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Abstract

In the development of parks in Bogota, legacies of conflict pull the environmental and post-conflict equity-building agendas apart. This thesis interrogates the relationship between post-conflict, equity-building and the ecology of public parks in order to propose a framework for the development of green open spaces that advances both agendas simultaneously, through everyday city-making processes. In particular, using a case study of Bogotá’s park system, this research explores the challenges when maximizing the benefits of ecological services, while fostering spatial equity, social cohesion, and civic formation in the development of parks in post-conflict contexts. This thesis employs an inductive research methodology that combines qualitative methods with spatial analysis and case study inquiries to identify key assumptions obscured in the everyday city-making processes. This reveals a phenomenon observable in the development of parks in Bogotá, whereby forces of social exclusion and fear of the other, in combination with ideas of order and security, end up provoking a simultaneous restraint on biodiversity and human diversity. This thesis explores the position of the different actors—both mainstream players and alternative organizations—in the design, planning, and operation of parks in Bogotá, and reveals how decision-making tools reinforce their theoretical positions. By doing so, it uncovers competing frameworks and priorities at play in a fragmented institutional context. A selection of exemplary parks, illustrate where legacies of conflict (such as associating nature with crime, and expressing nervousness towards “the other”) still over-determine the ways in which parks are designed, programmed, and maintained. These environmental tensions are mostly present in the development of large parks in ecologically vulnerable areas, and are generated by rigid assumptions that treat ecological functionality and security as mutually exclusive. Simultaneously, small neighborhood parks face class-based social frictions that reflect differences between neighborhood-centric preferences and the function of parks as city services for all, and a trend for increased agency of neighborhood associations threaten to make parks less inclusive. Nevertheless, alternative practices are emerging in the development of natural recreational settings that are promoting ecological conservation, high-use, and civic formation. By identifying opportunities, promoting collaboration, and seeking new processes and decision-making tools, this thesis offers a set of planning strategies and an implementation framework of social inclusion and ecological biodiversity to overcome fear (or perception of fear) and reinforce the potential of parks as peace-building tools.

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1. Introduction

In Colombia, the post-conflict period is emerging as a time of change. After more than six decades of violence, the government has started implementing a peace agreement with FARC, the major insurgent group. The peace process has opened new possibilities for social and economic development throughout the country. In this transition state, all efforts to transform the social conditions that perpetuated inequalities and other root causes of violence in order to avoid a relapse into conflict are arguably the most important projects for the country over the next 10 to 15 years. Armed conflict, which took place mainly in rural areas, has led to unequal development and a lack of opportunities for certain regions. Nevertheless, the divide has affected cities too, and Bogotá, the capital, has been the main recipient of immigration from local populations fleeing from rural areas. The resultant exponential growth has outpaced the local government’s capacity to improve and expand the city’s infrastructure and services, generating great disparity between the periphery of the city, where migrant populations have mainly settled, and the urban core. Nevertheless, because post-conflict initiatives have focused on the rural areas, places where the effects of the conflict were stronger and more direct, cities such as Bogotá are not receiving as much attention. For peace to be downscaled from a national agreement to the everyday life of the citizens, and at the same time to be scalable throughout the country, the post-conflict agenda needs to stop being treated as an isolated topic, implemented only in particular zones and by particular agencies, and rather start being integrated into the everyday practices of development.

"To the extent that territorial control –be it armed, political, social, or economic– has been shown to be central to violence, re-ordering space can be a first step in countering the power of violent actors" (Davis, 2012)

Making cities, and particularly public spaces, more accessible, inclusive and equitable becomes a way to start transforming structural inequalities. Equity needs to be a priority in all spheres beyond addressing only immediate needs such as housing and jobs. And the environment, which has evidently been the missing topic in the peace process, needs to be integrated into the development solutions if the country wants to achieve peace, while conserving its most valuable assets –including biodiversity.

In Bogotá, public space, and particularly parks, are one of the main mechanisms that the Mayor is promoting as a way to create equity by enhancing quality of life and democracy through guaranteeing equal access to quality, inclusive and safe public spaces. Mayor Enrique Peñalosa’s (1998 - 2000 and 2016 - 2019) conviction that the public realm is essential to guarantee “urban democracy” has led to important resource being dedicated to the development of parks. Theories related to landscape architecture and sociology of public spaces point out that parks can provide multiple city functions, from ecological benefits to transforming social behaviors and fostering processes of citizenship engagement. Therefore, a plan to expand the park network has the potential to promote an agenda to simultaneously connect people with nature and people with each other through everyday city-making processes. Nevertheless, theories of territorial justice and spatial equity, and how they relate to building citizenship and democracy through public life, also point to the limitations of these strategies to reach vulnerable populations.
This thesis began with the objective of finding connections between park development and post-conflict agendas to take advantage of the crucial political moment to use the multiple benefits of parks and co-benefits of their development processes. This would advance goals on both realms simultaneously. Nevertheless, this research revealed that not only are both agendas conceived and implemented as completely separate efforts, but that park promoters have rigidified assumptions about the perception of security, diversity and the conservation of nature that see the tradeoffs of both objectives as mutually exclusive. The way in which parks are being developed and operated is still over-determined by lingering ideas of security and exclusionary forces related to an underlying nervousness towards the other, common threats of the urban way-of-life, but accentuated by legacies of a decades-long armed conflict. In light of this finding, the objective of this research shifted to revealing an observable phenomenon in the development of parks, where forces of social exclusion and fear of the other, combined with ideas of order and security, end up provoking a simultaneous restraint on biodiversity and human diversity. This thesis argues that the park system, mainly at the scale of large parks, is developed following ideas of rational aesthetic order and surveillance as ways to increase the perception of security, which restrain ecological services by limiting biodiversity. Similarly, neighborhood and pocket parks may become less inclusive because cultural frictions are affecting programming decisions.

**Research Question**

The literature presents evidence that supports parks are able to achieve multiple social goals. Nevertheless, the lack of an appropriate parks’ development framework aimed at generating green public spaces to foster values supporting peace-building and ecology limits the city’s capacity to address both environmental and social conditions, while attending to the post-conflict agenda. If such a framework were in place, it could support the development of projects that help overcome a period of unstable equilibrium, where the level of actual achievements of the peace agreement is not sufficiently protected against deterioration from long-lasting forces of fear and exclusion at the community level. Moreover, without such a framework it is not possible to redress social inequalities and support a much-needed transformation of cultural values. For this to happen it is important to understand how parks are designed, implemented, managed and maintained. Therefore, the key question guiding this thesis is the following: Under which conditions can green open spaces and their development processes help maximize the benefits of ecosystem services, while fostering spatial equity, social cohesion and civic formation? By asking this, the thesis explores the challenges in pursuing the three goals simultaneously.

I began this research by identifying fundamental assumptions and dynamics usually taken for granted in the design, planning, implementation and operation of parks, which may have limited the potential benefits of these urban interventions, in the spheres of environment, equity and social processes. Then this thesis investigates whether urban planning tools and processes are, or are not, advancing the development of parks where most needed while maximizing ecological services, social cohesion and civic formation. Lastly, it highlights the practices of organizations that, although not main players in park development, are determined to find a constructive balance between ecological conservation, high use, and community engagement; in fact, looking through their lenses could provide lessons that could be transferable to the broader system. In addressing these questions, there is a hope to transform what has been established as a system of knowledge and ways of operating defined by legacies of conflict, to point out and open for discussion contestable assumptions that have permeated the ways in which parks are developed.
2. Literature Review

This research explores approaches to environmental preservation, spatial equity building, and community engagement around the development of parks. More specifically, it draws from five bodies of literature: (1) theories of landscape architecture and ecology, (2) theories on the sociology and cultural value of parks and public spaces, (3) theories of spatial justice and territorial equity, (4) theories on participation and civic formation, and (5) concepts of peace and peace-building initiatives implemented at the community level. Nevertheless, there is a gap in the literature where the three issues are handled simultaneously, highlighting the importance of a holistic perspective. This is particularly true in post-conflict contexts, where historic legacies of conflict create forces that pull in divergent directions and rigidify assumptions about tradeoffs between these spheres that are not necessarily faithful accounts of emerging conditions.

Even though the literature asserts that nature should no longer be understood from a dichotomous perspective, taking into account current ecological theories that state that it has completely been transformed by humans (Ellis, 2015), our relationship to nature is more than ever key to our survival. Evidence shows that simply being exposed to nature has the capacity to improve both mental and physical health (Saumel, Weber, & Kowarik, 2016). Multiple studies have shown that vegetation aids in the recovery from mental fatigue and systematically link vegetation with enhanced cognitive functioning (Canin, 1991; Cimprich, 1993; Hartig, Mang, & Evans, 1991; R. Kaplan, 1984; Lohr, Pearson-Mimms, & Goodwin, 1996; Miles, Sullivan, & Kuo, 1998; Ovitt, 1996; Tennesen & Cimprich, 1995). Moreover, urban nature provides ecological benefits such as cleaning the air, reducing runoff and heat island effects (Pataki et al., 2011). Managing it in a sustainable way is an essential task in city planning as we strive to create more equitable, healthy and resilient urban places. Cities have recognized these benefits agreeing that parks are vital city services that respond to the most pressing social goals of the time. Many cities have embarked on a quest to be more ecologically sustainable. Under the new paradigm, parks, which have responded to different social problems and expressed various ideas about nature throughout history, have been framed as solutions to ecological problems (Cranz & Boland, 2004).

Nevertheless, the relationship between planning paradigms and ecology can also be problematic, with ideas of order imposed over complex ecosystems with unintended consequences. In particular, hegemonic planning actions have shown to be disastrous when high-modernist ideologies of efficiency and order impose simplified visions upon the exceptionally complex set of relations and processes governing natural ecosystems. For example, throughout most of the nineteenth century, Forest Science in Germany, or attempts to control elements of instrumental value, such as biodiversity and visual order, disrupting vital interrelations in the ecosystem causing the death of multiple forests (Scott, 1998a). The phenomenon became known as Waldsterben (forest death). This case illustrates the dangers of dismembering an exceptionally complex and poorly understood set of relations. It also highlights the value of biodiversity, which makes ecosystems more resilient to the stress of disease and weather variations and more able to withstand and recover from such injuries. In light of projected climate change impacts, biodiversity is likely to become more significant in the future.

Incorporating spontaneous -messy looking- plants that are already adapted to new urban harsh conditions might be a more sustainable strategy to increase ecological and social values (Tredici, 2010). However, landscapes are cultural constructs. Ecological quality may not be appreciated or
maintained if recognizable landscape language that communicates human intention is not part of the landscape. Well-maintained vegetation is, therefore, a strong cue of care that can change the way in which we interpret the landscape (Nassauer, 1995). Moreover, although multiple studies associate urban wild areas and dense vegetation with fear, fear of crime, and possibly crime itself, a study by Sullivan and Kuo advances a theory and evidence to suggest that residents living in “greener” surroundings report lower levels of fear, fewer incivilities, and less aggressive and violent behavior. They argue that even though it might be true that visibility-decreasing forms of vegetation may promote crime, widely spaced, high-canopy trees and other visibility-preserving forms of vegetation do not. Furthermore, they present evidence to suggest that public spaces with trees are consistently used by more diverse groups, and a greater number of people simultaneously, than public spaces without trees (Kuo & Sullivan, 2001.). As such, they also help increase informal surveillance. Aesthetic experiences in landscape can also lead to attentiveness, empathy, love, respect, care, concern and action on the part of those who visit and experience parks and designed landscapes (Meyer, 2008). Likewise, understanding that landscape is a combination of function, feeling and meaning (Spiri, 1998) allows us to recognize that landscape has multiple capabilities that range from improving well-being to reshape our understanding of the world and each other (Moor, 2016). In other words, the ways in which landscape is designed and managed determines its functionality and cultural appropriateness.

The relationship of parks and people is even more complex when taking into account that parks not only connect people to nature, but also potentially change how people from different social groups relate to each other in public space, and therefore, public life. Since the 1870s, Olmsted exposed how people change their behavior when they engage in public parks. He argued that putting people on an intentionally constructed different setting than the city, where they receive the ecological benefits of clean air, sun, and pleasure without conscious exertion, generates tranquility and changes the minds of people in ways that affect how they relate to each other (Olmsted, 1870). Therefore, to advance an agenda of connecting people with nature and with each other, he proposes a type of park that generates the greatest possible contrast with the conditions of the city, having a broad enough open space and enough trees to completely shut out the city from the landscape. Moreover, Olmsted highlighted the importance of parks as a network, able to bring these benefits to more people.

Nevertheless, parks do not benefit social groups equally. Urban parks differ greatly in how much they are used and by whom. On one side, physical features, park amenities and programming, as they relate to social conditions of the surrounding population, can determine park usage and thus, the vitality of the spaces as civic arenas (Jacobs, 1961). Moreover, Jane Jacobs also suggested that the simple presence of more “eyes on the street” would help prevent crime and make spaces feel safer, and therefore, more likely to attract people. Planning theories that follow this line of thinking underline that parks which are not used enough do not accomplish this potential social value and diminish the impact of important city resources. Furthermore, even though parks can promote social cohesion, improve social ties in a neighborhood (Kazmierczak, 2013), or increase a sense of community that can influence tolerance (Cattell, Dines, Gesler, & Curtis, 2008), they can also make certain populations feel excluded and can even end up being harmful to other democratic practices and encounters in public space (Low, Taplin, & Scheld, 2005). Understanding the social implications of public spaces opens up a new way to think about society, where socially viable spaces promote the reproduction of and respect for group differences without melting away the differences (Young, 1990a), but also where contested spaces give occasion to friction and nervous tensions among different groups (Wirth, 1938).
Additionally, green open spaces don’t tend to be equally distributed in cities and marginalized populations frequently have unequal access to park benefits. Density, land values, rentals, accessibility, healthfulness, prestige, aesthetic considerations, among others, determine the desirability of different areas of the city as places of settlement for different sections of the population; people with homogeneous status and needs consciously select, or are forced by circumstances into the same area (Wirth, 1938). These aspects of urban life are particularly salient in cities where migration has been significant over the years and which encompass a diversity of identities and cultures. Research on the spatial distribution of parks has served to expose locational discrimination, particularly in racially heterogeneous settings. For example, an inquiry into environmental justice related to parks in Maryland found that a higher proportion of African Americans than whites have access to parks within walking distance, but that whites have access to more acreage of parks, also within walking distance (Boone, Buckley, Grove, & Sister, 2009) By exposing rigid structures of privilege and advantage, spatial analysis has given new meaning to the concept of democracy. When these spatial inequalities are recognized as unjust, intervention is more likely to occur (Soja, 2010) Through this lens, the selection of sites of intervention becomes crucial.

Nevertheless, in lieu of limited state resources and acknowledging the global lack of state capacity to oversee public spaces that started in the 1970s with the shift to neoliberal governance practices, cities have been outsourcing city services, such as park operation, to private entities, losing control over decisions, with spatial justice implications. This shift in urban governance from managerialism to entrepreneurialism, and the notion of “public-private partnerships” has attracted external resources of funding and can be evidenced by the emergence of “Friend of the Park” type of organizations. The caveat of entrepreneurialism is that it is speculative in execution and design, and prone to generating fragmented and unexpected outcomes as opposed to rationally planned and coordinated ones (Harvey, 1989). Moreover, entrepreneurialism changes the scale of the impact; it incentivizes investing in places that procure benefits only for populations within a particular geographical limit, falling short of offering city wide functions, key if parks function as systems with complementary components. Under such capitalist forces, mechanisms to facilitate a redistribution of surpluses are of great importance to guarantee the provision of city services to meet local needs, to maximize social welfare and to avoid sustaining or deepening uneven urban development.

In post-conflict transitions, where peace is still fragile, there is a heightened need to be aware of the ways in which different populations engage in public spaces, and potentially, in terms of their design, maintenance and management. Parks can create a sense of ownership that brings the community together around the collective goal of maintaining a valuable public good (Spirn, 1998). Likewise, the ways in which long-term use and governance are ingrained in the development process of green open spaces are essential to the practice of citizenship. Citizenship, that is by an informed capacity to engage processes of practical and symbolic re-imagining of the city, is key to increasing communities’ agency over the spaces they inhabit (Simone, 2004). Similarly, spaces for dialogue and collaboration can become unconventional spaces for alternative policy making (Mbaye & Dinardi, 2018). Civic formation can occur as a co-benefit of parks that help transform their neighborhood, such as community gardens, where people engage in the co-creation of spaces to meet local needs where the participation of a few improves public life for other people in the neighborhoods (Shepard, 2017). Community gardens, beyond providing food, help people organize food cooperatives, farmers’ markets, local playgrounds, health facilities, and neighborhood social and educational activities. As such, they represent a way to increase the power of citizens and their agency to transform their neighborhoods (Warner & Durlach, 1987.) In Bogotá, the role of dialogue and participation in the development of the main parks has been limited to consultation with the community. Therefore, in
the new projects, the stewardship mechanisms through which parks are maintained and public resources allocated offer new opportunities of engagement for the local communities and a means to support livelihoods that can create equity at the community level. Nevertheless, for these projects to be possible, the frameworks through which many city agencies operate need to change. These include real estate rationale and commodification of the land under which gardens are not the best use, as well as aesthetic models that limit the possibilities of community engagement by imposing the landscape style municipal authorities are used to manage.

Moreover, there needs to be awareness of the effects of everyday urban design in creating new patterns of urban segregation that affect the social interactions in public space and how those relate to experiences of citizenship and democracy. By analyzing the case of fortified enclaves—privatized, enclosed and monitored spaces for residence, consumption, leisure and work—in Sao Paulo, Teresa Caldeira shows how the perception of fear drives people to choose the particular urban typology of fortified enclaves, and how the systematic development of these spaces is affecting the quality of public life. She highlights how these spaces are making public spaces less conductive to the encounter of different people, and how the character of public spaces changes when certain groups cease participating in public life. Furthermore, she argues that acknowledging people from different social groups as co-citizens is a condition necessary for democracy, and that fortified enclaves threaten this condition by fostering the sense that people from different groups belong to different universes (Caldeira, 2012.)

