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UNIVERSITY COLLEGE LONDON FACULTY OF THE BUILT ENVIRONMENT BARTLETT SCHOOL OF PLANNING

OPEN SPACES IN INFORMAL SETTLEMENTS: CONFLICTS BETWEEN TOP-DOWN POLICIES AND BOTTOM-UP PRACTICES. THE CASE OF EVERYDAY USE OF PUBLIC REALM LINKED TO TRANSMICABLE IN BOGOTÁ, COLOMBIA

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Being a dissertation submitted to the faculty of The Built Environment as part of the requirements for the award of the MSc Urban Design and City Planning at University College London: I declare that this dissertation is entirely my own work and that ideas, data and images, as well as direct quotations, drawn from elsewhere are identified and referenced.

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Abstract

In Colombia, informal settlements are a pressing planning issue, mostly due to the lack of infrastructure, public transportation, public services and public realm. However, in an effort to improve life-quality and reduce segregation from formal areas, governments have decided to intervene on slums through a wide range of strategies. The most successful one has been the so-called 'social urbanism' strategy, in which authorities designed and planned a major transport infrastructure project and that is linked to a comprehensive intervention that incorporates new social infrastructure and public spaces.

Nevertheless, in the process of delivering new public realm, policy-makers' objectives and community aspirations may differ, leading to a disconnection between top-down policies and traditions, cultural rules, and social values. As a result, activities carried out on open spaces vary from those that were expected to take place initially. This paper shows the impact that the gap between top-down policies and bottom-up practices have on the everyday use of public spaces. Moreover, it recommends broadening the scope when evaluating 'social urbanism' projects and improving participatory processes in order to design spaces that fulfill local needs.

1. Introduction

Informal settlements are urban neighbourhoods developed and functioning aside from government control (Dovey, 2011). These particular spaces emerge outside planning frameworks and policies because of patterns as migration, violence, displacement, and lack of housing in formal urban areas. By some means, they develop connections and networks integrated into formal urban contexts, such as the settling of new industries in surrounding areas, the creation of new micro-scale economies and new jobs in those areas, or the affordable rent prices for low-income families. In most of the cases because of those connections, cities experiencing this phenomenon cannot operate without them (Alsayyad, 1993).

Due to its nature, these settlements grow outside planning regulations and local authorities have been facing the challenge of providing basic services like water, electricity, open spaces, and paved streets, as well as connect those territories to formal areas by expanding public transport systems. As one of the strategies to do so in several Global South cities -Medellín, Bogotá, Cali, La Paz, Caracas, Rio de Janeiro and La Paz, governments have solved to develop extensive transport-oriented infrastructure projects as the starting point for bigger and more comprehensive interventions (Dávila, 2013; Garsous, Suárez-Alemán and Serebrisky, 2017). This research focuses on the use and management of a very specific facility delivered by the public sector: public open spaces linked to major infrastructure projects, as mentioned before. A single case study will be conducted in Ciudad Bolívar, an informal settlement in Bogotá, Colombia in which

local authorities recently opened TransmiCable -an aerial cable-car line, along with a certain amount of public spaces/facilities linked to it.

Informal settlements initially emerged around the 1920s in Bogotá. Those so-called "barrios obreros" (workers neighbourhoods) were spatially segregated from formal neighbourhoods and were occupied by immigrants, repair people, and workers from industries first established in the city. By the 1950s expressions as "barrios ilegales" (illegal neighbourhoods) started to appear and replace this first idea of "barrios obreros" (Amézquita, 2013). In Medellín settlement process evolved similarly: industrialization dynamized urban growth and increased pressure on housing development. Nor government neither private developers were able to supply the expected amount of housing and therefore, informal settlements emerged on the periphery of the city (Echeverry and Orsini, 2011). Now, around 780.000 people live in Ciudad Bolívar -the informal settlement where this research will take place, and more than 400,000 people live in Medellín "comunas" -worldwide known informal settlements in Colombia.

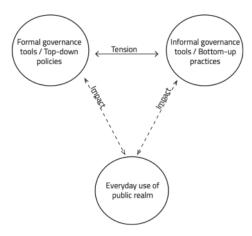
Despite informality is a long-standing issue in the country, it was never a priority for local governments to provide public provisions on informal neighbourhoods and even law forbids public investment in non-regularized areas. However, in the early 2000s while Sergio Fajardo was major of Medellín, a strategy called "Proyectos Urbanos Integrales -PUI" (Integrated Urban Upgrading Programme) was created to supply those provisions taking advantage of major interventions. One of the most successful approaches was to generate public spaces in the surrounding areas of aerial cable-car, trams and metro lines, be those green open spaces; open public spaces or public facilities -also called

'Social Urbanism' (Brand and Dávila, 2013; Echeverry and Orsini, 2011). As this is a relatively new strategy to face the challenge of providing such services, there is a lack of research on mechanisms to manage new open spaces as well as the uses derived from them when the built environment is substantially intervened by the government.

Furthermore, it seems to be a disconnection between top-down policy-making practices at the city level and bottom-up processes at the local level. This means when there is a gap between local needs and policy outcomes, residents, users, social leaders, and other significant groups make use of informal mechanisms to shape and even change uses, activities, and relations carried out on spaces provided by authorities. Even though public realm is designed to support some kind of activities and be managed through very exhaustive regulations and legal framework, stakeholders blend formal and informal governance dimensions when appropriating public realm, developing dynamics that could affect the rights of access, use, and control (De Magalhães, 2010) other stakeholders might have, and end up reducing publicness of public open spaces.

Therefore, it is pertinent for the field of study of urban design and city planning knowing how to create effective mechanisms to include stakeholders' (government, citizens, and the private sector) demands and aspirations when delivering public realm in order to enhance their openness of access, use, and degree of collective control -publicness (De Magalhães, 2010). Thus, this research aims to determine to what extent the disconnection between local needs and policy outcomes affects the everyday use of the public realm delivered as part of major infrastructure projects.

Figure 1. Aim of the research



Source: Elaborated by the author

Research Question

In large infrastructure projects in informal settlements in Colombia, to what extent does the gap between top-down policies and bottom-up practices affect the everyday use of public realm?

Specific Objectives

- Objective 1: To identify everyday use of newly designed public realm linked to infrastructure projects in informal settlements.
- Objective 2: To identify conflict between formal governance tools and everyday use of newly designed public realm linked to infrastructure projects in informal settlements.
- Objective 3: To identify which informal practices shape everyday use of newly designed public realm linked to infrastructure projects in informal settlements.

2. Literature Review

2.1. Informal settlements: initial explorations

Informal settlements are mainly defined as areas of cities growing outside planning regulations. Their neighbourhoods are characterized by operating aside from governmental control with precarious urban infrastructure, public equipment, public services; deficient construction techniques; environmental deterioration; absence of public spaces and leisure spaces, community, and cultural facilities; and the predominance of low-income residents (Dovey, 2011; Roy and Alsayyad, 2004; Alsayyad, 2004). Informal settlements and urban informality are growing issues in cities in developing countries around the world. This phenomenon has been increasing in the past decades due to the rapid urbanization process and worldwide economic liberalization.

Ultimately, informal settlements end up creating complex and dichotomous connections with formal structures, incorporating retail and industrial functions, (Dovey and King, 2011) supporting formal and informal economic processes (Dovey, 2012), opening up space for informal politics, and exacerbating social and spatial fragmentation on cities (Bayón and Saraví, 2013). Because of being at some point between formal and informal structures, authorities tend to manage them outside 'normal' urban considerations and their inhabitants deal with effects like discrimination, eviction, and displacement (Lombard, 2014).

2.1.1. Studies on informal settlements

From the city planning approach, this phenomenon has been explored under the label of 'informality', 'slums' or 'squatter settlements', and studies ended up diverging in different directions. Starting with a morphological perspective, Alsayyad (1993) researched the emergence of slums through a comparative case study in settlements located on South Africa, Egypt, and Colombia; and concluded the process may be gradual, communal, mobilizing or generated. Furthermore, it could be broken down into four phases: land invasion, social formation, physical consolidation, and urban maturity; and the land invasion phase presents three different patterns, settling on empty land -whether private or public, inserting on abandoned fragments of urban space; or attaching to structures of the formal city (Dovey and King, 2011).

Additionally, Dovey and King (2011) developed a typology of morphologies to identify growth patterns and physical characteristics of spaces on slums. The study took place in Indonesia and results indicate eight different ways in which informal settlements grow: districts, waterfronts, escarpments, easements, sidewalks, adherences, backstages, and enclosures. Moreover, one of the most interesting findings is the resilience informality develops over time. This means, informality appears as a temporary measure to solve critical gaps in housing for workers –usually near construction sites, and accommodation is 'permitted' for a fixed period, however, the slum in itself becomes resilient enough to resist displacement once the permission expires (Dovey and King, 2011).

Following a different approach, governments in Latin American cities have developed a diverse range of strategies to regularise informal areas and improve conditions and life

quality of dwellers. There are two main trends in literature: regularisation programs focused on land tenure and titling, and broad regularisation strategies combining titling with upgrading services, job creation, and community support structures (Fernandes, 2011). The first one stated tenure security was a generator of development, a stimulus to finance and local economy as well as a catalyst for residential upgrading (De Soto, 1989) and was developed and implemented in Peru from 1996 to 2006, with little impact due to unclear relation between titling and improvement of the built environment. Rio de Janeiro authorities —in Brazil, tried the latter one with greater impact, however, because of the costs of interventions, the government stopped funding those programmes (Fernandes, 2011).

In Colombia, local governments have implemented mixed strategies to deliver interventions in which both transport solutions and social changes are the main goal. This transport-oriented development (TOD) projects aimed for urban upgrading by combining three key elements: mobility, environment and public space. In Medellín, the comprehensive intervention carried out in four of the five aerial cables-lines operating in the city included the delivery of parks, plazas, community centres, and public libraries. Besides the physical impacts derived from those systems -such as reducing journey times, diminishing physical segregation and creating public spaces, other positive consequences of interventions were the reduction of murder and violence rates in the most deprived neighbourhoods (Brand and Dávila, 2011b).

