Quito’s Urban Imaginaries: Between Conserved and Intervened Green Spaces

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Abstract. This manuscript presents the results of field research aimed to identify the perceptions that condition the urban imaginaries addressing the green spaces in Quito, Ecuador. Two focus groups were carried out with experts in designing green spaces. The results were evaluated through discourse analysis, applying the dialectical hermeneutical method, to finally establish open, axial, and selective categories. Six categories allow the understanding of the imaginaries associated with the city’s green spaces: conserved or intervened spaces, public and private spaces, and individual and collective subjectivity in relation to green areas; also relevant are the interventions of actors such as the state, the real estate market, and the community in the management of these spaces. In the city, conserved green spaces, such as urban and peri-urban forests, are for contemplative use and would be less attractive to the population than provoked green spaces, the latter of which are characterized by facilitating human interaction and by having the direct intervention of public institutions. The identification of public and private green spaces was related to potential forms of urban segregation. Participants stated that privileged social groups have direct access to customized architectural designs, whereas community organizations manage these spaces through social action.

1. Introduction
The city is continuously reproduced through acts of imagination [1]. The studies related to the processes of subjectivation in urban spaces have focused on the forms of representation of social content and on individuals’ perceptions of public spaces [2]. Social imaginaries are the ways in which
people imagine their social existence, including the perceptions drawn by a society around various elements and experiences in a specific space and time; these imaginaries are not theoretical, but expressed through legends, images, and stories [3, 4].

Similarly, and with a focus on Latin American cities, García-Canclini [5] argued that urban imaginaries research focuses on the perceptual and cognitive conditions that characterize urban life in contemporary societies, which not only determine the relationship modes of physical spaces, but also the ways in which subjects perceive each other [5–7].

Zhang et al. [8] pointed out the continuous reduction decrease of the natural landscape due to changes due to the intensive use of agricultural land. In addition, Latin American cities face rapid urbanization processes. Likewise, the scientific and technological development of modern civilization has caused people to assume physically unhealthy lifestyles. Under such circumstances, the recreational demands of individuals increase and the functions of urban landscapes tend to diversify. Landscape planning is necessary for the generation of a high-quality environment and to achieve aesthetic, social, economic, and ecological benefits [9].

Cities are not simply material or living spaces but are also spaces of imagination and representation [2]. The city affects the imagination, and also is imagined. Ginn and Francis [10] explained that there are forms of collective imagination that can be both positive and negative, and that negative perceptions about “others” with which a physical space is shared can generate forms of segregation. Segregation forms are related to expressions of individual and social discomfort resulting from perceptions about the spaces of belonging.

2. Material and Methods

2.1. Sampling Technique

The present study used qualitative research techniques. We used the focus group technique for collecting the information and data. As a research technique, the focus group generates a group interaction on a theme determined by the researchers [11]. Thus, instead of asking the whole group a direct question, group interaction is a fundamental part of the method and facilitates data gathering [12]. Such interaction is achieved by encouraging participants to ask questions, exchange stories, and discuss the experiences of the other participants [13]. The interaction fostered within focus groups is considered a significant attribute and an advantage over other data collection techniques because it helps people to explore and clarify individual points of view. Thus, if individuals manage to feel comfortable and interact, a great amount of experiences and information will emerge [11].

Two focus groups were organized with eleven and nine participants, respectively. In the first focus group, the following field specialists participated: seven architects, two biologists, a garden designer, and an ecologist. The second focus group included a plastic artist, an expert in landscaping, a biologist, and six architects. The focus group participants were selected considering their current jobs and expertise related to designing Quito’s green spaces. Therefore, seven of the focus group participants were public officials working in local or national institutions, such as the Metropolitan Park, the Botanical Garden, the Botanical Foundation of Quito, and the Ministry of Culture and Heritage, one participant was a state advisor working with Quito’s municipality on landscape restoration, and the rest of the participants were architects working in the private sphere.