Restricted forms of citizenship participation can also represent new models of exclusion. Participation in its most basic forms of tokenism—informing, consultation, and placation—does not necessarily increase the citizen’s power (Arnstein, 1969) nor does it support building necessary capacity, training and experience at the core of democracy. This is increasingly important in urban areas, where institutions responding to a need to be efficient tend to cater to mass rather than to individual requirements. For that reason, sociological urbanism theories claim that individuals can be effective in generating change only as they act through organized groups. Therefore, largely through activities of voluntary groups, individuals increase their status as citizens and are able to increase their agency (Wirth, 1938), which implies recognizing that sustainable structural transformations require investing time and resources in composite governance mechanisms (Simone, 2004). To advance democracy, physical infrastructure and civic formation processes become equally important goals of park development; and parks can no longer be seen only as physical infrastructure but also need to be seen as the people behind their stewardship. In other words, in park development processes and operation, we need to understand people as infrastructure.

A feeling of ownership, visible transformations and community engagement in public space are of utmost importance in peace building initiatives at the community level, even when they are not the prevalent words in the peace discourse at high political levels focusing on justice, truth or reparation. One of the most important long term challenges in peace-building processes, reconciliation “in practice”, relies heavily on “exposure to the other” (McKone, 2015). This requires managing both individual and collective identities, and overcoming the negation of the other as a central component of one’s identity (Kelman, 2004). Even though there is consensus about the importance of reconciliation in peace-building processes over the long term, efforts in this matter seem to receive the least attention and resources, as compared to other earlier stages of post-conflict such as (1) conflict settlement or agreement, or (2) conflict resolution.
Efforts to link parks and peace-building processes have emerged at three different scales: international relations, national identity and memory, and individual development. Nevertheless, there is a gap at the intersection of parks and peace theories at the community level where the everyday city making practices are seen as a vehicle to advance issues of environmental conservation, civic formation and participation processes, and spatial justice, simultaneously. On the international level, parks are shown to be peace-building tools that support pacific co-existence among conflicting parties in places where multiple jurisdictions overlap and where conservation of the environment serves as a means to achieve diverse peace related objectives (Ali, 2007). This is the case of parks such as SAPO-tai national Park and corridor in Liberia or the Emerald Triangle in Indochina (Ali, 2007). Creating transnational peace-parks has shown to have functional spillover effects such as creating public awareness around a particular conflict and place, opening up communication channels, building trust among conflicting parties, and/or creating alternative visions and symbols of how conditions have changed (Brock, 1991). At this scale, even though the literature recognizes that peace parks will continue to be an important peace-building tool, capable of promoting cross-national conservation, the question at this scale remains around how to make this a priority for governments in actual conflict situations. On a smaller scale, few parks have also been created as monuments and symbols for reconciliation. The emphasis of parks such as the Canberra Reconciliation Place and the Hiroshima Peace Park is to reaffirm a commitment to reconciliation as an important national priority, by creating parks that are either designed through co-creation processes between the parties (VisitCanberra, 2018,) or reinforce a collective memory; standing as “reminders of the past and contributions to a future of lasting peace” (UNESCO World Heritage, 2018.) On the individual development level, peace-building through sport is becoming more accepted as a catalyst for peace and as a way to promote reconciliation though national symbols, communal activities and individual development (Cardenas, 2016.)

Parks and vegetation can in fact play a significant role as peace-building tools at the urban level. There is an opportunity to explore how findings at the three levels can then be transferred across physical scales and from the individual to the community, or from the neighborhood to the city. Lastly, making an explicit goal of this link can benefit both the post-conflict and green open space agendas. From a peace initiatives’ perspective, the use of the term peace may in itself be peace productive, fostering a feeling of communality in purpose which may create common ground for deeper ties in the future (Galtung, 1969). From an environmental and social agenda, it aligns the development of green open spaces with national priorities which could increase political will and commitment of contested city resources to the development of the type of parks and the implementation of processes that consistently create the spillover benefits that support peace in the long term.
3. Methodology: Case Study of Bogotá’s Park System

In this thesis, the development process of parks is studied through a multifaceted approach that considers the benefit of ecological services, the generation of equity across unequal geographies and the contributions of planning as a means to strengthen social processes such as building social cohesion and civic formation. Existing literature does not currently address this complex mix of effects and interrelations, particularly in post-conflict contexts. Therefore, to see how these issues play out on the ground in Bogotá, this research develops an inductive research methodology that combines qualitative methods with spatial analysis and case study inquiries to identify key phenomena and variables obscured in the everyday processes of park development. It also argues that they require a more careful look if planning practice is to be brought to a level where it can transform legacies of conflict to create a more ecologically biodiverse, human diverse and equitable society.

This thesis explores the challenges of maximizing the benefits of ecological services, while fostering spatial equity, social cohesion and civic formation in the development of green open spaces in post-conflict settings, using a case study of Bogotá’s park system and the actors involved in the design, planning, implementation and operation of its park. In Bogotá, the capital city of Colombia, inequality both in terms of socio-economic conditions and in the provision of city services is built into lasting structures of privilege and advantage. Uneven distribution of parks and natural elements in the public spaces, inconsistent park quality, stark inequality and other legacies of conflict such as migration, and increased levels of intolerance and fear for the other, combined with an ambitious vision to transform the ecological structure of the city into public parks, present important challenges and a perfect opportunity to study the dynamics and to identify determinants of successful park development in a post-conflict context. Clarifying that the objective of this thesis is not to address how to deal with conflict-or memories of conflict-through parks, but rather to point out challenges and frame everyday city-making processes in ways that help address some of the inequalities (democratic and spatial) that led to the conflict in the first place, this thesis goes beyond an understanding of peace-building as a separate agenda, and intends to advance more inclusive urban development frameworks and new modalities of practice that motivate deep and lasting transformations where social inclusion and ecological conservation are at the core of urban development.

Methods: Qualitative Grounded Theory, Site Visits, Participant Observations and Spatial Analysis

This research approaches the study of the park system through the use of qualitative methods of knowledge production. It recognizes the possibility to find sustained, rational, objective knowledge through the process of critical interpretation regarding the politics and epistemologies of the partial perspectives of actors participating in the park development process (Haraway, 1988). Even though Mayor Peñalosa, in the role he has taken as Bogotá’s chief urban designer, with his determination and managerial skills crafted the vision for the development of the park system, the practical resolution, long term sustainability of the projects and potential impact of
the park development process are shaped by the intricate mix of multiple actors and institutions operating on the system. Therefore, this research uses semi-structured interviews as the main data gathering method by collecting partial and local knowledge to inquire into the possible connections and tensions perceived by the different actors, providing information about their everyday practices, and exploring their motivations, purpose and goals. To construct meaning from the different conversations, coding is used as a method of analysis. It aims to point out obscured dynamics that limit the capacity of the city to maximize ecosystem services while fostering spatial equity and social transformation processes.

Semi-structured interviews

For these interviews, a sample of eight actors was originally selected including city officials, private developers and experts in the field of landscape architecture and design. These groups are the main entities in charge of developing and operating parks in Bogotá—or more generally, green open spaces with recreational use even when those are not yet classified as parks—as well as subaltern actors who occasionally intervene on specific components of the park system or who lead alternative development and operation processes. These were identified through the interview process with the main actors and then included into the research. The broader set of actors was selected with the objective of understanding the wider coalition of forces and the real mechanisms that define parks and urban life around them. The diversity of actors also makes it possible to capture the tensions between different perspectives, as well as the opportunities presented at the gaps and overlaps between the different governance mechanisms, where the official administration has sometimes only a coordinating role. By asking interviewees to indicate other relevant people to interview, four additional actors were included in the sample.

The semi-structured interviews were conducted in a two-week timeframe during January 2018 and each had a duration between one and two hours. All interviews included three common questions to understand the typical process of how parks are developed and who participates, the role of the institution represented and the social goal and success determinants of parks according to their individual perspectives. I asked for concrete examples of how the interviewee observed or experienced particular situations in parks or in the processes of how parks are originated, designed and implemented. The remaining questions were formulated to understand theoretical positions based on the specific examples, the challenges and frictions the actors experience in their practice, and the opportunities of parks to reinforce people processes as civic formation and social cohesion that could be oriented to create the values and community capacities that support peace-building processes in the everyday lives of citizens of Bogotá.

City government officials:

Institute for Recreation and Sports (IDRD for its acronym in Spanish)

Interview 1, 2 and 3: Orlando Molano, Director; Luis Fernando Quezada, Technical Deputy Director – design and construction of new parks; and Ivan Gonzáles, Parks Deputy Director – operation.

Objective: Understand current park development processes (programming, design and implementation) and operation models; concepts of sustainability and landscape design; and challenges and opportunities around the development of metropolitan and large zonal parks.
Aqueduct Company (EAAB for its acronym in Spanish)
Interview 4: Staff, preferred to remain anonymous.
Objective: Understand the model and challenges of projects that are currently being designed and implemented for the Environmental circuit of Bogotá.

Municipal Planning Secretariat (SDP for its acronym in Spanish)
Interview 5: Martin Anzellini, Advisor for the Office.
Objective: Understand the overall vision for the park system, guiding principles and current priorities in the Administration.

Public Space Defense Administrative Department (DAEP for its acronym in Spanish)
Interview 6: Nadime Yaver, Director.
Objective: Understand the mechanisms through which public space is currently created and governance of small neighborhood and pocket parks.

Civic Participation Institute (IDEPAC for its acronym in Spanish)
Interview 7: Antonio Hernandez, Director.
Objective: Understand the role of the institute in the development of parks, their contributions to the park development processes, and the links between community organizing initiatives and conservation or park development processes.

Municipal Culture Secretariat (SDC for its acronym in Spanish)
Interview 8: Víctor Manuel Rodríguez, Director of Civic Culture.
Objective: Understand their contributions to the park development processes, and the links between cultural initiatives and park development processes.

High Counsel for the Victims, Peace and Reconciliation (ACVPR for its acronym in Spanish)
Interview 9: Gustavo Quintero, High Counselor.
Objective: Understand the perspective on how the city is serving the victims of the conflict, the city officials understanding of peace concepts like reconciliation and how it is being implemented through their actions and programs or how it could be implemented through parks.

Private Developers and experts:

Base Property Group (BASE)
Interview 10: Daniel Rodriguez, CEO
Objective: Understand the role of private developers and emerging governance mechanisms through which public space is currently transformed and operated, specifically in regard to small neighborhood and pocket parks, and understand how their priorities influence the city service that is being offered.
Expert in park planning and design

Interview 11: Fernando Montenegro, architect and consultant to the Land Use Plan (POT), designer of several parks in Bogotá, and former Dean of the Faculty of Arts at the National University in Bogotá.

Objective: Gain an external vision from someone who has been working for many years and in different roles in the development of parks in Bogotá; his understanding of how the system functions; and the role of environmental services in the conception and implementation of parks on the local context.

Non-profit organizations (not common):

Amigos de la montaña (ADM)

Interview 12: Luis Adrian Pulido, Head of ADM

Objective: Understand the role of subaltern and emerging governance mechanisms through which natural recreational settings are transformed and operated, specifically in the Eastern Mountains’ Reserve, and understand how their priorities open spaces for community engagement.

Constructing meaning

The data from the interviews was transcribed and coded through an inductive and iterative process to allow the emergence of patterns and meanings from the data, that then revealed new insights and findings. The initial coding focused on defining what the data was about, simultaneously summarizing and accounting for the meaning in each piece of data. Subsequently, the pieces were grouped into more general codes to sort data according to emerging links and beginning an analytic accounting of common themes and patterns (Charmaz, 2006). This dialogue between initial inquiries and evidence is key to uncovering puzzles or empirical patterns in the complex interactions between people’s ideals and processes as they shape the development of parks. This approach facilitated the understanding of how theoretical concepts such as spatial justice, civic formation and participation, sociology and use of public space, and landscape and ecosystem benefits are defined and prioritized on the local context and how legacies of conflict influence or restrain the materialization of this theories in the development of parks.

Choosing the sites

The emerging and evolving theoretical concepts were complemented with case-oriented inquiry to illustrate the above-mentioned theoretical positions through specific park examples in Bogotá. Six examples directly emerged from the interview analysis as the most representative of three different categories -reflecting their positions regarding the social goals of parks as they emphasize urban democracy, ecological conservation or high-use. Type I parks are large parks under IDRD’s jurisdiction, Type II are smaller neighborhood parks under local municipalities’ and DADEP’s jurisdiction. Type III are natural recreational settings under EAAB’s and IDRD’s jurisdiction. Two examples were included per category to identify commonalities among them, but also to highlight salient characteristics at the margins of the category by discovering variations among them.
Illustrative Park's selection

1. The Simon Bolivar Metropolitan Park was unequivocally recognized by all interviewees as the most important park in Bogotá, both for its privileged location as a central park and for hosting a set of unique amenities such as the Aquatic Complex, the Botanical Garden, the Virgilio Barco Public Library and a concert lawn.

2. The San Andres Zonal Park is considered by the Mayor and many city officials as the model of success. It is the park that is being replicated by IDRD all around the city, which embodies active recreation ideals and high use.

3. The 93 Zonal Park was cited as the most successful example from an economic and urban revitalization perspective. It is a privately managed park that generates revenues above its own capacity to absorb them as reinvestment.

4. The Nogal Neighborhood Park is a smaller park in a high-income neighborhood, which is privately operated. The park is a site of class-frictions as soccer fields or other amenities that attract people from outside the neighborhood are contested by organized neighborhood associations.

5. The San Francisco Trail is also owned by EAAB and open for public recreation. It is managed by a non-profit which has supported community conservation projects as part of their management operation of the trail.
6. The PTAR Salitre park is a zonal park under development by the Juan Amarillo Wetland, where community organizations allied with environmental authorities have advocated for a more passive park.

Site visits were done in each of these parks and on-the-ground observations were collected through photographs to account for the commonalities and particularities of these cases. Visualization was used as a complementary analysis method with the objective of providing a comprehensive map of the types of parks and the actors involved in the development of each of these types. Additionally, spatial analysis inquiries using the municipal tree inventory (SIGAU) were used to characterize parks according to tree density (See Figure 1) and to complement the case studies with information on strata and density of the surrounding neighborhoods.

![Socio-economic strata](image)

*Figure 2. Socio-economic strata per UPZ (Zonal Planning unit). Strata 6 represents the high-income areas in the city while strata 1 represents the most socio-economically disadvantaged areas.*

**Observant participant at the Botanical Garden of Bogotá**

This research is also informed by my experience as an observant participant (Downey, Dalidowicz, & Mason, 2015) during a 12-week fellowship at the Botanical Garden of Bogotá. During this time, I entered into the workday of the technical Sub-direction, a team mainly composed of landscape architects, in charge of defining where to plan trees and designing landscape interventions in the city. During this time, I developed a spatial analysis model, maps and indicators to allow comparisons of (1) accessibility to green infrastructure, (2) social conditions and (3) environmental conditions between planning zones (UPZ and districts) in Bogotá. Using this...
information, I designed and tested new processes to identify potential planting areas in parks and road medians and built a tool to prioritize landscape interventions among these or other types of areas. This work allowed me to gain an insider perspective into the work of the Botanical Garden, to get acquainted with green infrastructure data and the tree inventory in Bogotá, and to conduct informal interviews with the members of the team to understand what they perceived as the main contradictions between their real jobs and their motivations as landscape architects.

**Limitations**

The selection of parks intends to provide a comprehensive perspective of operation models, social goals, scales and promoting organizations. It includes both typical examples and cases at the margins to contrast common practices with subaltern or emerging practices. Nevertheless, other spaces that are considered to be parks, such as plazas or large sports arenas, are outside the scope of this analysis. Moreover, this research is only the starting point to uncover relevant variables at the intersection of ecosystem services, spatial equity and social processes of civic formation and social cohesion. After identifying relevant tensions and tendencies, future research could expand to include ethnographic research to capture the perspective of park users and people’s opinions related to their experiences on each of the park categories. Additionally, interviews with relevant actors were conducted during a two-week period in Colombia which limited my capacity to follow-up with other actors suggested by interviewees who could have provided a complementary perspective. Among these, local municipalities, community action boards, local action boards, and social workers could have provided perspectives closer to the users and a complementary perspective.

National Post-conflict: Legacies of Conflict in the Perceptions of Nature and of the Other

In Colombia, more than 50 years of violence caused by the armed conflict held by the Revolutionary Armed Forces of Colombia (FARC for its acronym in Spanish), the major guerilla group, and the National Liberation Army (ELN for its acronym in Spanish), an extreme right paramilitary group, with the Colombian Government have caused the deaths of more than 220,000 people between 1958 and 2012; more than 10,200 were victims of mines between 1988-2012 (PAICMA- Dirección para la Acción Integral Contra Minas Antipersonales); more than 25,000 victims of forced “disappearance” between 1985 and 2012 (RUV- Registro Unico de Víctimas), more broadly, over 5.7 million people were internally displaced (CODHES- Consultoría para los Derechos Humanos y el Desplazamiento.) On the 26 of September of 2016, a peace agreement was signed between the FARC and the Government, officially ending the conflict and proposing a plan to address integral agrarian development, political participation, cease-fire and weapon abandonment, illicit crops and drugs, and reparation of the victims through the implementation of the agreement. This peace process has opened new avenues for social and economic development, but has also exposed new threats to biodiversity and ecological preservation, since extractive industries are encroaching upon the new “safe” zones in the Country. Important ecologists, such as Brigitte Baptiste (director of the Humboldt Institute for the research of biodiversity and ecosystem services) criticized that the peace treaty included commitments to rural, social and economic development, but did not incorporate environmental conservation, or biodiversity concerns, which are commonly seen as opposing goals. On the national level, these tensions are starting to be recognized and an emerging collaboration between the Colombian Ministry of Environment and Sustainable Development, the Community Innovators Lab (CoLab) at the Massachusetts Institute of Technology and the International Organization for Migration is jumpstarting an initiative to develop strategies and pilot projects to address climate, equity and sustainable development simultaneously.

