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RESEARCH ARTICLE

How the consumption of green public spaces contributes to quality of life: evidence from four Asian cities

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While green public spaces have been studied in relation to biodiversity and climate change, and in relation to health and social inclusion, there is a need to further understand how they relate to a broader understanding of human wellbeing. Evidence suggests that public spaces play an important role with a view to happiness and mental health, but further evidence is needed on how people actually use such spaces and how human needs are met – and how this might compare across different contexts. This necessitates to linking conceptually, empirically and practically the consumption of such spaces, the notion of the good life, and the management of such spaces. Towards this aim, this article explores quality of life in relation to green public spaces in four cities of South and Southeast Asia: Chennai, Metro Manila, Shanghai and Singapore. Based on empirical research in these cities, we engage in a comparative analysis to discuss how and in what way 'going to the park' as a form of consumption is a satisfier towards meeting 'Protected Needs' (Di Giulio and Defila, 2020) such as to live in a livable environment, to develop as a person or to be part of a community. The analysis shows that the practice 'going to the park' is linked to the practice 'making the park', leading to a discussion on how public policies can further support quality of life in cities. On a theoretical note, the article contributes to the debate about how to conceptually link human needs and social practices.

Key messages
- Green public spaces contribute considerably to quality of life beyond health and social inclusion.
- The practice 'going to the park' as a form of consumption is a satisfier for 'Protected Needs'.
- Public policies aiming at wellbeing in cities must be attentive to the practice 'going to the park'.
- Human needs are deep meanings that have been neglected due to the normalisation of desires.

Introduction: a quality of life approach to the consumption of green public spaces

Cities, as important working and cultural hubs, account for a significant use of resources and related impacts, including carbon emissions. At the same time, cities are important sites for the production and consumption of goods, services and spaces. Both themes are captured in the United Nations' Sustainable Development Goals (SDGs), Goal 11 and Goal 12 respectively. The debate about sustainable cities often runs under the heading of 'healthy city' or 'livable city', thus emphasising the importance of a salutogenic approach[1] to urban development – one that focuses on health and wellbeing (for example, Leporelli and Santi, 2019). Research supports this by suggesting 'that consideration of the associations between the many subsystems within a city and residential happiness could be vital to a future of sustainable cities' (Cloutier et al, 2014: 644). Based on their findings, Cloutier et al conclude that 'future studies should continue to explore the breadth, depth and theoretical foundation for the complex relationship between happiness and SD in cities around the world' (Cloutier et al, 2014: 645). Similarly, Ramaswami posits the necessity of developing 'robust instruments that directly measure individual subjective well-being and infrastructure performance assessments' with a view to provide information 'as to which attributes of household and neighborhood social and biophysical infrastructure might be prioritized to advance well-being' in cities (Ramaswami, 2020: 123).

Green public spaces are an important subsystem of cities and one of the 'key physical provisioning systems' essential for urban activities (Ramaswami, 2020: 120). The greenery in cities is thus important not only in relation to biodiversity and climate change, but also in relation to health and social inclusion, all of which have been extensively studied. With regards to human wellbeing, there is a need to further understand how such spaces relate to quality of life and to connect individual wellbeing to broader issues of collective wellbeing and responsibility. This article presents differentiated evidence about how green public spaces relate to quality of life, and shows how the development of 'a powerful instrument for cities to advance inclusive well-being for all within planetary boundaries' (Ramaswami, 2020: 123) can be approached.

Reviews of urban research (for example, Konijnendijk et al, 2013; Sadeghian and Vardanyan, 2013; Jennings et al, 2016) show that much of the existing research about the benefits of urban parks focus on single social or economic benefits (for example,

social cohesion, tourism, house prices) or on single aspects of physical human health (for example, reduced obesity) or on a diversity of aspects where each may yield individual and social benefits, but stop short of being integrated into a coherent whole – if it does not, as stated by Lawrence et al (2019), 'rely heavily on proxy measures' (p 159) instead of considering 'human agency and the societal conditions of daily life' (p 176). Other research investigates how mental health (or happiness) is related to parks (for example, Wood et al, 2017; Leporelli and Santi, 2019), but it does so without actually investigating how people use, that is, how they consume parks, and how this usage impacts their wellbeing – although some emphasise that 'people's perception is another important indicator of green space quality' (Kruize et al, 2019: 8). Other contributions use single activities as points of departure and show the importance of green public spaces in allowing for the set activity; this is the case for Rao and Min (2017), who point out that public spaces can 'foster a sense of freedom, for the pursuit of leisure activities, and to congregate for political and social activities' (p 20). Such research provides important insights into the significance of parks in a city, but it does not shed light on how people actually consume parks and how these spatialised and embodied practices are linked to their wellbeing. Others again investigate how park–goers consume parks, how valuable parks are to them and what benefits people derive from visiting parks, but in capturing benefits they do not apply a coherent and comprehensive definition of wellbeing that allows for a differentiated account of the values of parks (Henderson-Wilson et al, 2017). There is, in sum, a need for research that adopts and integrates a comprehensive approach to quality of life and a practice-based perspective on park usage as the consumption of space. Such research complements existing research by providing a comprehensive and differentiated understanding of how green public spaces support quality of life in cities, and how promoting such spaces contributes to wellbeing. The notion of 'consuming' spaces brings attention to 'the social and the physical environment, and the interdependencies between the consumption of material objects and of the natural and built environments' (Urry, 1995: 1).

Building on this, this article explores quality of life in relation to green public spaces based on research in four cities in Asia. In the second section, we explain our theoretical approach. We draw from a broad definition of consumption which includes the appropriation and appreciation of ambiance and spaces, in addition to goods and services, and engage with practice theoretical approaches to discuss (1) how people practice green public spaces as a form of consumption of space in daily life. We then detail a theory of human needs and eudemonic approach to wellbeing to address the main question: (2) towards what needs do green public spaces act as satisfiers? In the third section, we present our methodological approach, while in the fourth section, we present the results of our inquiry. Finally, we conclude by reflecting on our contribution, in terms of conceptual, methodological and policy-relevant findings.

