Ruang Terbuka Hijau:

Observing Green Social Spaces in Central Jakarta

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Abstract

Urban Park potentially act as spaces for social connectivity, one of the most important aspects of urban livability, health and social sustainability. To understand if this occurs in a megacity context, a short study utilizing a non-participant observation method in Central Jakarta's two culturally popular urban parks were conducted, investigating the social operation of public urban parks and nearby informal green spaces. Field notes and photos taken in this observation will reveal some of the information on users and the social life of parks that management and policy makers can take into account for future planning. Final reflections note the efficacy and limitations of employing non-participant observation methods when seeking to understand (and ultimately manage) complex/spatial cultural patterns relationships.

Keywords: Social Spaces, South East Asia, Green Open Urban Spaces, Urban Landscapes.

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Introduction : The Importance of Parks as Social Spaces

Taking lessons from the city planner Kevin Lynch in my research of understanding spatial forms of the city including his addressing "interrelations of urban forms and (its) human objectives," in this case the connectivity between people in urban developments. In making places for people in high density capital city of Jakarta, my research is intended to study *who* uses these spaces, and *how* the usage of the physical environment and activities occurring in these spaces impact interaction between users. To emphasize socio-cultural interest in the spaces, the term "social space" is used to refer to places that provide functions of social interaction and recreation as part of a cultured city. A *biophilic* social space for a functioning socio-cultural purpose would include city parks, sports fields, botanical gardens and similar informal green areas.

Change life! Change Society! These ideas completely lose their meaning without producing an appropriate space. A lesson to be learned from soviet constructivists from the 1920s and 30s, and of their failure, is that new social relations demand a new space, and vice-versa.- Henri Lefevbre

I am referring to Henri Lefebvre's writings on the modes of production from natural space to a socially produced one (e.g. Social Spaces) (Sayre, 2009). Lefebvre stated that every society produces a certain space, a uniquely owned space, with its own social practices for building relationships. This social space is a product of every day practices made productive in social practices such as activities and interactions between people. It is a good starting place to learn and understand new emerging social changes in a rapid developing city.

To explore this phenomenon, this paper traces three main ideas. The first section describes the changing landscape of Jakarta and summarizes current policies that play a part in the physical changes in the city. The second section presents local contextual culture and traditions of people in Jakarta to the study, followed by the chosen methodology employed and findings accruing from the research. Subsequent to this is a discussion on results of observation encountered during the research and fieldwork.

Jakarta and the De-greening of the City

To understand the importance of open green spaces as social spaces, the current role of parks in the context of megacities (particularly in review of the wider economic and spatial changes that accompany rapid urbanization) is required. Jakarta Central is unique in its built environment urban identity as the incredible density of population is reflected in the contrasting series of high-end hotel towers, multi complex shopping malls and expensive office buildings alongside the low rise intervals of village pockets (or "urban kampong") in between new developments. This is apparent to any visitor making the journey from Soekarno-Hatta International Airport, just outside the north-west edge of the city alongside the fish farms that buffer the Java Sea only 30-minute drive from my inner city accommodation. The congestion of traffic that spills in-and-out of the city, however, delayed my arrival by three and half hours, allowing me time to note the drastic rural-urban landscape within the city. Already, this was an interesting start to finding out the state of social dynamics within the city pocket spaces.(see Figure 3)

It is important to note that rapidly growing cities in South East Asia, such as Jakarta, are not simply home to just urban squalor. Jakarta is made of 650 kilometers with 5 cities (North, South, East, Central and West Jakarta) with Central District estimated with 9 million inhabitants acting as hub for commercial, business operations as well as having regular commutes from its adjacent cities with equivalent, if not denser population levels.

Some scholars have suggested megacities are the richest cities in developing countries, which are otherwise poor (Chen, Orum & Paulsen, 2012). Despite the economic growth arising from global investment, it is ironic that in Jakarta, nearly 70 percent of the jobs are located in the informal sector (Silver,2007). According to Silver, heavy concentrations of particular industries has high productive workforces that jumpstarted the city's productivity and income, but somehow contributed unto persistent poverty and uneven distribution of wealth in the city. This phenomenon of wealthy living alongside the poor in the informal economy is found in megacities all around the world-in Mexico, Sao Paolo and Mumbai to name a few.

