

Authors:

Carmen Pérez del Pulgar, UAB-ICTA; IMIM

Isabelle Anguelovski, UAB-ICREA, ICTA, IMIM

James Connolly, UAB-ICTA; IMIM

Title: Toward a green and playful city: Understanding the social and political production of children's relational wellbeing in Barcelona

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Abstract

This paper examines recent urban green amenities directed toward children and families and develops a novel understanding of the ways in which children's socio-natures are made/unmade through such interventions. We employ ethnographic and archival analysis in two new parks – Poble Nou and Nou Barris – in Barcelona to examine how a particular type of children's wellbeing, what we call "relational wellbeing" is shaped through the production of green-playful-child-friendly amenities. We find that planning processes and visions, urban development goals, and neighbourhood socio-material structure moderate the effect of green-playful-child-friendly amenities on relational wellbeing by directing how these spaces are used. This finding points toward the importance -- for equity concerns -- of accounting for the social and political processes that generate relational wellbeing. These processes are often reflective of broader economic agendas of urban transformation designed to extract value, control space, and/or legitimize speculative urban development – while sometimes eroding local socio-material conditions – to the point of producing green spaces of privilege, exclusion and control. The connection between relational wellbeing and green-playful-child-friendly interventions highlights the importance, within the urban environmental equity literature, of reconceptualising pathways of wellbeing and health beyond questions of spatial distribution of natural areas and offers a new perspective for the development of future guidelines on green-playful-child-friendly space policies.

Keywords

Barcelona, Children-Nature-Play, Urban Environmental Equity, Urban Political Ecology, Relational Wellbeing, Environmental Justice, gentrification

Introduction

Municipalities are increasingly creating and restoring green amenities directed toward children and families as an important part of efforts to shift toward more sustainable and healthy cities for all (Woolley 2006; Ekawati 2015; Anguelovski, Connolly, et al. 2018; Kondo et al. 2018; Lang and Rothenberg 2017). Yet, these amenities, which serve at once to promote greater contact with nature and 'free' or 'creative' play in cities, are increasingly reduced to universal prescriptions for achieving wellbeing within policy conversations guiding urban growth. However, there is a risk that such an

approach reifies and commodifies problematically narrow concepts of the child, nature, and play (Morgan 2017; Kraftl 2006) – potentially (re)producing uneven territorialisation at odds with equity and wellbeing goals (Rigolon and Flohr 2014).

In this paper, we challenge widely-held assumptions that child-friendly green spaces of play produce universal benefits (Douglas, Lennon, and Scott 2017; Flouri, Midouhas, and Joshi 2014; Ward et al. 2016) by focusing on the particularly relational aspects of wellbeing. Our original contribution flows from this challenge; we parse out the socio-political mechanisms that produce differences in what we call ‘relational wellbeing’ – the portion of overall wellbeing derived from social relations, connections, and interactions. By focusing on how design, socio-spatial context, and planning and politics shape relations in particular children’s spaces, we uncover an important part of the making/unmaking of children’s urban socio-natures. Specifically, we highlight the impacts of power and capital (e.g. Morgan, 2017; Shillington and Murnaghan, 2016) on the wellbeing outcomes of new green play spaces. Studies in children’s geography (van Vliet and Karsten 2015; Christensen and O’Brien 2003; Bartlett et al. 2016), urban environmental justice (Rigolon and Flohr 2014), and social determinants of health (Dadvand et al. 2015; Ebbeling, Pawlak, and Ludwig 2002; J. Ward et al. 2016; Rydin et al. 2011) have indeed overlooked the ways in which such social and political processes shape children’s wider socio-natures and in turn relational wellbeing.

Using Barcelona as a critical case study where the green and playful agenda has permeated recent urban development and municipal practice, we examine two new child-oriented park areas with contrasting political visions and processes of space production. These two parks also have different socio-economic characteristics: The Parc Central de Nou Barris is exemplary of a traditional working-class neighbourhood while the Parc Central de Poble Nou exemplifies a recently gentrifying neighbourhood. Using archival data and ethnographic observation methods, we qualitatively analyze the ways in which socio-material and political foundations differentially co-produce relational wellbeing for children. This is a process that is not specific to Barcelona. Rather, the underlying dynamics we uncover apply across many cities turning toward the intersection of greening and child’s play as a means of increasing livability.

Results show that neighbourhood socio-material conditions and political processes of space production seem to undermine the relationship between green space and relational wellbeing in some cases, while, in other cases support greater relational wellbeing. Such findings highlight the importance, within the ample urban environmental health and environmental equity literature, of reconceptualising drivers of and pathways for wellbeing and health benefits beyond questions of green space access and distribution throughout the city. They also call for the critical examination of internationally-praised urban planning practices that place social equity, wellbeing, and access to green space for all at the center of municipal action but, might, in some cases, undermine the creation of benefits for some social groups.

The production of (uneven) urban space in the green-playful-child-friendly city

The changing status of children’s urban socio-natures

Urban space is ‘*lived*’ space (Raffestin 2012) composed of messy relations, ties, and representations that people build within their material and social environment. The full human and environmental composition of urban lived space has been described as “*social space*” (Lefebvre 1974), “*territory*”

(Raffestin 2012) or “*socio-nature*” (Swyngedouw 1996). These human-human and human-environment relations are the “*hidden, dissimulated structure of the everyday*” (Raffestin 2012) that co-produce space, human experience, and wellbeing (Smith and Reid 2017). Thus, urban socio-nature is built on a series of complex metabolic processes in which social and natural systems dialectically produce the city (Swyngedouw 1996). Through socio-natures, people construct nature and themselves both discursively and materially as a human-nature outcome and relation (Heynen, Kaika, and Swyngedouw 2006). And, in turn, these processes are deeply political in the sense that they are produced, circulated and interpreted through (and for) power (Heynen 2006).

Children’s urban socio-natures are specifically those aspects of the metabolic processes producing cities that shape the urban life of those individuals understood in a given time and place to be a child – and shaping their construction of nature-human relations. The socio-natures of many Western cities are premised on an historical disregard for children in urban planning. Urban development trends in Europe and the US historically produced unsustainable, adult-centered environments that adversely affected children’s healthy development and wellbeing (Christensen & O’Brien, 2003; Hart, 1979; Karsten, 2002; Lynch, 1977; Tonucci, 1997; Valentine, 1997; Van den Berg, 2013; Ward, 1978). Such adverse environments occurred through children’s institutionalization, enclosure and control (Zeicher 2001; De Visscher and Bouverne-de Bie 2008), and through poor free outdoor play and contact with nature (Louv 2005).

Yet, today many city administrations are seeking to reverse these trends by investing ample resources in green space and infrastructure projects (Anguelovski, Connolly, et al. 2018; Kondo et al. 2018; Lang and Rothenberg 2017; Woolley 2006; Ekawati 2015). These investments are a targeted effort to improve the social and environmental conditions that make up children’s socio-natures. They respond to and further build on research highlighting the health and wellbeing benefits of quality urban outdoor environments. In all, this research shows that green outdoor amenities improve local environmental air and noise conditions and offer sites for restorative activities, with physical (Dadvand et al. 2015; Gascon et al. 2016) and mental health benefits (Triguero-Mas et al. 2017).

The emerging reformulation of children’s socio-natures is premised on a universal notion of wellbeing developed from measures in public health research of specific health outcomes. A universal notion of wellbeing is defined here as the somatic and psychic state of a person that allows its proper functioning (Zaror et al. 2019). This understanding of wellbeing is usually assumed to be induced by the exposition to specific material conditions or necessary things to “*live well*”. Environmental epidemiologists, for instance, argue that green areas can improve wellbeing outcomes by helping to address obesity (Ebbeling et al., 2002), attentional functioning needs (Taylor et al., 2001), risk of ocular vision impairment (Dadvand et al., 2017) and lower cognitive development (Dadvand et al., 2015; Ward, Duncan, Jarden et al. 2016). This evidence has been used to make an argument of the universal benefits for children’s wellbeing of an exposure to green socio-natures.

Consequently, this common narrative of universal wellbeing benefits reduces understanding of children’s socio-natures to simple types of play equipment or physical access to amenities – an approach that recent public health scholarship has started to question (Anguelovski, et al. 2018; Anguelovski et al., forthcoming). In that approach, children are assumed to be homogeneous, pre-existing, innocent, and pure subjects with inherent, direct, and universal connections to nature (Taylor, 2011). However, this understanding ignores other social categories, such as gender, race, ethnicity, class, and physical and mental abilities (Kraftl 2006). It also abstracts away the differences in understanding childhood across space, time and social position (Ariès 1962; Mintz and Kellogg 1988; Thompson 1963). As such, common narratives around greening, play, and health impacts obscure the

ways in which the everyday urbanism of children's green spaces actually enables or prevents construction of play and access to play.