Theoretical approach: quality of life and consumption of green public spaces

In the context of sustainability, the most prominent approaches to quality of life are a capability approach (for example, Robeyns and van der Veen, 2007), a needs approach (for example, Gough, 2017; Guillen-Royo, 2020) and a hybrid approach combining needs and capabilities (for example, Costanza et al, 2007). In our research, we adopted a needs approach that has been developed through an interdisciplinary comparison

and integration of approaches: the theory of 'Protected Needs' (PN) (Di Giulio et al, 2012; Di Giulio and Defila, 2020; see also Figure 2). The theory of PN is a salutogenic definition of quality of life for the context of sustainability: PN are 'needs that (a) deserve special protection within and across societies because they are crucial to human well-being, and are, at the same time, (b) needs for which a special societal protection is possible, because they are needs for which a governmental/community responsibility can reasonably be assigned' (Defila and Di Giulio, 2020: 320). The list of PN consists of nine universal needs (PN 1–PN 9). For each need a description is provided that serves as a starting point for its cultural and historical adaptation (Di Giulio and Defila, 2020, displayed in Annex I).
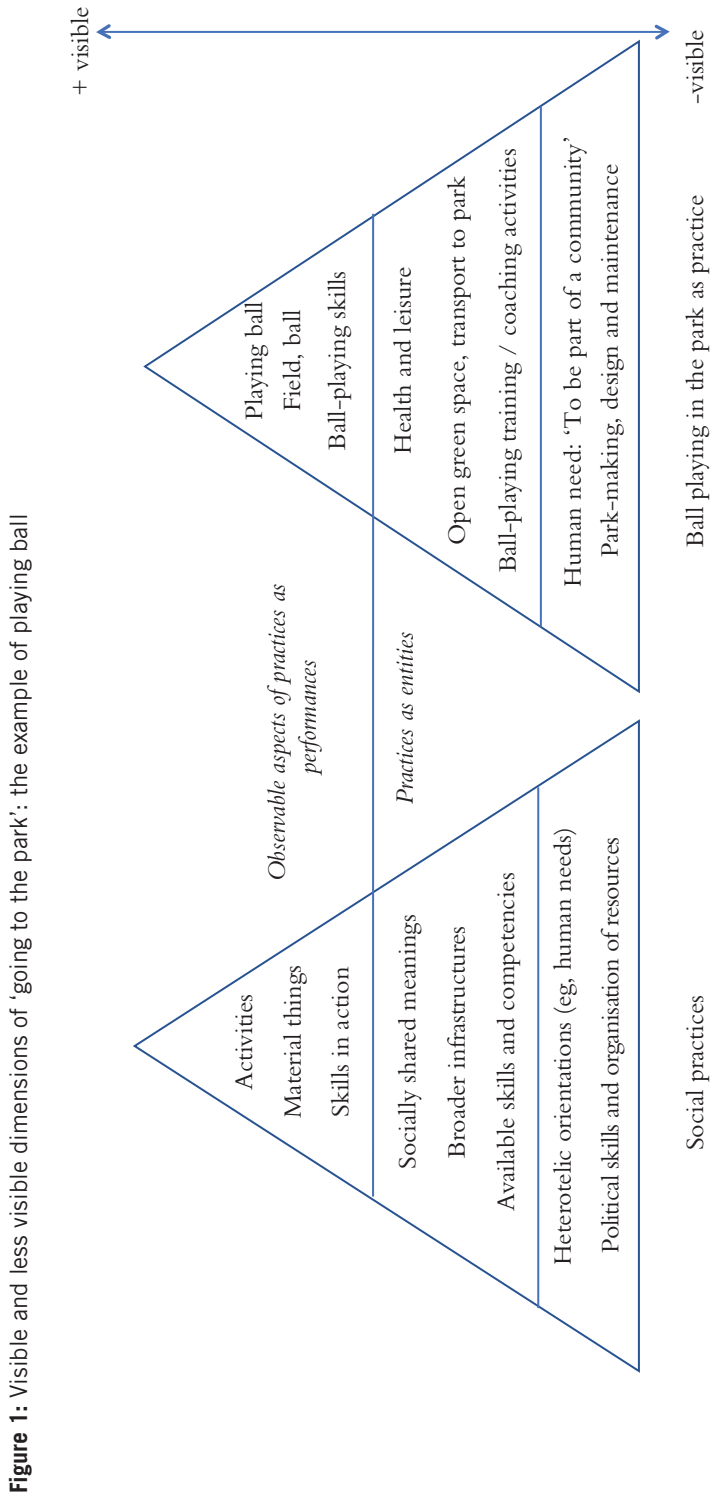
Adopting a needs-based approach to wellbeing leads to distinguishing between needs (that is, purposes that cannot be further reduced and cannot be substituted) and satisfiers (that is, means used to satisfy needs) (for example, Doyal and Gough, 1991; Max-Neef et al, 1991). The notion of satisfiers covers, inter alia, actions, products, structures, institutions, services and infrastructures, that is, both material and non-material means. In contrast to needs that are assumed to be universal and stable, satisfiers are dependent on historical and societal contexts and unstable (for example, Jackson et al, 2004; Soper, 2006). Thus, in relation to quality of life, in a needs-based approach, both parks and how they are consumed are satisfiers (Sahakian and Anantharaman, 2020). In sustainable consumption studies, this distinction between needs and satisfiers is critical because it invites a debate about whether (or to what extent) the aim (that is, need satisfaction) could be achieved and protected by using fewer resources and with a lessened negative environmental and social impact (Fuchs et al, 2021). In that respect, uncovering the role of green public spaces as a way to satisfy human needs in cities of South and Southeast Asia, where air-conditioned commercial centres dominate the cityscape, is all the more relevant. Several studies have emerged in recent years which link need satisfaction to sustainable consumption problematics, for example, on how information and communication technologies contribute to both human needs fulfilment and environmental sustainability (Guillen-Royo, 2020), or on how to untangle human need satisfaction from energy usage (Brand-Correa and Steinberger, 2017).

Adopting a consumption lens in investigating how people use parks draws attention to how green public spaces, alongside goods and services, also imply acts of consumption (Urry, 1995). The act of consumption entails a using up of resources (for example, land, water, energy, labour), but does also involve a preceding evaluation or appropriation phase. As such, consumption is neither limited to the act of acquiring products, nor to the usage of products and/or to the usage of consumer goods that are subject to market transactions. A broad definition that we proceed from is provided by Warde (2005): 'a process whereby agents engage in appropriation and appreciation, whether for utilitarian, expressive or contemplative purposes, of goods, services, performances, information or ambience, whether purchased or not, over which the agent has some degree of discretion' (p 137). As such, green public spaces are consumed by people engaging in various activities in the appreciation of such spaces (Urry, 1995). Acts of consumption are embedded in social, cultural and material (socio-technical and socio-spatial) contexts, and they are not ends in themselves, but serve functional and symbolic purposes – such as achieving quality of life (see also Di Giulio and Defila, 2021). Understanding acts of consumption necessitates theoretical and methodological approaches that account for these different dimensions.

