the imagination of ever solving anything big”. (Smithsonian Institution, 2013, p. 25).

de la Peña’s challenge, as per his qualifier, is almost impossible to undertake prior to the fact. However in it lies a very important point for design, this links back to participation and the lack of recognisable success by the broader scientific community of the impact of design. In order to make more impact visible, one needs to use the methods of science created to validate any ‘truth’. By quantifying the results through empirical data, such as a measurement in economic terms of the success of advertising campaigns, design interventions for social impact can quantify their impact and hence build a reputation as a valid method for social change. This is something that takes time, and requires designers to build M&E

into all design for social impact projects. Additionally this is very relevant to accessing funding for implementation since the majority of Corporate Social Responsibility (CSR) and large funded projects are expected to answer requirements of M&E. This enables funders to ‘quantify’ the outcomes of their donations and to validate the impact of projects. Again the field of Development Studies has had to jump this hurdle a little earlier than the field of design. The UK Institute of Development Studies (IDS) explains how participation can not only be used in the planning stage in a project, but also whilst monitoring progress and after a programme/project has ended (Institute of Development Studies, 2013). Whereas conventional M&E caters for donors to account for their spending:

Participatory M&E [PM&E] seeks to account to people. It shifts the focus from upward to downward accountability. The intended beneficiaries of programmes themselves set the indicators for progress and success. They discuss and decide how a programme brought about change. They will tell the development actors whether it improved their lives. A PM&E process helps to ensure responsible and accountable aid. (Institute of Development Studies, 2013)

Chambers explains how PM&E empowers communities by including them in the process of evaluation and allowing them to be able to share the evidence of their success (Chambers, 2008, p. 120). Chambers also notes that it is very rare that communities use numbers for PM&E, he attributes this to the fact that numbers are not necessary to ‘prove’ success in communities (Ibid. pp. 121-122). The difficulty is trying to balance the requirements of funders against measurement systems that are not too complex for community members and not too data rich, and hence too time consuming for assessment by design practitioners. A method that meets these requirements is described by Chambers as Participatory Action Learning System (PALS) pioneered by Linda Mayoux as a PM&E approach that uses simple, easily learnt diagrams which balances “people gaining confidence and learning on the one hand, and standardization and making a difference with higher-level decision-makers on the other” (Ibid. p. 122).

As per the final proposals from the Social Impact Summit, building a culture of evaluation and “the need for better tools to demonstrate the long-term impact of design projects and initiatives” (Smithsonian Institution, 2013, p. 37), Development Studies may provide a range of participatory measurement and evaluation tools that can be used as methods to validate the impact of Design for Social Impact for communities, designers, researchers, funders and the broader public.

CONCLUSION

This paper attempts to link an almost twice as old historical documentation of the field of Development Studies to the currently burgeoning field of social impact design. What is evident is that many of the issues identified by practitioners and academics operating in the realm of design for social good have previously required substantial exploration from the field of Development Studies. And

although impossible to explore in any great depth in this paper, an acknowledgment of the overlap between these two fields will allow designers the opportunity to possibly leapfrog some of the mistakes development practitioners and theorists made. This is relevant, not through some form of hierarchic importance of either of the fields, but rather to provide the best knowledge and possible methods for designers to approach development in an attempt to equalise the distinct inequalities of current society and more specifically in Africa.

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