People, public space, digital technology and social practice: an ethnographic approach

Marluci Menezes
Carlos Smaniotto Costa

Abstract – *Ethnography matters when to provide sustainable and inclusive urban spaces is an issue. Advancing knowledge on the relationship between social practices and public space is therefore crucial. This paper seeks to contribute to widening the debate about this relationship, added now by the phenomenon of penetration of ICT into public spaces. The main goal is to propose a methodological approach to guide the research in the field of urban ethnography. This approach is based, on the one hand, on long experience in ethnographic studies on public spaces, with the goal of identifying the relationship between social practices and the space in the configuration of representations and creation of socio-spatial images, particularly in urban transformation processes. On the other hand, it is based on a detailed analysis of the CyberParks Project objectives. Both allow us to better define the analysis dimensions and to identify their variables. Such framework could be used to guide future ethnographic research to be undertaken in CyberParks and beyond.*

Keywords— **urban ethnography, social practice, urban public spaces, imaginary, methodological framework**

167

I. INTRODUCTION

Technology is developing quickly and in many directions so that it becomes an inevitable part of contemporary life, stimulating the creation and diffusion of uses, but also inducing reflection and research. Locative media and the penetration of digital technology into the real urban space is increasingly calling the attention of urban designers, sociologists and experts on information and communications technologies (ICT), to better understand the opportunities created by ICT and the challenges they pose. There are already different examples of how technologies are merging into the public open spaces, e.g. digital displays in cities, wi-fi provision in parks and squares, on-the-spot tourist information, broadcasting and interactive art performances, urban games, etc. The kind of interactions is moving from those with an initial artistic, experimental or marketing orientation into a more political and academic one. Both aim to implement actions or to advance knowledge towards more sustainability and people's friendly urban development. Even if the current experiences are not goal-oriented towards urban spaces, they influence the perception and use of the real spaces, and adding to them a new dimension - the virtual, blurring the boundaries between the physical and digital. Different terms are emerging to refer to this amalgamation, as mediated [1], hybrid [2], networked spaces [3] and cyberpark [4]. These entwined spaces have now become a commonplace environment for social and public life [5]. The authors further argue that planners "must engage in the design of the parallel realities of social

and public life in these spaces" ([5]: 156). Even if ubiquitous, inter/hyperconnectivity and social network interactions as characteristics of the contemporary urban life are increasing, the links to the real world remain unchanged. People of all ages still need contact with open space, nature and with other people, in order to develop different life skills, values and attitudes [6], to be healthy, satisfied with their lives and environmentally responsible [7]. Recent research into biophilic design, restorative environments, nature deficit syndrome and technobiophilia demonstrates that a green environment is essential to well-being in both analogue and digital surroundings [8]. Therefore, regardless of unlimited possibilities ICT open, they should still be viewed as a tool, and being so they do not replace any actual open space, direct physical play and activities or the contact to nature [9]. Thus, there is a call to better understanding the relationship between people and space. In this context, the question of the role that ICT can play is increasingly pertinent.

II. THE URBAN ETHNOGRAPHIC PERSPECTIVE

In this work, ICT is considered as a potential for social innovation and motor for change, but also as a tool for social research. The consequences of the penetration of ICT into public spaces raise many questions as to what changes and challenges do ICT pose for urban spaces and therefore for human behaviour; whether ICT has potential for enhancing and building up (digital) sense of (real) place; and how to use ICT to intertwine virtual and real places and bring new/more users outdoor. At the same time, it is important to turn the viewpoint around and increase the understanding about users, people who use or do not use public open spaces, the interactions among people in these spaces, and the interaction between people and spaces. This requires an integrated approach aimed at enabling a reading of these processes towards advancing comprehensive knowledge on the appropriation of the space and social practices. Research should involve qualitative methods and ethnography, with a particular interest in methods that allow researchers to explore the connection between people, space and social practices, as well as urban design and ICT.

This paper takes up the urban ethnography perspective as essential research methodology, because it enables production of detailed information from small-scale studies. The interest lays in capturing points of view of different social actors and their cultures of use, appropriation and representation of the urban public space. This perspective draws up to deepening the knowledge of aspects related to public space users, their images, sociocultural resources applied in the appropriation of space, the temporalities involved, the relationship between these aspects and physical spaces, the typology / morphology of spaces and, finally the use of ICT and their intertwining into the physical spaces. In this context is important to observe both the everyday life, as this contributes to the identification of socio-spatial continuities and discontinuities, to situate behaviours and socio-spatial practices in terms of culture, experiences and attached meanings, as well as ephemeral experiences, those related with rituals, festivals and celebrations as well as emerging, unexpected, unconventional behaviours. Hence, the ethnographic perspective helps to gain more detailed knowledge

of behavioural scenarios ([10], [11]) and this, in turn, reveals the relationship between users, space/spatialities, time/temporalities and artefacts or objects employed (see Table I).