To gain a comprehensive insight into how people consume parks, and building on Schatzki (1996; 2001), we adopted a social practice approach to uncovering 'going to the park' as a 'nexus of activities (e.g., walking, playing, and doing nothing) that involves embodied knowledge and material arrangements' (Sahakian and Anantharaman, 2020: 129). In this conceptualisation, social practices are seen as the way in which human needs are satisfied (Sahakian and Anantharaman, 2020). Linking a social practice approach to a human needs approach leads to an important distinction: Needs and desires are both human wants (Di Giulio et al, 2012), and, as Warde put it, 'wants are fulfilled only in practice, their satisfaction attributable to effective practical performances' (2005: 142). But in contrast to desires, needs are not 'created' by practices (Warde, 2005: 137). Rather, human needs are deeply rooted and invisible essential meanings of practices. However, such meanings are not normally discussed in our societies, because the scope of discussions about 'quality of life' is often limited to desires or satisfiers.

According to the distinction between practices as visible performances and practices as invisible entities (Spurling et al, 2013: 8), needs – as defined here – belong to the invisible elements that make up practices as entities. But in order to capture them suitably, the element 'socially shared meanings' (Spurling et al, 2013: 9) needs to be complemented by a deeper level of purpose (Figure 1). These deeper meanings could be termed 'heterotelic orientations' building on Warde et al (2017: 29f), in that certain practices can have 'an end, purpose or meaning outside' of the practice. A practice-based approach to motivation will seek to uncover forms of affective engagement, either negative or positive, in relation to a practice such as 'going to the park' (Welch, 2017). Yet such heterotelic orientations are not always visible in a given research site. With a view to our guiding question and against the background that quality of life often is equated with satisfiers or desires, they needed to be uncovered by asking people to specifically react to and engage with the list of PN. Drawing on such a list was all the more useful when comparing such motivations across different research sites. This approach to making human needs explicit and engaging in citizen debates and discussions has been found to be effective in other instances (see Koch et al, 2021).

Activities associated with 'going to the park' such as 'playing ball' can be observed. In contrast to the Spurling et al (2013) model, we see certain material arrangements as part of the performance of practices, or what can be observed. We build on that same model to uncover 'practices as entities' as having shared meanings, such as playing ball as motivated by health and leisure aspirations. Certain material arrangements, and skills and competencies, can also be uncovered through understanding the practice as entity. However, to reach the least visible elements that hold a practice in place, it is necessary to not only uncover how people make sense of their doings, how their doings are embedded in social interactions and material arrangements, but also how they themselves relate their activities and perceptions to quality of life – as a level of purpose that is not usually discussed and debated. In this study, we introduce human needs as an aim or goal that is useful in comparing how people in different settings – from Metro Manila to Shanghai – understand 'going to the park' as an essential practice. Thus, quality of life cannot be reduced to single (and observable) activities, or reduced to whether and how the equipment of parks is being used. An integrative approach is needed, that cuts across the different levels of the iceberg presented in Figure 1.

Figure 1: Visible and less visible dimensions of 'going to the park': the example of playing ball

+ visible — visible

Observable aspects of practices as performances

Practices as entities

Playing ball
Field, ball
Ball-playing skills

Health and leisure

Open green space, transport to park

Ball-playing training / coaching activities

Human need: 'To be part of a community'
Park-making, design and maintenance

Ball playing in the park as practice

Activities
Material things
Skills in action

Socially shared meanings
Broader infrastructures

Available skills and competencies

Heterotelic orientations (eg, human needs)
Political skills and organisation of resources

Social practices

Absent from what can be visibly observed is also the dimension of what makes 'going to the park' possible, or the system of provision for this form of consumption. A consumption lens is again relevant here, as it draws attention to the flipside of consumption – or how green public spaces are 'produced', involving their design, planning and maintenance. How parks are designed is crucial for how they are used, and accordingly, 'designers play a decisive role in the planning of urban spaces, contributing to the health and well-being of the population' (Leporelli and Santi, 2019: 16). A comprehensive approach investigating how parks contribute to wellbeing necessitates to integrate the complementary practice of 'park-making', because this practice provides the conditions of need satisfaction (structures, materials, infrastructures, and so on). From the perspective of the practice 'going to the park', the practice of 'making the park' is invisible, though critical to understanding how parks contribute to need satisfaction. The practice of 'park making' is the wider configuration within which 'going to the park' plays out, and has determining power over that practice (Warde et al, 2017). While this article does not assess 'park-making' through empirical data, we discuss in the analysis of our results how park-making could further support wellbeing in cities, as a set of policy recommendations.

Method

The qualitative research investigating in what way 'going to the park' is a satisfier towards meeting PN took place in parks in Chennai, Metro Manila, Shanghai and Singapore. It was fielded in 2018/2019 and involved a two-pronged approach: first, people were asked a series of questions related to their park practices; then, participants were invited to reflect and react to the list of PN (Di Giulio and Defila, 2020; see Annex I and Figure 2; used in English, and translated into Chinese and Tamil by team members). We recognise that as researchers, we have predetermined for this study what might be a 'heterotelic orientation' around going to the park. We have used a list of PN – discussed and agreed upon with and by the research team.

To explore 'going to the park' as a practice, the interview guide was designed around elements of social practices, involving: (1) people's competencies and dispositions (for example, what they like/dislike, what skills and competencies they exert, their most/least favourite spots, where they feel safe/unsafe, what they believe is meaningful to their lives); (2) material arrangements of these spaces (for example, lighting, infrastructure and other facilities, landscaping); as well as (3) social norms and regulations (for example, explicit rules or implicit guidelines about what people can/cannot do in the space, who can use or not use the space and in what occurrence). In all research sites, the same interview guide was used. To explore how the 'going to the park' practice was linked to need satisfaction, the research teams printed the list of PN, and presented it to the interviewees or read it to them (Figure 2). Research participants were asked whether the activities they carry out in the park allow them to satisfy one or several of these needs. The interview included a question about whether the park is unique compared to other places in the city.

The interviews were recorded, and in those cases in which participants did not consent to the interview being recorded, the interviewers noted down the answers. In order to allow for comparative data analysis, the answers were translated into English. Interview notes and select citations were inserted in a common template, based on the interview guide. In analysing how park activities relate to the PN, only explicit

mentions of the PN were coded and thus included in data analysis (using Excel in order to allow equal access for all team members). Intercoder reliability was ensured, firstly, by the local research teams checking whether they agreed to how their local data was analysed and interpreted, and, secondly, by discussing the comparative results in a workshop with the entire research team, towards reaching agreement.