Toward a focus on relational wellbeing in children's urban socio-natures

The generalized approach to wellbeing does not often account for the specifically relational aspects that structure a great deal of children's experiences in cities. Green amenities are not just places to receive environmental inputs; they are also places of interaction. They are sites of peer and intergenerational exchange where children can explore both themselves and the material and social surroundings (Stevens 2007), acquire a social network, and negotiate their cultural and social identities (Christensen and O'Brien 2003; Formoso, Weber, and Atkins 2010). Green spaces are especially important as centers of 'free' or 'creative' play (A. F. Taylor et al. 1998; Douglas, Lennon, and Scott 2017; Flouri, Midouhas, and Joshi 2014; J. Ward et al. 2016). Moreover, children's greater access to green spaces tends to foster environmental stewardship by increasing their knowledge of and attachment to the natural environment (Kals, Schumacher, and Montada 1999; Chawla 2007; Derr, Chawla, and van Vliet 2017; Broom 2017; Fisher, Svendsen, and Connolly 2015; Chawla 2015), which also plays a role in wellbeing through regular social and environmental contacts.

In response, in this paper we aim to contribute to a research agenda that addresses an under-theorization of the underlying ontologies and pathways for wellbeing (e.g. Smith and Reid 2017). Specifically, we look at how relational wellbeing is differentially produced in two urban green play spaces. We examine some of the complexities and nuances embedded in the production of children's urban socio-natures and develop an understanding of a particularized notion of wellbeing – relational wellbeing, which is strongly mediated by political and socio-material relations. In all, we aim at refining the ways we view equity and wellbeing within green-playful-child-friendly spaces beyond a traditionally decontextualized analysis of access and distribution of amenities.

Furthermore, we employ relational wellbeing as a conceptual tool for understanding better how children's wellbeing in large cities embedded in global economic and financial flows (Moreno 2014) can be subsumed into market logics of demand and supply, favoring the creation of spaces as commodities designed primarily to increase real estate profits (van Vliet and Karsten 2015). The travel, tourism, hospitality, and real estate industries are now selling green-playful-child-friendly-ness as a consumable product to middle-class residents who have the capacity to move according to residential preferences (van Vliet and Karsten 2015; Boterman and Bridge 2015; Van den Berg 2013). Some families link access to these spaces with the ability to remain in the city after having children (Karsten 2002; Lilius 2018), and elevate them to essential aspects of a new urban middle class identity (Rutz and Balkan 2009; Donner 2017; Boterman and Bridge 2015; Van den Berg 2013).

This entrepreneurial (Harvey 2006) market and neoliberal (Rossi 2017; Horton 2016) logic in the process of green-playful-child-friendly space production also shapes questions of distribution and inclusion (Goodling et al., 2015). As the ample urban environmental justice and equity literature has demonstrated, children's leisure spaces and playgrounds tend to be unevenly distributed, being spatially concentrated in wealthier neighbourhoods or in the outskirts of the city, and in turn do not offer equal access to marginalized or discriminated groups, including children within those groups (Karsten 2002; Rigolon and Flohr 2014; Rigolon 2017). Child-friendly (Van den Berg 2013) and green (Anguelovski et al., 2018; Hamilton & Curran, 2013; Heynen et al., 2006; Pearsall, 2010; Quastel, 2009; Quastel et al., 2012; Wolch et al., 2014) amenities can even contribute – sometimes in combination with other revitalization strategies – to increased rent and property value, leading to (green)

gentrification trends (Dooling 2009; Gould and Lewis 2017; Checker 2011; Van den Berg 2013) and to other socio-cultural exclusionary trends (Anguelovski et al., forthcoming). Similar trends of gentrification have been established in relation to park-based playful urbanism and the “*disneyfication*” of cities (Zukin 1995b; Bryman 2004).

Bringing back alternative voices in front of a historical disregard and a universal model

The universalized notion of children’s wellbeing that lies behind many green-playful-child-friendly spaces turns the historical disregard for children in urban planning on its head, but also dismisses alternative visions for what is desirable (Zukin 1995a; De Visscher and Bouverne-de Bie 2008; Van den Berg 2013). Shaping the notion of wellbeing that drives the creation of such spaces around market demand prevents historically disempowered groups (at the intersection of class, racial, ethnic, gender, and sexual status) from transforming their needs into claims for urban territory because those needs are often not compatible with the private accumulation of capital (Donner 2017). In addition, green-playful-child-friendly amenities may be perceived as fundamentally problematic sites of power, conflict, violence, oppression, racism and/or as devices of social control for minorities, immigrants and/or working class residents (Brownlow 2006; Hamilton and Curran 2013; Byrne and Wolch 2009; Wolch, Byrne, and Newell 2014). Finally – and importantly for our findings here – the universalizing narrative around such spaces overlooks different class-based norms for free unstructured play (Holloway and Pimlott-Wilson 2018; De Visscher and Bouverne-de Bie 2008; Van den Berg 2013). Any view apart from a playful, pristine childhood becomes associated with an abject un-child-like other (Aitken 2001; Van den Berg 2013; De Visscher and Bouverne-de Bie 2008) or “*waste*” (Katz 2008) – the alternative experience is equated with a degraded urban environment and dismissed within the green-playful-child-friendly urbanism narrative.

Despite – at least discursively – downplaying the poor wellbeing outcomes that may result for some groups from existing profit-oriented urban interventions, removing alternative voices serves to mobilize a consensus around urban policy goals that avoid challenging the socio-ecological contradictions of unsustainable, unjust, and androcentric growth. By obscuring the political construction of spaces and the contestation they might trigger, narratives around children’s access to green space and wellbeing could paradoxically eventually aggravate urban socio-environmental inequalities by generating green-playful-child-friendly cities with narrow wellbeing benefits for an exclusive number and type of residents. In response, our paper also examines the set of environmental inequities produced by dominant representations and idealizations of nature and children (e.g. Shillington and Murnaghan 2016) and by the implementation processes of specific interventions. Our central questions are thus: How does the political and social production of green-playful-child-friendly amenities shape relational wellbeing in different contexts? And how do those processes of producing relational wellbeing help refine our understanding of environmental inequities?

Transformation of urban socio-natures in Barcelona 1975-2016

We selected Barcelona as a site to examine the recent transformation of children’s urban socio-natures because the city has been extensively engaged in the creation of new public and green spaces since Spain’s transition to democracy in 1979, with a strong emphasis on improving neighbourhood quality of life and children’s wellbeing. Since that time, the city has created roughly 300 new public green spaces, many with children’s play areas as central aspects. Furthermore, Barcelona’s recent urban transformation is characterized by different phases, with clear shifts in the role of economic, social, and political interests; as well as scales of interventions and involved stakeholders across time and space. Its practice of urban planning has received much international attention, with many praising its emphasis on neighborhood urbanism and access to new physical infrastructure and calling for it to be used in broader international applications (Marshall 2000; Monclús 2003), although others have raised

criticisms (Anguelovski, 2014; Arbaci & Tapada-Berteli, 2012; Borja et al., 2004). This recent history makes Barcelona a critical case to examine the complex and uneven effects of the production of green-playful-child-friendly socio-natures.

Early 1980s livability interventions in Barcelona were mostly led by the municipal government in conjunction with social movements and neighbourhood associations. They were geared towards localized and small-scale interventions creating quality open and green spaces with children's play spaces often built in. This early approach especially targeted neighbourhoods with a historical deficit of public space, such as degraded areas of the historic center (e.g. Jardín Emili Vendrell, 1984), working class neighbourhoods (e.g. Parc de la Espanya Industrial, 1985), and more peripheral neighbourhoods (e.g. Parc del Clot, 1986).

The preparations for the 1992 Olympic Games inaugurated a new period characterized by the presence of large operators – mostly public-private partnerships and mixed capital companies – executing extensive urban transformations (Montaner et al., 2011) without negotiating with small associations. Most public spaces and parks built during that period covered a much greater scale of action and featured public art installations authored by internationally acclaimed artists and architects (e.g. Joan Miró, Fernando Botero, Santiago Calatrava, Norman Foster). Many of those new parks raised eyebrows among some local planners and resident groups for being considered as tourist-oriented spaces of consumption and design rather than spaces responding to the needs of neighbourhood residents (Anguelovski et al., 2018).