These economic markets play a considerable role in land use arrangements, particularly in maintaining a ratio of urban green space. This type of economy follows through social networks in the built environment and livelihood strategies. There is evidence that provisions of parks and green spaces in the past have been based on demographics and socio-economic of their users (Krellenberg, Welz & Reyes-Päcke, 2014) Jakarta, Indonesia has the same principal and its own calculation to support the ration given to its green space allocation. (see figures 1 and 2)

$$La = P_2 K (1 + R - C)t - PAM - Pa$$

La Total area of urban park to be developed P_{2} Total number of Population К Level of Water Consumption/per capital (litre/per day) R Speed of Water Usage С Factor of Deviation PAM Total water supply т Year Pa Potential of Ground Water Ζ Permeability Level

Figure 1. Formula to calculate for Urban Park provisions based on SPL 2007.

Increasing development and urban regeneration projects providing for urban population growth will almost certainly lead to a decrease in green space fragmentation if roles of these urban green spaces left unexplored and studied. A study in the early 1990s by the City Population and Environmental Agencies, found that out of 412 public parks, 246 of them had been converted into some other function – either school, mosque or residential complex, violating the 1970's master plan to keep at least 30% of the land area dedicated to public green open spaces (Rukmana, 2015; Silver, 2007). One of the biggest challenges the local government DKI Jakarta, Daerah Khusus Ibukota (Special Capital Region, Indonesia) faces for landscape and infrastructure investment, is that changes occur faster than are intended to guide them.Mostly due to uncertain lines of authority in the "informal sector," the planning of developments of Jakarta occurred outside of the structure of local planning, regardless of the national ministry or private corporations. This resulted in an inconsistent definitive of final proposal by consultants often at odds with the local plan.



Figure 2. Land-use targets in Indonesian cities according to SPL 2007 (CCB = Coefficient Basic Buildings).

From Governor to President, Bowo's 2008 leadership, not unlike his predecessors, attempted to include an environmental agenda in the master planning of the country and city capital. These discussions succeeded in forming an amendment to the Spatial Planning Law in 2007 for Jakarta to increase green open spaces which included creating and maintaining parks in the cities (Rukmana, 2015). This policy change, according to the new plan, is part of the plan to promote equality and inclusion in the long-term and to be continued by the next Governor until 2030. Whether this plan succeeds may become clearer as we move to understand how Jakarta, the mega city, operates in maintaining and using these spaces. (See Figure 2)

Indonesian Ministry of Public Works defined Ruang Terbuka Hijau (RTH) or green open spaces as 'part of public assessable urban area that is filled with herbs, plants and vegetation (endemic and introduced) to support the benefits of ecological, socio-cultural and architectural that can provide economic benefits (welfare) for the people.' Ecologically, these green spaces can improve the quality of groundwater, prevent flooding, reduce air pollution, and lowering the temperature of the <image>

city. These spaces are also important contributors to social/cultural richness as an element of architectural identity for the city and people living in it.

Figure 3. Views of contrasting rural and urban landscapes of Jakarta Central from an apartment & from the backseat passenger view. (The author is the source for this and all subsequent figures).

Diversity in Tradition, Art, and Culture

Another significant fact to be taken into account is that Indonesia is home to over 300 ethnic groups with Jakarta being the central capital for income and concentrated population since the Dutch colonial times in the 1800s. The national motto, *Bhinneka Tunggal Ika*, is an old Javanese expression translated as "unity in diversity." The nation's official ideology, first formulated by President Sukarno in 1945 as representation of their diversity in culture can be seen everywhere in all festivities celebrated in the public areas of the city including the parks. Needless to highlight that symbolism is a very big part of Indonesian identity, often represented by the local cuisines, artistic sculptures seen in many parts of the city and love for of music-ethnic and modern.

Social diversity in an urban environment has appeared to be problematic in some cases. It might bring vibrancy to a city, but it could also affect the relationship between the inhabitants. Research have shown that natural environments (with vegetation and water) in urban areas has been tested for their positive influences on psychological and mental health (Ward Thompson, 2011; Tzoulas et al., 2007; Grahn & Stigsdotter, 2010) for reducing stress and lowering aggression among urban dwellers. Regardless of the adjacency to a commercial development or a residential area, research in the past have shown that people use public spaces as opportunities for sanctioned people-watching as well as place to establish social bonds (Peters, Elands &Buijs, 2010; Syamwil, 2012; Low, 1996; Germann-Chiari & Seeland, 2004). Visitors and residents from different parts of the city, including people from different ethnic and socioeconomic groups and people of different ages and abilities, can be in the same place (same park at the same time), allowing people to assess and reassess the characteristics of space and their own relationship with it.