The research sites (at least two parks per city) were selected by the four local research teams based on a shared set of criteria considering the diversity of park users, the accessibility of the park in relation to the city and transport options, and the significance of the parks in relation to cultural heritage, biodiversity or other features (for details see Sahakian et al, 2020). Parks that are natural reserves, only visited infrequently, solely designed for tourism or not accessible for free were excluded. Within the parks, the sampling of the interviewees aimed for diversity in park users in terms of age, gender,

Figure 2: The Protected Needs in the mandala format used for the interviews
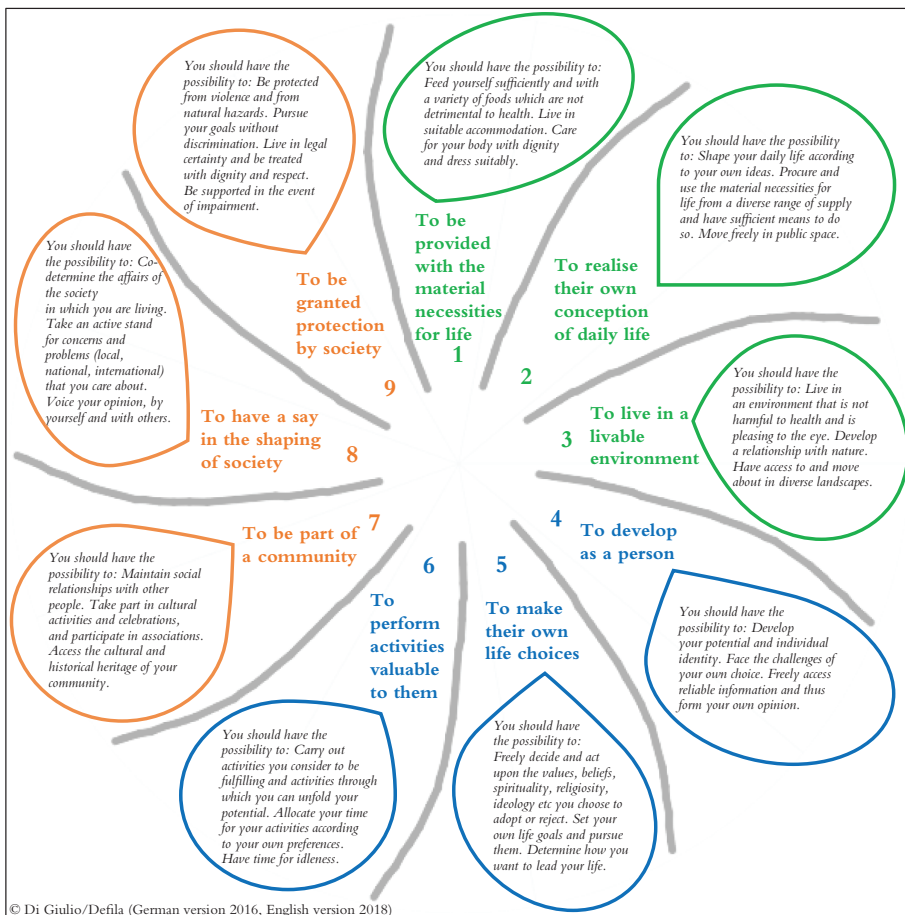
Notes: Group 1 (PN 1–3) focuses upon tangibles, material things; group 2 (PN 4–6) focuses upon the person; and group 3 (PN 7–9) focuses upon community. Building on Di Giulio and Defila, 2020 (see also Annex I), the thick descriptions of the PN have been summarised. These summaries have been collaboratively developed by Antonietta Di Giulio, Manisha Anantharaman, Marlyne Sahakian and Czarina Saloma, based on discussions with the entire research team.

Table 1: Overview of four research sites

	Chennai	Metro Manila	Shanghai	Singapore
Parks	Anna Nagar Park Nageshwara Rao Park Perambur Park	Rizal Park UP Academic Oval Park	Daning Park Zhongshan Park	Botanic Gardens East Coast Park
Number of interviews	31	29	26	30
Gender (F/M)	17/14	12/17	10/16	10/20

employment and particularly social class. Ten to fifteen interviews took place in each park (see Table 1 for a summary of the research sites and sample).

Results: going to the park, park–making and quality of life

In this section, we describe how and in what way green public spaces serve to satisfy human needs across four cities in South and Southeast Asia. Similar activities can meet several needs, as the discussion demonstrates. Based on these results, we then analyse ways in which park–making, as a system of provision, could further support quality of life in sustainable cities.

'Going to the park' and quality of life

The importance of the nine PN differs between people, as did the importance of the park(s) in terms of need satisfaction. That being said, all parks in all four cities represent spaces in which multiple needs are satisfied (Table 2). Parks thus provide need satisfaction for a considerable number of PN. The fact that needs were not satisfied for all people equally is discussed elsewhere (Anantharaman et al, in press). For this article, we focus on the comparative assessment across the four research sites.

Table 2: The Protected Needs (PN) that are satisfied in the parks

City/park	Protected Needs 1–9								
	PN 1	PN 2	PN 3	PN 4	PN 5	PN 6	PN 7	PN 8	PN 9
Chennai (CH)									
Anna Nagar Park		3	9	1		8	8		2
Nageshwara Rao Park	1	4	7	4	1	4	4		
Perambur Park	3	3	6	1			2		
Metro Manila (MM)									
Rizal Park	1			3		2	10	1	1
UP Academic Oval Park	2		6	4	1	4	6		2
Shanghai (SH)									
Danning Park	9	4	11	1		6		1	2
Zhingshan Park	3	5	10	2	3	9	6		1
Singapore (SP)									
Botanical Garden Park	5	4	11	6	5	4	9		2
East Coast Park	4	9	11	6	6	11	10		5

Notes: cells containing numbers = respondents say that the PN is satisfied by practices in this park; number in the table cell = number of interviews in which the PN is explicitly mentioned.
Source: Sahakian et al (2020), originally published under a CC BY-NC 4.0 license.

PN 1: To be provided with the material necessities for life

For respondents, PN 1 relates to various park activities, ranging from buying food (Metro Manila), exercising (running, tai chi; Shanghai, Singapore), meeting with friends and/or family (Shanghai)[2] and sitting (Shanghai) to working (for example, as a nanny, at a restaurant; Singapore). The criteria of 'suitable accommodation' communicated to the respondents were: accommodation that is suitably protected and equipped, offers enough space and privacy, and allows an individual to realise his/her idea of living (see Annex I). Especially noticeable is that parks provide satisfaction of PN 1 because, depending on the living/housing conditions, parks can be more private than private spaces (for example, parks can provide privacy and freedom from control that people, primarily women, do not experience at home or in their neighbourhood). That is, parks can be a substitute for privacy (lack of space and freedom) at home: "Yes. We sit and talk and make plans about our lives. No one listens or bothers us. No one cares. Whatever we talk stays here" (CH-NP-06, woman, 60+).