These efforts already represent significant steps to create strategies and alternative development models in the communities where the conflict was stronger. This research agrees with the need of such a holistic approach but shifts the focus to Bogotá, to argue that similar issues play out in the city, yet in a different form. The national conflict and the perception of violence has significantly affected citizens' relation to nature. During the periods of highest violence, armed groups used Colombian forests as the main natural refuges, and forest and “wild” nature became seen as dangerous places. For many years, traveling outside the cities to the mountains or forests, some of the biggest assets in Colombia, was limited by fear of violence. This has had important implications in how citizens relate to nature and how wild areas are perceived today.

1 The authors of the report clarify that this numbers are likely underrepresenting the magnitude of the conflict because of the difficulties to gather the type of data required, timing and resources.
Moreover, because the effects of the conflict have been less direct in cities like Bogotá, the peace-building agenda has not been fully developed or internalized by municipal institutions, other than the High Counsel for the Victims, Peace and Reconciliation (ACVPR for its acronym in Spanish.) That way of operating limits the possibility of having a real impact on an issue that requires lasting social and cultural transformations. Therefore, to materialize peace on the ground, peace-building needs to stop being a separate agenda, with a political connotation, advanced only by institutions which have it as their primary goal. Peace-building actions need to permeate the everyday practices that shape our living conditions and more importantly, those that intend to build equity.

Bogotá’s Landscape inequalities: Uneven Growth, Inconsistent Quality

Bogotá has been the main recipient of immigration from local populations fleeing from the conflict in rural areas over the last 50 years. In Bogotá, immigrants\(^2\) represent 32% of the total population (estimated at 2,472,942 people). While only 8% come from surrounding municipalities, and 4% from other countries, 88% of migration comes from other municipalities in the country (Secretaría Distrital de Planeación, 2015). Exponential growth caused by internal displacement has outpaced the local government’s capacity to improve and expand the city’s infrastructure and services, generating great disparity between the periphery of the city, where migrant populations have mainly settled, and the urban core. This phenomenon has generated an uneven urban pattern with vulnerable populations settled at the outskirts of the city that overlaps with environmental vulnerable areas prone to flooding by the Bogoté River, or at higher risk of landslides at the Ciudad Bolivar Mountains. Moreover, internal displacement has created a complex multi-cultural city where diverse communities co-exist, but with latent mistrust and strong polarization among different social groups. This is evident in political polls such as the peace referendum in October 2016, when 44%, almost half of the voters, in Bogotá voted against the peace agreement. Additionally, the 2015 Biennial Survey on Cultures, one of the most relevant citywide surveys, showed concerning indicators of high discrimination\(^3\) against LGTB populations (50.2%), poor people (49.6%), religious difference (47.6%), women (42%), and other types of difference. Furthermore, 16% of the population felt discriminated against, with 36% of the 16% having felt discriminated against during the two previous years (Secretaría de Cultura, Recreación y Deporte, y Observatorio de Culturas, 2016).

Even though the internal displacement caused by the armed conflict has halted which would theoretically limit future intra-country migration, Bogotá is still rapidly growing and projections estimate that the city will receive an additional four million people by 2050 (Alcaldía Mayor de Bogotá, 2016). Additionally, Bogotá is comparatively well positioned to receive the effects of climate change because of its geographic conditions, water sources, and mild climate, as opposed

\(^2\) Calculation of the immigrants was carried out comparing the place of birth of people with their current place of residence, where an immigrant is considered a person native to a municipality other than his residence.

\(^3\) Discrimination indicators are constructed by adding the people who completely agree and who agree with indirect statements such as “homosexual men should not be allowed to be school teachers”, “poor people are more prone to commit crime”, “the more religions there are in the country, the harder it is to preserve our values”, or “a good education for girls is that which prioritizes their roles as mothers and wives”. 
to coastal cities in Colombia such as Barranquilla, Tumaco, Cartagena or Buenaventura. Therefore, the city is likely to continue receiving populations displaced by climate change in the future, so these projections might be underestimating future population growth. This is an important challenge for the local government since many of the current eight million inhabitants’ needs have not been adequately met, and services provided by the city continue to be unequal for disadvantaged and vulnerable populations. More specifically, the distribution and quality of green open spaces and trees in the public landscape is unequally distributed among communities along socio-economic lines, resulting in inequitable social, health and psychological benefits for its citizens. The city’s creation of new green open space and public landscape management mechanisms have thus far been unable to address the unequal distribution and uneven quality of green public spaces.

Figure 3. Unequal distribution of parks in Chapinero a high-income district in the north-east side of the city and Ciudad Bolivar, a low-income district in the south-west. Photos taken by the author during helicopter flight over the city in 2017.

Disparity of green space allocation across Bogotá can be quantitatively assessed by comparing the amount of park area per person and tree density in geographically defined neighborhoods. See Figure 4 for the analysis of park area and tree density per district (Angel, 2017). The left side of the bar chart shows how park area per person varies greatly among districts. Most of the districts fall short of the municipal goal of 4.5m² per inhabitant. The right side of the diagram shows percentage of park area according to tree density, where dark green represents the higher tree density (>2,250 trees per hectare), the lightest shade of green represents low tree density (<100 trees per hectare) and pink represents park areas without trees (Angel, 2017). With this data, it is possible to classify districts in four different categories: (1) the most critical, districts without enough park area per inhabitant to meet the municipal goal, and where most of the parks have a low tree density (Usme, Ciudad Bolivar, Bosa, La Candelaria and Los Mártires); (2) lack of parks, districts without enough park area per inhabitant but where the majority of the existing parks have medium or higher tree density (Puente Aranda, Suba, Engativá, Fontibón, San Cristóbal, Rafael Uribe, Kennedy and Antonio Nariño); (3) lack of trees, districts with enough park area per inhabitant but where a high percentage (more than 40%) of parks have low tree density.

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4 Tree density is measured as number of trees per park hectare, and categorized based on natural Jenks classification. Low tree density corresponds to parks with less than 100 trees/ha, medium corresponds the interval between 101 trees/ha and 350 trees/ha, medium-high corresponds the interval between 351 trees/ha and 900 trees/ha, high corresponds the interval between 901 trees/ha and 2,250 trees/ha, and very high corresponds to more than 2,251 trees/ha. Data sources: Public trees inventory, SIGAU, 2017, Park Inventory, TEP, 2017.
(Barrios Unidos), and (4) appropriate area and density, districts above the park area per inhabitant goal and where most parks have medium tree density or above (Teusaquillo, Santa Fe, Chapinero, Tunjuelito, Usaquen). Most districts on the last category, such as Teusaquillo, Chapinero, Usaquén and Tunjuelito are Higher-income districts, while lower-income districts such as Usme, Ciudad Bolivar, and Bosa are in the critical category. These results confirm that there are strong landscape inequalities not only in terms of park area per inhabitant, but also in terms of the quantity of vegetation, and therefore, the potential ecological services the public landscape provides in each district.

<table>
<thead>
<tr>
<th>District</th>
<th>Park area per inhabitant (sqm park/inhabitant)</th>
<th>Park area by tree density (Percentage)</th>
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<tbody>
<tr>
<td>TEUSAQUILLO</td>
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<tr>
<td>SANTA FE</td>
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<td>CHAPINERO</td>
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<td>PUENTE ARANDA</td>
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<td>RAFAEL URIBE URIBE</td>
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<td>KENNEDY</td>
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<td>ANTONIO NARIÑO</td>
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<td>USME</td>
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<td>CIUDAD BOLIVAR</td>
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<tr>
<td>BOSA</td>
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<td>CANDELARIA</td>
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<tr>
<td>LOS MARTIRES</td>
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<td></td>
<td>Municipal goal: 4.5 m²</td>
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</tbody>
</table>

While aerial views of the city evidence landscape inequalities between high and low income neighborhoods, it is at the human scale where the lack of trees completely changes the experience of being in a park and the benefits provided by ecosystem services. Parks without trees decrease their capacity to capture CO₂ improve air quality, reduce heat island effect, or protect against wind and pollution, among others. Furthermore, the aesthetic experience provoked by the immersion in rich landscapes flush with tree foliage, which can make people more aware of how their actions affect the environment, is diminished or lost in parks with low tree density. In this way, sustaining the biodiversity and the richness of the landscape is also a way to sustain culture, because these types of moments can provide a different learning experience of the world and our environment.

“We need multiple forms and forums for caring and learning about the impact of our actions on the planet: some visual, some textual, and some experiential (...) we need more than reports and data, we also need products of culture, narratives, images, and places to move us to act.” (Meyer, 2008)

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5 Higher-income districts are defined as those where the percentage of people in poverty is below the average for the city. Source: Multipurpose Survey, SDP, 2015.

6 Conversely, low-income districts are defined as those where the percentage of people in poverty is below the average for the city. Source: Multipurpose Survey, SDP, 2015.
Figure 5. Neighborhood park in Ciudad Bolívar. In Bogotá, there are around 850 parks without trees and 1350 parks with a low tree density of less than 100 trees per hectare. Photo taken by the author during a visit with the Botanical Garden to Ciudad Bolívar in 2017.

Yet, tree density should not be a goal in itself, and it is indeed the case that some parks with less trees, particularly large parks, promote more sports activities. Meeting the social desire for sports, while balancing active and passive recreation, might generate conditions that are more conducive to allowing social mixing and ecological performance.

Municipal Political Shifts: Change in Priorities and Upcoming Transformations in the Park System

Bogotá’s current urban development pattern, including parks and public spaces, has been largely determined during the last two decades of policies and influential mayors. The combination of the five most recent administrations, along with the creation of the Territorial Ordering Plan (POT for its acronym in Spanish), and the Master Plan of Public Space have outlined policies, goals and standards which have shaped the city’s public realm. Seeing the city through its public spaces, one of the most transformative periods was from 1998 to 2000, when current Mayor Peñalosa, was in office for the first time. Peñalosa’s political platform has been built around sustainability, mobility, public space and parks. He is ideologically identified as a center-right politician and was elected after three terms of left and center-left administrations. He also had a presidential run in 2014, representing the center-right Green Party. Mayor Peñalosa predominantly focused his first administration in the “defense” and creation of public spaces. During this period, he recovered 600,000 square meters of public space, created 30 bike lanes, and built 1,100 new parks (Semana, 2001.) His Development Plan “For the Bogotá We Want, 1998-2001”, emphasized as one of its main goals, building a Municipal System of Parks and increasing the quantity and quality of public spaces. Peñalosa’s commitment to public space originates from his beliefs that those are the spaces “where the city is socially shared” and “where man can begin a process of re-socialization with the environment and with his fellow citizens” (Secretaría Distrital de Planeación, 1998).

Peñalosa’s influence, however, was extended through the POT, created during his first administration. Law 388 of 1997, that regulates the creation POTs was established the year
before Peñalosa’s period, assigning him with the task of creating the first long-term plan for Bogotá, setting “objectives, guidelines, policies, strategies, goals, programs, actions and norms adopted to guide and manage the physical development of the territory and land use” for the next 12 years (Law 388, 1997). Because of weak enforcement of the regulation and lack of political will, the first POT, with addendums added by Mayor Mockus (1995 - 1997 and 2001 - 2003) that redefined Municipal Ecological Parks to include preservation, restauration and scenic and biological values (Decree 469, 2003), and then compiled as one unified POT by Mayor Garzón (2004 - 2007) in 2004, is still in use (Cámara de Comercio, 2018); with only 35% out of 350 proposed interventions developed, where all of them should have been completed by 2007. There is also great imbalance between the types of interventions developed, with greater investments made in mobility, housing, and basic sanitation, and significantly less regarding public space and the main ecological structure. Out of 158 large parks proposed, only 57% advanced to the planning stage and have a Director Plan, and only 28% were fully built (Alcaldía Mayor de Bogotá, 2017,) evidencing low implementation capacity and political will.

After Peñalosa, the municipal priorities have been shifting. From 2001 to 2003, Antanas Mockus, was reelected. He continued many of Peñalosa’s policies, while shifting focus towards civic culture, implementing policies to educate Bogotá’s citizens to respect the city using unorthodox methods including mimes and cards to indicate civic faults. Additionally, Mockus’s administration completed a revision of Peñalosa’s POT (Decree 469, 2003) adding articles regarding the ecological structure of the city, and the standards of the public space. From 2004 to 2015, three administrations of left and center left politicians governed Bogotá: Luis Eduardo Garzón (2004), Samuel Moreno (2008), and Gustavo Petro (2012). These differed greatly from the previous two, focusing on social equality, education, and overcoming hunger became main priorities. The physical planning focus as well as the POT’s importance was relegated, with the emphasis becoming offering services, particularly for the disadvantaged populations. Petro’s Development Plan “Human Bogotá 2012-2016” (Bogotá Humana), representative of this shift in priorities, was centered around social policies, and creating a more economically equal society. Out of nine objectives, the built environment is only mentioned once, and only through the lens of infrastructure and the distribution of services such as water and sewerage, energy and gas, transportation, and educational, health, cultural, sports and administrative facilities.

Only now, during Peñalosa’s second administration (2016 – 2019), have parks and public spaces regained a central role. Peñalosa was reelected nearly 15 years after he left office. Once again, he prioritized the public realm by promoting sustainability, mobility, and the design of public space and parks. The current Development Plan begins by providing Peñalosa's human-centered vision of the built environment: “The city is a human habitat. Everything in it, starting with urban design and specially the design of its public spaces, including mobility systems, security plans, economic development, education, health, housing, and in general, the concept of society, should have as a fundamental criteria the comfort and enjoyment of its citizens” (Alcaldía Mayor de Bogotá, 2016.) Moreover, during this term, Peñalosa has also had the task of elaborating the second version of POT, allowed him to project his vision on a long-term plan that will continue to guide the city in the years to come.

On the shorter-term, and as a way to advance urban democracy -defined as a way to build equity by enhancing quality of life and democracy through guaranteeing equal access to quality, inclusive and safe public spaces (Alcaldía Mayor de Bogotá, 2016)- the city has embarked on an ambitious plan to transform the main ecological structure of Bogotá into public parks. The main
ecological structure is composed of the two main ecosystems: the Eastern Mountains and the Bogotá River as well as the 3 main corridors along the transversal rivers than flow from the mountains to the Bogotá River. If this initiative is successful, the city will increase green open space per inhabitant from 3.6 m² to 4.5 m² and will create a network of green public spaces that enhance ecological connectivity (Alcaldía Mayor de Bogotá, 2016). Among the on-going projects are new parks by the wetlands and river basins of Juan Amarillo, Jaboque, Fucha and Tunjuelo (Anzellini); 22 access trails as well, as a more than 70-kilometer panoramic trail that will connect all the mountain range from north to south (Pulido, 2018;) and a 1,200-hectare regional park by the Water Reservoir of San Rafael.

Figure 6. Ecological Structure of Bogotá and strategic projects to transform this area into new park; spaces of interaction, public access and the enjoyment of nature. Map courtesy of Taller 301.

Availability of internationally recognized local urban design, rich biodiversity and natural features of the Eastern Mountains, and the wetlands on the western side of the city increase the potential of successful park development in Bogotá. However, not all of the intentionally designed public spaces end up being equally successful in Bogotá. Moreover, there is a huge gap in terms of how some parks are used and by whom, their quality and their role as arenas for civic formation. Parks in Bogotá under the first Peñalosa administration were developed in a top-down way that has shown to be effective for large infrastructure projects like the BRT system, but which did not necessarily generate consistent results in the development of green public spaces. Parks like “Juan Amarillo” or “Tercer Milenio,” represented important investment for the city but are notoriously underutilized. Idea competitions for both of those parks where launched in 2017 by the Institute for Recreation and Sports (IDRD for its acronym in Spanish) and the Colombian Society of Architects (SCA for its acronym in Spanish). The objective is to generate more active parks by introducing more active recreation and new tendency sports (BMX, street workout,
skate boarding, among others) (IDRD and SCA, 2017b) and by creating a more active park connected to different systems in the city at multiple scales (IDRD and SCA, 2017a).

The initiative to transform the ecological structure into parks, the lack of consistency and diminished role of biodiversity, aesthetic experiences, and civic formation processes in park development present an opportunity for transformation of these spaces. The lasting structures of landscape inequality, as described on the last section “Bogotá’s Landscape Inequalities: Uneven Growth, Inconsistent Quality “, further suggest the need to assess the processes of how these public spaces are shaped. Understanding the challenges that limit either ecological services, civic formation or equity building is the gap this thesis seeks to fill.

**Who builds the park? Institutions and roles of actors developing and operating parks in Bogotá**

The design, development, operation and maintenance of parks in Bogotá is carried out by a complex set of actors and institutions. Some city agencies, even though it is neither their role nor their mission, are involved in park development because of the political interest of the mayor. This is why unexpected actors such as EAAB or the electric company (Codensa) are developing the most important parks in the city and the region; why SDP has a core team of architects designing parks; why DADEP is innovating in mechanisms to allow a broader participation of the private sector in park operation; or why IDRD has regained resources and increased its scope of intervention, previously diminished by other administrations. The combined operation of this institutions represents a resourceful way to increase the amount of parks in the city, but is also creates a complex system that is difficult to navigate, where some roles are unclear, jurisdictions overlap, and fragmented interventions are happening. Below is a description of the main park promoters, understood as the actors involved in the development and maintenance of parks, and their official as well as their actual involvement in the development of parks.