Medellín is an outstanding case study showing how innovative and sustainable public transport projects are the starting point for bigger proposals including integration with

formal areas of the city and social participation with the intention of improving social capital, local governance schemes and creating new identities on comunas (Brand and Dávila, 2013; Brand and Dávila, 2011b). Once under operation, non-tangible effects - such as an increased sense of inclusion, community self-esteem and less stigmatization as well as tangible effects as reduction in journey times, improved connectivity and reduction of emissions are reported by inhabitants (Brand and Dávila, 2011a; Brand and Dávila, 2011b; Jones and Rodgers, 2015). However, aerial cable-cars projects as the ones implemented in Medellín face several challenges as academics have highlighted in previous research.

There is a significant pitfall in participative processes and participatory planning practices leading to ineffective interventions when designing projects (Brand and Dávila, 2011b; Dávila and Daste, 2011); also high maintenance costs are never fully assigned to a specific stakeholders ending up in a rapid decline of community or social infrastructure linked to the main intervention. Furthermore, about 10% of the inhabitants of informal settlements become regular users of cable-car systems because of poor connections between neighbourhoods and cable lines or higher costs than other modes of transport (Dávila and Daste, 2011; Jones and Rodgers, 2015; Garsous, Suárez-Alemán and Serebrisky, 2017). Last, in some specific projects as MIOCable in Cali, Colombia, the project failed to achieve social transformation because authorities did not integrate top-down policies with bottom-up initiatives (Daste, 2013).

2.2. Governance

Provision of new public realm -be it open or closed- poses an additional challenge on policymakers: blending and coordinating public and private interests to achieve collective goals -in other words, develop governance (Pierre, 1999), and preserve their publicness. This is particularly relevant, as those spaces constitute the arena in which social relations and social fabric are developed and have the potential to create a sense of identity and address social exclusion (Maclean, 2015). Moreover, social sciences studies, politics, and planning make use of the concept; and academic research includes a variety of definitions starting with a general one describing governance as a shift in governing, decentralizing power to a network of actors and questioning hierarchy at a local level (Zamanifard, Alizadeh and Bosman, 2018).

Hence, governance has been a useful theoretical framework to approach a wide variety of issues related to informal settlements. Community governance -the process of negotiation between grouped individuals and authorities, was the concept employed to explain the mobilization of inhabitants of Green Point, South Africa to demand formal housing and public services as the main solution for the growing slums (Oldfield, 2002). Another framework -nodal governance framework, proved that one of the reasons why efforts to reduce flood risks and impacts were ineffective was the lack of collaboration between numerous stakeholders (or nodes) on informal settlements in Cape Town, South Africa. Ziervogel et al. (2016) demonstrated collaboration between governmental institutions, the private sector, and civil society is fundamental for effective management

of highly complex systems. Adaptive governance explains how to build resilience as a way to manage unexpected changes and risks like the ones faced by informal settlements dealing with lack of housing, education, security, and fragmented communities, in Stellenbosch, South Africa (Seeliger and Turok, 2014).

When narrowing the concept down and framing it to planning activities, urban governance is defined as processes of control, coordination, and regulation of the urban affairs reflecting values and practices of the society (Pierre, 1999), or the pursuit of collective goals through an inclusive strategy of resource mobilization (Pierre, 2005). Besides, if referring to any specific space in an urban environment, place governance stands for the deliberate collective arrangements for place management and development (Healey, 2010). Moreover, De Magalhães (2010) and De Magalhães and Carmona (2009) suggest there is specific public space governance, a sphere in which societal demands on, and aspirations for public space are articulated and realized, and this takes place through the intersection of four sets of processes:

- Regulation of uses and conflict between uses: rules for using and accessing spaces, codes of behaviour and enforcement procedures.
- Definition and deployment of maintenance routines: procedures and routines to ensure spaces are usable.
- Invest and resourcing: ensuring financial and material resources when new interventions are required.
- Coordination of interventions in public space: practices to bring together and coordinate the previous three processes.

For the authors, the agreements of stakeholders (government, citizens, and the private sector (Zamanifard, Alizadeh and Bosman, 2018)) on the four pillars/processes of public

space governance -coordination, regulation, maintenance and investment, end up shaping the essential attributes of public spaces: rights of use, rights of access, and rights of control/ownership; in other words, their *publicness*. The disparity on the sharing of publicness attributes implies a reduction in the enjoyment of those attributes for some social groups rather than others leading to a restrictive notion of public spaces (De Magalhães, 2010).

As governance involves giving power to different stakeholders at different levels in the bottom-up decision-making network, there is a mixture of interests at stake overlapping and creating tensions among actors. Yet, as not all stakeholders hold the same amount of power or the means to engage in collective arrangements, governance tools may be either formal or informal. The government holds formal tools, which are classified into three categories: incentives, guidance, and control (Carmona, 2016). Each one of them may be turned into laws, regulations, masterplans, and so. Informal tools are indirect tools of governance controlled by other stakeholders than government and include cultural rules, community values, aspirations, attachments and collective images (Zamanifard, Alizadeh and Bosman, 2018; Manzo and Perkins, 2006).

2.3. Assemblage theory and informal settlements

Given the characteristics of informal settlements, the complex relationships between stakeholders as well as the interests involved in public space governance, assemblage theory constitutes a helpful framework to approach and understand dynamics in those areas. Assemble theory or assemblage thinking is a theoretical framework aiming to (McFarlane, 2011):

- Analyze diversity and disagreement in functioning complex systems
- Describe inequality in social relations
- Expose existing forms of urban knowledge
- Connote indeterminacy of certain phenomena
- Explain emergence and process in multiple temporalities and possibilities
- Describe socio-material transformations
- Describe the relations between traveling policies and their localized substantiations

Integrated with critical thinking, it explains participation and engaging through a process of exposing, proposing, and politicizing urban problems (Marcuse, 2009). As assemblages take into account interactions between human and non-human components, they are capable to explain spatial relations involving material reality and social actors in different moments and under varied conditions (McFarlane, 2011). Assemblages evolve and reassemble over time as the result of interaction between human and non-human components of the systems (McFarlane, 2011). This capacity to generate change in both social and material realities because of interactions between components is understood as the *agency* of the whole assemblage (McFarlane, 2011; Farías, 2010).

Academics have used assemblage thinking in planning research to approach informal settlements phenomena yet focusing on other issues and making use of different

analytical tools. Dovey (2012) shows that slums in Mumbai and Bangkok have grown and expanded over the years because of the dwellers' ability to change assemblages -their relations with places, as fast as the environment evolves. McFarlane (2012) addressed how forces and agendas of different actors in new local economies or 'slum entrepreneurialism' assemblages produced 'other possibilities for collective action and social welfare' in Mumbai.

Jameson and Baud (2016), use assemblages of types of knowledge to evaluate the best framework/mechanism to deal with floods in Chennai, India, a region characterized by floods and droughts as well as drinkable water scarcity on informal settlements located around Kilkatullai Lake. The most successful approaches to deal with these issues are the ones including a diverse variety of disciplines as well as developing processes that engage inhabitants of the mentioned areas as well as local knowledge -local governance patterns. In Kenya, Gutberlet et al. (2015) conducted a case study in Nyalenda and Obunga, two informal settlements of Kisumu, to prove that when environmental governance is employed to address waste collection issues through the creation of community-based organizations (CBOs) -or new assemblages, services are provided by them in a more efficient way than when delivered by authorities.

For this study, *agency* is the capacity of stakeholders be those citizens, the government, or the private sector, to make use of formal or informal governance tools in order to shape processes of coordination, regulation, maintenance and investment hence affecting access, use and collective control *-publicness* of public spaces.

2.4. Gaps in literature

Previous research has established theories and trends on growth and expansion of slums, used assemblage theory as a tool for addressing governance issues in different contexts, and assessed the implementation of social urbanism projects on informal settlements in some Global South cities and their impacts. Still, despite the social-oriented nature of transport projects, literature has been centred on three criteria when assessing their level of success: increase in mobility, degree of poverty reduction, and level of urban integration of neighbourhoods. Likewise, the most common perceived challenge is how to insert the project in local daily life so that it responds to the needs and aspirations of communities.

However, as the social urbanism approach presumes amenities are good by themselves, there is a gap in assessing if the new public realm linked to infrastructure projects is responding to local contexts and real demands. Therefore, it is relevant for further research to explore how authorities design and plan newly delivered public spaces to fulfill expectations and aspirations of residents beyond the simple assumption of them as valuable assets disregarding what dwellers need.

3. Methodology

To answer the research question and meet the specific objectives set up earlier, this research will be conducted as a single-case study. A single-case study is a qualitative strategy used on social sciences with a distinctive characteristic -the case (Brown, 2008),

and organized into four stages: prepare data collection, collect evidence, analyze evidence and produce the case study report (Yin 2003). This methodology is particularly helpful as making use of multiple sources of data helps to illustrate the gap between local needs and policy outcomes by exploring the nature of public open spaces, the social relations have taken place there, as well as the informal governance tools that shape everyday use of the delivered facilities.

This chapter is divided into five sections as follows: the first section explains why the most appropriate methodology to address the research question is the single case study. The second section provides a brief background on the case study -TransmiCable in Bogotá. The third section introduces methods employed to collect data and the fourth summarizes how collected data was processed to extract results. The final section describes measures taken to keep this as low-risk research.

3.1. Single-case study methodology

Research conducted as single-case studies are tailor-made as its main purpose is to address issues in real-life context, and give an answer to how and why of a specific set of events (Meyer, 2001), as well as find patterns, build explanations of these patterns, and trace changes over time (Yin, 2003). For this study, it means giving the possibility to explore the context and specific dynamics as social relations, activities, and groups of people gathering at parks. Also, it allows for tools like interviews, with which data about perceptions and impressions can be collected as well as information from authorities on the initial design of spaces and maintenance procedures for open spaces.

The multiplicity of information gathered through observation, interviews, surveys, and policy analysis grants diverse viewpoints of different stakeholders on a wide range of topics. This allows the researcher for interpreting facts and explaining the reasons for a problem -why exists a gap between local needs and top-down policy processes, the background of the situation -contextual facts of the area of the city and of other interventions with similar characteristics, and the consequences of the disconnection between authorities and residents demands. As this data is immersed in the case, this methodology brings effective information that could not have been collected otherwise (Brown, 2008).

Even though the single-case study seems to be appropriate for the research, some limitations need to be taken into account. To balance researcher bias when interpreting the information given by interviewees, surveys compiling objective information were applied. Besides, approaches and concepts utilized in other studies were adapted to this document as a way to avoid much specificity and non-replicability. Finally, it is worth noting even findings cannot be generalized because of the nature of the methodology employed, they give rich insights into events and behaviours (Brown, 2008), which could be the cause of disconnection between stakeholders.