PN 2: To realise their own conception of daily life

Respondents related a broad range of activities in the park to PN 2, ranging from doing nothing in particular or just "being yourself" (Chennai, Shanghai), exercising (running, cycling, water sports; Shanghai, Singapore), exploring one's identity or writing a journal (Singapore), praying (Singapore), relaxing (Chennai, Shanghai, Singapore), to taking the children out (Singapore) and meeting with friends and/or family (Shanghai). For many respondents, going to the park is an important part of how they wish to structure their daily life and it helps them to plan their days. Respondents reported different habits and preferences with regard to when during the day and/or week they visit the park. Limited opening hours and inaccessible areas (for example, spots perceived to be unsafe or infested by mosquitos or restricted) were reported to limit the ability of people to integrate the park in their daily life.

PN 3: To live in a livable environment

Not surprisingly, enjoying the environment was the most prominent park activity that respondents related to PN 3 (in all cities), but they mentioned a range of other practices as well, such as sitting (Chennai, Shanghai, Singapore), walking (Chennai, Shanghai, Singapore), exercising (for example, running, cycling, sailing, windsurfing; Chennai, Shanghai, Singapore), fishing (Shanghai), doing nothing in particular (Shanghai) or enjoying the natural heritage (trees; Singapore). Respondents mentioned also that in the park they felt free (Shanghai) and related this to PN 3. One recurrent topic is the importance of both the natural and the built environment in the park. As one respondent stated, "I don't think it would be complete if it's just entirely trees" (MM-RP-10, woman/man, 23/26); or another, "Yes, especially 'to live in a livable environment'. It's hard to imagine my undergrad and grad life without the area. If I studied in a place which is highly industrial/just buildings, the quality of education would be different" (MM-UPAO-12, man, 25). When respondents explain what they enjoy in the park (or what improvements could be made, to better support their activities in the park), they mention both natural elements (for example, trees,

lawns, water, beach, wind/breeze, fresh air, shade provided by trees, animals, flowers) and built/artificial components (for example, benches, playing areas, huts/pavilions, bridges, ponds, pathways, restaurants, monuments, fountains, buildings for events, art). They emphasise the beauty they find in the park, and some say that the park allows them to be closer to nature. As one respondent put it, "I have an emotional connection with the water plantations, watching them makes me feel content and satisfied" (SP-BG-06, man, 52).

PN 4: To develop as a person

Some of the practices in parks related to PN 4 are of a rather self-oriented, contemplative nature, such as thinking (Chennai, Metro Manila, Singapore), meditation and/or prayer (Metro Manila, Singapore), enjoying the natural heritage (trees; Singapore), discovering oneself and exploring one's identity (Singapore), reading (Singapore), journal writing (Singapore), exercising (for example, dancing, running; Metro Manila, Shanghai, Singapore), or simply "feeling at home" (Singapore). Others are more oriented towards an exchange with others (for example, teaching an activity such as dancing (Chennai), meeting with friends and/or family (Chennai, Shanghai, Singapore), talking freely and openly (Chennai)), while others again are of a contemplative nature but oriented to others, such as watching social activities (Metro Manila, Chennai). In all research sites, respondents mentioned relaxing and "being stress free" in relation to PN 4. The park does not only provide a space in which people can read, think and the like, it also provides stimulation. Stimulation can be provided by what people observe and overhear in the park; some respondents report being inspired by seeing what others are doing, and that watching others and overhearing conversations widens their own horizon. The design and equipment of the park can be stimulating as well:

> 'During my initial visits to the park, I enjoyed reading the names of all trees and plantations. I would then research these online; I found that a lot of the herbs and trees provide medical benefits.' (SP-BG-07, man, 28)

> 'It's like you go back into the past. If you are bored, there is also a lot of history that can come to mind. … Just look around when you're jogging and your stress goes away. There are lots of old trees. It's really part of our history, and every area there is a note. It's very inspiring to know that those happened there.' (MM-RP-10, woman/man, 23/26)

PN 5: To make their own life choices

What is salient about how the respondents related PN 5 to their practices in the park is the following: what people do in the park does not enable them to make their own life choices, but the park is a space in which they (can) act upon their life choices, which includes thinking. The park provides a space in which people can talk freely in contrast to other places, such as home: "No one bothers you. You can talk whatever you wish. Everyone minds their own business. In fact, we can talk about things that we can't talk at home" (CH-NP-04, women, 26/27/36). The park provides a space in which people can enact their individual lifestyle. According to one research participant, "It's free from

violence and threat. It's respectful in terms of society but also in terms of individuality. It's nice to have access to it in your own terms or it's loosely regulated. Nobody is bothering anybody else'', and then later added, "Physical stuff; part of having a healthy lifestyle of my own choosing" (MM-UPAO-05, man, 55). The park also provides a space in which people can realise their spirituality by attending religious events or by praying: "Because I will feel less constraints in the park, and can carry out all kinds of activities, feeling the atmosphere of freedom", later adding, "I can do what I want here and I enjoy freedom of religion, it's important to me" (SH-ZS-11, woman, 27).

PN 6: To perform activities valuable to them

There is a broad variety of practices that respondents reported to be valuable to them, ranging from more self-centred activities such as exercising (for example, cycling, jogging, tai chi, diabolo) or walking (in all cities), thinking (Metro Manila), relaxing (Chennai, Shanghai, Singapore), or enjoying the environment or the natural heritage (in all cities) or, more specifically, birdwatching (Metro Manila) to social activities such as meeting with friends and/or family (Chennai, Shanghai, Singapore), and/or talking with others, be they friends, family or new people (Chennai, Shanghai, Singapore), fishing with family members (Singapore), singing (Shanghai), attending religious events (Shanghai), teaching students (Metro Manila) or watching social activities (for example, dance classes, children playing; Chennai). Respondents also mentioned practices such as doing nothing in particular (Shanghai) or taking a nap (Singapore). In relation to PN 6, respondents emphasised how important it is that they can perform a broad range of activities in the park, that in the park they are free to do what they want to do. In a number of interviews, this freedom is what people pointed out as an outstanding difference between parks and other places (such as malls, the street, their own home). Other places are perceived to be constraining and offering less freedom, that is, other places allow for only a small diversity of activities and involve more social control. Some places even impose specific activities:

> 'In the mall, you cannot talk or laugh loudly. And if you don't buy anything, they kick you out. We were just in the mall and we didn't like it, so we came here. Here there are no such restrictions.' (CH-AP-02, women, 18–22)

> 'If you're at a park, it seems like you are free to do anything. At the mall you are prohibited to jog. You will get reprimanded.' (MM-RP-07, man, 25)

PN 7: To be part of a community

With regard to PN 7, respondents reported seven different types of activities that, according to them, serve towards the satisfaction of PN 7:

- Type 1: organised activities that are performed in groups, such as groups that meet to sing, dance, do yoga, tai chi, and so on: "At my age, it's hard to find friends who are interested in the same game [tai chi]. I take part in this group and get the sense of belonging, it's just like an interest community" (SH-ZS-10, man, 36).
- Type 2: attending cultural or religious events (for example, Holi). Even knowing that such activities take place in the park (that is, having the possibility to attend)

produces a sense of belonging (for example, for one interviewee, celebrations for Pongal provide a community feeling, although he and his friends do not attend [CH-AP-04, man, 25]).