**Mayor Enrique Peñalosa**

Enrique Peñalosa is currently Mayor of Bogotá, for the four-year period 2016-2019. During his first term as mayor, Peñalosa started the construction of the first BRT System in the city, TransMilenio; built the city’s first bikeways, Ciclorutas; recovered public space from informal vendors, creating the DADEP (Yaver, 2018;) and did the first park inventory as well as obtained large parcels of land for park development (Gonzales, 2018.) During his current term, Peñalosa has continued policies of his previous term, expanding TransMilenio and improving the bikeway network. In an effort to define a park system projected for the next 100 years (Molano, 2018), and convert Bogotá into a recreation and sports oriented municipality (Molano,) Peñalosa himself has envisioned the transformation of the ecological structure into public spaces. Towards these goals, this administration has started developing over ten new parks as part of the ecological structure (EAAB staff, 2018), has been improving over 1,100 parks, planting over 100,000 trees, and constructing over 75 soccer fields (Quezada, 2018) (“Perfil Oficial Alcalde Mayor - Enrique Peñalosa Londoño | Bogota.gov.co,” 2018) Moreover, the mayor is involved in making micro-decisions about park design such as defining species to plant, trees to cut, and width of trails, among others.
Municipal Planning Secretariat (SDP)

The Municipal Planning Secretariat (SDP for its acronym in Spanish) formulates, guides and coordinates planning policies for territorial, economic, social and cultural development (Decree 16, 2013), advancing regulation of land use, articulating the Capital District with the region and coordinating urban and rural development policies. Additionally, SDP coordinates the development and execution, and monitors the implementation of the Development Plan and the Territorial Ordering Plan (POT for its acronym in Spanish.) The first one is prepared for a 4-year term by every new administration. The POT is intended to be designed for a 12-year period. SDP works closely with the Recreation and Sports Institute, defining the vocation and approving Director Plans for each new park (Quezada, 2018.) Moreover, under the current administration, design plays an unusually important role at SDP, and a core team of architects “los arquitectos del distrito” directly attend to the mayor’s requests, many of which are parks. They plan and define the vocation of new strategic parks through conceptual zoning and design schemes, understanding who the parks are intended to serve and providing renderings and technical drawings (Anzellini, 2018) (“Secretaría Distrital de Planeación - Alcaldía Mayor de Bogotá,” 2018.)

Recreation and Sports Institute (IDRD)

The Recreation and Sports Institute (IDRD for its acronym in Spanish) is a public entity part of the Culture, Recreation and Sports Secretariat. IDRD’s mission is to generate and encourage the use of spaces for recreation, sports and physical activity and to guarantee the sustainability of parks in an effort to improve the quality of life in the city. IDRD is divided into four core areas: Sports and Recreation, Parks, Constructions, and Financial Administration. Through them, IDRD manages the weekend Ciclovia (closing vehicular streets for cyclists,) supports the formation of professional athletes - offering sports training to 70,000 children, employing over 1,800 sports’ educators, and sustaining 2,500 high performance athletes (Molano, 2018.) Foremost, IDRD is responsible for designing, building, developing, managing and operating metropolitan and zonal parks in Bogotá. IDRD provides guidelines, holding public tenders for detailed design, engineering, and construction (Quezada, 2018.) Regarding smaller parks, developed through urbanization sessions, IDRD’s role is to certify parks comply with stipulated amenities specifications and the park design manual (Quezada, 2018.) With a budget of 200 million dollars (Molano, 2018,) -three times more than what it was during the last administration- IDRD maintains around 1,200 out of the 5,110 parks in the city (Quezada, 2018,) and operates metropolitan, regional, zonal parks. The remaining pocket and neighborhood parks fall under the jurisdiction of local municipalities and DADEP (Yaver, 2018.) Nevertheless, local municipalities often lack the capacity or political commitment to maintain parks. Therefore, IDRD is determined intervene in 100 neighborhood and pocket parks, even though that falls outside their actual scope (Molano, 2018). On one hand, decisions on where to create new parks are defined by the Development Plan (Quezada, 2018.) On the other hand, decisions on which parks to improve, are supported by a matrix of park needs and by crossing spatial indicators (Gonzales, 2018.) (“Instituto Distrital de Recreación y Deporte - IDRD | Secretaría de Cultura, Recreación y Deporte,” 2018)
Public Space Defense Administrative Department (DADEP)

DADEP (for its acronym in Spanish) is a public entity created to manage the municipal real estate and properties (Agreement 18, 1999.) As such it owns, inspects, monitors, regulates and controls public spaces and real estate owned by the city (Montenegro, 2018.) DADEP’s functions include all legal processes related to municipal property: receiving cessions, legalized properties, payments and donations in the form of land or real estate, and municipal transfers. Moreover, they provide legal, technical, and logistic advice to other entities to reclaim invaded public space (Yaver, 2018.) DADEP was created during the first Peñalosa administration in 1998-2001 to advance the first inventory of public properties (Yaver, 2018,) which today they manage and keep up to date. Moreover, DADEP’s objective is to designs policies to generate, recuperate, and sustain public space with the help of the public sector, the private sector, and the local community (Yaver, 2018.) In that regard, DADEP looks to optimize and is increasingly incentivizing management through the generation of public-private management models such as private administration, maintenance and economic utilization contracts (CAMEPS its acronym in Spanish) (Yaver, 2018.) Although small pocket parks fall under DADEP’s jurisdiction, the entity was designed as a control entity. Their function is limited to control that public spaces are not invaded, ensuring that the integrity as a public space is not transgressed. It was noted as a failure that DADEP does not have an established budget for physical maintenance, nor to develop parks, other than through CAMEPS (Yaver, 2018.) (“Misión, Visión y Objetivos | Departamento Administrativo de la Defensoría del Espacio Público,” 2018.)

Citizen Participation Institute (IDEPAC)

The Citizen Participation Institute (IDEPAC for its acronym in Spanish) is a public entity whose purpose is to guarantee the right to citizen participation, promoting and strengthening social organizations (Article 53, Agreement 257, 2006), while taking advantage of existing policies, plans and programs. IDEPAC endorses a democratic culture by promoting participation, civic formation, community organizing, and civil rights. Moreover, IDEPAC facilitates processes to engage youth, ethnic groups, and women. For example, the entity has created educational campaigns in favor of diversity, appropriate use of sidewalks and bicycle riders, and against discrimination, women violence or animal abuse (Hernandez, 2018.) Typically working by request of municipal entities, local mayors, or citizens, IDEPAC has been involved in the development of large parks where participation process are particularly challenging. More commonly, IDEPAC supports pocket and neighborhood park improvements through processes that promote civic culture, and cleanliness (Hernandez, 2018.) IDEPAC works together with Community Action Boards (JAC) to gather community opinions and generate inputs which can be used by municipal designers and contractors. Furthermore, through their leadership program “Bogotá líder”, they are promoting community projects ranging from community gardens, to the generation of green public spaces, and to the appropriation of parks by women (Hernandez, 2018.) (“Quienes somos | Instituto Distrital de la Participación y Acción Comunal,” 2018).

Botanical Garden of Bogotá (JBB)

The Botanical Garden of Bogotá (JBB for its acronym in Spanish) is a local research center part of the municipality of Bogotá. It is responsible for managing public landscape and greenery in pocket
parks, neighborhood parks, road medians and residual spaces in the city, and collecting living flora for conservation and enjoyment of the citizens. The JBB’s mission is to improve the overall environmental quality of the city through the creation and conservation of ecologically functional and culturally valuable green open spaces. Through a constant effort to improve the quality, efficiency and sustainability of the public landscape, the JBB plants more than 15,000 trees annually and 4,500 square meters of gardens in sidewalks, pocket parks and all residual open spaces. Even though it only focuses on the vegetation, JBB is the main landscape designer of small neighborhood and pocket parks. Additionally, it approves plant species in parks developed through urban sessions and certifies that landscape has been planted according to approved designs (Yaver, 2018.) The JBB does not have a direct role in large park’s landscape design. In parks developed by EAAB, JBB provides forestry permits and provides guidelines for the private landscape architecture studios who are developing the projects (EAAB staff, 2018.) In parks developed by IDRD, the JBB approves the designs and can be called upon request to present planting proposal, that then go through competitive processes. Sometimes, the JBB also donates plants to improvement initiatives led by neighborhood associations (Rodriguez, 2018) (“Misión y Visión | Jardín Botánico de Bogotá,” 2018.)

**Aqueduct Company of Bogotá (EAAB)**

The Aqueduct Company of Bogotá (EAAB for its acronym in Spanish) is a public company providing aqueduct and sewage services for the city and nearby municipalities. To guarantee sustainable water provision, EAAB holds a strong environmental commitment to protect the water sources that supply the city. It conserves, manages, and restores water resources of the region, including four major rivers, 100 streams, 13 wetlands, more than 40,000 hectares in the Chingaza natural reserve, and five thousand hectares in the Eastern Mountains of Bogotá (approximately 30% of the reserve). To that end, EEAB has to develop and comply with the Environmental Management Plans (PMA for its acronym in Spanish) and Watershed Management Plans (POMCA for its acronym in Spanish) approved by the local environmental authority (CAR for its acronym in Spanish.), which regulate and limit activities that can be developed on the protected areas. This responsibility of preserving all areas around the water bodies in the city, has led EEAB to be one the biggest land owners of green open space in Bogotá (EAAB staff, 2018) (Montenegro, 2018). This quality as well as readily available resources, and the mayor’s vision to transform the ecological structure of Bogotá for public use and enjoyment, has positioned EAAB as the entity who is developing the most important parks in the city both in terms of location and size (Anzellini, 2018). EAAB has identified that their park development processes run more smoothly when companies and teams are hired who simultaneously deliver design, facilitate social participation processes, and develop construction drawings (EAAB staff, 2018).

Nevertheless, the role of EAAB as park developer is a new administrative device, and as such, it still faces unclear regulation and tensions when the new vision and their corporate vision or existing environmental regulation collide (EAAB staff, 2018) (“Empresa de Acueducto de Bogotá,” 2018.)

**Friends of the Mountain (ADM)**

Friends of the Mountain is a community based non-profit organization founded by a group of hikers. It promotes the protection and respectful public use of the mountain reserve. They are firm believers that the interaction of citizens with nature improves not only physical, but also
mental and emotional health. ADM’s goal is to simultaneously strengthen the social fabric and promoting ecological conservation by building citizenship and initiatives around the protection of the mountain reserve. Its engagement with city entities started out of the need of EAAB to manage La Vieja, recognizing the ample knowledge and social network od ADM in the area. ADM was hired to help guide the intervention of the highly-used trail, guaranteeing the minimum conditions for secure hiking: signage, handrails, and the delimitation of protected areas. Later on, ADM was granted a 3-year operation contract for the San Francisco Trail (Pulido, 2018.) Currently, ADM is constituted as a non-profit organization and facilitates institutional coordination between municipal entities such as the fire department, local police, the Tourism Institute, the Municipal Environmental Secretariat (SDA), and EAAB. Moreover, as part of the environmental management, they launched a pilot initiative to support community projects related to the conservation and respectful use of the mountains.

Unclear Roles: Fragmentation and Ambiguous Responsibilities in the Current System

The implementation of parks has to overcome a complex and fragmented inter-institutional development and management scheme which in the past has produced low quality parks with uneven ecological functionality, evidenced by estimates on the unequal distribution of parks as well as trees in the public landscape in different municipalities (See Figure 4. Park area per inhabitant and percentage of park area according to tree density.) This in turn limits the health benefits parks could be generating for the communities they intend to serve. Moreover, the problem of parks and recreation is mostly assessed in planning instruments through quantitative indicators such as m2 per inhabitant, but besides working towards those goals, there is not a clear notion of how the park system should work or how entities could have complementary functions. Additionally, a lack of clear roles compromises the maintenance, and therefore, the sustainability of the park system if political will and commitment to public spaces shifts in the next administrations.

In neighborhood and pocket parks, uncoordinated design, maintenance, and consensus building among different institutions with unclear roles are among the common challenges. Park architectural design (including components as trails, signage, lighting, amenities, etc.) is disconnected from landscape design. Both process can happen at different times, uncoordinated, or even worse, only one of them is developed. When the JBB designs planting arrangements, it can either have to work on a park where architectural elements have already been constructed (not necessarily following landscape design criteria) or plant trees in a park which has not been developed. Likewise, local municipalities plan physical interventions such as systematically installing bio-gyms, without landscape design and as the only amenity without further assessing the communities needs or recognizing the multi-cultural context where those were being inserted (Observation of 20 of such interventions in Ciudad Bolivar, visit on July 2017). Moreover, small parks created through urbanization sessions are fragmented spaces where quality is not guaranteed. Urbanization policies require developers to dedicate 17% of land to green open spaces. In the past, these spaces have been residual spaces, disconnected and sometimes inaccessible, in areas of high environmental risks and difficult topographies, and with ambiguous public-private use and ownership relations (Yaver, 2018).
Maintenance of the smallest parks since the Petro administration, when responsibility was transferred to local municipalities, has become unclear. Even though the combined budget of local municipalities to manage neighborhood parks increased 3 times (from 4 mill USD to 12 mill) after the function was transferred from IDRD to these authorities, interventions decreased to approx. one fourth (from 1200 to 350) (Gonzales, 2018). DADEP, JBB, EAAB and even IDEPAC all seem to be providing partial services (invasion control, lawn mowing, painting and cleaning, tree planting) to support local municipalities, to improve specific components but often as disconnected efforts. Lastly, it was highlighted by neighborhood associations that park interventions by private operators require consensus building across different entities and internal knowledge and connections within municipal agencies to be able to leverage resources from different plans and entities (Rodriguez, 2018). In this context, more organized associations with a stronger political network are better positioned to leverage resources for the parks they operate. This in turn raises questions of who’s interests are being prioritized when competing visions overlap and priorities diverge.

In ecological recreation settings developed by EAAB, regulation is still ambiguous and it is unclear which entity should/could maintain the new corridors; IDU’s role is to maintain bike lanes, but not in protected river borders. EAAB is responsible of tree pruning, but not of maintaining hard public spaces. Moreover, EAAB is already under pressure from labor unions that claim that parks are beyond its legal functions (EAAB staff, 2018). IDRD currently does not have jurisdiction over these spaces, but more importantly, their practices oriented towards managing a certain type of park with limited vegetation might not be adequate or even detrimental for the ecological conditions of these parks. Developing parks through EAAB is an innovative mechanism to develop the only available green open spaces in the city, but it should be noted that the long-term sustainability of these spaces still faces important challenges.
5. Results: Competing Frameworks and Priorities

The social purpose of parks and meanings of success in Bogotá: Urban democracy, high use and ecological conservation

Urban parks in Bogotá respond in different ways to social problems. They are developed and managed following varying ideas about recreation, nature, and perception of security, among others. This section first presents the range of perspectives regarding social purpose, success indicators, and success determinants of parks according to different organizations or promoters involved in planning, designing, developing, managing and operating parks in Bogotá. It then presents a diagram that maps how these perspectives and selective parks fall in relation to tradeoffs between high use and ecological preservation. The diagram also conveys the interviewees' understanding of urban democracy, and how this relates to either spatial justice or civic formation and participation. Lastly, this section presents data from the interviews to describe the type of tensions that arise when ecological preservation and high use goals diverge, and when social frictions among different social groups are evident in park programming decisions.

Parks in Bogotá are classified in five categories (Metropolitan, Zonal, Neighborhood, Pocket, Regional and Sports Setting), but these categories, as administrative constructs, do not necessarily respond to the size or natural conditions of the park. Pointing out that many parks are exceptions to these categories, interviewees revealed discrepancies between the category and parks' functions, and how parks respond to the specific natural conditions of their surroundings. For example, there are metropolitan parks that are smaller than zonal or even neighborhood parks. Some neighborhood parks that have sports amenities are larger zonal parks. More importantly, the use of the term "park" for green open spaces on the border of wetlands or trails in the mountains was rarely used or completely rejected by some park promoters. After recognizing the social function of the spaces as a parks, interviewees still preferred to refer to those green open spaces as natural recreational settings or ecological corridors conceptually distancing these spaces from programmed parks (Pulido, 2018) (EAAB staff, 2018).

This study adopts three broader categories of green open spaces derived from similarities in social purpose, size, and interviewees' perspectives. The Type I category includes large metropolitan and zonal parks under IDRD's jurisdiction. Type II refers to small zonal, neighborhood or pocket parks under the jurisdiction of local municipalities or DADEP, where IDEPAC, IDRD, JBB and neighborhood associations all participate in improvement interventions, operation, and/or maintenance. Type III includes natural recreational settings such as the trails in the eastern mountains' forest reserve and the ecological corridors along the rivers and wetlands. This thesis continues to refer to this set of these green open spaces as parks, clarifying that Type III parks should have special consideration regarding use and ecological conservation.