Case Study: Ruang Terbuka Hijau (Green Open Spaces) and Their Social Function There are currently only five urban parks listed by the Park Management of DKI Jakarta out of the 246 open green spaces located in Jakarta Central, including the National Monument (Sitadevi 2012). Location of the two sites are shown in relation to Jalan Thamrin (See Figure 4), one of the major roads linking the rapid growth areas of South Jakarta to the city center and primary business center for capital. North of this corridor lies the Merdeka "Freedom" square alongside the National Monument (or locally known as Monas) the last major public works for Sukarno's scheme to enhance Jakarta. The neighborhood of Menteng, a kilometer south of the Merdeka Square is where the two selected sites are located. These two parks are Taman Suropati and Taman Menteng evenly popular spots to attract the locals and visitors of the city. These two sites as shown in the figure is only within a kilometer of each other but brings in different sets of users at different times of the day.

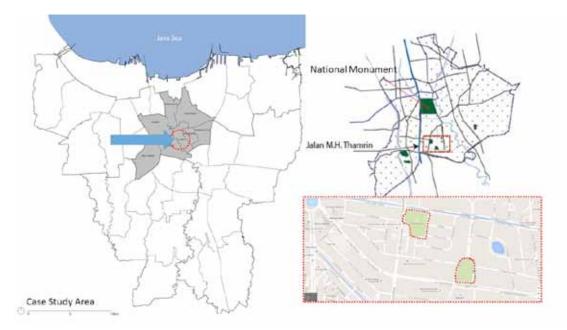


Figure 4. Location of Urban Parks in Jakarta Central and main arterial streets of the city, as well the water bodies that runs through it, key plan of Taman Menteng (near the river) and Taman Suropati (further south of the map).

Location and Background of the Sites

Taman Suropati, formerly known as Burgemeester Bisschopplein, is an established urban green space since early 1920s as part of the new city planning done by Moojen, a Dutch planner at the time. Strategically located in the centre of the Menteng District in between its three main streets Menteng Boulevard (Jl. Tengku Umar), Orange Boulevard (Jl. Diponegoro) dan Nassau Boulevard (Jl. Imam Bonjol) is the first urban green space in Indonesia during colonial times. This site is close proximity to the Presidential residence, US ambassador home as well as a few other foreign consulates. Even in high security surroundings, this park is also a widely known spot for artistic and social function for budding musicians. Taman Menteng however, is a much newer addition to the city built to accommodate a stadium and sport center in 2004. Due to traffic congestion and budget cuts, the stadium project was cancelled and the site was reopened in 2007 as another urban park alongside Taman Kodok to serve the sprawling city. This park has more amenities on site which included a three-level car park building, two glass houses, a basketball court, two indoor football courts, a volleyball court and separate playground area for younger children. The two sites serves for different activities, but they are characteristically representative of the current state of green spaces in Jakarta Central. (See Figure 5)

Both parks are open to public all day and all night with allocated security guards and office on site. Other informal green spaces in this study are the connecting streets to the park and adjacent areas of shrubbery, trees and pathways with vegetation about three meters radial distance to allocated sites.

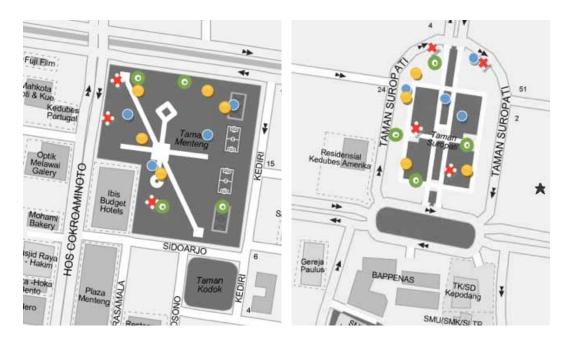


Figure 5. Map and locations of observations done in Taman Menteng (left) and Taman Suropati (right) during different times of the day.