The post-1992 Olympic games consolidated the leading role of private operators – mostly real estate companies (Montaner, Álvarez, and Muxí 2011) in a context of economic crisis for public administrations and increase of real estate values and tourism. Representative of this time (1997-2004) the district of Sant Martí located just up the coast from the historic city center was radically transformed through new public space and greening interventions anchored by the “Diagonal Mar” luxury development and park; the establishment of the “22@ district” as a hub for tech and creative firms with a new Central Park (Parc Central de Poble Nou); and the construction of the Parc del Forum for the 2004 *Forum of Cultures* international fair along the last undeveloped sections of the Barcelona waterfront. Green space production was embedded in a competitive urbanism logic to attract new investors and visitors, with decision-making influenced by developers and real estate speculation (Montaner, Álvarez, and Muxí 2011). Several observers lament the resulting direct social costs, such as displacement, loss of industrial working-class cultural heritage (Borja, 2010) and streets with scant urban life (Montaner, Álvarez, and Muxí 2011). Since 2004, the municipality has linked open space policy with global sustainability agendas to emphasize green infrastructure, biodiversity, and re-naturing projects through new green amenities including parks, forests, ecological corridors, streams, community gardens, and urban farms (Anguelovski et al., 2018; Depietri et al., 2016).

Meanwhile, children's wellbeing and access to green space has played a strong role in the Barcelona green agenda in recent decades. Since 1990, the municipality has produced regulatory frameworks (e.g. periodic Children and Adolescence Plans, Charter for Educating Cities) that direct public action. The main objectives of children-focused interventions in Barcelona have generally been to guarantee children's universal access to urban resources and services and promote more and better facilities and services for education, leisure and health. Most recently, several plans and objectivesⁱ highlight the importance of children's right to free play and access to nature and two main strategies aim to stimulate free outdoor play: the 2018 governmental measure “*Barcelona dona Molt de Joc*” (Barcelona gives a lot of play)ⁱⁱ and the 2016 (and beyond) creation of pacified “superblocks”ⁱⁱⁱ.

Materials and Methods

In this study, we compare the creation and use of green play spaces in two neighbourhoods – Poble Nou and Nou Barris. We describe their characteristics in *Table 1* below.

Table 1. Case study comparison model

	PARC CENTRAL DE POBLE NOU-St. Martí district	PARC CENTRAL DE NOU BARRIS-Nou Barris district
SIMILAR starting points in 1990	TIME: same period (end of 90s).	
	Construction started in 1999 and park opened in 2008	Construction started in 1992 and park opened in stages between 1999 and 2003
	LOCATION: First periphery of Barcelona	
	DIMENSION: Large non-urbanized urban spaces with a high proportion of public land	
	SOCIAL COMPOSITION: above Barcelona-average percentage of children (14.10% for Nou Barris district and 14.08% for St. Martí district)	
	Gentrifying neighbourhood	Working class neighbourhood
DIFFERENT 1990-2018 Political Processes of transformation & Social composition (1990-2018)	SOCIAL COMPOSITION:	
	High income Rapidly growing percentage of college educated Low presence of Global South residents	Low income Low percentage of college educated High presence Global South residents
	URBAN TRANSFORMATION:	
	<i>Scale</i>	
	Immersed in large city- scale strategic transformation	District-neighbourhood scale transformation
	<i>Benefits</i>	
	Part of Barcelona's attempt to gain competitive advantage in the ICT sector/world economy	Community: Compensation of developmentalist Franco's phase and provision with equipment to historically underprovided community. Public space for the neighbours.
	Promotion and construction of housing for ICT and/or international expatriate workers	Creation of social housing
	<i>Framing/Vision</i>	
	Radical transformation of the neighbourhood Imposition of "new" spectacular, isolated, sustainable, district and park and erosion of industrial heritage, historical layout of the area	Continuity Response to neighbourhood demands and remediation of historical lack of quality public spaces, community equipment and affordable housing
	Privatization of infrastructure works Redevelopment and urbanization of more than 35 km of streets and public spaces	Gain of public space overall through expropriation
	<i>Balance of Power</i>	
	Leading role of private sector	Leading role of public sector
Privatization of the public land	Expropriation of private land for the creation of public space	
DESIGN OF THE PARK:		
Role of Park: Playful and festive Isolated park Wild-alike aesthetic Unstructured play equipment	Role of Park: Socio-cultural Connecting park Urban aesthetic Structured play equipment	

To conduct our study, we used both archival and ethnographic observation methods. On the one hand, we carried out 30 hours of observation in each park in May 2018, over two afternoons (from 17:00 until 21:00) between Monday and Thursday, one Friday afternoon (from 17:00 to 21:00), one day-long observation on a Saturday and one day-long observation on a Sunday (in both cases from 11:00 until 20:00) for each park in order to get an in-depth sense of each park's uses, users, and relationships between them. The chosen time slots covered midweek after school play, Friday afternoon play and weekend leisure times, in order to discriminate the effect of these different types of time and days on

the uses, relations and duration of activities. This selection also helped us observe a variety of users and interactions between them.

We systematized our observations in three ways in order to combine a structured observation of play and recreation in the park (e.g. McKenzie et al. 2006, 2000) with an ethnographic non-structured approach to observation (DeWalt and DeWalt 1989; Marshall and Rossman 1995). First, through a checklist which included questions about physical access to the park, safety, urban density characteristics, types, quality, usability, organization and distribution of equipment (including those for children), green space and natural element characteristics and composition and maintenance concerns. Second, we designed a diagramming tool (See *Figure 1*) to keep systematic track of the parks user's physical activity levels, activity modes/types, estimated age, gender and ethnic groupings, which we classified alongside the intensity of the physical activity and the interacting elements/agents – these were our proxy for type of play and socio-material interaction. Furthermore, we employed a field notebook with detailed descriptions of the type, location and duration of activities,^{iv} informal conversations, observable aspects of participants' ethnic and socio demographic characteristics, and the relations and interactions developed in the space. We built, adjusted, and completed our diagram and detailed descriptions continuously throughout field work, while moving around the park and stopping for especially long intervals of observation in each park's most crowded areas.

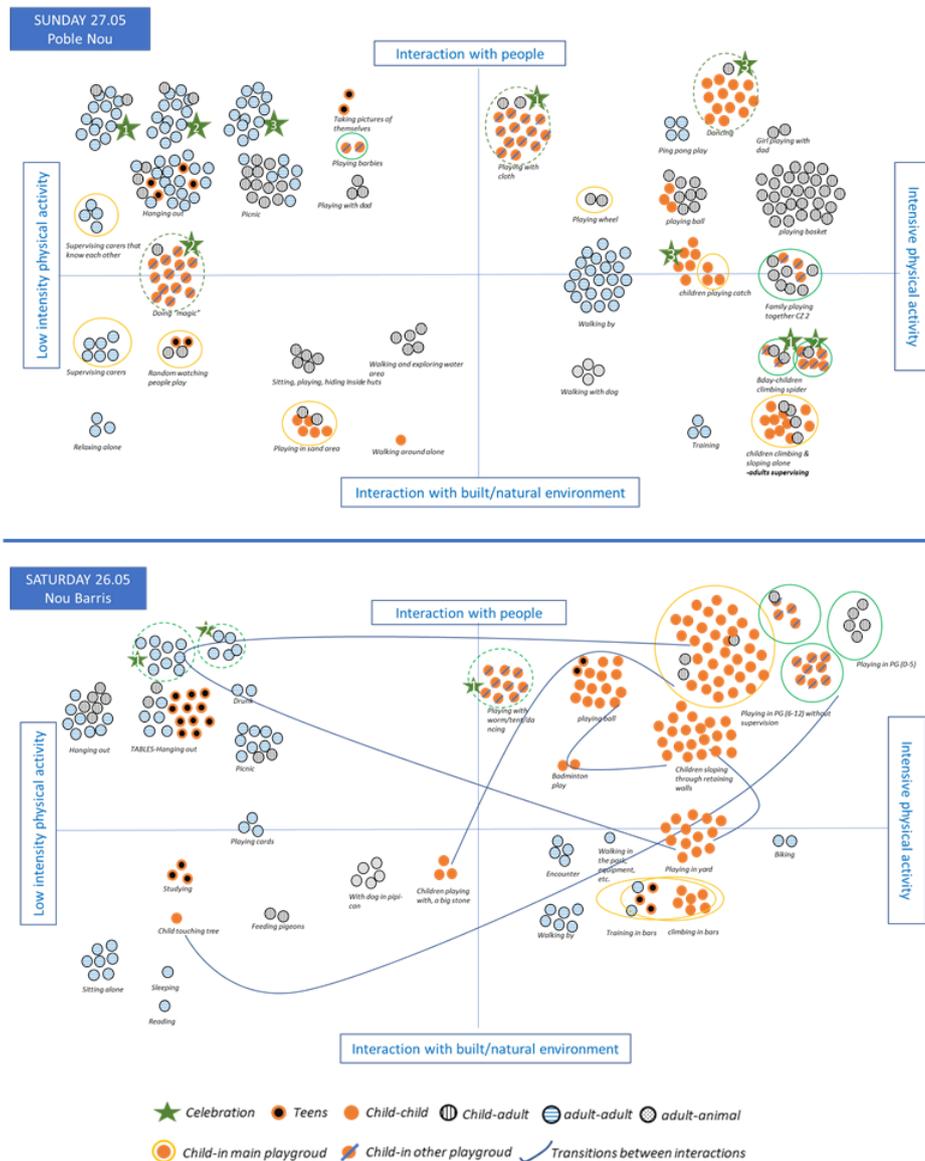


Figure 1 Diagram of activities based on the intensity of the physical activity, of the interactions, and the interacting elements/agents. Two examples of a weekend day in May in Parc Central de Poble Nou and Parc Central de Nou Barris

Field data was analysed using grounded theory techniques, (Strauss and Corbin 1990) following an iterative process of data collection and analysis^v and using the insights of the analysis carried out after each session of observation to inform the following iteration of data collection. The final most relevant codes related to relational wellbeing from the analysis are: “self-management of risk”, “exploration of oneself”, “bodily and communicative control over rules and codes of conduct”, “shared meanings and affordances”, “management of material and social boundaries”, “negotiation of social identity”, “social network”, “exploration of social and material environment”, “attachment to environment and sense of place”, “routines”, “regimes of care” “regimes of space”, “regimes of time”.