The work with the focus group was organized in three phases. First, there was an introductory phase where the aim and scope of the study was briefly explained, some basic interaction parameters were established, doubts and concerns were addressed, and the participants were asked to provide their names and a brief summary of their work. Second, we introduced the guidelines for the focus group interaction, “What do you think about Quito’s plants and gardens, and what role do those species play in our lives?” The main subjects discussed were garden generalizations, garden designs, green spaces and their plants’ places of origin, initiatives for using native plants in Quito’s green spaces, and green space users. Finally, each participant was asked for a final comment.
The focus group interaction was taped and video recorded; the discussion was systematized and the document was later revised and strengthened with the audiovisual material and the facilitators’ notes. The interpretation of the results was carried out through discourse analysis, applying the dialectical hermeneutical method, to finally perform open, axial, and selective encodings.

2.2. Categorization Process
Data interpretation allowed us to distinguish three codification moments: open coding, axial coding, and selective coding. The research group carried out the codification process. To start with the coding work, all the information collected in the focus groups was transcribed. Having a complete text of the focus group interaction allowed us to determine the first approach to the open categorization process. The discourses of each participant were identified and the main concepts and ideas were extracted. Strauss and Corbin [14] pointed out that “to discover and develop concepts we must open the text and expose the thoughts, ideas and meanings contained in it.” Data were segmented, examined, and compared in terms of their similarities and differences.

Subsequently, we proceeded to the process of axial coding, where relationships were identified between the categories obtained in the open coding and their subcategories, determined by their properties and dimensions, so that the text was transformed into simpler units of analysis. Convergent and divergent ideas that determined the informants’ perceptions were coded into thematic elements that expressed a central idea or concept, taking into account that a category represents a phenomenon; that is, a problem, an issue, or an event that was defined as meaningful to the participants [14].

In a third moment, and as an extension of the axial coding, selective coding was carried out in order to obtain a central category that expressed the research phenomenon and integrated the categories and subcategories. In this way, the central category consists of all the products of the analysis, condensed into a few words that seem to explain what the research is about [14]. In this process, the analyst determined a set of categories and subcategories that converged in a conceptual unit, which, in turn, integrated the reality expressed by all the participants in the focus group and facilitated the analysis of the data.

3. Results
Six macro units of analysis were obtained through the categorization process: 1. green spaces (preserved, provoked, public, and private); 2. interrelation with nature (contemplative, interactive, and recreational); 3. city plants (emblematic, medicinal, wildlife-attractive, and vulnerable); 4. identification with Quito and flora (introduced and native species); 5. actors (state, community, and real estate market); and 6. community participation (community organization and intervention requests).

Figure 1. Map of Categories.
3.1. Green Spaces
The first categories identified in the open categorization process were those related to the access to and use of green spaces.

3.1.1. Conserved and Intervened Green Spaces. Focus group participants characterized the city of Quito as being divided between conserved and non-intervened green spaces on the one hand, which allow Quito’s citizens direct contact with native flora and fauna, and intervened green spaces on the other hand, referring to those that have been modified for recreational purposes.

Conserved green spaces were perceived as places where citizens build a direct relationship with nature and the landscape. However, these spaces are less used and have a contemplative purpose because it is not easy to access them. In contrast, intervened spaces were perceived as the confluence of various elements for recreational purposes, including bike paths, playgrounds, sports courts, and trails. However, these spaces were considered to be inadequately used because citizens are not responsible for their care.

3.1.2. Public and Private Green Spaces. Intervened green spaces were differentiated from those that are for public use and the private gardens belonging to houses, residential complexes, buildings, or urbanizations.

Four types of public spaces were identified: 1. metropolitan parks, which are perceived as the “natural salvation” of the city (Quito has two large metropolitan parks); 2. neighborhood parks, which have little or no natural vegetation because they prioritize sports courts; 3. linear parks, which have fallen into disuse because they do not meet citizens’ specific needs; and 4. built landscapes that have been produced by communities or housing cooperatives, which rescue the Andean landscape because they include native plants (mainly medicinal plants and fruit trees).

Private spaces, in contrast, were seen as reserved for people with high incomes. As Participant No. 4 expressed, “Green spaces or private gardens are focused and produced by upper-class people.” Similarly, Participant No. 3 affirmed, “A garden needs permanent care by a gardener; only people who can afford this service can have a green space.”