Methods and Observations

Ethnography is a social science research method that relies heavily on very personal experiences within a subject group or culture. Social patterns are, according to (Ratti 2004; Hillier et al.,1987) identified in the uses and appropriations of the patterns itself. Data collected are parts of events, actions and interactions that take place at the selected public spaces, they (the data) also used to measure the subjective sense of experiences and images it causes on people. This assessments of data starts from references related to the "specialization" of social practices as done by works of (Gehl, 2010; Low, 1996; Whyte, 1960) see (Lockton et al., 2013) which all utilize behaviorial observations and focused interviews in their studies to demonstrate their human-centered design research. The challenges in ethnography involve understanding and translating a culture and subsequently communicating the cultural meanings to the policy makers to make better places for the city. This ethnographic method of observation and recording of activities allows a more focused, more detailed study into the complex understanding of behavior of urban green spaces users in the two selected sites. It also laid down groundwork of what works in the current layout of the parks, the physical limitations of the design that successfully deters antisocial behaviors but also created boundaries for activities that foster inclusion. Conducting a pilot survey proved advantageous in this regard.

This current study solely focuses on direct observation and the information it can elicit, recording as much as possible what occurred in the selected sites. Figure 4 illustrates the process of observation period (consisting of photographs, written field notes and sketches that locate people and their activity including the initial scoping visits). The first two days were spent for environment test walks on the sites followed by a total four out of ten days of the trip dedicated to direct observations.

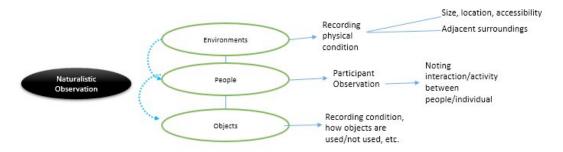


Figure 6. Field observation notes encompassing the above areas.

Behavior Coding

This field study requires a recording of social interaction between park users and the activity that encourages this interaction. The interactions will be in categories of Subject/Verb/Object to refer to whom to watch, when and how long for. The concept is applied by linking activity observed (i.e., sitting, chatting, sleeping etc.) to indicative measure of social interaction available within the sites. For recording procedures, the objective was to obtain as accurate measure of park users as possible in the target areas of the parks and informal spaces. Local conditions and points of time in the day to conduct study is an important element for gathering. A sample of observation schedule and correlations made to social connectivity is shown in figure 7 below.

Findings

a) Contrast of Day and Night, Light and Dark

Light plays a role in creating different type of social behavior observed in the parks. Morning users of both parks consisted mainly of fitness and daily walkers. For Taman Menteng, the park and green spaces were shaded and closer to the commercial shops and used as an alternate way to get to these places for pedestrians-usually young mothers with young children and dog owners walking

their pets. User visits in the earlier afternoon observations were more of solitary purposes, mostly alone, sometimes with packed food at their side. There were evidence of users sharing close proximity of space e.g., sitting on the same bench, but no interaction between the two participants This was especially true for Taman Menteng. They find places to either sit or eat their lunches or to nap under the shades, wherever possible (see Figure 8).

Time/Date	Observation Period	Method of Observation recording	Activity recorded (subject)	Coding Activity Example (Verb + Object)	Indicative correlation to social connection
1 Week day observation	10am, 3pm,8pm-11pm	Notes +photos + videos	Primary	Walking on path,/Using Phone/Sleeping on bench	Passive Interaction
			Secondary	Sitting together on path/ Chatting to each other by fountain	Face-to-face interaction
			Spectator	Quietly watching/Doing Nothing	Passive Interaction
			Group	Singing/Performing	Face-to-face interaction
1 Week End observation	10am, 3pm, 8pm-11pm	Notes +photos + videos	Primary	Sketching/Painting	Solitary activity
			Secondary	Making food/Selling Food	Face-to-face interaction
			Spectator	Sports activity in sports court, Small Concerts in center court	Passive Inclusion to activity
			Group	Rollerblading in groups on court/ Taking turns on the playground slides	Inclusion to activity

Figure 7. Recording of observation and social connectivity indicators.

In the early evenings on a weekday, users of Taman Suropati predominantly consisted of young families and little children, slowly replaced by groups of different ages – from adolescent girls-only, boys-only groups to either sit or study, young couples work chatting on the benches with a cold drink, to groups of mixed aged users practicing violins. The demographic presence in Taman Menteng consisted predominantly of both families and couples all over the sites, but as the evening got darker, more couples emerged in the shadows when observed closely (see Figure 8). This is not to say there were less couples seen in Taman Suropati, but users coming to this park were less conspicuous in presence. (see Figure 7)



Figure 8. Observation at Taman Suropati (left) between 6 - 8pm. (right) between 10am - 3pm.