The following table shows a comparison of the perspectives of city officials, private park developers and designers, and a community organization, regarding social goals, success metrics or how they determine a park's success, and what they cite as determinants for success.
<table>
<thead>
<tr>
<th>Promoters' affiliation</th>
<th>Social goal</th>
<th>Success indicator</th>
<th>Determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Planning Secretariat (SDP)</td>
<td>Recreation service; urban democracy - serving vulnerable communities</td>
<td>High use</td>
<td>Active recreation; multiple amenities and social services; perception of security (few trees, lighting); location; programming (vocation) that responds to surroundings</td>
</tr>
<tr>
<td>Recreation and Sports Institute (IDRD)</td>
<td>Recreation service; urban democracy; sports training; change lives through sport opportunities; promote healthy living and exercise culture</td>
<td>High use – all the time; appropriation as high use</td>
<td>White lighting (no darkness) many (all possible) amenities for all users (otherwise youth appropriate children's playgrounds); no vendors; perception of security; clear open space with few trees (no dark spaces or obstructed of visibility); people from different socio-economic strata are drawn into the park by unique amenities (skate park, pool complex); active recreation and not just a contemplative space; programs to &quot;occupy&quot; parks; surveillance; active promotion of civic culture; community agreements (consensus building); engagement exercises in finishing stage of interventions (painting); opportunities to recreate close to home; new sport amenities (BMX, skate park, skate rink); hubs of health advice and fitness work plans</td>
</tr>
<tr>
<td>Mayor's office</td>
<td>Recreation service; urban democracy; fostering citizenship values</td>
<td>High use</td>
<td>Perception of security &quot;eyes on the street&quot;; spaces where people of different socio-economic backgrounds can meet as equals; few and appropriate tree species; lighting</td>
</tr>
<tr>
<td>Architects, planning consultants and Designers</td>
<td>Recreation as activity outside everyday life; reflection and rethinking of the self; re-positioning human beings in relation to others and to the world; a type of learning experience of society; urban democracy</td>
<td>High use; appropriation; social cohesion; aesthetic experience</td>
<td>Parks function as a system attending different populations; use is according to space; function according to its role in the system; architectural reading of the best possibilities for a site; use according to loading capacity; attend diverse recreation needs; cultural relations; people from different parts of the city meet; zoning (not exclusionary); places of encounter for the community; aesthetics; generate new dynamics; community engagement</td>
</tr>
<tr>
<td>Promoters' perspective</td>
<td>Social goal</td>
<td>Success indicator</td>
<td>Determinants</td>
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<tr>
<td>Citizen Participation Institute (IDEPAC)</td>
<td>Everyday recreation; civic formation; stress relief and self-reflection; acceptance of differences and diversity; democracy</td>
<td>Appropriation in the form of community engagement</td>
<td>Community participation (supported by proper technical capacity) when uses are defined; articulation between institutions and the community; active programming (kids' festivals, open book program); someone is responsible (signs of care); include spaces for the elderly; community organizing efforts; no single group dominates the space</td>
</tr>
<tr>
<td>Public Space Defense Administrative Department (DADEP)</td>
<td>Territorial (spatial) equity; inclusive spaces; human health</td>
<td>Collective appropriation as a form of avoiding invasion; function as interconnected and financial sustainable system; social cohesion; no drug traffic</td>
<td>Quality of urban design (no spaces in residual, disconnected, risk and inaccessible areas); clean ordered spaces; effective mechanisms to guide public space generation through urbanization processes; design with differential approach (based on population demographics and projections); size (large parks have a bigger impact, small green spaces are more vulnerable to invasion); civic education of the surrounding strengthened by educational campaigns; variety of activities (generates more memorable experiences); community participation in recovery and maintenance; interconnected spaces and network; effective invasion avoidance mechanisms (design, norm, control); clear public vs. private definition and identity (avoid ambiguous public ownership with private use); community organizing (only work where the community is organized – allocation criteria); balance between surplus generating and subsidized spaces</td>
</tr>
<tr>
<td>Botanical Garden of Bogotá (JBB)</td>
<td>Create identity and character through landscape; spatial equity; environmental justice; preservation of species</td>
<td>Appropriation; number of trees planted; square meters of gardens planted; biodiversity</td>
<td>Socialization process; community appropriation (neighbors take care of the plants); appropriate species for the conditions of the area; connectivity between green areas; ecological functionality; orderly aesthetic look guidelines</td>
</tr>
<tr>
<td>Construction and management firms (BASE)</td>
<td>Economic development and urban revitalization; recreation service for certain groups of people; urban democracy</td>
<td>Financial sustainability (no city resources needed); moderate number of users</td>
<td>Someone is responsible and has decision-making power to generate profit and allocate resources / signs of care; character/identity to attract certain groups of people; perception of security; not attracting too many people (comfortable for the neighbors)</td>
</tr>
</tbody>
</table>
### Promoters' perspective

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<thead>
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<th>Determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqueduct Company (EAAB)</td>
<td>Water conservation; ecological health; environmental education; urban democracy</td>
<td>Appropriation - in the form of caring</td>
<td>Community participation as means for conservation; clear regulation for maintenance responsibilities and operation; timing of implementation - being completed in one administration</td>
</tr>
<tr>
<td>Community organizations and foundations (ADM)</td>
<td>User experience with nature; ecological health; environmental education; social cohesion</td>
<td>Safe and respectful use of natural areas; balancing use with safeguards for ecological recovery</td>
<td>Management to balance use and ecological preservation; sustainable use of resources (recycled wood); police monitoring; user aesthetic experience and contact with nature; community engagement in preservation</td>
</tr>
</tbody>
</table>

Explanatory note: The perspectives presented in this table reflect the views of one to three interviewees in each of the organizations. The perspective from JBB is constructed based on a three-month experience as a participant observer in the technical department of the JBB. The perspective from the mayor's office was reconstructed from direct references in interviews.

Perspectives regarding the social purpose of parks differ among different organizational visions. On one side of the spectrum, the stated social purpose is high use and public access theories supported by authors such as Jane Jacobs. On the other side, the social purpose is ecological conservation and sustainable park theories advanced by authors such as Meyers, Cranz and Boland. Some organizations like SDP and IDRD consider high use at all times as the foremost objective of park development: “The main objective is to attend to people. The quality of a park in the city is measured exclusively by the number of people who use it” (Anzellini, 2018), “A successful park is the one that is always full” (Gonzales, 2018) and “When a park stops being an abandoned parcel, and you provide services to the community, that makes it successful. Because a successful park is one that always is being used and not one that is simply contemplative” (Quezada, 2018).

On the other hand, there are organizations such as EAAB for which the development of “parks” or natural recreation settings should be a means to engage people in caring for green open spaces with the objective of conserving natural areas: “My main objective is not to generate public space. My objective with each project is to protect water sources”. “When the community starts realizing that it (a green open space) serves them, appropriates and starts caring for it, then a consequence is that they will help me conserve it”. “If I generate a beautiful limit between the water and the city, that prevents invasions, too. Sometimes, the Aqueduct buys land to protect
the borders (of waterbodies) and one year later they have been invaded. Then, (public space) interventions help demarcate limits and consolidate borders”.

Other organizations such as Amigos de la Montaña, DADEP, IDEPAC, BASE or JBB are at the middle of the spectrum with variable positions either promoting a balance between ecological conservation and use or, for different reasons, advocating for a more moderate use of parks. Amigos de la Montaña faces the tradeoffs between high use and ecological conservation in their everyday operation. For that organization, maximizing the ecological benefits of the trails in the mountains and ecological preservation and use should not be opposing goals. “There has to be a balance between use and protection. La Vieja Trail is a clear result of that. Management is required so that the ecosystem is not affected by the extreme success of the trail.” “Our purpose is to serve as a bridge between the mountain and the city. In the sense that we aim to create all the necessary spaces to guarantee a public use which is safe and respectful with the environment.”(Pulido, 2018). JBB faces the tradeoff of allocating areas for tree planting or leaving spaces open for the installation of amenities, all while having working towards a goal of planting 15,000 trees annually. Other expert architects in the field, like Fernando Montenegro or organizations such as BASE, advocate for a more moderate use of parks in relation to their carrying capacity or to not disturb a neighborhoods’ quietness.

A cross-cutting theme among all organizations was the belief that public spaces, and therefore parks, promote urban democracy. In a broad sense, urban democracy, as it is presented on the development plan, is understood as equity. It is defined as a way to build equity by enhancing quality of life and democracy through guaranteeing equal access to high-quality, inclusive and safe public spaces (Alcaldía Mayor de Bogotá, 2016). Urban democracy is one of Mayor Peñalosa’s main political causes and is the second pillar of the Development Plan Bogotá Mejor para Todos 2016-20. Under Peñalosa’s administration, parks are recognized as an important governmental service and, in the IDRD, the budget to build and operate parks has tripled since the last administration (Molano, 2018). The relevance of the topic and the concept of urban democracy has effectively permeated the discourse of all actors participating in parks development and operation as evidenced through the interviews: “In a park, and in public spaces in general, all people meet as equals. Everybody, regardless of whether you are rich or poor, have exactly the same rights in public space. So, to the extent in which you achieve to create public spaces as a meeting places, you will generate equity.”(Anzellini, 2018). “Being in public spaces creates moments, probably the only ones, where there are not strata. In them there are no divisions and social classes. All people are the same. The person who goes to jog at the Simon Bolivar Park can be of strata 1 or 6 and it’s the same”(EAAB staff, 2018). Nevertheless, the rhetoric of urban democracy does not always materialize in practice or it is implemented in limited and partial ways by different institutions.

Even though all actors agree on urban democracy as a primary goal of park development, echoing the mayor’s message, different actors have different interpretations of the term. Therefore, the underlying rationale of what urban democracy means, and how to achieve it, differs slightly among actors. Some actors interpret urban democracy as spatial equity, while others interpret it as increased agency and participation in decision-making processes. The main entities in charge of developing the park system -IDRD, DNP, EAAB, DADEP, JBB- follow a rationale of efficiency, where parks are seen as products that affect urban democracy in terms of spatial equity, quantity and distribution. “The short-term goal, meaning by 2024, of the public space policy we are currently working on is to generate spatial equity regarding public spaces. The city currently has
4.5 square meters of effective public space... there are districts with more than others. The Teusaquillo district, which has the Simon Bolivar Park, is the top public space district. It has 5.8 square meters. But there are other districts, like Bosa, which have 3 or 2. The objective by 2024 is to balance this and to bring all localities to the same level of effective public space” (Yaver, 2018).

“It (urban democracy goal) is more of an utilitarian concept, of a quantitative nature. Issues with quality or the citizen’s needs are not measured.” (Montenegro, 2018)

Moreover, for some of these entities, participation or the people processes of democracy are seen as informing or consultation intended to generate community acceptance of a project and validation of designs rather than actual decision making power. “In all processes the community needs to participate. They have to be participatory because that is how they are required to be, but it not about concertation. I should not have to ask for permission on what to do or not to do” (EAAB staff, 2018). “The participatory process has a limit, particularly because there are many heterogeneous visions. It is good to have them in mind, but in a way, one as an architect needs to assume responsibilities of a project. Not only as architect but as technician” (Anzellini, 2018).

Other subaltern entities participating in the park development process (ADM, IDEPAC) have a more people-focused approach and expand the goals of urban democracy to include civic formation, community organizing around a common objective and increased agency to transform the city’s public spaces. “A renovation, more than a public work is also a social work. During the three-month period when it takes place, other entities take advantage of the institutional presence to identify problems of that territory, and in addition to contributing to cooperation, it serves as an entry point to activate the community, to provide participation tools to exercise social control, and to promote a perspective of good use and enjoyment of spaces like parks as citizens” (Hernandez, 2018).

More problematic though, is the use of the discourse of urban democracy detached from its meaning of inclusion. “Public space is where all are equal. That is the value of public space. But what should not happen to public space is that it has no character. It is fundamental that public space is where everybody is equal but at the same time it has to be developed around certain topics. I prefer that the Nogal Park becomes a space for mothers and children because it is around those activities that healthier moments are generated. In theory around sports too, but more than all being equal, each public space should aim to have a character to gather, as a priority, certain groups of people.” (Rodriguez, 2018). Through programming, physical design and communication and media strategies, private developers reinforce the character and identity of a place to attract sub-groups of people. Even though they cite urban democracy in conversation, these organizations are not necessarily interested in promoting inclusion “for all” or spatial equity, which are the goals underlying urban democracy, evidencing a disconnect between the discourse and its actual implementation.

**Parks illustrative of the theoretical positions**

To illustrate how these theoretical positions look on the ground, the following section presents seven exemplary parks that stood out as representative of salient characteristics of each category during the interviews analysis. The objective of analyzing these cases and positioning a set of parks in relation to theoretical positions under which they were developed is to highlight salient characteristics of the three categories of analysis. These parks are described in relation to the
theoretical positions by joining partial perspectives of interviewees, my own observations and experiences during site visits, and spatial data queries regarding tree density.

**Type I: Metropolitan and large zonal parks under IDRD's jurisdiction**

**San Andres Zonal Park**

*San Andres* Park is cited by multiple interviewees as one of the most successful parks in Bogotá (Anzellini, Molano, Quezada, Gonzales). “The Mayor always talks about successful and unsuccessful parks, and the examples he defends the most are *San Andres or Tunal* parks, which are parks that are highly used, they are very vibrant” (Anzellini, 2018). *San Andres* is a seven-hectare zonal park developed and managed by IDRD. It is located on the north-west side of Bogotá, in the *Engativá* district, a mostly middle income district with a density around 36,000 people per square kilometer, which is representative to the average in the city. When you walk through the San Andres Park you realize why city officials cite it as one of the most successful parks. The number of activities happening at the same time is unprecedented. There are families hanging out, youth exercising on open air gyms, playing volleyball, soccer, tennis or basketball, children participating in skating, BMX or soccer schools or recreation activities. People of all ages reading, playing music and local games, jogging and walking. Moreover, the director of the technical (design and construction) department at IDRD presented it as the model that they want to replicate throughout the city (Quezada, 2018). “San Andres is a park developed during the first Peñalosa administration. Why is it successful? Because it has everything. It has a coliseum, jogging track, tennis courts, multiple courts, children playgrounds, outdoor gyms, skate rink, BMX track, soccer fields, it is almost like a social club, opens until 10pm, and people are happy. So the most successful park is the one that is always fullest” (Gonzales, 2018).

![Figure 7](image_url)

*Figure 7. On a Sunday morning, people of all ages visit the San Andres Zonal Park to exercise, walk or hang out. Traces of high use are visible all over the lawns of the Park and lighting posts have a very strong presence on the landscape. Photo credit: Marcela Angel. January 2018.*
Nevertheless, after being amazed by the amount and variety of activities happening, as well as the diverse ages of people in the park, one senses that something is missing in this park. Natural elements have a secondary role. Un-vegetated borders by the trails are signs of the pressures of excessive use on the natural elements of the park. The entire park is open to human access and even un-programmed spaces have been claimed for different activities. There are few trees and most of them are relegated to the borders. It has less than 50 trees per Ha, which is among the lowest tree density parks in the city (Angel, 2017). San Andres is representative of the high use ideal and of theoretical positions that understand the social goals of parks as a recreation service. This park exemplifies how landscape design and a perspective of sustainability and conservation can be relegated by the high use priority.

**Simon Bolivar Metropolitan Park**

The Simon Bolivar, a 400 Ha Metropolitan Park, is the biggest park in Bogotá. It was unequivocally recognized by all interviewees as the most important park in Bogotá, both for its privileged location as central park at border of the Teusaquillo and Barrios Unidos districts, and for hosting a set of unique amenities that attract people from all over the city. “Everyone goes to Simon Bolivar Park on a Sunday: children, families, groups of young people, couples. It serves a complex population since it has much more complex activities than other parks, you can do canoeing, but you can also go to sleep, or play a short soccer game. There are also concerts, many things happen there” (Montenegro, 2018). The park is fragmented in eleven zones, with very different uses, some of which have restricted or charged access such as the Aquatic Complex, the Botanical Garden, Children’s Museum, Salitre Magico amusement park, or concert lawn.

Even though this park has the amenities to accommodate large groups of people during special events, and it is visited by 100,000 people on the weekends, IDRD officials still see it as a passive park. “Simon Bolivar is a symbol of the city, although when you look at it is still very passive, it is a symbol of the city”(Gonzales, 2018). It has a combination of low and medium tree density in different sectors, having up to 300 trees per hectare in the Parque de los Novios sector, the most contemplative part of the park. “(It is successful) first because of its location, and because it provides all services, and second, because since the beginning, it was a well-designed park” (Anzellini, 2018). Simon Bolivar Park is also representative of the high use ideal and of theoretical positions that understand the social goals of parks as a recreation service. However, in contrast to the San Andres Park, it shows an intentional landscape design as demonstrated through a higher the space ratio between amenities and landscape.

![Figure 8. Trail by the main lake of the Simon Bolivar Metropolitan Park, Central Sector, on a rainy Saturday morning.](image)

*Photo credit: Benjamin Villa. April 2018.*
Type II: Smaller zonal, neighborhood and pocket parks under DADEP’s and local municipalities jurisdiction

93 Zonal Park

The 93 Park (officially Chico Norte Zonal Park), was repeatedly mentioned as the most successful example from an economic and urban revitalization perspective. It is a 1.9-hectare Zonal Park and the first park operated under a “Private Administration, Maintenance and Economic Utilization Contract” (CAMEP for its acronym in Spanish). In 1994, the park had become a waste dump for construction materials, which motivated the neighbors to organize a Neighbors Committee that included business owners and residents interested in recovering the park. With the intervention of improving the park, the entire neighborhood was transformed. “93 is the most successful park in the city and you have to recognize that 25 years ago, that area was a completely depressed. That public space intervention changed the appearance and changed the economic dynamics of the sector and it is now one of the most high-priced commercial areas in the city” (Yaver, 2018).

In 2009, the association called Friends of the 93 Park was established to assume the direct operation of the park. As a result, the park was increasingly programmed. Today, the offered activities and events range from yoga classes to book fairs, hip flee-markets and soccer game outdoor screenings. One of the main events, the Christmas lighting and ice rink, draws people from all over the city. “You have to see what happens with the 93 park in Christmas: buses from all over Bogotá, including people from other municipalities, come to visit the park” (Anzellini, 2018). Multiple events throughout the year generate over $350,000 US dollars per year (Yaver, 2018). In 2014, only five years after the private administration started, the park was fully renovated and recovered with self-generated resources. “93 Park is clearly a success story because we recovered public space, we improved it and now we charge for the brands that want to be near that public space and make it self-sustainable. From my perspective, after people being able to use it, the most interesting thing is that the park is self-sustainable” (Rodriguez, 2018). Additionally, it generates a surplus profit that is used to improve other parks. “Last year, to use the surpluses we told the park management: “look, we need you because we don’t have the capacity to do it. Go and fix the sidewalks of the Ciudad Bolivar Park, so in the same contract, the resources went to another other site” (Yaver, 2018).

