Identifying Opportunity Spaces for Design Research in South America: Working with Grassroots and Community Groups

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Abstract

As design research continues to gain momentum in South America, design researchers and practitioners in the region have begun to consider how to the field may address regionally-specific issues, including on-going political struggles. By bringing approaches such as Participatory Design and Adversarial Design that consider political aspects of design, local researchers have explored various forms that these two approaches could take that are tailored to the needs and values of different communities across the region. This paper focuses on identifying opportunities for developing design research projects in community-based and grassroots-oriented contexts. The paper presents the findings of our study about the understanding and experience of design researchers and experts who have been working closely with community groups and grassroots organisations in South America. Five themes emerged, highlighting opportunities and challenges related to positioning contemporary design research in the region, integration of adversarial perspectives into design processes, leveraging local obstacles through creativity, and the potential of building capacity within community groups and grassroots organisations for sustainability and autonomy.

Keywords: Design Research, South America, Interaction Design, Urban Informatics, Grassroots Communities

Introduction

South America has a long tradition of practice in different design spaces, such as graphic, industrial; and product design (Fernández & Bonsiepe, 2008). The past decade has seen a parallel development in research, as represented in the rise of local research conferences that address broader and new design fields, such as industrial design, architecture, interaction design and human computer interaction, including Interaction South America (ISA), SIGraDi and the Latin American Conference on Human-Computer Interaction. These efforts have brought to the fore similarities and differences in design traditions across the region and in a way provided a platform to develop a common language for design practice and research for the region. For example, Fernández (2008) explored the return of democracy to Argentina, Franky (2008) examined the impact of the Colombian economic aperture from the 90's; while they focus on locally specific issues, they all speak to the common themes of the influence that foreign schools of thought have had in South America, the consequences of unstable economic conditions of the region, and the development of perceptions around the roles and values of design practice and research.

In this paper, we examine the differences and similarities in different approaches to design research in the grassroots and community context in South American countries (Fernández & Bonsiepe, 2008). This study aims at identifying key challenges and opportunities related to positioning contemporary design research that are focused on community engagement and empowerment in the region.

Related Work

Design researchers in South America have taken a particular interest in understanding how local research could address regional issues and political struggles, as a result of an increased acknowledgement of the need to respond to local demands with cultural and social sensitivity (e.g., de los Reyes & Botero, 2012; Gasparini, Kimura, de Moraes Junior, Pimenta, & de Oliveira, 2013; Gasparini, Pimenta, & De Oliveira, 2011) while focusing on the political struggles faced by community groups (Kapp & Baltazar, 2012; Parra-Agudelo, 2015) . A substantial body of these studies presents a broader position that guides the development of local approaches: that there is a need to understand the particular bottom-up social, economic and political characteristics that are common to

the region. This means starting with researching at a smaller local scale, then subsequently sharing the findings and knowledge with researchers across the region to form broader regional agendas for design research. Two key agendas are i) understanding how everyday practices and values are formed (e.g., Cardoso De Castro Salgado, Sieckenius De Souza, & Leitão, 2011; Gasparini et al., 2013; Gasparini et al., 2011) and ii) designing to help empower underserved communities (e.g., Baltazar, 2008; Bermúdez, 2014; Kapp & Baltazar, 2012). These highlights an urgent need to understand and further interrogate the political nature of design as applied and manifest in specific local sociocultural conditions.

Two perspectives that consider political aspects of design include Participatory Design (Halskov & Hansen, 2015; Kensing & Blomberg, 1998; Muller & Kuhn, 1993; Schuler & Namioka, 1993) and Adversarial Design (DiSalvo, 2012). By applying some of the fundamental aspects of participatory design (PD), as described by Halskov and Hansen (2015), regional studies in PD focus mostly on the impact of hierarchical settings in the design process (e.g., Braa, Titlestad, & Sæbø, 2004), the development of new methods and tools (e.g.,Navarro-Sanint, 2013), the social and cultural context in which PD is deployed (e.g., de los Reyes & Botero, 2012) and the design of participatory tools (e.g., dos Santos & Baltazar dos Santos, 2006; Zamora, Grimes, & Swarts, 2014). For example, by exploring the adversarial design (DiSalvo, 2012) and the political nature of civic confrontation and dissent, Gómez (2013) has explored how the citizens of the city of Santiago de Chile could appropriate the city through public interventions that provide spaces for healthy political confrontations. Similarly Parra-Agudelo (2015) examined how AD can be transformed from a cultural production (DiSalvo (2012) into an actionable design process. The findings from these studies highlight the challenges related to achieving high levels of participation from local communities; manifesting adversarial perspectives and enacting them in ways that are meaningful to the communities, and; establishing a productive dialogue between top-down political structures and bottom-up communities.