Figure 9. Observation at Taman Menteng (left) between 6 - 8pm. (right) between 10am - 3pm.

b) Access

Jakarta's limited public transit system has been in crisis since 1980's and had only recently going through some changes after Governer Ahoq's MRT implementation. However, the busway system in Jakarta still provided some mode of transport between known tourist locations which included the Grand Indonesia mall which is the closest to the parks. Visitors can start and end the public transport route from the Mall as well having the main train station just a five minute walk away. This route proves to be quite problematic during peak hours, but on Saturday and Sunday the traffic calms significantly.

Taman Suropati and Taman Menteng are situated within a kilometer of each other and easily accessed on foot through the leafy lined pedestrian path of the main streets of HOS Cokromianoto or the smaller connecting streets. Both parks are equal distance to office areas and residential complexes, it is very difficult to know by just observing to determine whether proximity is a factor to their presence.

During the observation both in the daytime and nighttime for weekdays and weekends, there was very little foot traffic between the sites although there were guests of Ibis Budget Hotel and Menteng Plaza customers (for Taman Menteng) seen to utilize the park as part of their daily path. Dominant transport choices for Taman Suropati seems to be motorcycles, bajajs (local three-wheel taxi) with often more than two passengers riding on the vehicle. From the results of observation, lack of public transport does not seem to deter crowd to come and enjoy the parks and surrounding informal spaces, even in the late hours of the night.

c) Wi-Fi Enabled Parks

Since 2013, both Taman Suropati and Taman Menteng made the list in the local council's program of free wireless internet access for public areas. This was one of the attempts made by the government to encourage users to come to the park. Therefore, it was not surprising that users throughout the observation times, at both the park and adjacent green spaces were seen engaged with their electrical devices; on the phone, or either laptop or ipad. Although not overwhelmingly used by the majority of users during the this pilot study, this technology will definitely encouraged more groups of young adults users to the park, especially in Taman

Suropati known for its musical venue, for users to sing along or practice their instruments with the aid of social media and internet access.



Figure 10. Photo observations in the late afternoon in Taman Menteng.



Figure 11. Observation at Taman Suropati (left) weekday and (right) weeknight.

d) Presence of Food and Cultural Activities

Although both parks has prominent sculptures and traditional elements of Betawi¹ history in the design, Taman Suropati is the more popular venue for hosting mini concerts and informal musical classes. During the Saturday night observation period, Taman Menteng was crowded with users sitting alongside the courts to watch their friends and family play sports, while the crowd in Suropati overflowed with groups of families and friends participating in either dancing, singing or drawing art on the hard floor.

Cuisines of street food, especially in Jakarta, are considered just as good as restaurants if not better. For locals, park users and non-park users, this was part of the informal economy of Jakarta. Vendors were the first to seen from the main entrance of both parks with their numbers increasing as the day progresses. Food vendors sell different variety of food, some that requires actually cooking such as satays, and soups, while some are just selling mixed drinks and quick and ready salads. For the sports users, having these vendors around proved to be handy to be able quench thirst and having a quick meal before resuming their activities.

Signage posted at the park entrances indicated that vendor and informal business transactions are prohibited (See Figure 15), but observation showed this rule is

overlooked and largely discarded by the public, including existing security officers. All the activity concerning street food were recorded as peaceful interaction. Further inquisition to how these informal stalls and food vendors operate (licenses or permits obtained) can only be confirmed through a more focused interview.



Figure 12. Observation at Taman Suropati (left) between 6 - 8pm. (right) between 10am - 3pm.



Figure 13. Combination of interaction on a weekend night (left) in Taman Suropati: groups of musicians, some people eating (right) Combination of interactions on a weekend night in Taman Menteng: Busking, family sitting together.

For Taman Menteng, the adjacent streets of Jalan Sidoarjo (see Figure 14) were already packed with lines of informal restaurants or street market, which may or may not already have attracted visitors for their own merit. Although there were presence of food vendors in the park during day, these spaces were clearly not attracting customers until nearing sun down when heat and intense sun were less concentrated. Nearing sundown, more vendors started emerging from different corners of parks, for both Taman Suropati and Taman Menteng. What was different in observation periods was that, during the weekend night, vendors operated more like restaurant with informal seating arrangements, catering for crowds far in between their carts and baskets (see Figure 12). Also, users at this time sometimes bring their own home cookery and picnic baskets on the side streets, even at the side of their parked cars (in the case of Taman Suropati) to enjoy the live atmosphere of the park.