3.2. Case Study: TransmiCable in Bogotá

TransmiCable is an aerial cable-car transport system located in Bogotá, Colombia. The project was structured, designed and delivered as an Integrated Urban Upgrading

Programme -PUI by its Spanish acronym. The main objective was to improve accessibility to public transport, connect Ciudad Bolívar -an informal settlement with 780.000 inhabitants located on the southeast area of the city, to formal areas and the Integrated Public Transport System -SITP by its Spanish acronym, reducing journey times for dwellers (Transmilenio S.A., 2018). As a PUI, it was conceived as a comprehensive intervention including new facilities, and the public realm. Overall, the project cost 50.000 million pesos and included the construction of 7 new communal spaces and centres dedicated to providing services to residents, and the re-design and construction of 5 parks, and 7.000 sqm of public space (Secretary of Planning of Bogota, 2018; Transmilenio S.A., 2018b).

TransmiCable has a 3.34km length and connects El Tunal station with Mirador and El Paraíso neighbourhoods, going through Juan Pablo II and Manitas areas, furthering quality-life conditions for over 550.000 citizens living in the influence area. One-hundred and sixty-three aerial cars get around the system with a maximum capacity of 3600 people per hour per way. Aerial cable system started operations last week of December 2018 and during the first four months mobilized nearly 2 million people (Transmilenio S.A., 2018b).

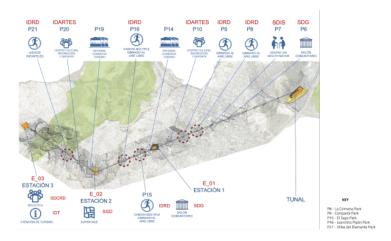
Figure 2. Location of TransmiCable Project





Source: Elaborated by the author

Figure 3. TransmiCable project



Source: SDHT

As mentioned before, the project included five parks along TransmiCable located on pylons 8, 9, 15, 16 and 21 -those are the facilities under study in this research. However, during fieldwork, it was evident just three out of the five parks are already open to the public -pylons 15, 16 and 21. Parks on pylons 8 and 9 are under construction and will be finished by August 2019.

Figure 4. El Sapo Park

Photo: Juanita Soto, June 2019

Plaground
Green Area
Communal Space
Pylon
Benches
Fences
Signals
Public Lighting

Figure 5. El Sapo Plan

Source: Elaborated by the author

Figure 6. Juanchito Pipón Park



Photo: Juanita Soto, June 2019

Figure 7. Juanchito Pipón Plan



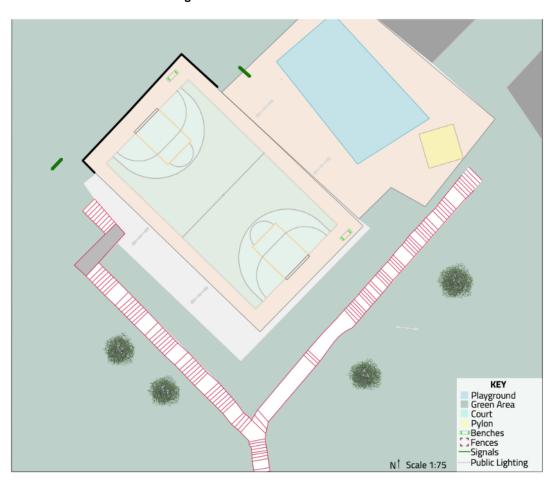
Source: Elaborated by the author

Figure 8. Villas del Diamante Park



Photo: Juanita Soto, June 2019

Figure 9. Villas del Diamante Plan



Source: Elaborated by the author

3.3. Methods

Four methods were employed to answer the research question and specific objectives. First, semi-structured interviews give the possibility to collect a great amount of information on social relations and activities happening in open spaces, as well as predominant social groups making use of them. As it is a very flexible method, information relevant for all specific objectives was collected through interviewing stakeholders with a broad knowledge of social dynamics. Second, surveys were applied to people using parks *while* observation periods were carried out. These aim for the second and third objectives as they give a glimpse of how people use these places and how they perceive other users' activities or attitudes. Third, policy analysis is relevant to establish activities permitted on public open spaces in Bogotá, determine legal burdens and define formal governance tools. Finally, observation provides first-hand data on the spatial distribution of activities and social groups as well as formal and informal uses everyday use of spaces.

3.3.1. Semi-structured interviews

As one of the main elements of single case studies is to gain an understanding of the situation explored, semi-structured interviews are appropriate as they give the possibility to structure the conversation around key topics to understand formal and informal governance tools and activities carried out in parks. Still, interviews allow the interviewees to be more exhaustive on subjects they consider relevant for the questions asked. Semi-structured interviews were held with stakeholders with in-depth

knowledge of social dynamics and highly involved in the construction and operation of the project. They are government officers, shop owners, and social leaders.

Interviewees from government work in two organizations: Secretary of Habitat, leading the construction of public spaces on TransmiCable influence area and Institute for Recreation and Sports, the institution in charge of park management in Bogotá -SDHT and IDRD by their Spanish acronyms. These organizations are accountable for early planning stages, the participation process carried out to include community and residents, the legal framework regulating the use of parks as well as maintenance procedures. Officers were reached by email and chat, and the SDHT officer handed over the phone numbers of two social leaders who had been actively and closely working with authorities from the beginning of the project. They were also contacted via chat and contacted two other leaders and asked them to engage in the research as they have been involved in the project as well. Information on the aim of the research and details on topics to be covered during the interview were given before the encounters.

Shop owners were approached differently. After observation periods the researcher entered shops located in front of parks or near to them and asked the owners if they had an interest in participating in a research that was taking place in the neighbourhood related to parks -specifically the one close to each shop. Unfortunately, there is no retail on adjacent areas to Juanchito Pipón and Villas del Diamante parks and just a few shops across the street on the north and east limits of El Sapo park. Due to these limitations, only three shop owner interviews were conducted: two on a grocery shop and a

pharmacy close to El Sapo and one on a local cafe a couple of blocks away from Villas del Diamante Park.

Interviews were conducted on May 30th - 31st, June 7th - 8th, 2019 in Bogotá, Colombia on sites proposed by interviewees. All interviews were recorded with verbal consent after explaining personal data is protected and names are not revealed on this piece of research. As expected, interviewees provided answers and information beyond the question set. Questionnaires prepared for each group are attached to this study as Appendix A. After each interview, the author transcribed significant comments and organized them to answer specific objectives. Table 1 summarizes the number of interviews conducted, how the interviewee was contacted, where the interview took place and for how long, as well as the topics the interviewee was asked about.

Table 1. List of interviewees

Interviewee	How was contacted	Length	Where the interview took place	Topics covered
SDHT officer	Email and	45 min	SDHT offices	- Participatory processes including community
IDRD officer		52 min	IDRD offices	- Regulations and legal framework - Coordination to other governmental and non-governmental organisations
Social leader 1	Chat and	109 min	Cafe in La Candelaria	- Background on the neighbourhood - Involvement with the project
Social leader 2]	58 min	Cafe close to Manitas station	- Effectiveness of participatory processes - Activities carried out on parks
Social leader 3		47 min	El Sapo park	- Perceptions and impressions on who uses parks and how are they used
Social leader 4		120 min	Juanchito Pipón park	

Shop owner 1	Personally	17 min	Around El Sapo park	- Activity in the area (beyond parks) - Impacts of parks in neighbourhood
Shop owner 2		22 min		dynamics - Perceptions and impressions on who
Shop owner 3		19 min	Around Villas del Diamante park	uses parks and how are they used - Times of the day when parks are more or less used

Source: Elaborated by the author

3.3.2. Surveys

Surveys are a consistent method to explore in-field experience of users and collect information about who visits parks under study, perception of the spaces, uses, activities carried out there, and if those are the result of formal or informal governance tools. Surveys were conducted during observation periods, between May 30, 2019, and June 13, 2019, on the three parks currently open to the public. Trying to cover a variety of hours surveys were applied during mornings (6:00 am to 8:00 am), middays (11:00 am to 1:00 pm) and afternoons (3:00 pm to 5:00 pm). However, it was not possible to collect data after 5:00 pm due to security issues warned by social leaders and residents who suggested after that time gangs and thieves take control of spaces by threatening and intimidating making use of the parks.

Questionnaires were designed to capture information on the motivations of people for going to the parks, times of the day of most intense activity, and whether people hang out there alone or in groups, perceptions of safety in the spaces and satisfaction with delivered amenities. Surveys were applied during observation periods to people *on* the parks willing to participate in the research. They were informed about the aim of the study before taking the survey and agreed to fill the questionnaire. Questions (Appendix

B) were designed to avoid the collection of personal data, protect identity, and anonymize people taking part in the activity. In total 348 surveys were compiled during fieldwork; 196 respondents were women (56.33%) and 152 were men (43.67%). 205 questionnaires were applied to users at El Sapo Park (58.9%), 61 at Juanchito Pipón Park (23.5%), and 82 at Villas del Diamante Park (17.5%).

3.3.3. Policy analysis

Policy analysis was carried out by researching and establishing the existing legal framework on permitted activities on parks and public spaces, regulations, and procedures, and institutions responsible for the maintenance of those spaces. Twenty-five different policy documents were studied to comprehend to what extent formal governance tools set the boundaries of permitted uses and activities on parks. The full list of consulted documents can be found in Appendix C.

Additionally, technical and design documents of TransmiCable were considered into policy analysis to check whether during the planning stage of the project authorities designed any specific management or use policy for the public realm or if it is treated using the same guidelines adopted for all parks in the city. The keywords employed for the analysis were:

Crime

Permitted activities

- Regulation - Fares

Opening hours - Sanctions

- Offence - Restrictions

The main purpose of this method is to determine formal governance tools to classify any other activities as derived from informal governance tools.

3.3.4. Observation

Observation allows for collecting first-hand information about what happens in selected spaces. For the research, the researcher conducted 35 2-hour observation periods during fieldwork, covering both weekdays and weekends and at three different times as a way to collect information throughout the day: mornings -from 6:00 am to 8:00 am, middays -from 11:00 am to 1:00 pm, and afternoons -from 3:00 pm to 5:00 pm. Besides, observation periods were not carried out after 5:00 pm because, as mentioned above, security issues increased after that time. Information was collected in June 2019 for two weeks, when the project had been active for six months. During these periods the researcher observed the activities carried out by users, with whom they were, at what time of the day, and in what specific area of the space. Table 2 displays days, hours and places of observation periods.