In addition, we supplemented field observations with archival analysis of roughly 150 pages of documents related to the process of planning/transformation that generated these parks and the design attributes of each park, including the modifications of the General Municipal Plan of 1976 for the creation of the Central Park of Poble Nou^{vi}, the modification for the Central Park of Nou Barris^{vii} and the different proposals that competed for the design of each park. The archival data contextualized the political processes of production of these socio-natures and situated the observed socio-material relations in the neighbourhood’s historical social and political context. These archival data were

thematically coded according to the discourses, normative visions (e.g. of the “good” city or neighbourhood), identified social concerns or problems, definition of beneficiaries, coalitions of power, material design of the built environment and role of “nature” suggested in the analysed processes of urban transformations.

Our approach does not assume that green amenities have a specific, deterministic effect on children’s relational wellbeing *per se*. Rather, we understand green-playful-child-friendly socio-natures as produced by a set of political and social processes that generate a medium in which relations of wellbeing arise or not (e.g. Smith & Reid, 2017). Thus, we are looking for evidence of processes at work below the surface-level and traditional target indicators of wellbeing that may shape the effects on relational wellbeing. We specifically focus on the following socio-material relations as indicators of relational wellbeing within the context of children’s play activities: personal (exploration of oneself, self-management of risk); social (negotiation of social identity); and socio-environmental (exploration of material environment, environmental knowledge, attachment to nature). We also hypothesise that the social composition of the neighbourhood will shape the creation of socio-material relations. A visualisation of the conceptual framework for data collection and analysis is presented in *Figure 2*.

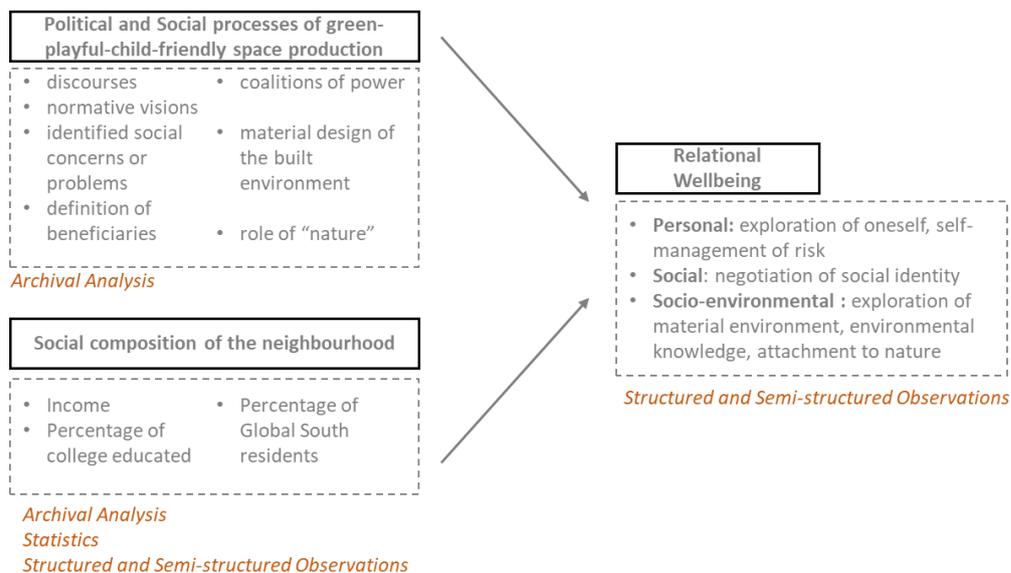


Figure 2 Conceptual framework for data collection and analysis

Results: A ground-level view of children’s socio-natures in Barcelona

In this section we analyse the production of children’s socio-natures and how those shape relational wellbeing based on our different data sources.

Assemblage of wellbeing in a structured urban socio-nature: the Parc Central de Nou Barris *Green space remediation for a historically underserved community*

Nou Barris is the district in Barcelona with the lowest index of family economic capacity, a low proportion of college-educated residents in 2016 (11.11% vs. 29.14% city wide average; Barcelona Statistics Department), the second highest proportion of residents from the Global South in Barcelona (7.31% in 2016), and above average percentage of children aged 0-14 (14.11 % vs 12.99% city wide average in 2016).

According to archival documents, the creation of the Parc Central de Nou Barris in 1992 was underpinned by a municipal commitment to remediate environmental inequities indicated by a

historical lack of quality public spaces, community facilities, and affordable housing in this traditionally working-class district. It responded to longstanding resident demands articulated through a historically active network of neighbourhood associations, which still persists today.^{viii} The Park is located on the site of an old Psychiatric Hospital that the 1976 General Metropolitan Plan (PGM) and a 1992 Special Plan^{ix} decided to dedicate to a large green space, to community facilities (e.g. the Nou Barris district headquarter, local police offices, student housing, and a library) and to social housing. The planning of the park represented an important milestone in the interruption of the speculative and developmental urbanization of the area of the previous decade and its substitution for a period of suture urbanism, *"reliving what had been separated, of intervening in the regeneration and dignifying of spaces marginalized by Francoist speculation"*^x.

According to the 1992 Special Plan⁹, the amount of land for housing was reduced to a strip located along the Park, but with a strong ambition to devote these to quality public housing. The land reserved for community facilities largely re-used the remaining structure of the old Psychiatric hospital and its environs. Finally, the ground where the park was planned – that was previously privately owned and ready to be developed – was obtained by expropriation legitimated by the 1992 Plan.^{xi} As a result, public space was regained, community facilities were built, and more social housing was provided for *vis a vis* the previous state of the metropolitan plan. The Parc Central de Nou Barris and its surrounding transformations had a strong impact on discourse about the local community, as revealed by the narrative used to explain the origin of and visions behind the park in official documents⁸ and informative signs throughout the community amenity areas.



Figure 3 Parc Central de Nou Barris. The design reflects the integration of different spaces and diversity of uses

Source: Pla Especial d'ordenació de l'àmbit de l'antic institut mental-Forum Nord de la Tecnologia-1992, Municipal Archive of Poble Nou. Scale 1:5.000m

Material coherence and continuity of the park-design

The park has a rather urban aesthetic, reflected in the predominance of paved triangular terraces connected by brick-ramps used as contention slopes (see Figure 4.b,c) and the same vertical wooden structures providing daytime shade and night lights that are present across the neighbourhood (see Figure 4.a). This design, together with the absence of a clear perimeter, contributes to a sense of

continuity and visual coherence, integration, and flow between the neighbourhood physical elements – houses, streets, equipment – and its natural features. Children’s play equipment is mostly composed of fenced playgrounds – three out of four playgrounds are fenced (see *Figure 4.d,e,f*) – and contain objects that seem likely to shape and even dictate children’s play. Benches are spread throughout the park, many of them around the fenced playgrounds, supporting children’s supervision, and the abundant communal areas and picnic tables.



a. Vertical iconic structures



d. Fenced playground. Castle and slide



b. Brick slopes



e. Fenced playground-Individual rocking horses



c. Brick slopes



f. Fenced playground with hanging bars

Figure 4 Parc Central de Nou Barris. Material design of built environment. Design and elements allow for integration of diverse infrastructure, natural and non-natural elements, users, and uses

Socio-material relations in the Parc de Nou Barris

At first sight, abundant socio-environmental interactions take place in the park amongst people of a diversity of ages and spoken languages (Catalan, Spanish-Castellano, Spanish-Argentinian; Spanish-Dominican; Portuguese/Brazilian, Russian, Slavic languages or Moroccan) who seem to be involved in regular daily routine activities in and around the park throughout most of the time of observation. During working weekdays, teenagers carrying their backpacks enter the library or sit in the lawn to do homework and chat. Elderly – mostly white and Spanish residents – take walks in the park or sit in groups and engage in informal talk about their upcoming summer holidays or some health issues. Middle-age adults walk by and casually meet acquaintances and chat. Homeless people (many of them black) gather around the “*Centre de Atenció Integral*,”^{xii} complaining about the difficulty of getting accepted in a music audition if you’re not “*Spanish-Spanish*” or the discriminations faced when begging on the streets. Parents from diverse backgrounds (in general, either Spanish or from the Global South) wait at a school entrance in front of the park, either gathering for a while chatting over their latest tax declaration, scheduling appointments for dinner, breastfeeding, asking for someone to take care of the kids for a night, or using that time to quickly enter the local market and buy some groceries. During weekends, the park is an active and dynamic meeting point with a myriad of children playing, families and groups of friends – with and without children – organizing picnics or birthday celebrations, elderly people taking a walk and sunbathing on the benches, and teenagers gathering to sing rap, skate, smoke and/or play cards.