Methodology

The approach taken to conduct this study combines qualitative research methods including open-ended questionnaires (Steckler, McLeroy, Goodman, Bird, & McCormick, 1992) and expert interviews (Bogner, Littig, & Menz, 2009) with a group of design researchers from South America. This study aims at gaining a richer understanding of how design researchers confront and deal with the challenges of working with grassroots and community groups in the region.

Open-ended Questionnaires
We distributed questionnaires during a main paper session at the annual conference of the Ibero-American Society of Digital Graphics (SIGraDi) that was held in Montevideo, Uruguay in 2014. SIGraDi is a Latin American network of researchers, educators and professionals from across several design fields including product design, interaction design, architecture and urban planning among others, which holds an annual academic conference that takes place in a different Latin American country every year to bring together its members and other experts in related fields. After presenting our current work and interests – namely, applying design processes in the South American urban grassroots context, and discussing future research paths that focus on social entrepreneurship in the region – we asked the audience consisting of researchers and practitioners mostly in architecture and interaction design – to complete the questionnaire on-site. Six completed questionnaires were collected as a result.

The questionnaires included one open and four closed questions. The first question had two components that aimed at broadly identifying the unique conditions of doing design research in South America and the key challenges and opportunities of working in design research in the region. This question was structured as follows:
- What do you think is unique about design research in South America?
- What are the key challenges and opportunities of working in this space (design research) in South America?

The closed questions had two main purposes, firstly, to establish if the participants were engaged in research projects in areas related to our own, and secondly to identify people working with grassroots organisations and community groups or social entrepreneurship. The questionnaires also asked for the country of origin of the participants and for their academic affiliation at the time.

All of the questionnaire participants were design researchers from South American countries. The responses were analysed to provide a preliminary understanding of what the South American design research community consider as the main concerns in regards to working with grassroots and community groups. The findings also guided the development of the semi-structured expert interviews that followed.

Participant	Affiliation	Country	Works with local communities
P1	Universidade Federal de Mato Grosso do Sul	Brazil	Yes
P2	Universidade de São Paulo	Brazil	No
P3	Universidad Técnica Federico Santa María	Chile	Yes

Participant	Affiliation	Country	Yes/No
P4	Universidad de Buenos Aires	Argentina	Yes
P5	Georgia Institute of Technology	USA / Chile	No
P6	Universidad de los Andes	Colombia	No

Table 1: Questionnaire's participant demographics.

Expert Interviews

In addition to the questionnaires, we conducted seven semi-structured interviews with South American design experts (E1 – E6) who have been involved in design research projects that are community and grassroots-oriented for longer than five years. The participants were recruited in person in SIGraDi 2014 (E2, E3, E4, E6, E7) and via email (E1, E5). The interviews were conducted during a period of three months. We interviewed the participants in person in Bogota, Colombia (E1, E5), Medellin, Colombia (E2, E3), Lima, Peru (E6) and via Skype (E4, E7). The semi-structured expert interviews included seven design experts that focus their work in understanding and applying design for leveraging bottom-up community endeavors. The interview participants were selected from those that were presenting a paper at SIGraDi 2014 thematically geared towards community-oriented design research. We also took advice from long-time participants and organisers of the conference as to whom to interview. Table 2 shows the details about the Expert Interview participants.

Participant	Affiliation	Country	City
E1	Universidad de los Andes	Colombia	Bogota
E2	Universidad Nacional de Colombia	Colombia	Medellin
E3	Universidad Nacional de Colombia	Colombia	Medellin
E4	Universidade de São Paulo	Brazil	São Paulo
E5	Universidad del Norte	Colombia	Barranquilla
E6	Universidad Peruana de Ciencias Aplicadas	Peru	Lima
E7	Universidade Federal de Mato Grosso do Sul	Brazil	Campo Grande

Table 2: Expert interviewees information.