Table 2. Observation periods

Day	Hour	Place
	AM	El Sapo
01/06/2019	М	Juanchito Pipón
	PM	Villas del Diamante
	AM	Villas del Diamante
02/06/2019	М	El Sapo
	PM	Juanchito Pipón
03/06/2019	AM	Juanchito Pipón
03/06/2019	М	Villas del Diamante

Day	Hour	Place
	AM	Villas del Diamante
07/06/2019	М	El Sapo
	PM	Juanchito Pipón
	AM	Juanchito Pipón
08/06/2019	М	Villas del Diamante
	PM	El Sapo
09/06/2019	AM	El Sapo
09/06/2019	М	Juanchito Pipón

	PM	El Sapo
	АМ	Villas del Diamante
04/06/2019	М	El Sapo
	PM	Juanchito Pipón
	АМ	Villas del Diamante
05/06/2019	М	Juanchito Pipón
	PM	El Sapo
	АМ	Juanchito Pipón
06/06/2019	М	Villas del Diamante
	PM	El Sapo

	PM	Villas del Diamante		
	AM	Juanchito Pipón		
10/06/2019	М	Villas del Diamante		
	PM	El Sapo		
	AM	Juanchito Pipón		
11/06/2019	М	El Sapo		
	PM	Villas del Diamante		
	AM	El Sapo		
12/06/2019	М	Juanchito Pipón		
	PM			

Source: Elaborated by the author

During observation periods, three main activities were executed to collect data: mapping, thick descriptions, and surveys. Mapping was used to spatially locate what was happening in the park at the time of observation: people were displayed as dots and a letter was added next to them to represent the activity they were carrying out. Additionally, the researcher wrote down a detailed description of what was happening in the park. The descriptions intended to answer questions such as who is carrying out the activity? (Including gender, age and if in a group or alone), for how long does the activity last? In what specific area of the park does the activity take place? is the area designed to support the activity, and other relevant aspects like particular interactions between people or groups of people. Observation periods served for applying surveys to users once activities were mapped and descriptions were written down.

Full summary of methods can be found as appendix.

The researcher consolidated a map for each one of the parks, summarizing data collected during observations, and processed the information on activities and areas of the park where the activity is concentrated, times of the day and days of the week to support results on who uses parks, most common activities and under or overused areas.

3.4.2. Thick description

This refers to the task of describing and interpreting social interactions and/or behaviour in context perceived through observation. Researcher charges observed actions with intentionality and captures the complexity of relationships among people (Ponterotto, 2006). As Denzin (2001) states, "thick descriptions and inscriptions are deep, dense, detailed accounts of problematic experiences. These accounts often state the intentions and meanings that organize actions". Social interactions and behaviour were recorded in a diary during observation periods.

Descriptions were written down trying to focus on certain aspects and to expose issues as most used areas, people using them, length of stay and local behaviour details as social patterns and rules governing interactions between users.

3.4.3. Interview and survey coding

Coding is a traditional technique widely used to structure text when utilizing grounded theory frameworks -this means when building new theory from empirical data. The objective underlying coding is to index texts containing the raw data within categories or codes so later one-text segments can be grouped into themes or topics. Codes may be

derived from the theoretical framework supporting the research or from the text (Glaser and Laudel, 2013).

Questions on surveys and interviews were designed to provide information on one or more of these four categories: formal governance tools, informal governance tools, planned activities, and unplanned activities. The categories were conceived to give information on each one of the specific objectives and to unveil gaps between what was initially planned by authorities and what *is* happening in those spaces. Once all surveys were digitized, answers were classified into one of the categories and processed to obtain trends on uses, hours of the day when activity is intensive, groups of people performing specific actions, perceived risks on parks and general perception and impacts of the new public realm in the settlement. Interviews recordings were played again to transcribe chunks of information into each one of the categories proposed along with annotations made after the meetings.

3.5. Research Ethics

This research includes interviews and surveys asking about the use and management of public spaces constructed as part of TransmiCable transport project in Bogotá, Colombia. Users, shops owners, social leaders, and government officers participated on it either as interviewees or as respondents. Despite ethical issues might arise from the involvement of human participants this dissertation is a low-risk study as children, disabled people and vulnerable groups were not taken into account as possible participants, and social and personal data was not gathered either. It is worth noting questionnaires did not include questions on sensitive or risky issues (i.e. illegal activities).

In addition, following UCL guidance, interviewees and respondents were fully informed on the aim of the study and the topics and questions they were going to be asked so they could freely decide whether to engage or not in the research. Participants chose to provide their informed consent through audio-recorded verbal consent (instead of through written signed consent), and recorded interviews have been stored in an encrypted computer. Likewise, personal data was not collected to avoid the risk of using sensitive data, as a measure to protect people's confidentiality, and to prevent any of the interviewees or respondents to be identified from the information raised as part of the research. Additionally, interviewees have been anonymized by identifying them as SDHT and IDRD officer, Social leader 1, Social leader 2, Social leader 3, Social leader 4, Shop owner 1, Shop owner 2, and Shop owner 3. People is not mentioned by their names in the document unless they explicitly asked for it. Interviewees were contacted in advance and interviews were scheduled and carried out after officers, social leaders and shop owners accepted to take part in the research.

4. Results

In order to solve the research question, each one of the specific objectives will be answered making use of collected data and results extracted from it. Outcomes for specific objectives are presented as a mix of observation, mapping, interviews and surveys, as diverse methods were employed to gain a broader understanding of the

planning problem. This chapter is divided into three sections, corresponding to each specific objective.

4.1. <u>Objective 1</u>: To identify everyday use of newly designed public realm linked to infrastructure projects in informal settlements.

During observation periods, the everyday use of the parks was monitored in order to understand the spatial distribution and users to be aware of what happening on those spaces. The results of activities mapped are presented in Figures 10, 12 and 14.

El Sapo Park

El Sapo Park is the biggest one of the three parks under study and, because of its close location to the commercial area of Juan Pablo II neighbourhood, is the most frequented. The park has a playground area, an outdoor gym, common spaces -an amphitheatre and benches for people to sit. As the only park with a large playground for children, kids are one of the largest social groups making use of the space (22.37%). As mentioned repeatedly on surveys, football is one of the favourites activities in the area, kids play matches regularly on leisure time and after school. However, as El Sapo does not have a court and Juanchito Pipón park and Villas del Diamante are a bit far for kids living around El Sapo, they end up turning the circular common space -the amphitheatre into a court. Because El Sapo is the only park with retail in surrounding areas -a few newsagencies, a restaurant, and a pharmacy, adults go there after exiting the shops just to hang in the space for a while or to gather together and have a conversation.

Additionally, activity is concentrated in the afternoon (12:00 m to 6:00 pm), as is the time after school hours when kids are home and when adults have left work. This is supported by the information given by 67% of respondents in surveys who expressed those hours are the most preferred to go out and have some time at the park.

The outdoor gym is one of the less used spaces in the park, because as Social Leader 2 mentioned during the interview,

'it is an amenity we did not ask for, and I know there are other outdoor gyms in close neighbourhoods that are used because neighbours have hired a trainer to go and help them to work out. Here we cannot afford that' (Interview with Social Leader 2, June 2019)

As a consequence of the abovementioned patterns of use, it is possible to identify the playground, the northeast corner, and the amphitheatre as the areas concentrating more than 50% of the activities mapped at El Sapo. On the contrary, the outdoor gym area and the southern border of the park are the least used spaces as they don't offer appealing street furniture for people to use them. Figure 13 shows the intensity of activity on El Sapo Park.

Standing
Sitting
Sitting
Walking Pets
Playing Sports
Conversing
Pushing a Stroller
Eating/Drinking
Path Stroller
For Honey Conversing
Pushing a Stroller
For Honey Conversing
Pushing a Stroller
For Honey Conversing
Path Stroller
For Honey Conversing
For Honey Conversing
For Honey Conversing
For Honey Conversing
For Honey Conversion
For Honey Co

Figure 10. El Sapo Park Activities

Table 4. El Sapo Park Activities

	Standing	Sitting	Walking		Conversing	Pushing	Eating/	Drinking	Reading	Playing/	Smoking	Vending	Group	Total
			Pets	Sports		a Stroller	Drinking	alcohol		Using pg			Activity	
EI														
Sapo	230	217	28	127	265	27	98	80	8	348	125	0	3	1556
'														
Park	14,78%	13,95%	1,80%	8,16%	17,03%	1,74%	6,30%	5,14%	0,51%	22,37%	8,03%	0,00%	0,19%	100,00%

Table 5. El Sapo Park Activities - time

	AM	М	PM	Total
El	88	461	1007	1556
Sapo				
Park	5,66%	29,63%	64,72%	100,00%

Table 6. El Sapo Park Activities - day

	Weekdays	Weekends	Total
El Sapo	913	643	1556
Park	58,68%	41,32%	100,00%



Figure 11. El Sapo Park Intensity

Juanchito Pipón Park

Juanchito Pipón park is located in a residential neighbourhood with just two entrances through narrow streets, and away from retail. The park has a court and an outdoor gym. As the area is not busy, there is a perception of solitude which discourages people from going there. As Social Leader 4 said,

'is far from everything here, and you don't want to send kids there because no one can go to take care of them' (Interview with Social Leader 4, June 2019) For this reason, Juanchito Pipón is a space essentially frequented by adults, and the main activity -because of its design is 'playing sports', specifically football. As football is a group sport, more people than the ones playing gather together in the park to watch matches, play, have a chat and drink a beer. Activities are concentrated on afternoons and weekdays.

The outdoor gym is -like the one at El Sapo Park, a forgotten facility in this space. During observation periods no one worked out there and just a few people was spotted sitting, conversing or just standing in this area. As mentioned before, is not a facility the community needs, and because of the topography of the area is not even easy to see from the street where the main entrance to the park is located. Subsequently, the most used areas are the court and surrounding benches while the rest of the park remains empty most of the time, as shown in Figure 13.