There are abundant instances of children’s free play and exploration of the environment. Children frequently decide the type, location, and rules of their play – either individually or in peer-groups, but without the guidance of an adult, which is also illustrated in the frequent instances of child-child interactions in our diagram (See example of one observation session in *Figure 1* where child-child interactions are represented in orange). Children also exhibit a considerable degree of exploration and shared knowledge of their surrounding social and material environment. Free play is apparent in the seemingly improvised art of children’s activities. Children’s use of the equipment often challenges the standard usage of the equipment. There were regular observations such as, “*children slide down the contention slopes as if they were slides*”, “*children hang themselves from bike racks as if these were monkey bars*” (Fieldwork Notes, several days). Also, children play throughout the entire park and their range of movement seems to be only limited by the adjacent traffic streets and not by the fenced playgrounds. Children enter and exit fenced playgrounds whenever they want, flowing from one to another as if moving between rooms in a house, in a safe, familiar, and comfortable manner. Fenced playgrounds also seem to support toddlers’ independent exploration of themselves and the environment given that some parents/caregivers seem to take advantage of the safety and visibility of the fenced playgrounds to leave toddlers alone for a while inside while playing with older children or chatting with other adults.

There are also numerous unexpected transitions in the type of play (e.g. from quiet to active play), the composition of the group playing – including interactions with strangers – (e.g. from individual to group play), and the objects of interaction (e.g. from interacting with a ball to interacting with a wooden stick to interacting with an ant). The high degree of fluctuation between spaces and types of activities was also observable through the very frequent lines representing transitions between activities and places in our diagrams (See example of one observation session in *Figure 1*).

This relates to one of the main patterns observed in Parc de Nou Barris. Although the interactions with the surrounding environment mostly start out involving *non-green/non-natural* elements such as the playing equipment, the contention walls, the light and shade structures or objects brought from home

(e.g. a ball), these interactions frequently stimulate and evolve into interactions with the *natural* environment, such as water, wooden sticks, trees and animals.

Furthermore, another main pattern in Nou Barris was that children's socio-material relations were characterized by a high degree of control over their surrounding material environment, which allowed for an individual or peer-based management of risk, rules and resources. We recorded recurrent instances of children's awareness of their own aptitudes and limits (e.g. *"I can't do this", says a girl to her dad*; Fieldwork Notes Tuesday 8.05, 18:00) or warnings to other kids about the risks involved in certain activities (e.g. *"take care when sliding, in this way you will fall on your head"*; *"if you go into the water and get wet your mum will be very angry with you"*, *"if you get on this (big wheel) you will feel very dizzy"*; Fieldwork Notes, several days). There were also hints of understanding of rules (e.g. *"I like the water area, but bathing is not permitted, and anyway, I would not like it because the water is very dirty"*; Fieldwork notes, Wednesday 16.05, 19:00) and peer-organization of norms (e.g. we observed that children tend to queue for using the Tyrolean, except when it's their first time of the day, when it seems to be accepted to skip the queue). Additionally, the children had a good geographic orientation vis-à-vis the surrounding environment (e.g. *"let's go to the water area"*; *"I live there"*; Fieldwork notes, Wednesday 16.05, 18:00), showing attachment to the space (e.g. *"I like the spider/climbing areas. There is one here and one over there"*; Fieldwork notes, Tuesday 8.05, 18:00), and held considerable knowledge of the available resources (e.g. we repeatedly observed carton boxes being collected from nearby stores to be shared and used to better slip down the contention walls).

The set of socio-material relations at work and the high degree of communicative and bodily exploration, knowledge, control, attachment and familiarity that children seemed to have with the social and material environment was at odds with the expected affordances and opportunities offered by a non-*"natural"*, structured and fenced socio-nature. Nevertheless, unstructured and spontaneous relations among kids and their environment seem to emerge because of the way this socio-nature was inhabited and owned by the apparently working-class and/or minority residents in the park. The frequency with which mostly children but also teenagers, adults and elderly went to the park and the long time they spent in the park revealed a socio-nature comprised of proximate, ordinary, and comfortable public space for residents' fulfilment of their social and material needs, inhabited and cared for as an extension of the domestic sphere.

A shared regime of care towards children, the integration of adults in the space, and a sense of community precipitate the production of these spaces of play as a familiar, supportive and nurturing arena characterized by safety and informal care that facilitates the creation of relational wellbeing for children and adults. Child care activities were often shared among adult acquaintances who gathered together (e.g. *"one or two adult members of the group at a time seem to care for children, bringing them a snack, playing with them or keeping an eye"*; Fieldwork Saturday 26.05, 15:00). During weekends, as large group picnics allowed children to play with one another and/or with adults, adult participants did not seem to be in the park only in a supervisory/childcare mode but also in order to socialize with peers and enjoy their free time. This was also perceptible through the diagram, in which we recorded consistently frequent adult-adult interactions (See example of one observation session in *Figure 1* where adult-adult interactions are represented in striped blue). Their presence reinforced a social network for them and for the children.

Last, a sense of community was perceptible, especially when new children and adults joined the park and upon arrival greeted each other - sometimes with an energetic *"hola familia"/ "hi, family."* During working days, we also encountered a general sense of co-responsibility – also stemming from strangers – towards children's safety (e.g. *"a young man training in the bars calls the attention of a girl who is climbing too high and keeps an eye on the girl until she finishes climbing"* Fieldwork Notes Tuesday

8.05, 18:00) and amusement (e.g. parents play and interact with their offspring, but also with other children in the playground; and the observation of “teenagers training in bars and listening to music (trap) briefly interacting with two nearby girls”; Fieldwork notes Wednesday 16.05, 19:00).

Scheduled structured play in a spectacular and “wild” socio-nature: the Parc Central de Poble Nou

Radical transformation of a neighbourhood for a city-wide redevelopment strategy

According to archival documents, in the late 1990s, Poble Nou was a low-income, working-class post-industrial neighbourhood that “had not participated in the dynamic of urban improvement of the surrounding renewed areas.”^{xiii} During the early 2000s, the regeneration of Poble Nou and the creation of the Parc Central del Poble Nou were tightly linked with a large-scale city-wide redevelopment strategy. In Poble Nou, this strategy called for a new creative, technology-centered, and sustainable hub known as the “22@ district” that would “boost Barcelona’s competitive advantage”¹³ and bring the city into line with the global transition from a “capitalist industrial society into a digital and knowledge driven society” of the 21st century¹³. This general strategy holds up to today.

This strong entrepreneurial framework used by the city Administration at the time was explicit that “the increase of the housing stock should be minimal, and ... dedicated to the residence of the workers of the companies”¹³, and not the existing majority of low-educated residents that lived in Poble Nou at the end of the 1990s.¹³ Furthermore, as stated in the archival documents, there was an initial capital prerequisite required for a developer to benefit from 22@ support (the minimum intervention unit was the block and main actors/partners had to “own 60% of the land”¹³), which resulted in high private investment and in the creation of a new public-private capital company – 22@bcn S.A. – to facilitate the transformation. The radical top-down intervention in Poble Nou socially, physically, productively, and functionally transformed the neighbourhood and swept away a large percentage of residents through concomitant gentrification and displacement dynamics, transformation of the material environment that had been associated with an industrial heritage, and alteration of the existing sense of community (Montaner, Álvarez, and Muxí 2011; Anguelovski, Connolly, et al. 2018). Today this heavily gentrifying neighbourhood has an index of economic capacity similar to Barcelona’s average (92.63 in 2016^{xiv}), a below-average percentage of residents from the Global South (4.67% in 2016), increasing presence of college educated residents (23.21% vs. 29.14% city wide average^{xv}), above average percentage of children aged 0-14 (14.08 % vs 12.99% city wide average in 2016), loss of public space and a growing building stock of high-end housing and contemporary unique-architecture. Its current demographic and social composition thus varies quite dramatically from that of Nou Barris.