Figure 14. Adjacent activities in Taman Menteng.

e) Nature Available, But Non-touchable

It is rather ironic that while these green spaces are land portioned to encourage restorative health benefits and foster relationship to nature but yet in Jakarta parks, sitting on grass and walking on planted vegetation were off limits. In Taman Menteng, special guardrails were present in some parts of the paths to prevent stray trails. According to the planning guide for parks, there were areas of the parks and green spaces that needed more maintenance and upkeep from the others, and it was within the rights of the Park Management to enforce these rules to ensure that aesthetics of parks remain as they are for public use. (see figure 15) Taman Suropati had a good-sized birdhouse with living pigeons erected in the middle of a grass area among the icons and symbolic Indonesian sculptures for admiring spectators. The park users, carefully avoided these grassy areas, even on a full crowded night on the weekend, with the few exceptions pets and toddlers unable to contain their excitement on site.

In both Taman Suropati and Taman Menteng during the evening observations, although both parks provided a playground area (in Taman Suropati albeit slightly small than Taman Menteng), groups of children brought along their toys, bicycles, skateboards and rollerblades which were suited to be used on the hard surfaces and spent less time using the playground swings and slides. This could be due to the dimly lit areas and presence of buzzing mosquitos in areas nearing vegetation and trees. Also quite apparent was the watering and sprinkler system in both parks were constantly bleeding water making the soil wet and muddy, which could also be a source of deterrent from using these areas.

As demonstrated most of the activities and interactions observed were predominantly taking place on the hard surface of concrete, followed along the path line design. (see Figure 15) This has created a unique line of activities in the social space created, focusing interactions alongside of the green space allocated as illustrated in figure 16. This raises some concerns whether or not the existing public parks are providing enough/adequate space as provisioned by law. Is it a matter of just adding more benches and seating spaces or redesign specific areas for the weekend crowds of specific activities?



Figure 15. (left) People seen to find seating around the perimeter of Taman Suropati on a crowded night (right) Signage of rules and prohibitions for all urban parks in Taman Menteng and Taman Suropati.



Figure 16. Author's interpretational conceptual sketch of life in biophilic social spaces in Jakarta Central.

Conclusion

In context of this study, the role of RTH or urban green space as provider for social connectivity is addressed. Overall, this study succeeded in shedding light on user activities found in each park, classifying them in categories of sporting activities, meeting friends or channeling artistic outlets through art and music in correlation to the type of active or passive social benefit it can bring to the park user. It can be

assumed from observation of these two parks that the more frequent users fall in different age groups for different target of social activities they are going to undertake.

Due to the limited sampling time, no universal conclusion can yet be made about RTH or urban green spaces in general. The observation findings of this small study, however, allowed for some conclusive remarks and leeway to managing expectations for the next step in determining patterns of visits to inner city parks of Jakarta Central. Results presented in the observation indicated a need to accommodate appropriately designed activity areas to encourage the positive exchanges of interaction for both the informal and formal social activities. It has yet to be revealed if the social interaction recorded during this study occur between strangers at all or will change pattern from positive to negative between different events. The interpretation process of these interactions is based on knowledge of local tradition, cultural norms, and be solidified from further data collection triangulation.

This study to investigate social connectivity in green social spaces through direct observations would be able to inform policy makers and practitioners involved in developing these strategies to show what works and what does not in existing urban green spaces. Several countries in South East Asia has already launched policy changes regarding green growth indicators to support sustainable development, connectivity being a top priority for stronger society.

Public engagement, citizen's voicing their personal needs and interests are believed to function as reference criteria to envision a much clearer sustainable strategies. Valuation and assessments for these intangible benefits could be a vital qualitative appraisal in understanding and ultimately manage complex cultural spaces.

Endnotes

1 Descendants of the 17th century Old Batavia city from all over Indonesian islands which includes Sundanase, Malays, Balinese, Minangkabau, Makkasarnese and western groups of Portuguese, Dutch, Arabs, Chinese and Indians.