The renovation initiative included significant branding efforts and now the park is catered as a park for art, culture, and lifestyle, where place-making strategies to reinforce a certain lifestyle and identity have been used to make the park more exclusive and attractive to certain social groups. “In principle, all parks generate equity, but obviously when you go to the 93 Park, which I go once every two years, you see that they host an open market, where child bonnets cost $50 USD, that is not for the poor.” 93 Park is representative of the current shift in the type II category where operation is increasingly being delegated to neighborhood associations. Nevertheless, the park is considered to have a very high use among the type II parks. Some neighbors of other parks in this category see the 93 Park as a poor reference because it attracts too many people. “93 Park overflows and it becomes a metropolitan park because many people want to visit. It is an icon. Hopefully that does not happen to this (Nogal Park). When a park excesses its loading capacity it becomes uncomfortable for the neighbors”.
Information gathered from participant observation and interviews position the 93 Park (See Figure 13) on the high-use segment of that scale. It is positioned higher on the civic participation scale due to local organizing efforts and the impact in generating organized community participation. However, these efforts were prioritized over spatial equity. Therefore, the park is placed low on the equity scale because of the localized impact of its operation, where the benefits go mostly to the population on the vicinity of the park.

Figure 9. Zonal 93 Park on a Saturday afternoon. Tents and events such as the Tourism Fair visible on the background are common programming activities that generate revenue for the park. Photo credit: Benjamin Villa. April 2018.

Nogal Neighborhood Park

Nogal Park is a 0.6-hectare park located in the Chapinero district, in Chico, a high-income neighborhood in the north-east side of the city. 25 years ago, Maria Eugenia Meoz, one of its neighbors started to collect resources from the neighbors to maintain the park. “She collects from the buildings around the park, quotas of 35 USD per year, nothing really, and she manages a budget of 500 USD to 1,000 USD per month and that is enough to mown the lawn and do a couple of other things”. More recently, a private developer with multiple properties in the area and a strong incentive in increasing property values, started organizing the community through a neighborhood association and approaching the city to start a private administration, maintenance and economic utilization contract (CAMEP for its acronym in Spanish). “We have been working in the area for 4 years now. We started a process of urban renewal, and therefore, we understand that beyond demolishing these houses and improving the front yards and the public space we have directly in front, we were doing 5 buildings and adding about 100 thousand square meters to the area. So basically, we started to convene the owners, to tell them we know we will generate a huge impact with around 5, 6 thousand, 7 thousand new people coming to the area, so the best we can do is to improve the public space we have, and that is the park” (Rodriguez, 2018). The process to start the private operation was described as troublesome, requiring significant consensus building and visioning exercises. “The most difficult part is that the city does not have a single person who makes decisions, it was my work during all this time, coordinated all these entities so that this could happen; because the IDU is involved and thus mobility, SDP (planning) is involved, TEP is involved (public space), DADEP is involved, the Local Mayor’s Office is involved; so, all are involved, but nobody makes the decision”. “In October, after a year and a half of management with the city, we signed the CAMEP for three years extendable to three years more. For that, we basically dreamed and Taller 301 (local architecture firm) helped us to understand how that park was used and how we could make it evolve. We thought of many things, from the most basic thing that was renovating the whole park. But also we envisioned a WholeFoods, like the one in Columbus Circle but here. So we would make a
basement for the supermarket and a parking lot below” (Rodriguez, 2018). After a financial analysis, the scenario of just renovating the park was selected, since the other ideas would require longer amortization periods than the ones allowed by CAMEPS.

Nogal park is representative of the type of class based social frictions caused by the presence of amenities that attract people from outside the neighborhood to parks and of efforts of the neighbors to limit the use of the park by “outsiders”. The neighbors oppose the presence of the multipurpose court in the park because 70% to 80% of the people who use it are from outside the neighborhood. The developers would like to remove the court because they imagine more profitable or “sophisticated” uses to attract a certain type of people and even proposed building it in a different neighborhood. “We are not going to remove the field, we are going to translate it, we would move it to a neighborhood where there is space and where this use is appropriate”. Moreover, it is a park were surveillance cameras have been installed and trees are being removed to control drug consumption in the park. “We put about 15 cameras in the park. The cameras had a very positive effect, because what happened around the soccer field is that people met there to smoke joints”, “this park has more than 100 trees. It has an area that is excessively populated by trees, so the park is lost, so you have to take out some trees to expand the park and make it look clean” (Rodriguez, 2018). Because of the efforts to limit active recreation and high-use by groups from outside the neighborhood, it is positioned (See Figure 13) on the moderate segment of the high-use scale. Moreover, because of the organizing efforts but mostly localized impact of its operation, where the benefits go mostly to the population on the vicinity of the park, and its higher impact in generating organized community participation than in promoting spatial equity, it is positioned as low on the equity scale and higher on the civic participation scale.

![Figure 10. The multipurpose court at the Nogal Park is commonly used by people from outside the surrounding high-income neighborhood. It is the cause for social frictions at the park. Photo: Courtesy of Taller 301. February 2016.](image-url)
Type III: Natural recreational settings under EAAB’s and IDRD’s jurisdiction

San Francisco Trail

The San Francisco trail is a 3.85 kilometers trail and approximately 3 hours hike on the Eastern Mountains of Bogotá. The trails have been becoming popular and since police started monitoring them regularly, use has been steadily increasing from below 100 people per weekend to close to two thousand people who come from all over the city in one day. The San Francisco access is located in the Las Aguas neighborhood, a neighborhood at the border of the Santa Fe and Candelaria districts, close to the city center and mostly defined by the presence of important educational institutions such as Los Andes University and Universidad Distrital, among others. The San Francisco trail officially starts by the San Francisco Church, at intersection of the Carrera 7 and Avenida Jimenez de Quezada. The urban portion of the trail is a public space project called “Eje Ambiental” designed by renowned Colombian architect Rogelio Salmona. This project connects important historic buildings and public spaces such as El Rosario, Las Aguas plazas, and the Espinoza Park. The trail then climbs up into the valley of the Monserrate and Guadalupe Mountains, the most iconic mountains in the city. It runs along the San Francisco River, which used to be the northern limit of the city during Bogotá’s colonial period, a river fed by the high mountain “paramo” ecosystem.

It is one of the trails located in protected areas in the Eastern Mountains Reserve, owned by EAAB, and open for public recreation during the weekends and holidays. Even though the trail has been used by the community for a long time, in 2016 it started being actively managed by the non-profit organization Friends of the Mountain (ADM for its acronym in Spanish). This organization was created in 2013, by a group of friends, who liked to hike the mountains every weekend and doing social work in low income neighborhoods. Their relationship with EAAB started when they asked them to map multiple trails, the to coordinate improvements in the La Vieja Trail, and more recently to manage the San Francisco Trail. ADM see their role as mediating between the social needs of the city and the environmental protection of the reserve. “The role of Friends of the Mountain has basically been to serve as a bridge between the mountain and the city. Bridge in the sense of generating all the necessary spaces that have to be developed for there to be a respectful and safe public use of these trails” (Pulido, 2018). Providing an aesthetic experience through interventions that have a minimal impact on nature is one of their goals. They reuse wood from fallen eucalyptus trees as the main construction material and connect existing trails to define the path.

As part of their management operation, ADM has done calls for proposals and supported community engagement projects around respectful use and conservation of the mountains, such as a community garden and tourism routes. The first project they supported was developed in Vereda Fatima, a settlement at the end of the San Francisco River trail. With the support of JBB, permits from CAR and volunteers from Universidad Distrital, ADM supported the construction of a garden that generates local income growing local plants that are used for the active restoration of the trail. The second project is about strengthening tourism routes that start in the urban area and then connect to the trails. This initiative is led by local hip-hop leaders who serve as tour guides. “The initiative was about how to enter and understand the dynamics of those territories,
especially because there are complex issues such as invisible borders. It turned out great because around the conservation of our natural settings, because of course everything had to do with the mountain and with the San Francisco, and through art and culture, we managed to create momentum with the community so that they could see these settings as opportunities. Opportunities to allow them to generate resources for themselves and their families, and to keep them away from complex issues” (Pulido, 2018).

Because of the efforts of ADM to balance recreation and high use and ecological restoration, the San Francisco and La Vieja trails are positioned (See Figure 13) on the moderate ecological conservation segment of the conservation-high use scale. Moreover, because how they balance community engagement pilot projects while serving a broad population, the trails are positioned on a relative central position on the civic participation scale, with a slight emphasis on civic formation and participation.

![Figure 11. High Mountain Trail on the Eastern Mountains depicting the characteristic “paramo” ecosystem, where traces of a colonial trail remain. View of the city on the background. Photo credit: Marcela Angel. August 2017.](image)

**PTAR Salitre Park and Juan Amarillo Wetland**

The Salitre Treatment Plant zonal park zonal park currently being developed by IDRD at one of the borders of the Juan Amarillo Wetland. It is located on the west limit of the city in the Engatina district and by the Lisboa neighborhood, a low-income neighborhood with pressing socio-economic conditions, and on one of the densest and less vegetated areas in the city (See Figure 12). “Go and see what happens in Lisboa, like: Águilas Negras (gang), FARC ex-combatants (insurgent group), other gangs, rapes, mistreatment of women, child abuse. Quality of life indexes are extremely low. It is a neighborhood that is below the level of the River and occasionally flooded, right? Why will we do a forest there, so that the animals live? We will make of this sector a super nice thing, with fish replenishment for the river, and a nursery, an administration and environmental education area, a kiosk in the middle of the water and active recreation. This has BMX, soccer, soccer, soccer” (Anzellini, 2018).

During the planning and design stages, there were fights among the community, and between IDRD and local environmental authorities (CAR for its acronym in Spanish) regarding the vision for
the park. SDP and IDRD advocate for a high use park, and part of the community and CAR for a more passive park, highlighting the environmental importance of the place due to its proximity to the Juan Amarillo wetland. The process with the community and local environmental authorities had been particularly difficult and IDEPAC was called in to facilitate the participation process. IDEPAC helped build consensus around a design that leaves part of the park for passive and part for active recreation (sport fields and TRX). Even though the participatory process seems to have helped reach an agreement, SDPs initial attitude towards the park denotes how zonal parks are approached, regardless of their location on vulnerable ecosystems.

![Trees in the Public Landscape in Bogotá](image)

*Figure 12. Public Tree distribution in Bogotá. Kernel density analysis with a 100m radius per tree, representing influence area of ecological benefits influence area estimates by the Nature Conservancy. Data source: SIGAU 2017, JBB.*

**Putting competing frameworks and priorities in perspective**

The following diagram (Figure 13) depicts all the organizations interviewed or observed during this research in relation to their positions regarding the social purpose of parks and perspectives of successful parks as well as the illustrative park examples representative of each of the three categories of analysis. Understanding that visualization entails a politics of positioning it needs to be clarified that the positions represented in the graph are reflecting perspectives of individual interviewees or observations, with the purpose of providing a map with a comprehensive view of the actors participating in the park development process and the main tensions caused by their different positions. Moreover, the main intention is to use visualization as a means for understanding and not to assign actors and parks to fixed locations but to be able to represent nuances in institutional orientations and park meanings.
Figure 13. Map of actors and exemplary parks in relation to its social goal emphasis and concept of urban democracy.
The horizontal axis represents the “high use/access” vs. “ecological conservation” spectrum. Organizations or park examples on the right of the graph indicated a stronger emphasis on ecological conservation (EAAB). On the contrary, organizations or park examples farther to the left of the graph showed a stronger emphasis on high use and unlimited access of people as the priority (SDP, M.EP and IDRD). The actors and examples closer to the center don’t emphasize either of the goals (DADEP and IDEPAC) or may exhibit a preference for a moderate use (BASE), or a perspective aware of the trade-offs between the two social goals (JBB and ADM). This means that the center of the graph does not represent an absolute 0 for either of the goals, but rather a neutral position or a balance of the trade-offs, whereas the zeros would be located on opposite ends of the range.

The vertical axis represents the actors’ interpretation and operationalization of the concept of urban democracy as spatial equity or as civic formation and participation, and their perceived contribution of the exemplary parks in this regard. Actors on the upper part of the graph showed a strong emphasis on understanding urban democracy as spatial equity and particular park contributions from an efficiency rationale in terms of increased green areas and more equal distribution (SDP, IDRD, M.EP, DADEP and EAAB). Actors on the lower part either express a higher understanding of urban democracy as a people process that involves civic formation and participation as a way to increase communities’ agency over their public spaces (IDEPAC), or mentioned consensus building and community organizing as an important activity in the development of parks but did not showed an explicit interest in creating equity (BASE).

Type I parks, the metropolitan and large zonal parks under IDRD’s jurisdiction, are positioned on the upper left quadrant to reflect their conception as spaces where use is being maximized at the expense of other variables. Type II, smaller zonal, neighborhood and pocket parks under DADEP’s and local municipalities jurisdiction, are located at the center of the high use/ ecological conservation axis and spread on the urban democracy axis evidencing the fact that many entities with different approaches work on these spaces. Type III, natural recreation settings currently under EAAB’s or IDRD’s jurisdiction, are placed on the right quadrants but are the most spread among the 2 dimensions, reflecting tensions in their transition from ecological settings to parks and the management vision that community organizations bring to some of these spaces when they lead the operation. Mapping the actors allows to visualize the tensions among competing frameworks and positions. More specifically, the categories where the axis are crossed reflect more distant theoretical positions within a category, and therefore increase the likelihood of observing contradictions between rhetoric and operationalization of the concept of urban democracy, and higher tensions between high use and ecological preservation.

**Decision making tools reinforce theoretical positions**

Looking at IDRD’s decision making tools further provides insight into how the city operationalizes its priorities around the development of parks. In a context where parks’ maintenance needs supersede the city’s capacity to provide it, and where private administration contracts are just starting to emerge, deciding where the IDRD intervenes is a crucial decision to advance the urban democracy goals the mayor has set for this administration. IDRD’s budget to operate parks increased 3 times (to around 55 million USD) because of the mayor’s political will and direct interest in parks. Nevertheless, even under favorable political conditions, this only allows IDRD to maintains around 1,200 out of the 5,110 parks (Quezada, 2018), approximately 23% of the parks.
in the city. Therefore, their prioritization tool becomes a key mechanism to both understand and evidence how priorities are defined beyond the urban democracy discourse.

In theory IDRD uses a matrix and geographic information to prioritize park interventions (Molano, 2018), but staff in the parks' department say they use the geographic tools more than the matrix because it provides a spatial understanding of Bogotá. “How park interventions are selected at this moment, we have a matrix that I find the most boring so I don’t rely much on it. We do have Bogotá, the hills, the Bogotá River, and then Secretary of Security gives us (a map) with the hottest crime sectors in Bogotá, and then we take a look at the areas with public space deficit within the city and population. There are some big overlaps between these variables” (Gonzales, 2018.) The commonly used variables for prioritization are (1) park deficit per Zonal Planning Unit (UPZ for its acronym in Spanish), a planning unit smaller than districts but larger than neighborhoods; (2) concentration of criminal events; and (3) population density. IDRD visually identifies the areas where these phenomena are concentrated, and then overlaps the shapes into a map with existing parks. Figure 14 shows the three maps IDRD uses and the synthesis map where the variables overlap. To prioritize an intervention IDRD sees where 3 variables cross, or where at least two cross. Specifically, the park deficit variable is problematic because as IDRD’s staff note, public space deficit, compared to the current goal of 10m² per person, is ubiquitous.

![Figure 14. IDRD’s prioritization tool, showcasing park deficit, criminal events, population and the variables overlay.](image)

IDRD also reported that more recently they are starting to use health data “health territories variable” with sectors where children get sick the most, provided by Health Secretariat (SDS for its acronym in Spanish) and “de-marginalization territories”, a variable that identifies the areas where the city is improving the conditions of marginalized neighborhoods by providing services and infrastructure (Gonzales, 2018). The selection of current as well as new variables evidences how the priorities center around social conditions; specifically related to high-demand and security. The only variable that accounts for the existence of green spaces, as it is currently used, is the least relevant because it is considered to be pervasive. There are no considerations regarding either biodiversity, ecological functionality or other environmental variables. As such, ecological conditions are not being represented in the model. Additionally, the oversimplified way in which the overlap is done and the arbitrary geometric shapes used, fail to account for the nuances in the data and to provide a more meaningful level of detail to plan for future improvements. Therefore, by looking at this tool and its new data sources it can be inferred that parks are seeing as a way to address heath, crime, growth and marginalization but there is no focus on biodiversity or other ecological services.
6. Discussion: Designing for fear

In Bogotá, legacies of conflict still dictate how parks are designed, developed, operated and constantly transformed by their promoters. Forces of social exclusion and fear of the other, combined with ideas of order and security, and empowered detractors, are provoking a simultaneous restraint on biodiversity and human diversity in the development of parks. Even more concerning is that this is happening during a historic moment when the city needs to overcome important social disparities and adapt to be more-or at least not less- resilient to the impacts of climate change to stabilize and guarantee the sustainability of peace-building efforts. This chapter begins by problematizing how the forces of fear of violence and of exclusion are evident in the design and programming of parks in Bogotá. Then, it poses a series of probing questions to highlight issues that require attention if the city intends to maximize the benefits of ecosystem services, while fostering spatial equity, social cohesion and civic formation.

Environmental Tensions: Parks with High Ecological Value Developed Under High-Use Principles

On one end of the park system, mainly at the scale of large zonal and metropolitan parks (defined as Type I in this analysis, Chapter Results, page 32), planning paradigms that promote rational aesthetic order and high use as ways to increase the perception of security are limiting both biodiversity and the consolidation of forests in urban areas, ultimately constraining ecological services. A driving goal among city officials working in the development and operation of Type I parks is to increase the perception of security, both through design and programming. Two intertwined ways of guaranteeing security were constantly mentioned during the interviews in this research: aesthetic order and “eyes on the street”.