Spectacular and isolated design

In the late 1990s, the construction of the Parc Central del Poble Nou was contemplated as part of this broader economic development agenda and as a central element of the area’s “playful and festive offer of activities.”^{xvi} A review of historical documents reveals the extent to which the final selected project, led by French architect Jean Nouvel, reflected the same lack of consideration for Poble Nou’s material and social heritage as other 22@ projects. The park design aligns with the layout of the more modern portion of the central city (Avenida Diagonal and Eixample neighbourhood). It is structured around the historically central highway to France called *Pere IV* Street which erodes the older urban layout of Poble Nou (see *Figure 5*). Poble Nou’s material and social heritage was further transformed by the choice of an isolated park design – the space is concealed by bougainvillea ivy vegetated walls and only has a few entrances – that closes the new public space off from its surroundings (*Figure 5*).

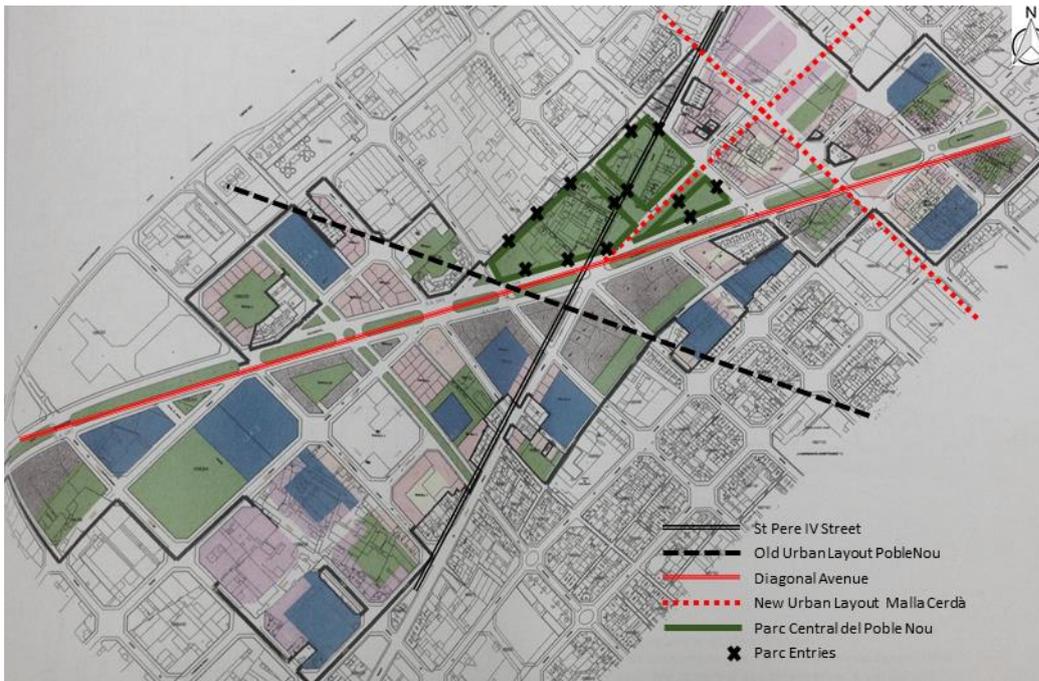


Figure 5 Parc Central del Poble Nou. Design reflects segregation of infrastructure and users and lack of continuity between different park spaces

Source: Proyecto de Ordenación del Parque de Pueblo Nuevo 2000, Municipal Archive of Sant Martí. Scale 1:5.000m

On the interior, the park is silent, and the noise and urban form of the exterior are almost not perceptible (e.g. Figure 6). With much of the park mimicking wild nature, in sharp contrast with Nou Barris, the Parc Central is divided into three main areas separated by city streets. Each of these areas presents a “natural” aesthetic, mainly achieved through the presence of abundant willow-trees. None of the children’s equipment is fenced and many of the amenities are built out of biomass, such as wooden huts (Figure 6.a), a water area, one sand area, and a spiral-shaped area full of bushes forming a labyrinth. There are also monkey bars, climbing spider nets (Figure 6.c), ping pong tables, basketball courts, and a large open playground surrounded by individual chairs and willows (Figure 6.d, e). The playground integrates many possible play options and presents a diverse orography, with ramps, ropes, slides, a wheel, hanging bars, a sand zone, and a rubber-surface area painted different colours and shapes (e.g. lines and circles).



a. Wooden huts



d. Playground in vegetated area



b. Dense Vegetation and artistic sculptures



e. Playground in vegetated area



c. Spider-net. Supervised play



f. Birthday Celebration

Figure 6 Parc Central de Poble Nou. Material design of built environment. Design reflects segregation of infrastructure and users and lack of continuity between different park spaces

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Socio- material relations in the Parc Central de Poble Nou

During weekdays, the park is usually very quiet in the early afternoon, one can hear birds and bikes passing through the bike lane on the old Pere IV street. Some of the few adult visitors lie on the grass while others walk their dogs. Teenagers seem to rarely use the park, and when they do, they practice dance moves, play basketball, or take pictures of themselves with their smartphones. Elderly visitors are also almost absent. In general, children and their parents/caregivers tend to gather around the main rubber playground (Figure 6.d, e) and at intervals in the central plaza or around some of the hanging bars. They are mostly white and Spanish or from the Global North, as can be inferred from the main spoken languages – Catalan, Spanish, French, Italian, American-English and Greek. For the few

11 instances of ethnic diversity we observed, visitors seemed to be divided along class lines around the
12 playground, which we could infer by observing/identifying the dress style and relation with children of
13 the visitors (e.g. parent or professional carer). In field notes (Monday 7.05), we recorded, *“the 3*
14 *ethnically diverse persons in the park – one Asian and two Andean women – sit in the benches that are*
15 *further away from the central playground, whereas Spanish-Global North white parents are sitting in*
16 *the first line of the playground. The Asian woman is in the playground accompanying her child, whereas*
17 *the Andean-South American women are professional caregivers.”* This hierarchical spatial disposition
18 did not apply to middle-class non-white parents – only observed in seldom birthday celebrations – who
19 were mostly spatially integrated.

20 Children were almost constantly accompanied by an adult and, as a result, play areas had comparable
21 numbers of parents and children mixed together. This observation is perceptible in our diagrams by
22 the high presence of adult-child interactions (See example of one observation session in *Figure 1*, with
23 adult-child interactions represented in black stripes). Children’s interactions with the play equipment
24 were mainly guided and stimulated by parents (e.g. parents saying, *“look at that rope!”*, *“do you want*
25 *to go to the slide?”* Fieldwork Notes, various days). When not guided by parents, interactions with the
26 environment followed a strict obedience to the existing physical cues (e.g. the spider and monkey bars
27 were exclusively used to climb, the sand area to play with sand, the basketball courts to play
28 basketball). Furthermore, children’s activities seemed to be guided by the uses demarcated by the
29 colours and shapes painted on the rubber soil (i.e. circles to walk in circles or jump, straight lines to
30 walk or run, etc.). Parents contributed to the reproduction of these norms by explaining to children
31 how to navigate the playground. In Poble Nou, in contrast with Nou Barris, none of the diagrams of
32 the observation sessions contained fluid transitions across space or between activities (see example in
33 *Figure 1*).

34 Despite the numerous opportunities to have contact with nature (the park was designed to mimic
35 natural landscapes), none of the children exited the playground area delimited by the rubber soil and
36 children did not interact with the material environment other than the play equipment or games
37 brought from home (e.g. balls, buckets, etc.). Consequently, the contrast between the neighbourhood
38 and playground physical elements, on the one hand, and the “wild-resembling” aesthetic of some of
39 the natural elements, on the other, reinforced a socio-natural dichotomy, leaving “natural” elements
40 as an untouched aesthetic background landscape. The size and shape of the trees (*Figure 6*) and their
41 more manicured look might furthermore lead parents and children to perceive that those trees are
42 not meant for play but have been placed there for aesthetic reasons.

43 Interactions with the social environment at all times were also scarce in comparison with Nou Barris.
44 Children did not seem to interact much with other unknown children or adults. When interactions with
45 strangers took place, these were mostly reduced to polite and kind gestures mediated by adults (e.g.
46 *“a dad explains to his daughter that if she wants to play with a ball, she needs to ask the owner for*
47 *permission and thank her”*; Fieldwork Notes, Friday 11.05; 19:00). The management of risk was also
48 mostly taken over by adults (e.g. parents/caregivers commanding *“do not jump here”*, *“watch out when*
49 *climbing the ramp”*; *“don’t run so fast or you might bump into other children”*; Fieldwork Notes, various
50 days).