Citizens’ access to private green spaces is mediated by their socioeconomic positions. The people who live in areas with few green spaces are the less privileged. Nevertheless, in these low-income areas, there are many instances of community organization to adapt natural spaces or areas in disuse for recreational purposes.

3.2. Interrelation with Nature
In this category, special importance was given to the contemplative character of the preserved green spaces, emphasizing the positive effects for the physical and mental health of the city’s inhabitants. However, intervened green areas are related to recreational and physical activities. Following this line of argument, a direct relationship with nature occurs mainly in conserved spaces. In the intervened spaces, nature is less important because the infrastructure intended for recreation is used more actively.

3.3. Plants
Native plants play a significant role in urban imaginaries about green spaces. Focus group participants identified the city’s emblematic native plants, including the tuna (Opuntia soederstromiana) of San Antonio de Pomasqui, the guaba (Inga insignis) of Tumbaco, and the mora de Castilla (Rubus glaucus) in the valleys. These plants are seen as part of the natural and cultural history of the Andean region. According to Participant No. 3, “Among these practices, as we have this vine as ornamental to this herb as medicinal, this fruit as food, we must work and recover those knowledge and traditions at once.” References were made to the need to have an inventory of Quito’s emblematic plants and to activate collective memory of the uses of plants to reduce the possibility of extinction of native species.

Attractive plants for fauna were also identified. These plants have a specific ecological use and attract birds, bees, and a diversity of species. Among the participants, there was the notion of
“returning to nature what we are taking away from it,” explaining that among native people, little use is made of native plants, ignoring their potential and precipitating their disappearance.

3.4. Quito’s Identity and Flora
The focus groups directly related the sense of belonging to Quito with the identification of native species.

Participants argued that in the past, Quito had a closeness with the natural surroundings and an identification with them, as expressed by Participant No. 1: “is something that you have already identified as a child, native species were in the gardens of your grandparents, of the neighbors; those are species with which there was permanent contact.”

However, they also expressed that new generations have had less access to conserved natural environments and find it difficult to identify native species; “they are young citizens who have not walked by gorges, who have not seen animals such as güllis güllis (tadpoles) or hummingbirds” (Participant No. 7). Participants explained that when selecting species for the regeneration of urban green spaces or gardens, priority is given to foreign species that respond more to exogenous tastes. There has been a common notion that “the beautiful is what comes from abroad; then, there are many species of foreign plants and trees that have been incorporated in the city” (Participant No. 8). In terms of native plants, the perception is that they are difficult to reproduce. Quito’s citizens’ identification with its native flora was perceived as threatened by the changes from the natural city to a more industrialized environment.

3.5. Actors
Two main actors were identified in Quito’s planning and designing of green spaces: state institutions and the real estate market. The state institutions have been identified as being responsible for parks and public green areas, whereas the real estate business operates in the private sector.

Public institutions are responsible for the planning of green areas and public spaces. However, their planning and practices are perceived as distant from the population’s needs. Participants observed the need for Quito’s public institutions to have a deeper knowledge of native species so that they can be included in planning green spaces. However, participants did locate areas where the municipality reproduces native species (Las Cuadras Park and the Cununyacu nursery).

As for the real estate business, the participants expressed that there is an attempt to please the client; therefore, in designing gardens, the priority is given to non-native decorative plants. It was also observed that some architects usually work autonomously, without consulting more documented specialists, regarding the plants that can be used, the relationship with the climatic conditions, and the care that should be provided to different species.

3.6. Community Participation
Community participation was a central category for the focus group. It was highlighted that organized communities at the neighborhood level play an important role in relation to Quito’s municipality. These organizations have used collective action to obtain financial and logistical support for green area management. The organized community groups are perceived as having significant knowledge of the opportunities to take advantage of the natural environments and unused spaces to which they have access. In the designing of gardens or community parks that have resulted from the so-called “community struggle,” native species were included. It is important for organized citizens to be included in the planning of urban green spaces.