It should be noted that it is not necessary to tackle all the issues listed in Table I, the list is long but not exhaustive. Nevertheless, these issues usually should be considered in a socio-spatial analysis. As they are varied, it requires combining different methods and techniques for their collection and analysis. Considering just as guidance there are four main questions to be addressed [13]:

- *Who* are the users... - gender and age (in groups). Interviews enable the collection of more attributes on socio-demographic characteristics (education, marital status, occupation, place of residence and work); size users' group (if single person or group); if a group how many persons; whether it is a group of women or men; if a mixed group how many men, women, teens, adults, elderly.
- *How* they use the space ... - typology of practices – eg. walking, crossing, standing (for example, in a corner, at the entrance of a building) or sitting (for example on a bench, on the pavement, at a coffee shop).
- *What* users do ... and *what artefacts* they use ... – eg: sitting, jogging, sunbathing, talking, taking care of a child, meeting, reading a book, using ICT devices, carrying shopping bags, etc.
- *When* they use the space ... - in relationship to the time of observation, eg. hours or periods of the day – morning, noon, afternoon, evening; working days, weekend, public holidays; and frequency of use (daily, many times a week, sporadically, etc).
- *Where*, which place they use ... - regarding the typology of spaces - eg. square, street, plaza, playground, green space.

Generally, in ethnographic research the methods and procedures used are secondary data analysis, fieldwork, descriptive observations, informal and semi-structured interviews. Beyond these it could be also interesting:

- Keeping a field diary with notes about impressions, identifying the areas and/or spaces of observation; the periods of observation and users and practices observed.
- Photos and/or videos taken in different periods of observation; featuring types of users, practices and places.
- Drawings, diagrams and sketches of the local and practices observed, location of observed users; behaviour maps.

Recording the areas and time of observation should follow a systematic logic, i.e. observing areas always in the same time frame and in the same form, recording the same type of observation through the same type of resource and method.

**TABLE I. SUMMARY OF THE RELATIONSHIP BETWEEN THE ELEMENTS
THAT CONSTITUTE THE BEHAVIOURAL SCENARIOS [12]**

ELEMENTS	CHARACTERISTICS
Users	Socio-demographic profile – eg: age, gender, place of work and home address, educational level, marital status.
	Relational – eg: family relationship, friendship.
	Socio-cultural attributes.
Times and Temporalities	Moments and periods of linear time – eg: morning, afternoon, night / weekdays, weekends.
	Frequencies of use and regularity of use – eg: daily, several times a week, sporadic.
	Sporadic use – eg: festivals and rituals, holidays, vacation.
	Background / life paths (person's life and spatialpractices – eg: frequency of use of public spaces, preferred places, time someone started to use a specific space).
	Memories and life projects (prospects of life and their relations to spaces, preferences, needs and expectations on a space).
	Historical time: past, present and future.
Spaces and Spatialities	Identification of the space and its main physicalarchitectural, social, urbanistic, and environmental characteristics.
	Forms and modes of use and appropriation – eg: behaviours and socio-spatial practices; driven sociocultural resources and the intensity of space appropriation, establishment of territories and delimitation; routes, identification, guidance.
	Features of the physical environment – eg: equipment, facilities, services, layout of the space, landscaping and design.
	Types, characteristics and composition of space – eg: shadowed and sunny places, water features.
	Functions - eg: areas for contemplation and for active sports, restaurants, cafés, buildings, etc.
	Accessibility, location within the urban fabric.
	Perceptions of security and safety.
	Perceptions of environmental hygiene - eg: noise, air quality, odours, etc.
Artefacts and objects	Identification of the artefacts and objects that are being employed.
	Distinguish the technological artefacts from other artefacts
	Identification of users and the way they employ the artefacts, considering different times and temporalities

Moreover, many of the contemporary urban public space analyses take place from a macro-analytic approach – from afar and with an outside look [14]. Such approach shows the trend towards homogenisation of public spaces in function of the economic adjustments, the strengthening of privacy and as support of ephemeral and fleeting cultures. In fact, if we want to increase the understanding of dynamics of use and appropriation of public space, it is necessary to understand the space in varied and multiple layers. These layers should pay attention to the diversity of users, practices and representations; the regularities, uses and forms of ownership; and the socio-cultural references and dimensions of public

and semi-public space ([14], [15]). In other words, it is important to understand the urban public space from the idea that social practices are a set of actions that establish the liaison between the masculine and feminine, young and old, building and street, indoor and outdoor, private and public, local and global, sacred and profane, time and space, everyday and extraordinary situations, work and leisure, real and virtual, etc. – configuring and recon-figuring the meanings of space. This justifies an ethnographic interest, that could be described as having a view from near and from inside, as it provides a useful approximation to the social actors, to their practices, and to their spatial experiences, which help to shape the social practices [14]. This ethnographic approach – from close and inside – allows recognising the space as a significant reference for individuals, with the interest to capture the micro-geographies of everyday use and appropriation of space, the behavioural scenarios, pathways, draw points, landscapes ([10], [11], [17], [18], [19]).