References

- Chen, X, A. M. Orum, and K. E. Paulsen. Introduction to Cities: How Place and Space Shape Human Experience. Wiley, 2012. https://books.google.co.uk/books?id=obAGJ2pEPZMC (accessed November 11, 2015).
- Gehl, Jan. "Cities for People." *Places* 16 (2010): 269. http://books.google.pt/books?id=lBNJoNILqQcC (accessed November 11, 2015).
- Germann-Chiari, Christina, and Klaus Seeland. "Are Urban Green Spaces Optimally Distributed to Act as Places for Social Integration? Results of a Geographical Information System (GIS) Approach for Urban Forestry Research." *Forest Policy and Economics* 6 (1) (2004): 3-13. doi:http://dx.doi. org/10.1016/S1389-9341(02)00067-9.

Grahn, Patrik, and Ulrika K. Stigsdotter. "The Relation between Perceived Sensory Dimensions of Urban

Green Space and Stress Restoration." Landscape and Urban Planning 94 (3-4) (2010): 264–75. doi:10.1016/j.landurbplan.2009.10.012.

- Hillier, B, J Hanson, and H Graham. 1987. "Ideas Are in Things An Application of the Space Syntax Method to Discovering House Genotypes." 1987. doi:10.1068/b140363.
- Krellenberg, Kerstin, Juliane Welz, and Sonia Reyes-Päcke. "Urban Green Areas and Their Potential for Social Interaction – A Case Study of a Socio-Economically Mixed Neighbourhood in Santiago de Chile." Habitat International 44 (October) (2014): 11–21. doi:10.1016/j.habitatint.2014.04.004.
- Lockton, Dan, Flora Bowden, Catherine Greene, Clare Brass, and Rama Gheerawo. "People and Energy: A Design-Led Approach to Understanding Everyday Energy Use Behaviour." *Ethnographic Praxis in Industry Conference*, no. 1991 (2013): 348–62.
- Low, Setha. "The Anthropology of Cities: Imagining-and Theorizing Thecity." Annual Review of Anthropology 25 (1996): 383–409.
- Peters, Karin, Birgit Elands, and Arjen Buijs. "Social Interactions in Urban Parks: Stimulating Social Cohesion?" Urban Forestry and Urban Greening 9 (2) (2010) Elsevier: 93–100. doi:10.1016/j.ufug. 2009.11.003.
- Ratti, Carlo. "Space Syntax: Some Inconsistencies." Environment and Planning B: Planning and Design 31 (2004): 487–99. doi:10.1068/b3019.
- Rukmana, Deden. "The Change and Transformation of Indonesian Spatial Planning after Suharto's New Order Regime: The Case of the Jakarta Metropolitan Area." International Planning Studies, no. June: 1–21 (2015). doi:10.1080/13563475.2015.1008723.
- Sayre, Nathan. 2009. Space, Difference, Everyday Life: Reading Henri Lefebvre. International Journal of Urban and Regional Research. Vol. 33 (2009). doi:10.1111/j.1468-2427.2009.00934_6.x.
- Silver, C. Planning the Megacity: Jakarta in the Twentieth Century. Planning, History and Environment Series. 2007. Taylor & Francis. https://books.google.co.uk/books?id=iLJ07Vt-swMC. (accessed November 11, 2015).
- Sitadevi, Latifa. "Utilization of Green Open Spaces in Jakarta: Challenge and Current Status 2012" EAROPH WORLD CONGRESS Indonesia Association of Urban and Regional Planners (IAP) (2012).
- Syamwil, Indra Budiman. "Social Construction View in Environment Behaviour Studies: The Potential for Asian Context in Environment Behaviour Knowledge in Architecture and Urban Design." Procedia - Social and Behavioral Sciences 42 (July 2010): 27–33. doi:10.1016/j.sbspro.2012.04.163.
- Tzoulas, Konstantinos, et al. "Promoting Ecosystem and Human Health in Urban Areas Using Green Infrastructure: A Literature Review." Landscape and Urban Planning 81 (3) (2007): 167–78. doi:10.1016/j.landurbplan.2007.02.001.
- Ward Thompson, Catharine. 2011. "Linking Landscape and Health: The Recurring Theme." Landscape and Urban Planning 99 (3-4). (2011). Elsevier B.V.: 187–95. doi:10.1016/j.landurbplan.2010.10.006.