4. Discussion
Quito has around 300,000 hectares of both urban and rural landscapes; a chain of active and inactive volcanoes surrounds the city, which generates the imaginary of a city at a high elevation with its population of 2,200,000 inhabitants nestled between mountains. Besides being the capital of Ecuador,
the city is known as the “middle of the world” due to its geographic location at latitude 0 (Carrió n, 2001).

The present study identified some perceptions that are part of the urban imaginaries related to Quito’s green spaces. These imaginaries are not directly related to the forest species or plants of the Andean landscape, but rather are determined by other elements that condition the green areas of the city, such as access to green spaces, their infrastructure, and the services for human interaction that these spaces contribute. For Carrió n [15], the imaginaries of Quito are directly related to its foundation and are defined by its location in the middle of the world, the perpendicular condition of the solar rays, as well as the location of the city between volcanoes, where Pichincha Volcano and its natural environment in particular is a determining factor in the city’s imagination. However, Carrió n [15] argued that the urban imaginaries of large cities have been redefined by the process of globalization [8]. In the case of Quito, it has lost its image as the middle of the world and seeks to incorporate dynamics related to the economic and political development of other cities in the United States, China, and Europe. In the present study, elements related to the perception and imagination of the city emerged, bringing together traditionalist identity aspects with foreign elements, which speaks precisely of the redefinition of the urban imaginaries of which Zhang wrote.

Participants classified Quito’s green spaces according to the adscription of its users to a certain social group, thus conditioning certain types of uses for the public and private green space and generating forms of urban segregation. It was considered that there are differences in the access to green areas depending on income, meaning that privileged social groups have direct access to customized architectural designs, whereas community organizations must manage these spaces through social action. Clichevsky [16], in his approach to informality and urban segregation in Latin America, argued that the population growth of Latin American cities has meant an increase in their historical problems of lack of adequate habitats, especially for the lower-income sectors.

This research takes into account some elements that transcend the sociodemographic and that are related to human intersubjectivity, which, from a psychological perspective, involves a significant indicator around the forms of use and appropriation of public and private green spaces, the displacement of the subjects in the city, the forms in which they are grouped, and the segregation modalities that are generated. One of the main results of our study shows that Quito’s inhabitants have more access to certain types of green areas than others according to their income. In this sense, it is relevant to refer to Bordieu’s [17] focus on class as a set of agents that are located in homogeneous conditions of existence that impose and produce systems of homogeneous provisions appropriate for engendering similar practices.

The appropriation, the imagination, and the forms of use of Quito’s green spaces were related to the forms of consumption of privileged social groups, to the detriment of other groups with less access to green spaces. Thus, the city’s public green areas were defined around the conservation of spaces and the interventions carried out on them. These interventions are determined by the practices of the individuals who use these spaces, as it is them who decide the places to visit, the activities to be carried out, and the people with whom to relate. According to Bordieu [17], there is a “magic barrier” that controls the choices that appear natural, but which are determined by the consumption of goods and services, which always implies a work of appropriation; that is, the consumer contributes to producing the product that is consumed. The author explained that the use of one space or another gives a distinction to the social subject, making it emerge as part of one or another group of subjects and giving it an identity.

One of the main categories that the study showed was the relationship of the identity of Quito with the flora and with the use of native versus “imposed” plants. There is a preference for “imported plants” in the high-income sectors over the emblematic nature of the Quito landscape. That is, the citizens of Quito were perceived as lacking identification with their native flora and being highly ignorant of the plants that can be used for managing private gardens, despite knowing, through historical and generational appropriation, the medicinal uses of the plants.
In contrast, participants gave special interest to the category of “social struggle” typical of the communities that have little access to green spaces, being that these groups issue demands to local institution to participate in the designing of gardens for collective public use. There are studies related to social and urban segregation in Latin American countries. In this regard, Guerrero Valdebenito [18], studying the social representations of insecurity in two districts of Santiago de Chile, found that the social differences reflected in the urban territory through various forms of social segregation determine who is in charge of the production of spaces, perceptions, and differentiated social histories that, in turn, are configured as effective symbolic borders. In our study, these symbolic borders were found to condition the access to and uses of the green areas as well as their management.