Figure 13. Juanchito Pipón Park Intensity

Villas del Diamante Park

Villas del Diamante Park is located in an intricate area only accessible by stairs. It is the smallest one of the three parks where this study was conducted and has a court and a small playground. As it is located in a very isolated area and the playground is very old-fashioned, kids don't go there very often. The park is used to play sports in the court and users are adults. Groups of people hang out there, have a chat and eat or drink while others play football -a similar dynamic to the one observed at Juanchito Pipón. The surroundings of the park are not very appealing (a stone wall on one side and a cliff on the other), so it is not the nicest place to spend time. The days and times

this park receive more people are weekends during noon (11:00 am to 1:00 pm), as neighbours organize small football tournaments, so people congregate there for some time making the court the most used area of the park -Figure 15.

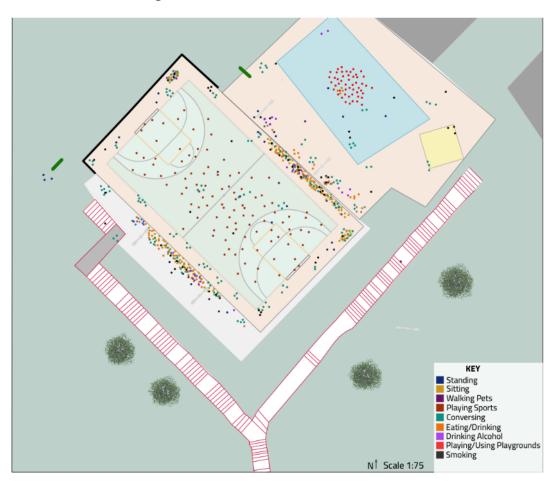


Figure 14. Villas del Diamante Park Activities

Table 10. Villas del Diamante Park Activities

	Standing	Sitting	Walking Pets	Playing Sports	Conversin g	Pushing a Stroller	Eating/ Drinking	Drinking alcohol	Reading	Playing/ Using pg	Smoking	Vending	Group Activity	Total
Villas del	38	145	5	104	187	0	83	32	0	50	58	5	0	707
Diamante														
Park	5,37%	20,51%	0,71%	14,71%	26,45%	0,00%	11,74%	4,53%	0,00%	7,07%	8,20%	0,71%	0,00%	100,00%

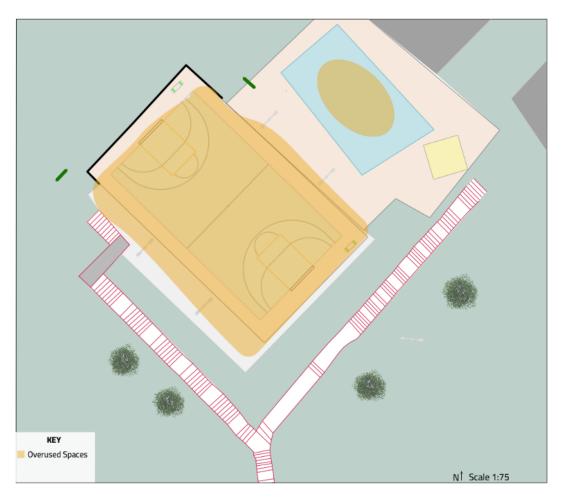
Table 11. Villas del Diamante Park Activities - time

	AM	М	РМ	Total
Villas del	70	416	221	707
Diamante Park	9,90%	58,84%	31,26%	100,00%

Table 12. Villas del Diamante Park Activities - day

	Weekdays	Weekends	Total
Villas del	177	530	707
Diamante Park	25,04%	74,96%	100,00%

Figure 15. Villas del Diamante Park Intensity



4.2. <u>Objective 2:</u> To identify conflict between formal governance tools and everyday use of newly designed public realm linked to infrastructure projects in informal settlements.

This section presents the tension between regulations and contradictory behaviours and activities observed on parks. Conflicts were classified into three categories: tensions arising from design, tensions arising from signs and codes of behaviour and tension arising from fences and boundaries.

Conflict arising from design

From interviews with officers and official documents sent by IDRD is noticeable all parks in the city are planned and designed following procedures, protocols and guidelines presented into the Booklet of Guidelines and Technical Specifications for Parks Design, which implies aspirations on design expressed by communities and not included in the Booklet, are automatically not taken into account. Moreover, even though officers interviewed as part of this study said residents and community were invited to participate in some meetings to take part in planning and design processes; interviews social leaders reveal contradictory facts. Actually, participants saw meetings as mere formalities, and residents have a bittersweet feeling about participation processes as they felt aspirations were not taken into account and agreements over facilities and urban furniture to be installed on parks were broken.

El Sapo Park

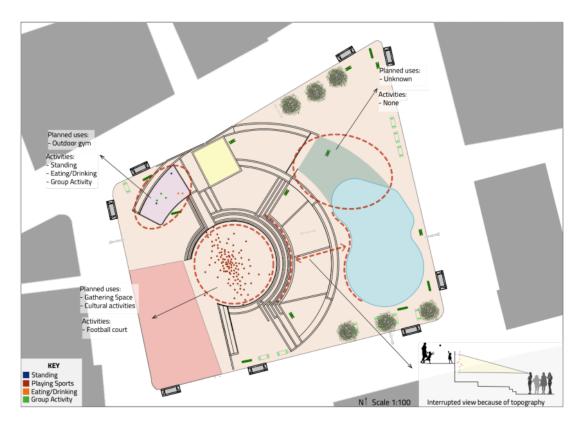


Figure 16. El Sapo Park Design Restrictions

Source: Elaborated by the author

Four main design restrictions were identified at El Sapo. First, the outdoor gym on the north-western corner of the park is being as a place to stand, drink and eat food. As this is not the initially planned activity tanking place on the site, it shows disregard towards the appropriation of space. Second, the green area adjacent to the playground lacks clear to use and as a consequence; no one uses it.

Third, as the park lacks a court, the amphitheatre is used to play sports. This imposes a big restriction on kids as space is not designed to support this activity, showing disregard towards the traditions and aspirations of the community. Last, adults using the amphitheatre cannot take care of kids as the facility and the playground are opposed. Also, the view from the steps towards the playground is interrupted because of topography, making difficult to sit there and watch kids playing.

Juanchito Pipón Park

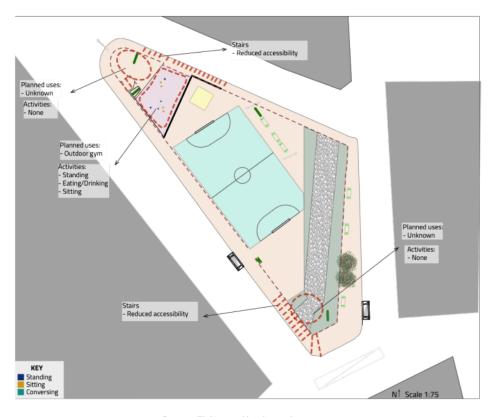


Figure 17. Juanchito Pipón Park Design Restrictions

Juanchito Pipón Park has a similar design restriction with the outdoor gym; it is not used for working out. As in El Sapo, users go there to perform activities like drinking, eating, and sitting, this bolsters up the fact that the community did not ask for those facilities. Furthermore, there are two spaces -in the north-western area and south-eastern corner, with no planned uses. The first one has a statue of a boy looking at the sky, who is supposed to be Juanchito Pipón. The statue is just ornamental.

The second one is a wooden stand with no function located in the middle of green space.

As no one knows what it is for, and is not suitable for any activity, it became a dead space.

Lastly, the design solution implemented to deal with topography -stairs on sidewalks, reduces accessibility for disabled people, elders, and toddlers.

Villas del Diamante Park

As Villas del Diamante is a quite simple park, there is not much to say about design restrictions. The main one is the limited accessibility because of its location. It is only reachable by stairs -there are no ramps for moms pushing strollers, wheelchairs or people with reduced mobility to get to the park. Also, the size of the playground is one more reason for kids no to go there, making the space appealing for a small segment of the population. Design restrictions are shown in Figure 18.

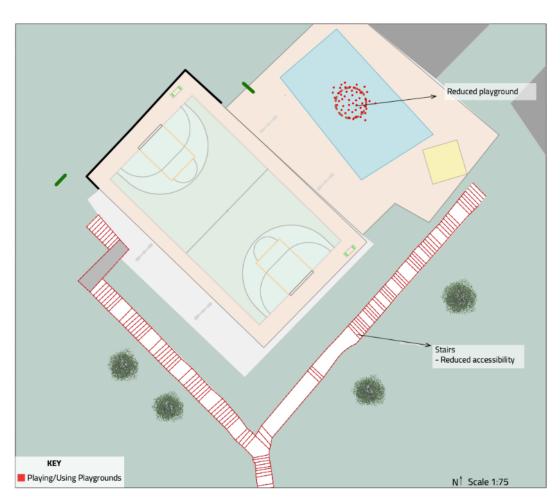


Figure 18. Villas del Diamante Park Design Restrictions

















Source: IDRD, 2019

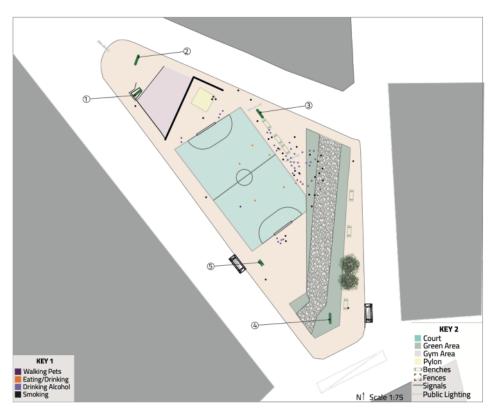


Figure 20. Juanchito Pipón Park Signs



Source: IDRD, 2019

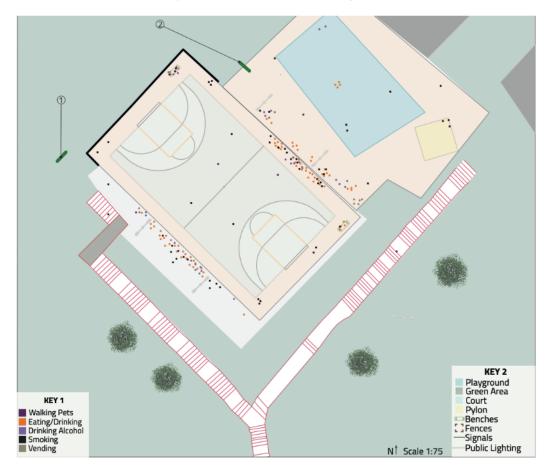


Figure 21. Villas del Diamante Park Signs



Source: IDRD, 2019

Conflict arising from fences and boundaries



Figure 22. El Sapo Park Fences



Figure 23. Juanchito Pipón Park Fences



REY
Playground
Green Area
Court
Pylon
Benches
Signals
Public Lighting

Figure 24. Villas del Diamante Park Fences



Fences are the most effective tool to discourage certain behaviours: in El Sapo, the green space surrounded by this physical barrier remains empty at all times even still people can use it. The other fences displayed in Figures 22, 23, and 24 are disposed to prevent accidents and falls as because of topography there are irregularities in all parks, which is potentially dangerous.