51 The set of socio-material relations at work, especially the reduced exploration and management of
52 oneself and the material and social environment was at odds with the expected opportunities offered
53 by a “nature-like” play space with unstructured and creative play amenities designed into it.
54 Nevertheless, these socio-material relations seemed to, partly, be shaped by parents shadowing
55 children and by a lack of independent child integration into the park. The adults’ main reason to be in
56 the park was to accompany their children, play with children or supervise them. This was also

57 perceptible through the diagram, in which we found few adult-adult interactions (See example of one
58 observation session in *Figure 1* where adult-adult interactions are represented in a blue stripe).

59 Park occupation and activity increased after 5pm during school days. However, in contrast with Nou
60 Barris, the short-time and the little regularity of children's and parents'/caregivers' visits to the park
61 during these working evenings (i.e. there were few identified recurrent users and children usually
62 stayed maximum 40-50 minutes in the park) also seemed to hinder children's development of a sense
63 of control over the processes that shape their socio-nature and ability to contribute to the scant social
64 network children and parents seemed to have within the park.

65 Furthermore, the park only seemed to serve as a brief and exceptional stop in children's and parents'
66 life rather than a long daily routine (e.g. a dad says to a little girl: *"let's make a stop here and continue"*;
67 Fieldwork Notes, Thursday 17.05, 18:00), unlike what we observed in Nou Barris. The individual/family-
68 based management of care we observed (e.g. parents only interacted with their offspring, not with the
69 other children) with independent nuclear family units sharing a material space might reflect a desire
70 of parents and/or children to spend some quality minutes together in an exceptional moment within
71 a broader, perhaps overscheduled, middle-class life (Katz 2008; Donner 2017; De Visscher and
72 Bouverne-de Bie 2008). This schedule is illustrated by parents' frequent conversations about their own
73 and children's time management (e.g. *"can we go on Saturday?...No, I have an appointment to do my
74 nails"*; Fieldwork Notes, Friday 11.05, 17:00). In turn, the lack of a routine and social network in the
75 park tend to create a barrier against a greater sense of familiarity, safety, and informal environmental
76 control that could prompt children to wander around comfortably and parents to feel more carefree.

77 During weekends, the time spent in the park and the sense of familiarity and safety seemed to increase,
78 especially in the late mornings and late afternoons, when the space was usually more crowded, mostly
79 owing to children's birthday celebrations (*Figure 5.f*). These celebrations were organized by residents
80 who did not seem to use the park every day (e.g. organizing or participating parents acknowledged
81 how this park is *"actually a nice place to do this kind of celebration"*; Fieldwork Notes, Sunday 27.05).
82 During those events, parents socialized with other parents, talked about school options for children,
83 language management (in the cases of multilingual families), work, etc. Although gathering for
84 children's celebrations, adults seemed to be fulfilling independent socialization activities while
85 children engaged in more exploratory play (e.g. running in-between trees), appropriated the material
86 environment, and challenged the designed use of the equipment (e.g. *"some girls are using the monkey
87 bars as a puppet house"*; Fieldwork Notes, Sunday 27.05, 13:00). Free play attempts were, however,
88 on several occasions interrupted by the arrival of a hired professional entertainer who, even if
89 encouraging children's interaction with the environment, mostly directed children's play, mediated
90 children's care, and contributed to a shared – although commodified – regime of care while adults kept
91 socializing. We rarely observed such directed play in Nou Barris.

92 In Poble Nou, the lack of a routine, a sense of community or social network and the disaffection of
93 adults in the socio-nature precipitate an individual/family-based management of care and the co-
94 production of these spaces of play as a foreign, exceptional space, "used" as a material amenity in
95 certain occasions but not "lived" as a community space in a way that enables practices associated with
96 personal, social and environmental benefits to arise.

97 Interpretation and discussion

98 Our research in Barcelona reveals that different conditions of access, utilisation, and material design
99 of the two parks in terms of green biomass and unstructured play equipment proved not to be a
100 sufficient condition for explaining the production of children's relational wellbeing, free play and
101 observed contact with nature. In the seemingly more un-natural and structured socio-nature of the

102 working-class Nou Barris park, we observed a greater relational wellbeing. This was reflected through
103 an assemblage of designs and interactions promoting children’s free play, self-exploration, self-
104 management of risks, diverse social interactions, freedom of movement and environmental
105 exploration, knowledge and control, thus creating a positive green-playful-child-friendly park/amenity
106 towards relational wellbeing. In contrast, in the creative, unstructured and greener socio-nature of the
107 gentrifying Poble Nou park, we found high rates of supervised play, few movements across space, a
108 strict arrangement of the types of play, and scarce interactions with the social and material
109 environment at most times of the day and week – conditions that point toward a lower level of
110 relational wellbeing built over time. Thus, we argue that the most important aspect in determining the
111 production of relational wellbeing is the inseparably intersected socio-material structure of the
112 neighbourhood and residents’ uses of the socio-nature (i.e. local socio-material conditions, *Figure 7*).
113 In turn, the differentiated planning processes, visions and urban development goals for each park
114 determine how and for what these green-playful-child-friendly places are being produced and affect
115 the socio-material conditions of the neighbourhood – and eventually use of space and relational
116 wellbeing (*Figure 7*). While we have developed such findings for Barcelona, our analysis of the relation
117 between urban greening, implementation of play and child-friendly agendas could readily be applied
118 to analogous contexts in other cities such as Vienna, Amsterdam, Portland, or Austin, which have
119 ostensibly exhibited similar agendas and neighbourhood greening.

120 In Nou Barris, our archival analysis shows that urban transformations entailed a municipal effort to
121 support the existing social and material capital while improving the community’s access to equipment,
122 social housing and public spaces. The production of a green-playful-child-friendly space was the
123 catalyst for a holistic, resident-centered and co-driven process of regeneration that was able to address
124 long standing demands stemming from existing neighbourhood associations and diverse social groups.
125 Up to today, the socio-material conditions of Nou Barris’ residents (e.g. small apartments and no
126 second residences; migrants with no direct family in the city; absence of professional domestic help)
127 do influence residents’ management of time (e.g. full time-working parents and few children’s extra-
128 curricular activities) and aspirations.

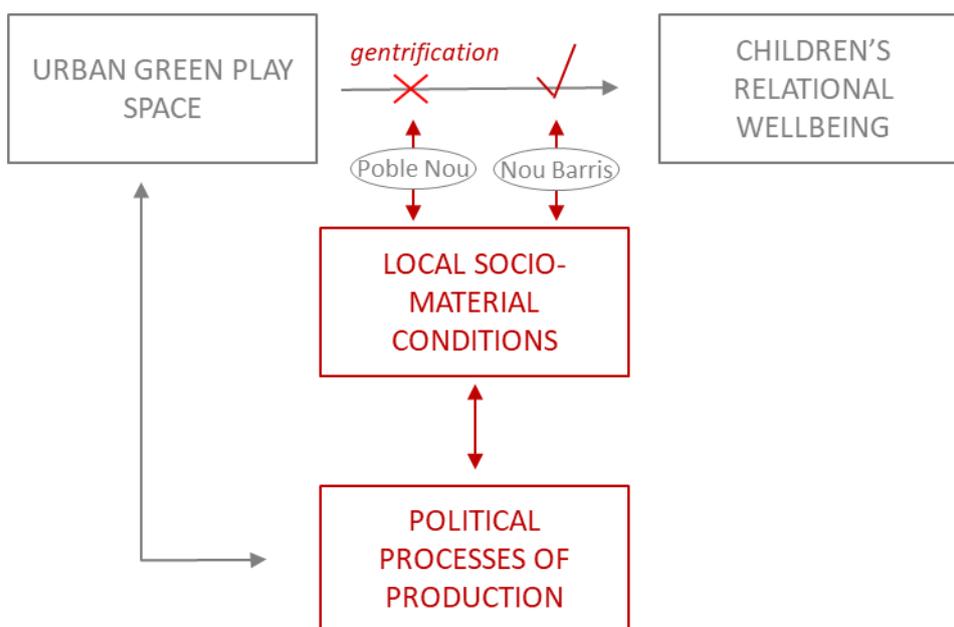
129 Here, the long-standing social capital of Nou Barris, which hasn’t been eroded by radical
130 neighbourhood socio-material changes, is connected to what we observed in terms of risk perception,
131 sense of community, and shared responsibility towards children. These conditions in turn co-produce
132 the Parc Central de Nou Barris as a daily community park that resonates with the community’s pride,
133 identity and life that permeated the original planning process. While the intensive use of the park
134 allows for residents’ social reproduction, it simultaneously promotes children’s sense of safety,
135 control, familiarity, knowledge and attachment to the material environment and, in turn, their contact
136 with “nature”, freedom of movement, improvisation, fluidity of interactions, and a supportive
137 surrounding social network – all reflecting strong relational wellbeing. This history has deep
138 ramifications for how other cities engaging in similar agendas should include neighbourhood history
139 and actors into a co-design process.