5. Conclusions
This research identified six categories related to the perceptions that condition the urban imaginaries concerning Quito’s green spaces. In this sense, it was evident that non-intervened or conserved green spaces, such as urban and peri-urban forests, are for contemplative use and would be less attractive to the population than provoked green spaces, the latter of which are characterized by facilitating human interaction and by having direct intervention of public institutions. However, participants showed a dissociation between community problems and urban planning with respect to green spaces.

The identification of public and private green spaces was related to potential forms of urban segregation. Participants considered that there are differences in access to green spaces based on the population’s income. They stated that privileged social groups have direct access to customized architectural designs, whereas community organizations manage these spaces through social action.

In the socio-ecological system of the city, different perceptions were identified as part of Quito’s green urban imaginaries. These are not necessarily related to forest species or plants of Quito’s landscape, but rather are determined by other elements that condition the city’s green spaces, such as their infrastructure and their potential for human interaction.

Acknowledgements
Funds for this project were provided by Universidad Tecnológica Indoamérica (Project: Uso sustentable de plantas nativas del DMQ, N Oleas). We thank Pablo Melo for transcribing the focus groups video tapes. We thank to all our focus group participants for kindly share their ideas.

References
[1] Cinard A and Bender T 2007 Urban Imaginaries (London: University of Minnesota)
[2] Bridge G and Watson S 2011 The New Blackwell Companion to the City (London: Wiley Blackwell)
[3] Taylor C 2004 Modern Social Imaginaries (Durham: Duke University Press)
[4] Cassián N, Escobar M G, Espinoza R, García R, Holzknecht M, and Jiménez C 2006 Imaginario Social: Una aproximación desde la obra de Michel Maffesoli. Athenea Digital, 9 1–26
[5] García Canclini N 2010 Imaginarios-Urbanos (Santiago)
[6] Villar Lozano M R, and Amaya Abello S 2010 Imaginarios colectivos y representación social en la forma de habitar los espacios urbanos. Barrios Pardo Rubio y Rincón de Suba Revista de Arquitectura, 12, 17–27
[7] Fernández Pichel S. 2010. Mitos e imaginarios colectivos. Frame, núm. 6, 265–284
[8] Zhang H, Chen B, Sun Z, and Bao Z 2013 Landscape perception and recreation needs in urban green space in Fuyang, Hangzhou, China Urban Forestry and Urban Greening, 12(1), 44–52
[9] Blaschke T 2006 The role of the spatial dimension within the framework of sustainable landscapes and natural capital Landscape and Urban Planning 75(3–4) 198–226
[10] Ginn F, and Francis R 2014 Urban Greening and Sustaining Urban Natures in London. In Sustainable London? The Future of a Global City (London) pp 283–304
[11] Morgan D L 1997 Focus groups as qualitative research. Qualitative Research Methods Series 16 80
[12] Clark L, Editor C and Marie A 2009 Scientific Inquiry JSPN 14 3
[13] Duggleby W 2005 What About Focus Group Interaction Data? *Qualitative Health Research* **15**(6) 832–840

[14] Strauss A, and Corbin J 2002 *Bases de la investigación cualitativa: técnicas y procedimientos para desarrollar la teoría fundamentada*. http://doi.org/10.4135/9781452230153

[15] Carrión F 2001 Algunos imaginarios urbanos desde centros históricos de Américas Latina. *La Ciudad Construida Urbanismo En América Latina*. Bogotá

[16] Clichevsky N 2000. *Informalidad y segregación urbana en América Latina. Una aproximación.* *Perú Económico* (Vol. 64). http://doi.org/10.1017/CBO9781107415324.004

[17] Bourdieu P 1979 *El espacio Social y sus Transformaciones. La Distinción: criterios y bases sociales del gusto*. (Universidad de Guadalajara.)

[18] Guerrero Valdebenito R M 2010. Segregación socio-urbana y representaciones sociales de la inseguridad en dos comunas de Santiago de Chile. *Cultura Y Representaciones Sociales*, **2**(3), 151–168. Retrieved from http://revistas.unam.mx/index.php/crs/article/view/16262