However, there are more subtle elements that can act as barriers as water elements, plants, and walls -used as canvas or chalkboards, that are interactive and more welcoming making the place more appealing.

4.3. <u>Objective 3:</u> To identify which informal practices shape everyday use of newly designed public realm linked to infrastructure projects in informal settlements.

The researcher employed thick description in order to highlight informal practices people use to appropriate spaces as El Sapo, Juanchito Pipón and Villas del Diamante parks. The following stories tell about situation in which bottom-up practices were the mechanisms driving the use given to spaces.

Beyond the amphitheatre

When the afternoon starts, the park acquires new colours. Kids from adjacent streets bum into the park to meet their friends for the match of the day. The fact of not having a court at the park is not a restraint for them to play football. As they do every day at 3:45

pm, they gather together in front of the playground gate to fist bump and start looking for stones or bricks to locate on opposite sides of the amphitheatre as goalposts, once done, goalkeepers take their places. The last one to arrive is always the misfortune coach that defines if the ball got into the goal area.

Today, sixteen friends are playing a match al El Sapo. Some moms sitting on the highest step of the semi-circle are cheering up the kids and waiting for them with water and snacks. Neighbours change their routes to cross the park for not interrupting the game, and toddlers and other children look from the playground. The oldest and biggest one of the players, scores: is 9 to 8. The goalkeeper burst into tears and teammates run to comfort him. After a couple of minutes, mothers come and give them some food while telling them it is time to go home and do homework (Observation time, June 11th, 2019).

The funny sidewalk

It is Friday. After a long day of work, neighbours are coming to their homes to have some rest during the weekend. On their way back they stop at the Shop in front of El Sapo, a well-known place in the area where people go to grab a beer on a Friday afternoon. Today is not the exception. However, is more crowded than usual. A big group of people has met there to talk and hang out for a while. As it is a numerous one and there are not enough seats to sit inside, they decide to go outside, cross the street and use the sidewalk of the park as benches. The good sit about sitting there, they say, is that they can enjoy the weather -very rare those days in Bogotá and drink their beers at the park and chill for a while.

Once they finish their beers, a guy in jeans and a blue shirt waves his hand to someone on the inside of the shop. An old lady comes out and shouts out at him 'one more of the same?', the guy shakes his head and yells back 'thanks'. Another person of the group asks, 'do you have a close relationship with the lady?', and the guy replies 'sure, this is where the party starts every Friday!' (First site visit, May 31st, 2019).

As seen in the stories above, social patterns, aspirations, and traditions play a crucial role in how residents use spaces like parks and determine the everyday use of the public realm. Long-standing informal codes of behaviour are the ones ruling how people interact with each other and set up mindsets that explain the appropriation process of public space.

5. Discussion

TransmiCable is a massive transport strategy classified as "social urbanism", a comprehensive project designed to tackle some of the most common issues of informal settlements: disconnection from formal urban areas, poor public transport connectivity, and in general, physical segregation (Brand and Dávila, 2011b). This project constitutes a remarkable milestone in Bogotá as it is the first aerial cable car in the city, yet the government and experts agreed on its necessity to improve mobility in the area years ago. From its launching –last December, a lot of attention has been put on how many people are using the system and in what percentage journey times had been reduced, the common measures when assessing the effectiveness of this transport mode, as seen in

cases such as the ones in La Paz, Medellín and Cali (Brand and Dávila, 2011a; Daste, 2013; Garsous, Suárez-Alemán and Serebrisky, 2017).

Still, not much attention has been put into the amenities and public realm delivered as part of the project and how their use has been evolving since TransmiCable is operating. This study focuses on activities carried out in and uses given to the parks delivered as part of the whole project. Specifically, the research seeks to understand to what extent the gap between top-down policies and bottom-up practices affect everyday use of newly designed public realm.

The design and renewal of the three parks have shifted the attention of residents towards them, as those are the only public open spaces for the community. Even though authorities were unsuccessful in laying street furniture out in a functional way, -as shown in the last chapter, the delivery of new public realm changed the perceptions neighbours had of the areas where parks are located. However, TransmiCable may be replicating some of the weaknesses and challenges authors like Brand and Dávila (2011a), and Daste (2013) already identified. Participatory processes designed to include and engage citizens in planning decisions are obsolete, inefficient and insufficient to fulfill their purposes as the aftermath impression for the community is not feeling included in planning processes on topics residents consider sensitive and crucial to their well-being.

Summed up, top-down policies are designed in a very general way. Therefore, normative frameworks, technical handbooks, and behaviour codes tend to be restrictive and disregard social traditions and communities' aspirations. As the government was unable

to transform community need and proposals into design solutions, residents and users used *agency* to overcome restrictions and change socio-material relations set by formal governance tools (McFarlane, 2011; Farías, 2010). They shaped regulation processes by imposing bottom-up practices to appropriate the public realm and transform the initial assemblage imposed by material conditions established through top-down policies.

Thus, traditions, collective images, aspirations and cultural rules embedded in communities are key to understand activities happening in the public realm (Zamanifard, Alizadeh and Bosman, 2018). For the three parks under study, informal governance tools are central to figure out why kids play football on areas different from courts, or why adults gather on corners to drink beer and talk on afternoons. Long-standing social patterns show how activities clash with existent top-down policies and, through the everyday use of spaces reveal how users are appropriating the public realm. Moreover, as shown in Figures 11, 13 and 15, there are areas of parks utilized more frequently and efficiently than others, concentrating most of the activities occurring in the public realm, even if urban furniture is not designed to support all of them.

Finally, in the words of De Magalhães and Carmona (2009), the government is failing to deliver public space governance and as a result, rights of use and access are being affected for some groups, as not everyone can utilize spaces with the same intensity and freedom because of design restrictions, accessibility failures and overregulation of behaviour.

6. Conclusions

This research shows several findings on the impacts on the everyday use of newly designed public realm delivered as part of bigger strategies implemented to improve lifequality in informal settlements, in Bogotá, Colombia. First, residents use parks to perform a wide range of activities and appropriate spaces in varied ways, even if provided spaces don't support those activities. This means, although design imposes restrictions over the kind of uses it is meant to support, this is not a limitation to people.

The findings confirm that formal governance tools and the everyday use of the public realm are in constant tension as the patterns of use proved the existence of disconnection between what was delivered as part of a major intervention and what was needed by the inhabitants of the area. Processes and procedures developed to engage people in planning decisions to harmonize top-down priorities and bottom-up practices have proven to be inaccurate as people don't get what they ask for and end up modifying spaces through agency and trying to adapt them to the local needs.

Nonetheless, the outcome leads to new assemblages that not necessarily support most wanted activities, decreasing the odds of having a successful intervention with long-term material and social positive impacts, likewise, the appearance of overused and underused areas shows the unevenness engender by the abovementioned gap. As shown in the CableMIO case (Daste, 2013), the lack of involvement of community on comprehensive interventions may lead to a failed project in terms of the transformation of areas -which is the main objective of these kinds of schemes.

The impact informal practices have on the way people appropriates space is exemplified through everyday situations that, despite being opposed to what was initially planned and permitted on El Sapo, Juanchito Pipón and Villas del Diamante, are entrenched on dwellers of the surrounding areas not just as traditions or cultural rules, but as social codes with higher impact as they create and preserve the social fabric.

This research has also contributed to theory by enlarging the scope of variables to be included when assessing 'social urbanism' projects. As mentioned before, existing literature on similar projects tends to focus on the impacts derived from the implementation of the new transport system. Still, interventions linked to it are not appraised separately to evaluate their strengths, weaknesses and overall impact on adjacent areas.

Also, findings challenge the common belief -highly rooted in practice-, of delivering public realm because it is good by itself, despite its characteristics. This research confirms that design, layout, planning and participatory processes matters; especially because those processes are essential to integrate bottom-up practices and guarantee projects have positive long-term impacts.

It is necessary to go over procedures established to assess the impact of projects as a whole, considering now is very limited, focusing only on variables related to transport measures but leaving aside complementary interventions which are key to improving life quality as well.