Aesthetic order, understood as clear visibility and surveillance, are common themes in the discourse around parks. The discourse in this regard denotes a militaristic approach to guaranteeing security: “lighting is key. That you have a ‘vigilant’ space that feels safe” (Quezada, 2018). “Japan park and its trees, it turned into an insecure park, dark. It has a police station at the corner but people are robbed on the other corner, and the neighbors don’t see the relationship and want to keep the trees” (Gonzalez, 2018). SDP, IDRD and the mayor consider that three of the most important design guidelines are having strong white lighting, amenities for active recreation, and trees of a few varieties. “The success of a park is measured in people, in the number of people who use it. How to you achieve that? Lighting, few tree planting, or at least designed planting. That is not to arrive there, and to plant trees like crazy, and then have an urban forest.” (Anzellini, 2018) Additionally, there is a mandate directly from the mayor to have a limited number of tree species for parks to look orderly and that trees should be reserved for the borders of the park. “Something that the mayor repeats every time he talks about parks, and because when I started working here I thought “Let’s put more trees in the parks, that’s what they are for,” but limiting trees is something that the mayor repeats a lot, even though he might be the person who has planted more trees in the city” (Anzellini, 2018). “This year, we are going to complete more than 1,000 parks illuminated with white LED light, and that makes people start to go out at night to their parks. That's what the mayor says.” (Molano, 2018). These quotes not only emphasize the importance of lighting, trees and active recreation in park design, but they
also denote how involved the mayor is in the design process; defining things at the scale of the color of the light, or the number of species in each park.

In the everyday work of the Botanical Garden (JBB for its acronym in Spanish), it is common to hear about the species the mayor doesn’t like and which shouldn’t be planted, regardless of the stock. Additionally, the mayor’s position regarding small pocket parks and road medians—the spaces where JBB is allowed plant trees without the approval of other institutions—is that the number of species should be limited to two per street or per park. This guideline has the purpose of creating an image of order in the city. This also means that if there are one or more species already at the site, the JBB can only add one more or limit its decision to two that are already there. As such, instead of creating biodiverse plant assemblages that acknowledge the spatial qualities of different plant communities as a means to increase resiliency (Cranz & Boland, 2004), the public landscape might be becoming less resistant and less able to recover from adverse events such as plant diseases or harsh changes in environmental conditions. But as Sullivan and Kuo noted, even though vegetation that decreases visibility might support crime, many forms of vegetation preserve visibility and therefore ought not promote crime. If the purpose is to maintain visibility, a more nuanced guideline is needed that does not limit the number of species and therefore, biodiversity, but rather specific characteristics or assemblages. Moreover, as the evidence suggest, vegetation in poor inner-city neighborhoods might deter crime both by increasing informal surveillance (fostering higher use of public space) and by mitigating some of the psychological precursors to violence (mental fatigue), so limiting it might even have the opposite effect it intends to (Kuo & Sullivan, 2001).

Sustainability, and the concept of sustainable parks, is preached by IDRD’s Parks Operation and Maintenance Direction. Their vision is in a broad sense of physical infrastructure, financial, social, and environmental sustainability. Nevertheless, when asked about specific strategies and measures, environmental sustainability was only mentioned from a resource efficiency perspective regarding architecture components. “In parks, we have changed things to become more environmentally friendly. All parks were lighting has been installed, because now they are opening until 10p.m, have LED technology. The toilets are water-saving and dry urinals have been installed. The Campin Stadium has almost only dry urinals, and that results in significant water savings” (Gonzales, 2018). This conception of environmental sustainability is very limited and overlooks important traits such as plant choices and plant assemblages, restoration of streams or other natural systems, composting, wildlife habitat, integration of appropriate technologies or infrastructure, and recycling. It also fails to include the parks’ integration to other city systems, new models of aesthetics, and sustainable maintenance practices such as community stewardship, environmental education (Cranz & Boland, 2004), among others.

Moreover, in Bogotá the explicit purpose of limiting tree density and not establishing forests is to avoid creating dark spaces with limited visibility because they become insecure. “In the designs, there are established guidelines that are important. One is, according to our idiosyncrasies, that there should be not forests. Parks need to be very open, with a lot of lighting. As you have things closed, they are likely to become niches for insecurity, if you are going to walk through a forest, it is more likely that something will happen to you than if it is an open space.” (EAAB staff, 2018). “Japan Park, located in an area with the most expensive square meter in Colombia, is a park that nobody uses, abandoned. And one of the reasons why the mayor attributes that, “the failure of that park”, even though it is very beautiful and generates green to all the buildings around it, is that it is a park that nobody uses, it is a park very tree-dense for Bogotá, it does not receive
enough sun, and those trees, even when there is a police stand in the corner, generate feeling of insecurity, shadow and the possibility of hiding" (Anzellini, 2018). This position against trees is concerning because even today, after major tree planting initiatives, Bogotá does not have enough trees. Bogotá has around 1 tree per six inhabitants, a very low indicator as compared to the World Health Organization’s recommended standard to achieve better air quality, which is one tree per 3 people (datasketch, 2017). Especially in light of a rapid population growth, every tree counts.

Knowing that trees are already unequally distributed among low-income and high-income neighborhoods, and that the order and security planning paradigm is implemented more systematically in the socially disadvantaged areas, the tree inequality gap is likely to be sustained or deepened, even if new parks are developed. This is problematic because trees tend to have highly localized effects in terms of their ecological benefits such as controlling particulate matter pollution and mitigating high temperatures (Debats, 2016) (McDonald et al., 2016). The Salitre Treatment Plant Park is a case in point of how assumptions about the relationship between crime and vegetation could be creating an environmental justice issue. This case also reflects that landscape is a cultural construct which is shaped, interpreted and appreciated through our cultural lenses, including aesthetic preferences for order (Nassauer, 1995). SDP and IDRD highlighted the Lisboa neighborhood because of its complex social problems and lack of public space. Even though a participatory process seems to have helped reach an agreement on an intermediate solution with areas for passive and active recreation, SDP’s initial attitude towards having a more vegetated area in the park remains unchanged. The planning authorities’ unchanging opinion reflects assumptions about the incompatibility of having more “messy” looking ecologically functional ecosystems, and perception of security, implying that forestry should be avoided in neighborhoods with chronic violence. “That was a constant fight because people from the CAR (local environmental authority), tedious people, wanted a forest: “you will grow a forest there? Make a forest to see what will happen” (Anzellini, 2018). The problem is that if the city keeps thinking that it should not plant many trees where there is crime, landscape inequalities will remain.

"Eyes on the street," a softer approach to guaranteeing security, follows Jane Jacobs’ theories considering that in order for a street to be a safe place, “there must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street” (Jacobs, 1961). In Bogotá, the theory is coupled with an efficiency rationale to maximize use through active recreation. “Today, I walked through the Martyr plazas, with the cell phone in my hand all time, talking on cell phones, feeling calm, why? Because it's full of people. And the pickpockets pass by, but you feel safe because you know there is a protective environment. If one goes to the Tercer Milenio Park, that is close by, as soon as there are no people, it becomes a dangerous space” (Anzellini, 2018). This has implications in terms of how space is allocated to active recreation creating parks like San Andres, where space is used to accommodate the maximum number of possible amenities. The mutually reinforcing planning practices of controlling landscape aesthetics and maximizing use are generating parks where landscape has a secondary role.

More startling, these strategies are implemented under a technocratic paradigm that has established a theory where the origins of knowledge are not questioned and ways of seeing become fixed assumptions. “The work that I do is design. I define technical characteristics that public spaces must have to be safer, and those are very technical, very measurable, and have little to do, very little, with the engagement of the community. It’s a projecting endeavor, it’s a
technocratic thing. I know that if I illuminate a park, that park will be safer at night. That is a thing that is already tested, and proven” (Anzellini, 2018). There are no apparent feedback loops in this process, since the community is left out of these decisions and SDP does not use or know that data could be available to project parks, even knowing that IDRD may have indicators on use. This approach not only has implications in park design, but it also limits the role of parks to the construction of physical infrastructure. However, as the literature suggests, parks represent important opportunities to strengthen the “people infrastructure” at the base of democracy by building the citizens’ capacity for meaningful public participation.

As noted in the case of the PTAR Salitre Park, in the development of large Type III Parks in ecologically vulnerable areas (as defined in Chapter Results, page 32) such as wetlands, strong tensions exist among stakeholders in the prioritization of social versus ecological services. Figure 15 illustrates this tension highlighting the positions of IDRD, SDP and the Mayor on the left side of the chart and the position of the PTAR Salitre Park to the right of the axis. When parks in the Type III Category are designed prioritizing principles of aesthetic order and active recreation as means to increase the perception of security, local environmental authorities (CAR for its acronym in Spanish) and community groups have opposed to the projects demanding parks with more passive recreation purposes where the landscape plays a more relevant role. This tension between environmental goals and recreational purpose with an emphasis on high use through active recreation, along with environmental licenses and land acquisition, was highlighted by EAAB’s staff as one of the three biggest challenges to park implementation.

Figure 15. Environmental tensions in parks with high ecological value developed under high-use principles.
To counterbalance the strong prevalence of the social function over the ecological function, community-based environmental movements have emerged and are demanding parks more balanced in terms of social and ecological priorities. Nevertheless, sometimes those groups are also serving as a vehicle for class-based exclusion forces and the environmental cause is used as a means to avoid building the amenities that could attract people from other social groups. "Above all, it is very sad, but you see it more in high strata in the north, people do not want any intervention. Clearly, they start with a very environmental discourse, but when you start to disaggregate (their motivations), at the end of the day it is about "I do not want them, the commons, to come here, to arrive on buses, to have vendors selling corn, and to have people grilling in front of my house". When discrimination and nervousness about the other either stop the implementation of parks or start guiding programming decisions, there is a threat to increasing the social divide in the city.

Social Frictions: Differences Between Neighborhood Preferences and Function as City Services

On the other end of the park system, specifically smaller neighborhood and pocket parks (Type II as defined in Chapter Results, page 32), efforts to reduce class-encounters in public spaces are affecting design and programming decisions. As a result, parks could become less inclusive.

Figure 16. Social frictions reflect differences between neighborhood preferences and the function as city services for all.
Figure 16 illustrates the social frictions that emerge when parks are planned and designed to provide fundamental city services under a spatial equity framework, such as the one provided by Bogotá’s Development Plan, while neighborhood associations with localized interests are in charge of operations, improvements, maintenance and generating revenue. This tension is particularly evident in high income neighborhoods, where discriminatory actions and discomfort with people from other socio-economic classes create frictions. In this research, almost all interviewees reported having seen efforts to prevent people from outside the neighborhood using the parks. Most notably, there were significant efforts in high income neighborhoods to avoid having soccer fields, multipurpose courts, basketball courts or even big enough clear open spaces to play soccer, as these sports fields may present opportunities for non-residents to use the space. The reported cases illustrate how design politics are present in programming decisions, and therefore, how changes in design can have an effect on who uses the park.

In Japón and Virrey parks, neighbors oppose the construction of sports courts. As IDEPAC’s director noted “In Virrey Park, there is a problem at this moment, we want to build a court so that many people go there, to have not only passive but active recreation. And there is a very interesting debate with the people of the neighborhood association. Obviously, what they say is that they do not want other people to go there, other than the neighbors” (Hernandez, 2018). IDRD’s staff also highlighted a similar issue. “Right now, we have an issue in the Cabrera neighborhood, precisely in the Japón Park, where the community is happy having nothing in the park. They like that there are no amenities because then no one comes to their park. They like the tranquility of the neighborhood, but that park can not only be seen as a park in that neighborhood, but as park for a larger community, for Bogotá, for everyone” (Gonzales, 2018). SDP’s staff further confirmed these strategies and pointed out: “To that, we must add that the neighbors threw lumps of earth so that the workers could not play football” (Anzellini, 2018).

At el Nogal Park, the decision is about removing an existing multipurpose court. “The court generates love and hate. Neighbors hate it because the court attracts people who are not from the neighborhood, say 70 to 80% of the people who use the court are people who are not from the neighborhood. Rather they are the waiters of Andrés Carne de Res who end their shifts at 3 or 4 in the morning, and since there is no Transmilenio (BRT system) until 5 a.m. they go and play a match; or people from nearby universities that go between 5 and 6 in the afternoon to play soccer” (Rodriguez, 2018). The neighborhood association operating the park has proposed that the city “relocate” the multipurpose court by removing it from the park and building it in a different location. People in the neighborhood association are aware that, even though they have the legal capacity to do so, it is not strategic to remove the court during the Peñalosa administration, since one of the mayor’s policies is to increase the number of soccer fields in the city. Nevertheless, the model of operation the neighborhood association sees as a successful reference is the 93 Park. In this park, basketball courts were effectively removed with the purpose of creating a more sophisticated park when the neighborhood association, Friends of the 93 Park, started operating the park. “In the 90s, the 93 Park had two basketball courts but that, those activities, those active uses of public space are more difficult to control, and therefore subtract “sophistication” to what takes place in the park. In el Nogal, we imagine that if the court disappears, we could expand the children’s area and have better children’s games, and we would have enough space to put a tent to make the events, and then the park begins to have another character” (Rodriguez, 2018). Character in this context starts to denote a status symbol, sophistication and games catered to “better” children. As such, character is used as a mechanism of social separation, reflected in the park’s redesign.
Moreover, sports amenities usually attract people from beyond the immediate neighborhood and benefit “floating” populations of workers and youth that visit the area during certain times of the day. Within the larger system of parks, parks with sports fields are intended to serve not only the immediate neighbors, but to provide city services on a broader scale. They are projected as spaces of encounter for diverse populations within a 10 to 15 block walking distance (Montenegro, 2018). Acknowledging people from different social groups as co-citizens is a condition necessary for democracy and these sports parks create a space for interaction as equals across groups (Caldeira, 2012). Therefore, when discrimination and fear of the other guide urban design to make public spaces less conductive to encounters of different people, there is a threat to increase the social divide, transforming the quality of public life, the character of public space and allowing greater participation by certain groups’ in public life.

The findings in this research support Caldeira’s theories, which propose that city design driven by fear can impact public life and change urban patterns to be less conductive to democracy. Moreover, even though Caldeira’s theory focuses on the case of fortified enclaves in São Paulo and Los Angeles to show how physical walls and surveillance mechanisms foster inequality by reinforcing the sense that different groups belong to different universes and have irreconcilable claims (Caldeira, 2012), this research expands the theory by showing that even more subtle interventions in the public realm, such as deliberate landscape strategies or programming decisions, can also create the sense of the existence of two completely different worlds, where intangible borders of segregation affect the quality of public life. In doing so, the goals of urban democracy are threatened, but in a way that is unnoticeable through the city’s current quantitative and spatial framework through which urban democracy is measured. Current indicators, such as square meters of public space per inhabitant, are not able to capture these types of changes even if the indicators were measured at a granular geographical scale.

It should also be noted that these trends could increase in places where neighborhood associations are gaining more control over programming decisions through private management schemes such as CAMEPS (Private administration, maintenance and economic utilization contracts). By demonstrating how neighborhood associations are incentivized to transform parks to benefit the immediate population, rather than comply with the wider public function of parks, this research not only does presents more evidence to support Harvey’s theories of entrepreneurialism in public governance, but also helps to bring awareness to his concerns about issues of uneven urban development and equity. In a context of limited resources and in a city-wide transition to privately and community operated parks as a way to leverage private resources into the maintenance of the park system, it serves as a reminder that entrepreneurial practices in urban governance are prone to generating fragmented and unexpected outcomes. As such, these private practices need to be constantly monitored, evaluated and adjusted to increase the cities capacity to manage public spaces, while fulfilling its democratic goals.

All things considered, it would be possible to argue that a unified lens and better tools to plan for a system of parks with complementary functions between ecological services and use with a focus on equity building and inclusion (understood as urban democracy) is increasingly necessary. On one side, It is not clear how much the modernist planning paradigm of order and visual aesthetic is disrupting ecological interrelations of a poorly understood system and what the unintended consequences of such actions could be (Scott, 1998a). Taking into account that biodiversity makes ecosystems more resilient to stress disease and weather variations (Scott, 1998b), limiting biodiversity through modernist park design could be increasing climate change
risk. According to the Hydrological, Meteorological and Environmental Studies Institute (IDEAM for its acronym in Spanish), Bogotá is already at high risk to the effects of climate change. Food security, hydrological resources, biodiversity, health and human habitat are highly vulnerable and sensitive to the effects of climate change, and have a low adaptation capacity (Valderrama, Carvajal, Pabon, & Verdugo, 2017). As such, the city should be striving not just to maintain the status quo, but rather to increase resiliency through more diverse landscape design that focuses on ecological services. Moreover, flooding and landslides are among the natural disasters that have been increasing over the last 30 years in Bogotá. This trend suggests that green infrastructure, and particularly trees, would be key adaptation measures for the city to better resist the effects of climate change.

If the city intends to maximize the benefits of ecosystem services, while fostering spatial equity, social cohesion and civic formation, they need to address questions such as: how are security driven design guidelines affecting biodiversity at the city level? Are the everyday practices of these entities making the city less resilient to the effects of climate change? Is the gap in landscape inequality in the city effectively being reduced through the focus of the Peñalosa administration on urban democracy, or is the policy’s implementation perpetuating the spatial (in)justice of having less vegetated areas in low income neighborhoods? Could qualitative indicators and planning tools help balance these assumptions by using data to provide mechanisms to balance these opposing forces? On the other side of the park system, in a context of limited resources and increased governance entrepreneurialism where the partial interests will likely increase the social divide, the question arises: how can the city counterbalance forces of exclusion in parks? How can private resources be leveraged without compromising parks’ public functions? What could be the planning tools and processes to control the forces of exclusion which are particularly strong in post-conflict contexts?