Each interview took between 60 and 90 minutes. We used the interviews to obtain the experts' insights into the overarching conditions and pressing issues that underserved communities and grassroots groups encounter on a daily basis, and to gain a deeper understanding on applying design research to address the particular demands of people living in mostly underprivileged urban areas.

Key questions during the interviews included:

- What are the key challenges and opportunities of working with local communities or grassroots organizations?
- What are the main struggles that these communities / organizations deal with?
- What is the role of design research in this context?
- What do you think is the most appropriate model or approach to design research and design processes in this context?

The interview data was thematically analysed (Boyatzis, 1998) to derive the five key themes, which are discussed in the following section.

Results

The themes from the interviews provide insights into the key challenges and opportunities for developing design research projects in South America that are community and grassroots-oriented. The five key themes are:

- Positioning Design Research
- Coupling Adversarial Perspectives
- Building Collaboration Networks
- Leveraging Obstacles Through Creativity
- Seeing Each Other

Each of these themes is outlined and discussed in this section.

Positioning Design Research

An overarching theme noted by all participants is the concerns around addressing the challenges faced by people living in underprivileged areas across the region. Such concerns stem from the taxing living conditions of poverty-stricken areas, as reflected in the following statement:

"(People in underserved areas) have a kind of subsistence that in a way, they're just managing to survive. It's very poor, sometimes almost miserable" (E4).

In this context, other issues and external forces such as laid-back work ethics, uneven living standards and economic constraints are highlighted as weaknesses that are detrimental to the overall quality life in the region:

"Challenges: Budget, commitment, (high) standards." (P5).

Further, the participants agree that rich and unique cultural characteristics of South America are an asset that can be further harnessed for the social, economic and cultural benefit of the region. The following statement exemplify the participants' interest in engaging local customs and traditions hinting at a need to start looking inwards:

"I think South American research in design could address

our unique cultural diversity" (P2).

In contrast, the following statement highlights the current research initiatives exploring the cultural uniqueness of South America, albeit making use of foreign positions that fail to advance an understanding of the nuances of the region:

"A recurring theme (despite the discipline) in South American [design] research is local identity. We're constantly reviewing the different factors that define our culture…It is time to stop looking up to Europe and North America, and start developing local frameworks." (P3).

Following this progression, E5 suggests that operationalising and incorporating informality to the design and conducting of research could better position the projects to respond to the often-changing research environments:

"You have to tolerate that the whole thing is about playing it by ear, once you start working, you need to improvise a lot, informality is something you have to embrace" (E5).

Positioning community-oriented design research in the South American context requires considerations for straining conditions in which underserved communities have to live, and strong engagement with the local customs and traditions using locally developed perspectives that can respond to the often-changing research settings.

Coupling Adversarial Perspectives

Further to positioning design research, the participants emphasise the conflict that stems from uneven relationships across the academic, public, and private sectors, as well as "illegal" organisations and communities that inhabit and operate in underserved zones without the state's official recognition or endorsement. This conflict has two distinct components. The first component is the magnitude of actions taken by the state and private sectors producing irreversible and damaging effects on citizens' everyday lives – for example, large traffic projects that split Brazilian favelas in two as expressed by E7; a large urban interventions from private institutions that threaten housing arrangements in Bogota as described by E1; state or private sector-induced violence in Colombia mentioned by E6, and; the spatial and social control exerted by paramilitary forces Medellin as reported by E2:

"There are places here that are dangerous, obviously…and if you go there, you have to go with them (paramilitary forces)" (E2).

The second component is the strong caution and distrust by the communities that live in these areas for people from the outside, based on the fear that the 'outsiders' may be in a position to threaten their already precarious living situation. They often believe that there are hidden agendas that drive the research efforts taking place, and these projects will not return any real benefit to the community and sometimes even have the opposite effect, such as the researchers reporting unauthorised dwellings or activities to the local authorities:

"Turn them in (to the local authorities)…some of these people live in land that has been illegally occupied" (E5).

"We started working with small businesses, but they didn't want to work with the university, because they thought that they were doing us a favor…the inhabitants were really distrusting" (E1).