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Appendix

Summary of methods and tools

Objectives	Tools	Achievements
To identify everyday use of newly designed	Semi-structured interviews to social leaders focused on what parks are being used for, people using them, and activities taking place on parks	Information about what is the park used for, activities, people making use of it, formal use of amenities, duration of use, gathering of different groups of people, coordination of official organisations in delivering other activities needed by residents.
public realm linked to infrastructure projects in	Surveys to users asking about spaces on topics as context, use (intensity, duration), activities, changes on layout and perceptions on the impact of spaces	First-hand information on activities carried out, duration, motivation for going there, time of the day most preferred to use spaces, advantages and disadvantages of parks
informal settlements.	Observation of what is people doing while using parks, where they locate while using parks, who are the people using parks and with whom are they while using parks	Information about what is the park used for, activities, people making use of it, duration of users in space, gathering of different groups of people.
To identify conflict between formal governance	Semi-structured interviews to social leaders and government officers focused on context, management of spaces, formal regulations, and planned uses and activities	Data collected through semi-structured interviews will provide information on planned activities, permitted uses, regulations on use and activities and management scheme
tools and everyday use of newly designed public realm linked to	Policy Analysis on legal framework and technical documents produced on planning stage of TransmiCable -specifically on management and use.	Information about whether government designs projects and interventions including social and cultural rules management schemes from the initial stages.
infrastructure projects in informal settlements.	Observation of design and layout of amenities across spaces, signals, fences and physical barriers	Information on how design allows for or restricts activities and accessibility. Identification of physical barriers as fences, stairs and benches, among others.
To identify which informal practices shape everyday use of newly designed public realm linked to	Semi-structured interviews to social leaders and shop owners on adjacent areas of the parks focused on context, unplanned activities, social groups making use of the spaces, and times of the day with more activity, restrictions imposed by social groups/users	Information about dynamics ruling use of spaces beyond regulations and planned uses: people or groups of people having influence or control over parks, activities developed as a consequence of prevalent people/groups of people, users displaced by dominant people/groups of people

infrastructure projects in informal settlements.	Surveys to users asking about spaces on topics as context, use (intensity, duration), activities, changes on layout and perceptions on the impact of spaces	' '
	Observation of people/groups of people using spaces and amenities, where in space they are located, time of the day they are using spaces and for how long	Information about under-used or overused areas of parks, times of the day when activity is concentrated, unplanned use of amenities, prevalent groups ruling spaces

Semi-structured interviews

Social leaders

- A. ¿Hace cuánto vive en el sector?
- B. ¿Desde cuándo está involucrado en el proceso de construcción del TransmiCable?
- C. ¿Cree que el proyecto cambió desde su inicio (lo que inicialmente se pensó) hasta la puesta en operación?
- D. ¿Considera que los parques cumplen con el propósito inicial con el que fueron construidos por la Alcaldía?
- E. ¿Existen programas de otras entidades para desarrollar actividades lúdicas y recreativas en los parques? ¿para el desarrollo de esas actividades es necesario hacer cambios en el espacio -poner canchas, usar sonido, usar colchonetas?
- F. Además de las anteriores, ¿hay más actividades que se realicen en el parque, ya sean organizadas por vecinos o por entidades distritales?
- G. ¿Considera que todas las personas pueden usar el parque en cualquier momento?
- H. ¿Considera que hay personas o grupos de personas que por su presencia o la actividad que realizan, puedan limitar el acceso de otros usuarios al parque? ¿Sabe quiénes son? ¿Cómo diría usted que ejercen influencia sobre otras personas? ¿En qué momento?
- I. ¿Sabe si existen vecinos/asociaciones de vecinos haciendo jornadas de adecuación/mejoramiento a los parques?

Shop owners

- A. ¿Ha cambiado la actividad del sector desde la apertura/re-apertura del parque?
- B. ¿Considera que el cambio ha sido positivo o negativo? ¿Por qué?
- C. ¿Cree que hay personas/grupos de personas que usan más el parque que otros?
- D. Considera que hay personas o grupos de personas que por su presencia o la actividad que realizan, puedan limitar el acceso de otros usuarios al parque? ¿Sabe quiénes son? ¿Cómo diría usted que ejercen influencia sobre otras personas? ¿En qué momento?
- E. ¿Cuáles cree usted que son los momentos del día en que el parque es más usado?
- F. ¿Cuáles cree usted que son los momentos del día en que el parque es menos usado?

Government officers

A. ¿Cuál es el propósito inicial con el que fueron construidos los parques?

- B. ¿Existió algún proceso de concertación con la comunidad sobre el tipo de espacios, el diseño y los equipamientos a instalar en cada uno de los parques manejados/administrados por el IDRD?
- C. ¿Cómo responden estos al contexto del barrio y las necesidades de la comunidad?
- D. ¿Cuál es el manejo de estos sitios? ¿Quién los administra?
- E. ¿Cuál es el marco regulatorio de estos espacios? ¿Qué actividades están permitidas? ¿Hay algún horario de uso?
- F. ¿Existe algún proceso de coordinación con otros niveles de la administración distrital para, por ejemplo, la realización de otro tipo de eventos/actividades en los parques?

Surveys

Encuesta sobre el manejo y uso de los espacios públicos construidos como parte del proyecto TransmiCable de Ciudad Bolívar- Bogotá, Colombia.

Indicación: Por favor conteste el cuestionario de acuerdo a su experiencia en el parque en el que se encuentra

1.	Género)			
	М	_ F			
2.	Edad				
	a.	18-25	d.	41-50	
	b.	26-30	e.	51-60	
	c.	31-40	f.	Más de 60	0
3.	Cuánta	as días a la semana que usa el parque			
	a.	Un día			
	b.	Entre 1 y 3			
	c.	Entre 3 y 5			
	d.	Más de 5			
4.	En qué	momento del día			
	a.	En la mañana (7am - 12m)			
	b.	En la tarde (12m-6pm)			
	c.	En la noche (después de las 6pm)			
5.	Cuánto	tiempo permanece en el parque			
	a.	Menos de 15 minutos			
	b.	Entre 15 y 30 minutos			
	c.	Entre 30 minutos y 1 hora			
	d.	Más de una hora			
6.	¿Viene	solo/a?			
	Si	No			
	Si su	respuesta fue NO, ¿quién lo acompaña/a	quién	acompaña	generalmente

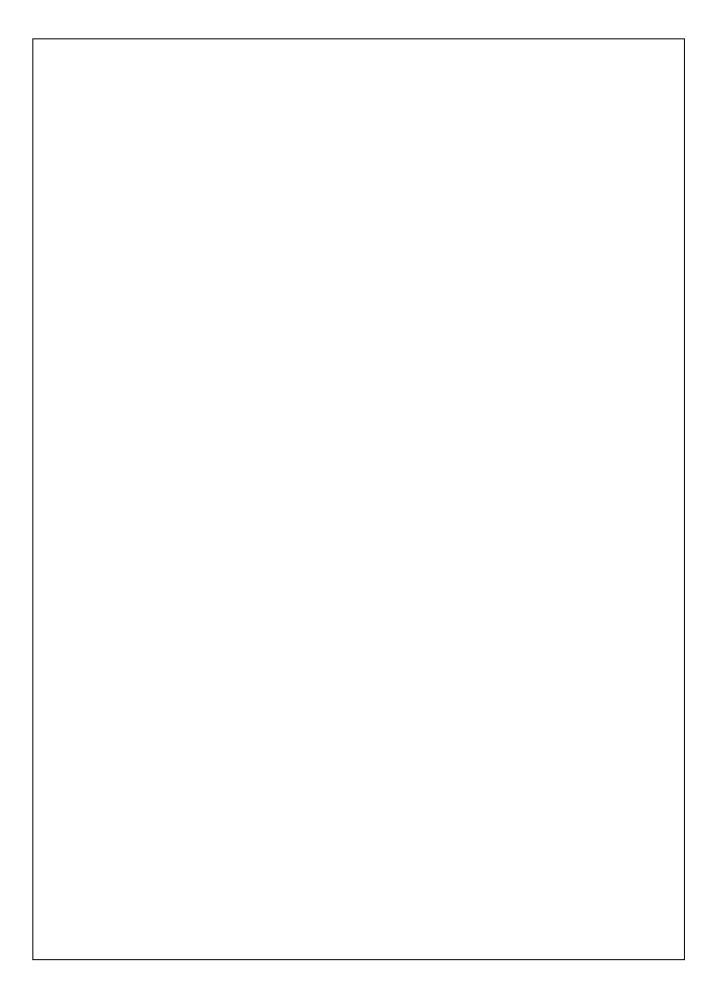
7.	¿Se Si		en este espac		alguna	ı persona	o grupo	de per	sonas?			
	Si	su	respuesta	fue	SI,	Scou	quién	se	reúne	ge	neralm	ente?
8.			realizan algur No respuesta	_				ad	realizan	ge	neralm	nente?
9.	Si		n momento de No uesta fue SI, ¿	_	·	·						_
10.	usaı	rlo?	a que el parq		á hech	no/diseña	ido para	que t	odas las ¡	perso	nas p	uedan
	Si Si		No respuesta f	_	خ ,0	Quiénes	no p	ueden	usarlo	У	por	qué?
11.	aerd Si Si si	óbicos, —— u resp	alguna activid , partidos de fi No uesta fue SI, ¿ lugar del parqu	útbol - Cuál? _						ular?	Ej: Clā	ase de
12.	limi arco Si	tado e os de f ——	sas actividade I uso de las de utbol, se ocup No uesta fue SI, ¿	emás p a una p -	ersona arte e	as? Ej: Se specífica	ponen c del espa	olchor	ietas en el	l piso	, se in	stalan
13.	Si		hay personas No uesta fue SI, ¿	-								
14.	usu: Si	arios d	ue estas pers lel parque? No uesta fue SI, ¿	-		·		J		n el ı	uso de	otros

15. Manaiana tras irra-ata-a-a-iti-a-a-a-	al barria daspués de la crestima	a do osto por e	
15. Mencione tres impactos positivos en a.	ei varrio despues de la apertura	a ue este parque	
			82

!			83

Acuerdo 707	2018		Por el cual se dictan lineamientos para la adopción de medidas de inclusión, acciones afirmativas, y de ajustes razonables que permitan el acceso real y efectivo de las personas con discapacidad para el disfrute de los parques recreativos y escenarios deportivos del Distrito Capital
Resolución 2	2005		Estructura organizacional del IDRD
Resolución 277	2007		Por medio de la cual se adopta el Manual de Aprovechamiento Económico de los Espacios Públicos administrados por el Instituto Distrital de Recreación y Deporte - IDRD
Resolución 583	2008		Por medio del cual se modifica el Manual de Aprovechamiento Económico de los Espacios Públicos administrados por el Instituto Distrital de Recreación y Deporte - IDRD
Resolución 338	2010		Por medio del cual se modifica el Manual de Aprovechamiento Económico de los Espacios Públicos administrados por el Instituto Distrital de Recreación y Deporte - IDRD
Resolución 087	2011	Instituto Distrital de Recreación y Deporte - IDRD	Por medio de la cual se adopta el instructivo previsto en el articulo 2 del Acuerdo 233 de 2010, por el cual se establecen medidas para garantizar la seguridad del espacio publico en los parques de escala vecinal y de bolsillo y se ordena su reglamentación
Resolución 316	2013		Por medio del cual se modifica el Manual de Aprovechamiento Económico de los Espacios Públicos administrados por el Instituto Distrital de Recreación y Deporte - IDRD
Resolución 613	2014		Por medio del cual se modifica el Manual de Aprovechamiento Económico de los Espacios Públicos administrados por el Instituto Distrital de Recreación y Deporte - IDRD
Resolución 190	2015		Por medio del cual se deroga la Resolución No. 018 de fecha 17 de enero de 2014 y modifica el Manual de Aprovechamiento Económico de los Espacios Públicos administrados por el Instituto Distrital de Recreación y Deporte - IDRD