- Type 3: activities that people perform in the park with friends and family, such as celebrating birthdays (or other special occasions), having a picnic (or other forms of eating together), playing, taking their children to the park, fishing, or just talking and spending time together (and, sometimes, doing things together that they could also do at home but are actually not doing at home: "In the room, we do not interact, we are looking at phone or studying, here we interact" (CH-AP-04, man, 25).

- Type 4: activities that people perform in the park in order to meet other (or new) people and to exchange with people without making an appointment: "I spend much time working so that there is less chance for me to communicate with other parents. Exchange of children's information is important for me. The park provides the possibility for me to get to know people with same interests. … Because of working, I have few chances to communicate with other parents about children's education or something. Inside the park I can do some" (SH-ZS-07, woman, 35); "Regarding 'be part of a community' to watch people, interact with them allows you to be part of a group even if you don't know them. There are sudden interactions with people in the area, you start playing with them etc." (MM-UPAO-12, man, 25).

- Type 5: activities that people perform on their own, but because others perform the same activity, they feel to be part of a community, or they get a feeling of belonging: "I feel like it's influenced by my own social factors (influence) because I can run in other places, but other people said it's beautiful and fun to run there. I think I do it for its social function. … Yes. Those activities meet my needs in terms of social life. Health comes second. It's really more of my social life" (MM-UPAO-14); "It's nice to meet up with other bikers in the park. Even if they don't know each other, they acknowledge each other with a nod or a wave and this gives a nice feeling" (MM-RP-16, man, 34).

- Type 6: activities that connect people with the local or national history and heritage. This can cover both, visiting and enjoying the natural heritage (trees) as well as visiting and enjoying the cultural heritage (for example, a monument or also a flag as reported by some in Metro Manila).

- Type 7: activities that can be summarised as 'watching others' or 'people watching', that is, seeing what other people are doing, watching people that are dancing, children (not their own) that are playing, and so on, noticing that there are other people around: "There are different activities going on here so it feels good to be part of this" (CH-NP-07, woman, 60+); "It is important to be with others. I like seeing many people. It is relaxing" (MM-RP-04, woman, 46); "Even if I go here alone, I feel like I'm still part of a community. I don't feel alone cause there are lots of people, even if they come from different backgrounds" (MM-RP-07, man, 25).

The last type suggests that it is not necessary to actually do something together with other people or of even talk to other people in order to get the feeling of belonging, of feeling connected. This might be labelled as 'being alone but together'. Knowing that other people are there and seeing them alleviates solitude and produces a feeling of

being connected. The results also show the importance of cultural heritage (with a view to being part of a community and also with a view to building local/national identity), not only in terms of monuments (covering also buildings in which 'historical events', such as the visit of the pope in Rizal Park in Metro Manila, took place), but also in terms of biodiversity and of other expressions of culture (such as events, art installations). Such components provide a feeling of being connected to heritage (historical, cultural and natural), of being part of history, and thus of being part of a broader community.

PN 8: To have a say in the shaping of society

According to the respondents, parks are not important as a space in which people satisfy PN 8. Whether this is a general result or depends either on the national setting or on the specific historic situation (during fieldwork, no public activities that might be related to PN 8 took place) remains an open question. In certain contexts, speaking about public affairs is frowned upon in such spaces, as demonstrated in the examples of Shanghai and Singapore:

> 'Yes, the park is a space where people can speak freely or hear others speak current affairs. Just not so openly. I never saw open political debate but friends will discuss China's top leaders including political bureau guys, within a small close circle.' (SH-ZS-14, man, 41)

> 'Yes [I can talk freely], "in Singapore way": not discussing politics.' (SP-BG-05, man, 49)

PN 9: To be granted protection by society

The linkage between using a park and PN 9 is quite special: on the one hand, the activities that people perform in the park do not serve the purpose of satisfying PN 9. On the other hand, respondents elaborated on whether or not they are 'feeling safe' in the park, where in the park they feel safe, and at what time of the day they feel safe in the park. And 'feeling safe' in turn is a prerequisite for visiting the park and for performing activities in the park. That is: the arrangements in the park (including material arrangements and rules, such as rules that safeguard freedom and security for instance for park vendors in Metro Manila) must provide protection in the park and thus support the feeling of being safe and protected. Otherwise, people cannot (or only within limits) perform activities in the way they want or where they want. Accordingly, satisfaction of PN 9 is a precondition for park related practices to take place (and thus for other PN to be satisfied).

Implications for park-making aiming at an improved quality of life in cities

With a view to quality of life, parks are important subsystems and infrastructures in urban planning. They are also important alternatives to other, more 'consumerist' spaces that are used for leisure in the cities of South and Southeast Asia and elsewhere: the ubiquitous shopping mall, problematic in that it promotes a more commercialised form of leisure and a more controlling environment for people, but also for the energy intensity of keeping such spaces cool in tropical climates. As one person put

it in Metro Manila, "The park is very relaxing and is more conducive to thinking and reflection compared to the mall" (MM-UPAO-06, man, 25). Accordingly, in consumer and public policies that aim at supporting quality of life in a sustainable city, the design and management of parks ('park-making') should be highly ranked and should adopt a comprehensive, interdisciplinary and participative approach (called for also, for example, by Kruize et al, 2019), as it has 'determining power' (Warde et al, 2017) over how going to the park plays out as a practice. This was all the more evident during the COVID-19 pandemic that first swept across the world in 2020: public parks became a luxury for people who did not have access to private green spaces.

There are three points that should be considered in designing and managing parks with a view to quality of life, which apply to green public spaces across cities and cultures.

1. The more a park is restrictive and constrained, the less it provides the possibility of satisfying multiple needs

What makes parks unique is the fact that they allow for a diversity of activities to be performed (in contrast to, for instance, malls, which only allow for a limited number of activities). With a view to park management, this means that it is important to focus on material arrangements, or the organisation of space and equipment that is conducive to a diversity of activities, so as to avoid a design that ends up being too 'specialised' and pre-structuring and thus limiting the diversity of activities ("Yes, ECP has a unique variety of spaces for personal, social and physical growth" [SP-ECP-09, 33, woman]). Going to a park is thus in stark contrast to other spaces of consumption, such as shopping malls, which are often more restrictive when it comes to freedom in conduct. At a general level which goes beyond the parks and includes the city as a community, it is necessary to work towards a socio-cultural diversity which is inclusive in terms of different practices and does not reduce behaviour to a single 'code of conduct'.