The conclusion section of this thesis highlights alternative practices that seem to be moving in a more balanced direction towards environmental preservation, spatial equity building, and civic formation. It also proposes initial alternative tools, recognizing that those are only first steps in a much-needed transformation of values to overcome lasting legacies of conflict, unbalanced knowledge systems and structural inequalities.
7. Conclusions: Overcoming “Fear”

Overcoming Institutionalized Fear: Implementing a Framework of Social Inclusion and Ecological Biodiversity

This research has highlighted that it is important to overcome the irony of designing and operating public parks in ways that are driven by fear and that intend to create a false sense of security if parks are to become tools to support peace-building at the community level, through everyday city-making processes. This thesis is aimed at promoting a framework in which ecological benefits, civic formation and spatial equity are advanced simultaneously. Yet, we cannot be too optimistic about the win-win prospects of this concept. A salient theme throughout this thesis has also been that parks are prone to reflect competing priorities and frameworks that see high-use and ecological benefits as mutually exclusive. Similarly, this thesis evidences that micro-conflicts may also arise over the control of programming decisions that influence who gets to benefit from parks. Such conflicts, however, primarily occur when assumptions about park design and operation are not contended and where no mechanisms exist to counter balance the forces of exclusion or aesthetic order. Therefore, pointing out these issues is a first step to open a discussion on how to overcome them. Subsequently, this section proposes a series of recommendations to overcome institutionalized fear through planning actions. It does so by bringing attention to planning tools, organizations and processes that are moving in the right direction, as well as literature where there is hope to advance the three agendas (environment, peace, equity) simultaneously. These cases can provide valuable lessons for the development of the park system, since they have shown potential to complement the current park development framework to advance towards a more equitable and sustainable system simultaneously, while being sensitive to the post-conflict context.

This thesis does not provide a single solution through which all these aims can be pursued, but rather it shows ways in which some tensions and trade-offs can be reconciled in the different park types. On one hand, this means becoming more sensitive to the competing frameworks through which parks are created and operated. On the other hand, this also implies a stronger commitment to planning processes than what has been typical in Bogotá, where there is a focus on achieving the parks as “design” products.

Recommendations at the park system level

1. Create a common vision among the different actors for park interventions to be understood as efforts within a system, with balanced ecological and social qualities

Under the current understanding of urban democracy promoted by IDRD, SDP, and DADEP, interventions are mainly measured as quantitative additions to the park system, without considering ecological qualities. Moreover, high-use is promoted as opposed to ecological functionality, and vegetation is limited because of a supposed association with crime.
To create a common vision of the park system, ecological concerns and social concerns can be balanced by fostering horizontal collaboration to share best practices among institutions with different experiences. Even though not all parks need to fulfill the four social goals presented in Figure 13, the practice of the organizations positioned at the center of the diagram present ways in which ecological functions, high use and civic formation are balanced. There are non-governmental organizations such as Friends of the Mountain (ADM) that promote community based initiatives as part of the operation of the trails in the Eastern Mountains. ADM has supported the development of projects able to fulfill multiple ecological and social functions. As operators of the trails they have been dealing for years with very high use levels, ecological preservation needs and environmental advocacy (Pulido, 2018). They monitor the pressure on the ecosystem and restrict access during certain times of the year for ecological restoration. Moreover, they promote ecological education and support community projects that connect the trails to conservation initiatives such as guided tours and nurseries that create a strong sense of belonging. IDEPAC highlights stewardship in La Vieja, Las Delicias and San Francisco Trails as good practices of civic formation (Hernandez, 2018). Therefore, creating spaces to share their management and design practices could inform the efforts of IDRD to make sustainability a central issue in the development of parks. Moreover, the support of community projects that have been developed as pilot projects could be replicated and scaled through interagency collaborations.

Additionally, even though the role of NGOs is not common in the operation of the park system, they can provide valuable lessons because of their unique positions in the system. NGOs, as opposed to neighborhood associations, tend to have purposes that transcend the spatial unit of the neighborhood and particular interests on the neighbors which can help bridge differences between people from different communities. Similarly, as opposed to city agencies, NGOs usually have closer relationships with the community they work with. A purpose such as the conservation and safe enjoyment of the trails is a powerful motive to mobilize people from all over the city towards a common cause.

2. Develop decision making tools to reflect a framework where ecological and social variables are seeing as equally important, and complementary

IDRDs spatial prioritization tool considers park deficit, population concentration and delinquency events as the main variables to determine where resources for park improvements should be invested. City officials also made it clear that the current model does not account for green infrastructure in a meaningful way. Developing more comprehensive spatial models that make ecological and social priorities explicit can help operationalize a more balanced vision between social and ecological functions. Towards this end, alternative data sources and variables such as biodiversity, ecological services (water runoff, CO2 sequestration, temperature reduction, noise and wind buffering), quality of natural resources (air, water), climatological conditions (temperature, precipitation, wind), environmental risks (landslides, flooding, fires) could be additional layers in the prioritization model that account for ecological quality of the ecosystems, which is the type of geographic data used by the Botanical Garden (JBB for its acronym in Spanish) in their model to prioritize landscape interventions. Figure 17 shows the 30 variables used in the JBB’s model that include green infrastructure, social and environmental conditions. The JBB’s model was limited by the use of readily available
data. As new data begins to be collected, new variables can be included into these types of models.

<table>
<thead>
<tr>
<th>Green infrastructure typologies</th>
<th>Socio-economic and public health</th>
<th>Environmental conditions</th>
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<tr>
<td>1. Forest Reserves</td>
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<td>1. PM 10</td>
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<tr>
<td>2. Wetlands</td>
<td>2. Pop. with workforce</td>
<td>2. PM 2.5</td>
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<tr>
<td>5. Neighborhood parks</td>
<td>5. Sexual behavior</td>
<td>5. Precipitation</td>
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<tr>
<td>7. Water bodies</td>
<td>7. Cardiovascular diseases</td>
<td>7. Wind</td>
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Figure 17. Landscape Prioritization Model for the Botanical Garden of Bogotá. The model, a suitability geospatial analysis, considers green infrastructure, socio-economic, public health, and environmental condition variables. Developed by the author in August 2017. This model is limited to the use of readily available data.

An additional advantage of the JBB’s model is that it uses map algebra to combine the layers into a single suitability model. This data processing tool is more accurate as a method of analysis than the visual comparisons done by IDR.D. While the visual comparison only shows where different variables overlap, a suitability model can give different variables different weight factors to better reflect priorities. Moreover, it can provide a more detailed unit of analysis to make decisions at smaller scales. For example, single parcels can be scored based on a suitability model to define which one(s) should be prioritized.
The implementation of the territorial equity goal outlined in the public space policy DADEP is currently developing requires spatial analysis capacity beyond quantitative analysis of square meters of public space per district. Districts as a scale of analysis are too broad and don’t take into account best practices in parks planning such as guaranteeing access to parks within a 10-minute walking distance. To further advance urban democracy, interventions need to be targeted with more precision to benefit vulnerable populations. Moreover, to help prioritize and effectively increase the availability and equitable access to public space and recreation for vulnerable populations, more nuanced data on social variables could be used such as location of victims, children and the elderly and population growth projections.

Nevertheless, to facilitate the use of these tools, technical capacity in spatial analysis needs to be built into the IDRD. Currently, architects without a background on the use of spatial information are in charge of the process, and spatial analysis is partially understood as a visualization tool. Data crosses are done as geometrical drawings. Training and workshops in the use of spatial analysis tools are required to better take advantage of readily available data. By implementing these tools, new qualitative indicators and goals can be created to monitor and evaluate advances on ecological functionality, the provision of ecosystem services, or biodiversity, among others. In essence, these indicators can inform more strategic decisions in the park planning process.
Recommendations for type I parks

3. **Focus on process and people as a way to support the urban democracy goal promoting the idea of people as infrastructure**

   A paradigm shift is needed for mainstream actors to understand and implement urban democracy beyond its spatial and physical dimension, but rather as a social process of civic formation and participation. There is an opportunity to expand citizens' agency on the development of the built environment and citizen involvement in the stewardship of parks. Parks are physical infrastructure but they are also living organisms that require maintenance, stewardship, programming and financial resources to activate them. The “software,” meaning all the activities that take place on parks and which allow parks to maximize their ecological benefits, are as important as the physical infrastructure or the “hardware.” Civic formation can be a byproduct of parks if their development is approached as an opportunity to strengthen organizing opportunities and civic participation. Particularly, the practices of organizations positioned at the center of the vertical axis of the map of actors and exemplary parks (See Figure 13) provide valuable lessons in this realm. IDEPAC’s “Bogotá lider” leadership training promotes ecological conservation and stewardship in some of their projects, while promoting civic formation. Through their program, they support leaders working in community gardens or women advocating for an appropriation of public space by women. Through a collaboration between IDRD and IDEPAC, such a program could be expanded to purposely identify and support community led initiatives around the development of parks, stewardship and/or fostering more inclusive public spaces.

   Additionally, at the intersection of civic formation and potential ecological benefits is the role of community gardens. The literature evidences community gardens not only open opportunities for discussion around a common project, but they also provide a space to care for that reinforces a sense of belonging. Promoting the development of such projects in public parks are ways in which IDRD can expand its agency to fully promote urban democracy through parks.

4. **Promote new aesthetic models that are more ecologically functional and less driven by reminiscent ideas of order and security**

   Current landscape design guidelines are limiting biodiversity as a way to increase the perception of security in type I parks. Nevertheless, evidence provided by studies such as the one conducted by Sullivan and Kuo support that not all vegetation is associated with crime. In their 2001 paper “Environment and Crime in the Inner City: Does Vegetation Reduce Crime?”, they show that vegetation above and below the eye level does not affect visibility and therefore, is not related to crime (Kuo & Sullivan, 2001). This contradiction between theory and practice shows there is an gap and the opportunity to develop a more nuanced and less restrictive approach to landscape design guidelines that considers visibility, high canopy trees, or flowers and vegetation of limited height as alternatives, instead of restricting the number of species and number of trees. Such an approach can bridge city officials concern for guaranteeing the perception of security while allowing for richer plant assemblages and ecologically functional landscapes.
Furthermore, in Bogotá assumptions about security stand in the way of creating more “messy” looking, ecologically functional landscapes. Nevertheless, the literature also shows that cultural constructs of nature and ecological functionality do not necessarily have to be in opposition (Nassauer, 1995). Theories that understand landscapes as social constructs present alternatives on how to design landscapes that can be culturally appreciated while having high ecological functionality, even when they look “messy.” These theories argue that landscape is a cultural construct shaped, interpreted and appreciated through our cultural lenses. They highlight that signs of human care can reconcile both cultural expectations and ecological functionality through design strategies that provide “orderly frames” that convey human care. These strategies can vary from mowing the lawn a few feet on the borders of trails to strategically placing urban furniture that contrast or frames the landscape. Such practices allow advancing a more nuanced concept of sustainable parks, that can be developed as solutions to pressing environmental issues (Cranz & Boland, 2004), even in socially convoluted territories. Implementing a new aesthetic model requires not only re-developing guidelines but also re-training the landscape designers, maintenance personnel and volunteers to support more ecologically functional practices. In this effort, studies and design references can both provide the evidence and alternative visions to encourage a new design practice.

Recommendations for type II parks

5. Develop mechanisms to control the forces of exclusion recognizing the city is transitioning into a more privately managed system

Creating spaces that allow people from diverse social groups to feel comfortable in public space is a requisite to guarantee the function of public spaces as meeting spaces and as such, the quality of public life (Caldeira, 2012). “Neutral” and encompassing green open spaces or spaces that are not programmed following one particular group’s interests, such as neighborhood associations, are a way to avoid cultural imperialism in park design, which involves the universalization of a dominant group’s experience and culture, and its establishment as the norm (Young, 1990b). Parks, similar to institutions which intend to promote social justice, should promote the reproduction of and respect for group differences without oppression. Maintaining diversity in neighborhood parks is a way to expose people to “the other” in everyday life situations (different than robbery or other negative encounters of people from different social classes). Furthermore, exposure to “the other” is highlighted by city officials of the High Counsel for the Victims, Peace and Reconciliation (ACVPR for its acronym in Spanish) as a key aspect in reconciliation processes (Quintero, 2018), a fact that only increases the need to maintain socially diverse public spaces in post-conflict contexts. As city officials from IDEPAC argue, perspectives on diversity and discrimination change when there are spaces for encounters and common enjoyment. Parks as spaces to exercise, to learn, to meditate and to reflect provide a perfect setting for these types of encounters with “the other” (Hernandez, 2018).
Nevertheless, designing spaces to be culturally inviting and diverse is not enough. As this thesis argues in Chapter 6, there are strong forces of exclusion that try to limit diversity through subtle changes in use and programming. Therefore, a way to address this issue could be to develop mechanisms to control the forces of exclusion that are at play in neighborhood parks. One alternative would be creating a Diversity Committee in charge of monitoring and approving changes in use that might affect who gets to benefit from a park. This committee could also produce knowledge to understand the forces of exclusion operating in the city and further inform park design by, for example, conducting ethnographic studies on park usage. By doing so, this committee would be advocating for diversity and generating knowledge on how to make parks more inclusive and conductive to strengthening the values at the core of reconciliation processes.

6. Develop mechanism to redistribute profits among the park network

Harvey’s theories on government entrepreneurialism point out the limitations of allowing private actors to provide city functions such as parks maintenance and operation. Among the risks, he highlights the impact of localized investment interests generating uneven development patterns and fragmented and unexpected outcomes as opposed to rationally planned and coordinated ones (Harvey, 1989). Under capitalist forces, mechanisms to facilitate a redistribution of surpluses are of great importance to guarantee a more equitable distribution of the new resources that can be captured in the park system with the participation of private actors. Because of its ability to generate more profits than what the park can absorb, the 93 park is a case in point. To redistribute some of its profits, DADEP has made arrangements at the contract level to request “Friends of the 93 Park” to maintain park infrastructure in other parks. This is already a promising tendency. If parks are increasingly encouraged to be managed by private operators, redistribution mechanisms should be developed to allow a systematic redistribution rather than a contract by contract solution. An alternative would be to create a mechanism where the most profitable parks “adopt” other parks in less profitable areas. Otherwise, a fund managed by DADEP or IDRD could be created to support small park maintenance of parks located in these neighborhoods.

The mechanisms presented in recommendation 5 and 6 acknowledge that the city does not have the resources to maintain all of its parks. Therefore, they intend to provide alternatives to address the limitations of government entrepreneurialism, while allowing to attract private resources into the operation of the park system.

Recommendations for type III parks

7. Active management of natural recreational settings

The paradox of naturally looking scenarios is that they usually fall into a lack of maintenance trap due to their aesthetic appearance. Precisely because they look natural, people tend to think that they don’t require maintenance. In reality, the opposite situation is the case and these type of parks require active maintenance to avoid becoming neglected spaces. ADM highlighted the importance of active management in the trails of the mountains as one of the determinants of their success. As they noted, it
is important to clean the trails of fallen tree branches, prune the trees close to the trails, restore areas when needed and maintain the water sources clean and free of garbage. Maintenance of these spaces is of utmost importance, because it is unclear which entity will manage parks developed by EAAB along the ecological structure. As an aqueduct company, the maintenance of the new parks falls outside their current legal functions. Other entities are not allowed to intervene in these spaces because they are located in ecological reserves. This presents a legal challenge, but also an opportunity to develop a community based stewardship model different from the IDRD’s park maintenance model (which might also be inappropriate because of the simple landscapes they are used to managing). The particular maintenance needs of natural recreational settings open engagement opportunities for environmental education, volunteer and community participation in park stewardship or broader NGO’s engagement in park operation.

8. Integrate participation facilitation, environmental management and design

A lesson EAAB has learned through the development of their first park projects is the need to integrate participation facilitation, and environmental management into the budgets and project timelines. Initially, architectural design was the main focus and other aspects were relegated with the intention of accelerating design processes. Nevertheless, EAAB has identified that implementation runs smoothly only when design, participation facilitation and environmental management are integrated into design contracts. This way of operating calls for interdisciplinary teams to participate in park design and to provide more comprehensive proposals. *Indio* Park, a park designed by OPUS - an architecture firm known for being process oriented and regularly including ethnographers and social communicators into their teams - was highlighted by EAAB and SDP officials as exemplifying one of the best implementation processes (Anzellini, 2018). Even though participation and environmental management alone do not guarantee the successful implementation of a park, acknowledging that these processes require time and resources is the only way in which they can be meaningfully developed.

Other Avenues to Advance the Peace, Environmental and Equity Building Agendas

This thesis provides one example of how equity, the environment and legacies of conflict can be addressed in tandem, through projects that don’t have functions in one single sphere, but which are purposefully multifunctional and created through a triple lens of conserving and enhancing environmental conditions, creating equity and being sensitive to the critical characteristics of a post-conflict context. Nevertheless, as Sullivan and Kuo recognize, sustainable economic development strategies to reduce poverty are key to address the factors underlying crime. Notwithstanding, this thesis expands multiple theories that offer hope and outlines easily manipulatable variables to address the institutionalized fear that is pulling the environmental and equity building agendas apart in the development of parks in Bogotá. In such a context, the role of the planner and all the planning processes, tools and mechanisms presented in this thesis are key to aligning the three agendas by identifying opportunities, promoting collaboration, and designing processes, that could support the implementation of a sustainable peace through everyday city-making.
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Glossary of Spanish names and acronyms

ADM - Friends of the Mountain

BASE - Base Property Group

CAMEP - Private administration, maintenance and economic utilization contract

CAR - Local Environmental Authority

DADEP - Public Space Defense Administrative Department

EAAB - Aqueduct Company of Bogota

FARC - Revolutionary Armed Forces of Colombia

IDEPAC - Citizen Participation Institute

IDRD - Recreation and Sports Institute

IDU - Urban Development Institute

JAC - Community Action Boards

JAL - Local Action Boards

JBB - Botanical Garden of Bogota

PMA - Environmental Management Plan

POT - Territorial Ordering Plan

SCA - Colombian Society of Architects

SDA - Municipal Environmental Secretariat

SDP - Municipal Planning Secretariat

SDS - Municipal Health Secretariat

TEP - Public Space Workshop

UPZ - Zonal Planning Unit
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