Distrust is also a result of actions not necessarily taken by research organizations but by broader public and private sectors, which are perceived to allow very limited voices from citizens and communities in planning and implementing changes to the community in question:

"In many cases the communities feel like a laboratory rats, the universities come, the government, (then) they choose a community, they start working with them, get information from them, and start toying with their expectations and their trust, they obtain results and then leave. They (the community) end up just like when they started and they feel like they have contributed lots to the process, but nothing (positive) happened… There are community leaders that can not do much, because (paramilitary forces) would not let them" (E2).

However, the expert interview participants agree that strong and continued commitment to the communities by devoting resources, building rapport, and communicating willingness to fully understand from the community's point of view their needs, and then co-creating means to address their issues and concerns can overturn these deterrents eventually:

"You should know as much as possible from that specific group of people you're working with, not the one in the next neighborhood, or the one on other country. That one! Because each group is different for whatever reasons, after you learn as much as possible, you start realizing what can you do, and how and when and why" (E5).

Further, this call for regional commitment requires a shift where researchers and designers become enablers, translators and champions of the community:

"In terms of who's convincing who, or who's proposing what, the designer becomes an instrument. An instrument of the group's will" (E5).

Establishing and maintaining relationships with people or institutions that have stakes in underprivileged areas poses a challenge for the articulation of multiple, and possibly clashing, agendas. Whilst the participants have a clear idea of how to shape their own stance in relationship to the communities, the issues about how other entities, including government and illegal organisations, enact and negotiate agendas that can be a threat to the implementation and development of design research studies in some areas of South America remain unresolved. This presents an opportunity for design researchers to explore novel ways for integrating multiple parties and agendas in their research projects and leveraging adversarial positions for the benefit of all the participants.

Building Collaboration Networks

Collaboration is a key factor that underpinned the discussion about the challenges and opportunities of running design research projects in South America. We maintain that

collaboration is central to various scenarios, including developing cooperation strategies between countries as described by P3:

"A big opportunity that needs to be addressed is related to creating networks between the different (South American) countries...this opportunity presents a number of problems associated with the lack of well-established and fluid communication channels" (P3).

The participants made emphasis on solving local demands by making use of bottom-up approaches where there the involved parties share a common interest and the focus of the work is collaboration and togetherness:

"The feeling should be one of cooperation, not exactly gaining, or losing or investing, but you know, cooperating... The feeling should be one of cooperation, not exactly gaining, or losing or investing, but you know, cooperating...I think that it works when they (the community) don't feel as being passively the receivers of something, but actively participants of something in common (sic)" (E5).

Aligned with the patent necessity for establishing collaboration networks, the mechanics of collaboration were also highlighted as a key component of design research that is yet to be elaborated upon:

"Approach to collaboration. How do we collaborate?" (P5).

Building networks and discerning the mechanics of collaboration between multiple regional and local parties concern design researchers in South America. This presents an opportunity for design researchers to explore regional commonalities for building region-wide cooperation bridges and contributing to community and grassroots initiatives.

Leveraging Local Obstacles through Creativity

Among the challenges of engaging in design research put forward by the participants, the lack of economic and other resources was highlighted as a paramount obstacle for the local communities, grassroots groups and design researchers. However, the participants mentioned that people living under straining conditions leverage these disadvantages by turning them over and manage to provide thoughtful, creative and innovative solutions to their particular needs. This creative potential is highlighted by the emphasis placed in the role the Do It Yourself (DIY) approach plays in local problem solving practices and the resourcefulness and adaptability that originates in the taxing social conditions that can be found across the region:

"The lack of economic and material resources promotes critical and reflective approaches in relation to technological innovation. DIY is an intrinsic part of our culture for the same reasons, as so is hacking (In Argentina we say 'Fix it with wire')" (P4).

In turn, design researchers can learn from working with these communities and turn the local limitations into productive and actionable assets:

"You don't talk to them about informality, they actually have lived through informality. Their houses have been made

progressively by their parents...You're on their ground, you have to work on their terms...The great thing about this whole process is that you learn a lot about how to make things work even when you're not in the best of scenarios" (E5).

This suggests that there is an opportunity for combining efforts between communities, grassroots groups and design researchers that could leverage the ubiquitous lack of resources through resourcefulness, creative problem solving and the integration of informal approaches that are part of everyday life in underserved areas.