Risk Assessment	
	85



	work abroad incorporates Foreign Office advice
X	participants have been trained and given all necessary information
	only accredited centres are used for rural field work
X	participants will wear appropriate clothing and footwear for the specified environment
X	trained leaders accompany the trip
	refuge is available
	work in outside organisations is subject to their having satisfactory H&S procedures in place
X	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

- I have contacted social leaders and residents of the area, who will be accompanying walks and observation times.
- I'll wear suitable clothing
- I won't take with me expensive gearI'll treat local population with respect and won't take pictures without consent

FMFR.	GENCIES	Whore emergencies may arise use space below to identify and				
LIVILIX	OLINOILS	Where emergencies may arise use space below to identify and assess any risks				
e.g. fire, accidents Examples of risk: loss of property, loss of life						
Illness, accidents, robbery, theft, assault.						
CONTROL Indicate which procedures are in place to control the identified risk MEASURES						
	participants have	registered with LOCATE at http://www.fco.gov.uk/en/travel-and-living-				
	abroad/					
	fire fighting equip	ment is carried on the trip and participants know how to use it				
X	contact numbers for emergency services are known to all participants					
X	participants have means of contacting emergency services					
Х	participants have been trained and given all necessary information					
	a plan for rescue has been formulated, all parties understand the procedure					

the plan for rescue /emergency has a reciprocal element

- X OTHER CONTROL MEASURES: please specify any other control measures you have implemented:
- I have contacted social leaders and residents of the area, who will be accompanying walks and observation times.

FIELDWORK 1 May 2010

EQUIPMENT	Is equipment used?	NO	If 'No' move to next hazard If 'Yes' use space below to identify and assess any
			risks
e.g. clothing, outboard motors.	•		oropriate, failure, insufficient training to use risk high / medium / low ?
	Indicate which risk	proced	lures are in place to control the identified
		proced	lures are in place to control the identified
MEASURES	risk		dures are in place to control the identified
	risk ntal written Arrang	ement f	
the department participants have	risk ntal written Arrang ave been provided	ement f	for equipment is followed
the department participants havork all equipment	risk ntal written Arrang ave been provided	ement f I with ar	for equipment is followed ny necessary equipment appropriate for the ore issue, by a competent person
the department participants have all equipment all users have	risk Intal written Arrang ave been provided has been inspected been advised of o	ement f d with ar ed, befo	for equipment is followed ny necessary equipment appropriate for the ore issue, by a competent person

LONE WORKING	Is lone working	YES	If 'No' move to next hazard
	a possibility?		If 'Yes' use space below to identify and assess any
			risks
e.g. alone or in isolation	Examples of risk medium / low?	k: diffic	ult to summon help. Is the risk high /

- It could be possible that on a couple of site visits I'll have to go by myself. There is a low risk of lone working.

CONTROL	Indicate which procedures are in place to control the identified
MEASURES	risk

	the departmental written Arrangement for lone/out of hours working for field work is followed
	lone or isolated working is not allowed
	location, route and expected time of return of lone workers is logged daily before work commences
	all workers have the means of raising an alarm in the event of an emergency, e.g. phone, flare, whistle
	all workers are fully familiar with emergency procedures
X	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

- I'll wear suitable clothing
- I won't take with me expensive gear
- I'll treat local population with respect and won't take pictures without consent
- I'll be extra careful to not expose myself to risk situations
- I'll move on public transport and during daylight hours

FIELDWORK 2 May 2010

ILL HEALTH The possibility of ill health always represents a safety hazard. Use space below to identify and assess any risks associated with this Hazard. Examples of risk: injury, asthma, allergies. Is the risk high / medium / low? e.g. accident, illness, personal attack, - There is a medium risk of traffic accidents due to non-paved streets and special personal shared spaces with vehicles considerations or - There is a medium risk of assault vulnerabilities. CONTROL Indicate which procedures are in place to control the identified risk **MEASURES** an appropriate number of trained first-aiders and first aid kits are present on the field trip all participants have had the necessary inoculations/ carry appropriate prophylactics Х participants have been advised of the physical demands of the trip and are deemed to be physically suited participants have been adequate advice on harmful plants, animals and substances they may encounter participants who require medication have advised the leader of this and carry sufficient medication for their needs Χ OTHER CONTROL MEASURES: please specify any other control measures you have implemented: - I have health insurance from Colombia's health system in case of injury - I am aware of assault risk and I won't be alone in unknown areas or during nighttime.

TRANSPORT	Will transport be	NO		Move to next hazard
	required	YES	x	Use space below to identify and assess any risks
e.g. hired vehicles	Examples of risk: training	accider	nts a	rising from lack of maintenance, suitability or
	Is the risk high / m Low	edium /	low	?

CONTROL MEASURES

Indicate which procedures are in place to control the identified risk

X	only public transport will be used
	the vehicle will be hired from a reputable supplier
	transport must be properly maintained in compliance with relevant national regulations
	drivers comply with UCL Policy on Drivers http://www.ucl.ac.uk/hr/docs/college_drivers.php
	drivers have been trained and hold the appropriate licence
	there will be more than one driver to prevent driver/operator fatigue, and there will be adequate rest periods
	sufficient spare parts carried to meet foreseeable emergencies
X	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

- I'll move around the city and the site in public transport.

DEAL THE	ING WITH	Will people be	YES	If 'No' move to next hazard
PUBL	IC	dealing with public		If 'Yes' use space below to identify and assess any
				risks
e.g. in observ	terviews, ving	Examples of risk: p Is the risk high / me		attack, causing offence, being misinterpreted.
		Medium risk of persorLow risk of being percor		•
CONT MEAS		Indicate which pro	cedure	s are in place to control the identified risk
	all participants	are trained in intervi	iewing te	chniques
	interviews are	contracted out to a t	hird part	y
X	advice and sup	oport from local grou	ps has b	een sought

X	participants do not wear clothes that might cause offence or attract unwanted attention
X	interviews are conducted at neutral locations or where neither party could be at risk
X	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

- Interviews and questionnaires will prepared before going on the fieldwork and supervisor will give feedback on the to reduce risk of misinterpretation
- Interviews will be carried out during daytime and on open spaces
 Interviews will be done with consent of participants

May 20 **FIELDWORK** 3

WORKING ON OR	Will people work on	NO	If 'No' move to next hazard
NEAR WATER	or near water?		If 'Yes' use space below to identify and assess any RISKS
e.g. rivers, marshland, sea.	Examples of risk: risk high / mediun		ng, malaria, hepatitis A, parasites. Is the
CONTROL	•	rocedu	ures are in place to control the identified
MEASURES	risk		
MEASURES	risk		
	on or near water wi	ll not be	e allowed
lone working c	on or near water wi		e allowed Il work takes place outside those times
lone working of coastguard inf when tides cou	on or near water wi	tood; a	Il work takes place outside those times
lone working of coastguard inf when tides cou	on or near water wi formation is unders uld prove a threat are competent sw	itood; a	Il work takes place outside those times
lone working of coastguard inf when tides cout all participants participants alwellingtons	on or near water wi formation is unders uld prove a threat are competent sw	stood; a vimmers	Il work takes place outside those times s ective equipment, e.g. buoyancy aids,
lone working of coastguard information when tides could all participants all wellingtons boat is operated.	on or near water with or or near water with or near water with or near water with or near water and or near water ways wear adequated by a competent	itood; a vimmers ite prote	Il work takes place outside those times s ective equipment, e.g. buoyancy aids,

OTHER CONTROL MEASURES: please specify any other control measures you have implemented: MANUAL Do MH If 'No' move to next hazard NO **HANDLING** activities (MH) If 'Yes' use space below to identify and take place? assess any risks Examples of risk: strain, cuts, broken bones. Is the risk high / e.g. lifting, carrying, medium / low? moving large or heavy equipment, physical unsuitability for the task. CONTROL Indicate which procedures are in place to control the identified **MEASURES** risk the departmental written Arrangement for MH is followed the supervisor has attended a MH risk assessment course all tasks are within reasonable limits, persons physically unsuited to the MH task are prohibited from such activities all persons performing MH tasks are adequately trained equipment components will be assembled on site any MH task outside the competence of staff will be done by contractors

FIELDWORK 4 May 2010

have implemented:

OTHER CONTROL MEASURES: please specify any other control measures you

SUBSTANCES	Will participants work with	NO	If 'No' move to next hazard If 'Yes' use space below to identify and assess any
	substances		risks
e.g. plants, chemical, biohazard, waste	Examples of risks Is the risk high / r		- poisoning, infection, illness, burns, cuts. low?
CONTROL MEASURES	Indicate which p	orocedure	es are in place to control the identified
the departmen waste are follo		ements for	r dealing with hazardous substances and
	are given informa estances they may		ing and protective equipment for er
participants whe medication for		nave advis	sed the leader of this and carry sufficient
medication for			
medication for	their needs	sible man	ner
waste is dispos	their needs sed of in a respons iners are provided FROL MEASURES	sible man	ner
medication for waste is dispos suitable contai	their needs sed of in a respons iners are provided FROL MEASURES	sible man	ner dous waste
medication for waste is dispos suitable contai	their needs sed of in a respons iners are provided FROL MEASURES	sible man	ner dous waste
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hazards must be noted and assessed here.	Risk: is the risk				
CONTROL MEASURES	Give details identified ris		easures in place	to control the	
Have you identified an	y risks that are	not NO X	Move to Declar	ration	
adequately controlled?	•	YE S	Use space beloand what	ow to identify the risk	
			action was tak	en	
Is this project subject Research?	to the UCL requ	irements on the	ethics of Non-NHS I	-luman	
If yes, please state Number	your Project	ID			
For more informati	on, please re	fer to: <u>http://e</u>	ethics.grad.ucl.ac	:.uk/	
DECLARATION				is a significant change the work have read the	
Select the appro	opriate statem	ent:			
I the undersigne there is no sign			y and associated	risks and declare that	

risk

 $^{\rm X}$ $\,$ I the undersigned have assessed the activity and associated risks and declare that the risk will be controlled by

the method(s) listed above

NAME OF SUPERVISOR Pablo Sendra

SIGNATURE OF SUPERVISOR DATE 28/08/2019

FIELDWORK 5 May 2010