2. Parks must be inclusive in terms of different dimensions

Inclusiveness covers access to parks by a diversity of actors and groups (see also Rahman and Zhang, 2018), the variety of practices that can be performed in the park, and ensuring that people visiting the park are not discriminated and/or are not treated with disrespect (all should "get same respect irrespective of income level" [SP-ECP-14, man, 40]; "To make the design inclusive. Make the public space for everyone, regardless of class. It seems to me that the space is designed for working middle class, I seldom see the elite. The lower classes make use of the park as vendors or beggars, but not as something for them to enjoy" [MM-UPAO-14, woman, 24]). Practices interfere with each other (for example, playing music and meditation [CH-AP-05]; hunting birds and birdwatching [MM-UPAO-10]; relaxing and singing [SH-DN-03]; walking dogs and having a picnic [SH-DN-03]; jogging and cycling [SP-BG-03]; walking and scooters [SP-ECP-10]; sitting on benches and sleeping on benches [SP-BG-11]; or the behaviour of young couples that is mentioned to be bothering several times in interviews especially in Chennai). Measures must be established to avoid conflicts caused by (potentially) conflicting practices. In order to identify what should be addressed by such measures, it is necessary to inquire into the practices, perceptions and concerns of those that are actually using the park through a deliberative approach including diverse park users.

3. Infrastructure and maintenance in parks should focus on providing basic services

The activities people perform in parks are informed by all the things, natural or artificial, that make up the material setting of the park. These things allow activities, privilege certain activities while making others more difficult, and make some activities impossible. There are some services that are basic insofar as they are equally necessary for a diversity of people and activities (for example, free and clean toilets, water fountains, shade from the sun, shelter from the rain, benches, drinking water). Such services should be planned for, installed, but also maintained over time. In installing these services, it is mandatory to apply a user perspective and not a designer perspective. In order to identify these services and to ensure their usability, it is necessary to inquire into the practices that are performed by people that are actually using the park – or engage in a co-design approach towards co-benefits. To maintain these services (and parks in general), public funds must be provided.

Discussion and conclusion: park consumption and quality of life towards sustainability

Our research reiterates the importance of green public spaces with a view to quality of life within a city. Research adopting a mental health approach, taking natural attributes of parks (such as biodiversity or vegetation cover) as points of departure, and applying quantitative methods can provide hypotheses about the importance of parks for human wellbeing in a city (for example, Hussain et al, 2010; Wood et al, 2017; Kruize et al, 2019; Schebella et al, 2019 and the literature analysed by Schebella et al), but it does not offer much insight with regard to how exactly parks contribute to wellbeing. A qualitative approach using human needs as a value-based frame of the meanings and motivations that can be uncovered in social practices related to 'going to the park' can shed light on this relationship by uncovering the practices that 'translate' green public spaces into human wellbeing. Such research can, for instance, substantiate assumptions like the one formulated by Schebella et al (2019), that 'attributes such as richness and naturalness may influence … well-being outcomes' (p 15) by showing, for instance, that people do visit specific trees in parks because doing so makes them feel connected to their home, or because they widen their horizon by learning something about these trees. Such research can, in other words, show which practices are performed in parks and which dimensions of wellbeing they serve.

Social practices are highly bound to cultural, social and spatial contexts. Hence, knowledge about park-related practices may primarily support planning and/or managing a specific park. Comparing the results gained in the different cities allows us to draw some general conclusions beyond the differences between the four cities under investigation, and between the parks within these cities. This is where a list of needs such as the list of PN becomes all the more useful, as it provides a baseline against which the meanings and motivations around 'going to the park' can be discussed and compared.

Parks contribute to quality of life by providing spaces in which multiple needs can be satisfied through the practices that people perform in parks (Sahakian and Anantharaman, 2020). The relationship between a specific practice and quality of life in turn is neither a one-to-one relation nor does it apply identically to all individuals: One and the same need can be satisfied through a variety of practices, that is, different

practices provide, for different persons, the same benefit with regard to quality of life. One and the same practice can, vice versa, satisfy different needs for different persons and thus yield different quality of life benefits. Finally, many practices performed in parks are synergistic satisfiers, in that they contribute to meet several needs at the same time: watching other people satisfies, for instance, PN 7 and PN 4 because it alleviates solitude and, at the same time, provides food for thought and reflection. Similarly, enjoying the cultural heritage, satisfies both PN 7 by conveying the feeling of being part of the community and PN 4 by inspiring an individual to think about history. Our approach adds to the research about the impact of green public spaces on wellbeing by offering a more nuanced but yet coherent perspective on how such spaces increase wellbeing. This in turn allows for a deeper and more differentiated understanding of how people perceive 'green space quality' (Kruize et al, 2019) and an understanding that accounts for diversity not only in relation to sociodemographic variables but also in relation of satisfying a diversity of needs in a diversity of ways.

On a methodological level, our research provides a broader approach of how to investigate human wellbeing in relation to urban spaces while acknowledging what people actually do and think (instead of relying on proxy measures). On a conceptual level, our approach provides a framework that allows to go beyond merely collecting activities that people perform in parks (for example, Henderson-Wilson et al, 2017) but allows to firmly link activities (satisfiers) to a differentiated set of values (needs). Secondly, it contributes to the development of the still missing 'guidelines' for assessing the 'quality' of public spaces (Villanueva et al, 2015) and allows to differentiate what Lawrence et al (2019) summarise with the label of 'psychological health benefits' and 'social benefits' of parks (p 167). Thirdly, it provides a definition of wellbeing that is more suitable to design urban spaces such as to actually contribute to a comprehensive understanding of human wellbeing than definitions that rely on notions such as 'psychophysical efficiency' or 'structural and functional normality' (Leporelli and Santi, 2019: 5) – notions that can hardly be linked to what people do and feel.