Seeing Each Other

In order to advance design research and contribute with the communities and grassroots groups in underserved areas of South America, a shift in how the involved parties perceive each other is required. The first instance of this change lies in the hands of the researchers:

"Stop thinking in terms of 'them' and 'us' and start thinking in terms of 'we are all in the same thing'. Communities are usually very sensitive about that. If you start talking about 'you' and 'us' in those sorts of terms, they'll get defensive" (E5).

Changing the attitude and bringing flexibility to design research for dealing with unexpected conditions also requires pushing the boundaries and directives of the project when sudden changes occur:

"These communities and the whole situation is informal in its core (sic)...you have to tolerate the fact that even though there are some rules or some guidelines you might want to bend them" (E5).

As a result of this shift the participants appear to agree that it is essential that the research projects do not end when the researchers leave, if they leave at all. Continuity and regular presence is paramount according to E2 and E3. This is related to the capacity for action that can be built within the community as expressed by E1, who also suggested that by building, providing and developing tools and frameworks with and for the communities, the groups are able maintain the projects by themselves. E1 also suggested that the success of working with community and grassroots groups depends on building actionable capacity related to their interests, but also to the level of participation and involvement of the community in the project and to the applicability of the tools being used in solving the community's demands:

"I think that to a greater extent it is related to the community's involvement with the tools...if they see the practical (aspects), if they see applicability; they adopt the tools...the community (needs to) feel that they can grow, that they could be stronger" (E1).

Subsequently, capacity building encompasses the development of a knowledge base that the communities can use as launching platform for addressing future projects on their own:

"We can go there and help them solve their problem, but the state will appear again and they would need help again because they're not prepared to deal with the problem...Then we started

with this idea that they need to mobilise themselves...it's a very successful project in the long term because now they're an independent group and we're not with them anymore..." (E4).

Changing how design researchers see the communities and themselves is central to assuring that the projects continue to exist even if, or after, the researchers leave. Further, building capacity within the communities is a decisive factor in the success and applicability of the projects in the long term; but most importantly, it provides for the development of platforms that allow the communities to work independently.

Discussion

In this paper we have discussed the main concerns that we encountered by surveying a group of design researchers based in South America. The study provided details about the challenges and opportunities for design research in the region. The five themes revealed by the analysis of the data show, firstly, that design researchers face the challenge of re-positioning design research by addressing epistemological and ontological concerns while responding to the local demands secondly, that coupling multiple parties and adversarial agendas could prove beneficial for those parties involved in a research project (Gómez, 2013; Parra-Agudelo, 2015); thirdly, that discerning the mechanics of how to collaborate and building region-wide collaboration networks could contribute to local community and grassroots initiatives; fourthly, that the ubiquitous shortcomings and difficulties present in South America can be re-framed as assets that can be leveraged for developing creative and innovative solutions as suggested by de los Reyes and Botero (2012); and lastly, that the way the researchers see themselves in relation to the communities they work with, has the potential to positively influence the continuity of the projects by contributing with a knowledge base within the communities, and therefore building capacity for independent and autonomous work. We argue that an opportunity for crosspollination and collaboration between design researchers, communities and grassroots groups working in similar areas opens up by considering these five themes in conjunction.

Limitations and Future Work

As a preliminary attempt at identifying the potential presented by running design research projects in the community – grassroots space in South America, we presented the insights obtained from the analysis of a data set provided by a group of six researchers that were present at our talk in SIGraDi 2014 and the interviews from seven design research experts from the region. Consequently, the results are only indicative of what could be larger issues, concerns, struggles, and opportunities and challenges related to conducting these kinds of design research projects in South America. A greater understanding of the possibilities and limitations of how research in design operates in the region is required, in order to provide a more comprehensive picture and answer some of the questions raised in this paper. The starting points to address the shortcomings of this study could be firstly, performing similar studies in further iterations of SIGraDi and other academic South American venues; and secondly, performing studies with local communities and grassroots groups in order to understand how the five themes mentioned above could be enacted on the ground. This presents both a challenge and opportunity for researchers, designers and South America with regards to understanding and leveraging the local conditions to their advantage.

Acknowledgments

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