140 In contrast, in Poble Nou, our archival analysis shows an urban transformation aimed at attracting
141 private investment through public spending in fixed capital and infrastructure in the area and securing
142 private capital accumulation and growth through the destruction of old economic, material and social
143 structures (Harvey 1978). In turn, this process opened up a growing role for private capital in the design
144 of public spaces and eroded the original social and material structure of the neighbourhood. In many
145 aspects, unlike in Nou Barris, the Parc Central de Poble Nou was produced as a commodity for the
146 reproduction of power and capital in the restoration and new value creation of the geography of Poble
147 Nou and the 22@ district. A spectacular object-image – where capital itself becomes image (Katz 2008)

148 – that relies on commodified experiences and representations of the “desired” child and nature- was
 149 imposed on the space designed by Jean Nouvel producing a commodified space that reifies the
 150 formalisation of the relational categories of children, nature and play – one at odds with the claimed
 151 universal benefits of a green, playful and child-friendly city.

152 In the Parc Central de Poble Nou an eroded social and material capital strongly imprints socio-material
 153 relations in the socio-nature. Children’s use of space is ordered and structured, while free interactions
 154 with the “natural” environment are scarce. Structures of shared care and a sense of familiarity and
 155 safety are absent. A rather individual or family-based organization of care and play prevails, further
 156 confining the park to an exception in children’s routines. This sense of shared individuality and lack of
 157 socio-material relations outside the designed play amenities and/or the family unit are in line, although
 158 at a different scale, with the 22@ insular urban design of high-end constructions with little connectivity
 159 between them. The elimination of Poble Nou’s urban layout and industrial building stock together with
 160 the role of the park as an exception in children’s routines seems to further obstruct the creation of
 161 social networks and prevent the attainment of the necessary attachment and knowledge of the socio-
 162 nature to provide a sense of community and control over the environment – and thus relational
 163 wellbeing. The hectic and interrupted use of Poble Nou’s socio-nature is in turn linked to these new
 164 middle-class families’ socio-material structural circumstances (e.g. perhaps a second residence where
 165 children can interact with nature; domestic-help at home and more time to spend with their offspring
 166 in the park), routines, structures, times, habits (e.g. plenty of other activities are scheduled in their
 167 day, in addition to occasionally playing in the park), aspirations (e.g. desire to excel) and perceptions
 168 of high, external risks.

169 More specifically, in terms of relational wellbeing, our analysis reveals that planning processes, visions
 170 and urban neighbourhood development goals also moderate the effect of green-playful-child-friendly
 171 amenities by (re)-directing the socio-material structure of the neighbourhood in a way that either
 172 promotes or undermines socio-natures – that is how these spaces are used and perceived – and,
 173 eventually, relational wellbeing (*Figure 7*). These findings thus ask us to rethink how we interpret and
 174 analyse children’s relational wellbeing and urban environmental equity, with a much greater emphasis
 175 on procedural and cultural processes that lie below the surface of the built and natural environment
 176 and what nature/natural spaces are created and available there.



177

178

179 *Figure 7 Children's urban socio natures and the pathways for relational wellbeing*

180 Figure 7 provides a model for understanding why the widespread construction of green and playful
181 spaces in cities (and the density of “green” or “nature” features in particular) is not as important for
182 children’s wellbeing as neighbourhoods’ socio-material structures and residents’ social construction of
183 the space. In turn, both are inextricably linked to the political and planning processes driving green
184 and playful urban agendas. Relational wellbeing is co-produced by specific interactions between
185 humans and the material environment at place in these socio-natures that are themselves embedded
186 within socio-material structures as both a product and an enabler/constraint of specific actions,
187 routines and uses constitutive of relational wellbeing. The political planning processes driving green
188 and playful urban agendas and especially the balance of power between equity and growth interests,
189 the definition of the beneficiaries, and the recognition of (or lack of) the social and material heritage
190 of the neighbourhood also all have a strong impact on the neighbourhood local conditions, and
191 eventually relational wellbeing.

192 **Concluding remarks**

193 Our study asked how the political and social production of green-playful-child-friendly amenities
194 shapes relational wellbeing. This paper contributes to the vast urban environmental equity and urban
195 political ecology literatures (Agyeman, Bullard, and Evans 2002; Agyeman and Evans 2004; Campbell
196 1996; Gould and Lewis 2017; Mohai, Pellow, and Roberts 2009; Pellow 2000; Wolch, Byrne, and Newell
197 2014; Heynen 2006) as well as wellbeing research (Smith and Reid 2017) through a novel examination
198 of the differential relationship between the creation of new green-playful-child-friendly socio-natures
199 and the types of relational activities that result in two contrasting spaces.

200 It directs our focus toward the ways in which social hierarchies are differentially reproduced through
201 the socio-material interactions generated in these spaces and how those, in turn, produce what we
202 call ‘relational wellbeing’ for children. It specifically contributes new theory on the role of politics,
203 power and capital in shaping how urban socio-natures promote or constrain relations of wellbeing. In
204 other words, this study moves us beyond traditional analysis of green or/and play space “access” and
205 its impacts on health/wellbeing outcomes. It also reveals how historic environmental inequities might
206 be remediated through green spaces that produce socio-natures and relational wellbeing in ways that
207 address broader neighbourhood needs and characteristics as well as traditional local social relations
208 and ties.

209 From a methodological standpoint, this paper also offers a novel methodology to analyse relational
210 wellbeing. Our developed methodology allows researchers to systematically observe relations in space
211 in such a way that they can be related to the underlying socio-material context and connected with
212 overall wellbeing. While we have specifically focused on indicators of relational wellbeing within the
213 context of children’s play activities, this methodology can be applied to broader socio-natures and to
214 other international cases of neighbourhood redevelopment and implementation of child-friendly
215 green space and play agendas.

216 In sum, we call here for researchers to examine the underlying processes that shape children’s socio-
217 natures in order to understand relational wellbeing, as part of overall wellbeing. In Nou Barris, the park
218 was planned to integrate with the existing urban fabric with few designed elements for children to
219 interact with nature. Yet, such interactions were common because of existing social and material
220 contexts apart from the planned and designed elements that made them possible. In Poble Nou, where
221 interaction with a “purer” vision of nature was planned and designed with little integration to the

222 existing surrounding urbanism, such interactions were rare. Rather, the social and material context
223 militated a confined and rule-bound playscape. Even when access to nature was, in theory, greater and
224 environmental inequities “better” addressed on paper, the differentiated benefits of greenness were
225 determined almost entirely by the processes that shaped children’s socio-natures.

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446 Footnotes:

ⁱ Plan Municipal De Infancia y Adolescencia 2005-2010; Plan Municipal De Infancia y Adolescencia 2013-2016, Foco Infancia y Ciudadanía 2017-2020

ⁱⁱ <https://ajuntament.barcelona.cat/ecologiaurbana/ca/que-fem-i-per-que/espai-public-de-qualitat/barcelona-dona-molt-de-joc> establishes the goal of creating a playful Barcelona by 2030

ⁱⁱⁱ <http://ajuntament.barcelona.cat/ecologiaurbana/ca/que-fem-i-per-que/espai-public-de-qualitat/superilles>

^{iv} e.g. informal/unplanned vs. formal/planned; verbal vs. non-verbal, joyful vs. conflictive, inclusive vs. exclusive, intragenerational vs. intergenerational, monitored/surveyed vs. non-monitored, etc

^v Each phase of analysis involved line-by-line thematic note coding; thick descriptions of interactions; and elaboration of hypotheses about the relation between the most salient and repeated codes.

^{vi} Proyecto de Ordenación del Parque de Pueblo Nuevo, 2000. Municipal archive of Sant Martí

^{vii} Plan Especial de Ordenación del ámbito del antiguo Instituto Mental, Fórum Nord de la Tecnología, 1992. Municipal archive of Poble Nou

^{viii} Nou Barris, Centre de Estudis I Documentació de Nou Barris, Municipal Archive Nou Barris.

^{ix} Plan Especial d'Ordenació de l'àmbit de l'Antic Instituto Mental of 1992, Municipal Archive Nou Barris.

^x Nou Barris, Centre de Estudis I Documentació de Nou Barris

^{xi} Plan Especial d'Ordenació de l'àmbit de l'Antic Instituto Mental" of 1992, Municipal Archive Nou Barris

^{xii} Municipal centre that offers night-time accommodation, hygiene, dinner, breakfast, rest and social-health care.

^{xiii} Proyecto de Ordenación del Parque de Pueblo Nuevo 2000, Municipal Archive of Sant Martí

^{xiv} City of Barcelona Statistics Department

^{xv} City of Barcelona Statistics Department

^{xvi} Proyecto de Ordenación del Parque de Pueblo Nuevo 2000, Municipal Archive of Sant Martí