How 'going to the park' and wellbeing are linked is not something that can be observed. Need satisfaction requires some form of self-reflection and understanding by the park-goer. It is not possible to infer the contribution of a park to quality of life simply by observing what people are doing or asking people about their activities, and then infer how this relates to need satisfaction. Rather, it is necessary to find out how people actually link their usage of the park to quality of life. Taking into consideration what respondents reported with regard to their activities and which of them they linked to the list of PN, further adds to the importance of this point: These self-reported perceptions reveal that park-related practices that are important with a view to quality of life also cover doings that might not be perceived to be 'relevant' activities by an observer (such as sitting, thinking, watching others, or even doing nothing in particular). The respondents in our research did not have much time to engage in an in-depth and differentiated reflection about how their activities in the park are related to their quality of life. But despite the fact that they had to react spontaneously, the list of needs triggered reflection ("I am surprised to notice that the park satisfies most of my major needs. This is something that I had overlooked in the past. … I appreciate this questionnaire as it has reinforced my awareness of the needs that are being satisfied via this park" [SP-BG-06, man, 52]). This indicates that providing park-goers with a list of human needs provides an entry point for reflecting upon deeper meanings of heterotelic social practices.

Using a list of needs such as the list of PN in reflecting about quality of life in parks increases the awareness of people with regard not only to the relevance of the park with a view to their own wellbeing, but also with a view to the necessity of considering the wellbeing of others ("Stemming from the Protected Needs, we need those spaces. In my case, it is for social needs, for others it can be something else" [MM-UPAO-14, woman, 24]). The latter, in turn, might be a starting point to reflect upon and deal with conflicts caused by competing practices and possibly also competing need satisfaction – and this could support solidarity and cohesion. The approach presented in this article could thus be a basis for the research that complements investigations into the (un)just accessibility of parks (for example, Rahman and Zhang, 2018; Anantharaman et al, in press) by investigating justice-related questions such as 'How are parks and other green spaces distributed and utilized across different communities?', research that is called for by Jennings et al (2016: 9).

Human needs are not part of explicit collective conventions around quality of life: many people continue to associate quality of life with having things, without distinguishing the means (practices and things, as an example of satisfiers) from the purposes (feeling protected in society, as the example of a human need). This is where the heterotelic orientation of practices becomes useful, drawing on Warde et al (2017). Needs are deep meanings that have been obscured by the normalisation of desires and consumer goods as key motivators and criteria in relation to quality of life. Shifting awareness to the distinction between needs and desires and between needs and satisfiers, and focusing the reflection and discussion on needs, are important steps for transforming consumption because it allows to discuss about 'alternative practices' in cases in which the 'focal practice' causes social or environmental damage (Welch, 2017).

Finally, and on a more general level, it is both possible and necessary to engage in more public debates about needs satisfaction and to normalise such discussions. Around the world, efforts are underway to engage citizens in the co-production of knowledge towards resolving issues related to territorial development and sustainability. Involving citizens implies not only understanding what activities are important to people, what skills and competencies are needed to carry out such activities, but also how and in what way these activities relate to human wellbeing. As such, we contribute not only empirical results and policy implications, but also methodological insights on how to study human needs in relation to everyday life. This will be of relevance to future 'sustainable consumption' studies, from the consumption of city spaces to the consumption of energy and beyond.

Notes

[1] Salutogenic approaches are based on 'a positive perspective on human life' and aim to investigate the origins of health rather than those of disease and risk (Mittelmark and Bauer, 2017).

[2] Meeting with friends and/or family includes meeting colleagues from work, meeting people who have the same type of job, such as domestic workers, or meeting members of faith-based organisations.

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Conflict of interest
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Appendix

Annex I: The list of Protected Needs (published in Di Giulio and Defila, 2020)

The list of Protected Needs consists of nine universal needs that are arranged in three groups (left column) and are specified by thick descriptions (right column).[1] The needs denote what individuals must be allowed to want (left column) and the thick descriptions describe the possibilities individuals should be provided with (right column). The thick descriptions serve as starting point for their cultural and historical adaptation.

Group 1, focusing upon tangibles, material things (Protected Needs 1–3)	
Need (what individuals must be allowed to want)	*Specified description: Individuals should have the possibility …*
(1) To be provided with the material necessities for life	… to feed themselves sufficiently, with variety, and with food that is not detrimental to health. … to live in a suitably protected and equipped accommodation, offering privacy and sufficient space and allowing them to realise their idea of living. … to care for their bodies with dignity and dress suitably.
(2) To realise their own conception of daily life	… to shape their daily life according to their own ideas. … to procure and use the material necessities for life from a diverse range of supply, and to have sufficient means to do so. … to move freely in public space.
(3) To live in a livable environment	… to live in an environment (built and natural) that is not harmful to health and is aesthetically pleasing. … to develop a sensorial and emotional relationship with nature. … to have access to and be able to move about in diverse natural and cultural landscapes.
Group 2, focusing upon the person (Protected Needs 4–6)	
Need (what individuals must be allowed to want)	*Specified description: Individuals should have the possibility …*
(4) To develop as a person	… to develop their potential (knowledge, skills, attitudes, feelings, etc) and thus their individual identity. … to face the challenges of their choice. … to freely access reliable information and thus form their own opinion.
(5) To make their own life choices	… to freely decide and act upon the value-orientations they choose to adopt or reject (spirituality, religiosity, ideology, etc). … to set their own life goals and pursue them. … to determine how they want to lead their life in terms of intimate relationships, family planning, where to live, etc.
(6) To perform activities valuable to them	… to carry out activities that they consider to be fulfilling (in work and leisure; paid and unpaid). … to carry out activities that match their personality and in which they can unfold their potential (in work and leisure; paid and unpaid). … to allocate their time for their different activities according to their own preferences and to have time for idleness.

(*Continued*)

Group 3, focusing upon community (Protected Needs 7–9)	
Need (what individuals must be allowed to want)	*Specified description: Individuals should have the possibility …*
(7) To be part of a community	… to maintain social relationships with other people (private, professional, during training, etc). … to take part in cultural activities and celebrations and to participate in associations. … to access the cultural and historical heritage of their community.
(8) To have a say in the shaping of society	… to co-determine the affairs of the society in which they live. … to take an active stand for concerns and problems (local, national, international) they hold dear. … to voice their opinion, by themselves and with others.
(9) To be granted protection by society	… to be protected from public and private violence, from infringements on physical and mental integrity, and from natural hazards. … to pursue their goals without discrimination and with equal opportunity, to live in legal certainty, and to be treated with dignity and respect. … to be supported in the event of physical or mental impairment, unemployment, poverty, and other impairing conditions.

Note:The original and thus authoritative version of the Protected Needs is the German version (dating 15 October 2016), authored by Rico Defila and Antonietta Di Giulio. The German version has been subject to a comprehensive cognitive testing in Switzerland. Based on this it has been revised and then translated into French (by M.I.S. Trend). The German version has been translated into English by Antonietta Di Giulio and Rico Defila. Valuable contributions and feedback have been provided by Manisha Anantharaman, Marlyne Sahakian, Czarina Saloma-Akpedonu and Anders Hayden.