III. SPACE AND SOCIAL PRACTICES

Public open spaces assume a structural function in a city, defining its urban character. They influence the quality of the environment, affect the property values, promote the identity of a city or an area. Open spaces increase the aesthetic appeal, amenity and values of the urban landscape, contributing to diversify densely built up areas [20]. Covered with vegetation, they allow and maintain the presence of nature in a highly artificial urban environment. When integrated into the green infrastructure of the city, they contribute to the connectivity of habitats, enabling the propagation and protection of species and biodiversity conservation [21].

As an urban land use type and spatial resource, public open spaces are challenged through the spatial practice of its citizens in general and of the users in particular. These practices add a new dimension to the physical space - the social. Hence, the social space concerns how the physical spaces are lived and experienced by the users, generating the social practices. In light of the above considerations, a public open space embodies for the topic of this work three dimensions, the physical, the social and the virtual. The social practices are facilitated by public open spaces, as being a venue of sociability they afford the common ground for communication and information exchange. They are places for outdoor social activities, gathering places for all ages. They are places to express cultural diversity, the arena for seeing and being seen or even be anonymous in a crowd [22]. Individually the social interactions are important for contributing to our physical, cultural and spiritual well-being, for the personal development and social learning and for the development of tolerance [23]. All the above-mentioned support the change to a positive lifestyle - for all ages.

In spatial terms, public spaces are relevant for defining a sense of place that emerges through experience and knowledge of a particular area; this in turn heightens the sense of belonging to society. Thus, public spaces create the convivial, diverse and democratic urban realm, embodying the reproduction of social relations [22]. The spatial and social practices are also a result of the social structure and spatial stimulations. This means coming to terms with the fact that the design, the equipment and facilities available, and the

kind of management affect how people use the space. On the other hand, other factors as accessibility, connectivity, and especially safety, can be decisive factors for attracting, or not, users to a public open space [21].

Even when a public space is the enabler of socio-spatial interrelations, one has to consider that the urban society is highly heterogeneous with different expectations and needs. For this reason, it is necessary to demystify the relationship between public space and social interaction, a relationship often seen between the two extremes, the first with a touch of romanticism with all kinds of people gathering and sharing the same space, and the second with a pessimist perspective with social exclusion and the refusal to share the same space. This means public spaces are arenas of multiple and sometimes competing interests, occupied by people unequal in gender and social and cultural class [22]. They can be locational and situational spaces of conflict among disputing interest groups and individuals.

The modern urban environment, in its complexity, is considered one of the causes of the increasing social segregation, isolation and little involvement of people together [24]. Although as Whyte [25] pointed out, what attracts people to public spaces are other people, studies show that the majority of those who use them for leisure activities do not want to be more than mere spectators, and are not interested in establishing interactions with strangers. A study conducted in Dresden (Germany) revealed that the majority of users in urban parks, while appreciating the possibility of social contacts, have no other interests beyond a simple conversation [26]. They search for spending leisure time in a pleasant way and without interference. In a certain way, each user or group of users "privatise" their space, creating what Hampton and Gupta [27] calls a cocoon. For him the public space is not shared, but divided individually or collectively between different users or user groups. Although invisible and limited in time, these cocoons reduce the likelihood of serendipitous encounters, contradicting the common expectations for appropriation and public behaviour.

IV. THE ROLE OF ICT IN THE RELATIONSHIP BETWEEN SPACE AND SOCIAL PRACTICE

A relevant aspect of ICT is their ability to enhance communication with (potential) users and allow creative participation and community formation. ICT can be a tool to enhance the attractiveness and responsiveness of the public spaces. Through social reporting, users can share information, expose their opinions, needs and desires. GPS and other GIS supported devices can greatly inform about usage-spatial relationships. There is a wealth of evidence that the engagement of people can provoke a real change in the quality of the urban environment [21], thus improving the quality of life. The emergence and penetration of ICT has led to various forms the appropriation of the open spaces where the ICT facilities and devices play more and more a significant role. The hybrid space, along with global hyperconnectivity set urban ethnography to play a prominent role to advance knowledge on the relationship between people, social practices and places, and the resulting social and spatial interactions.

The metaphor of digitally mediated open spaces, where different access and paths are provided for things to happen, seems to be a promising line of thought. In this context, the cooperative design and decision-making processes can be enhanced with new views and approaches. More importantly, and rather than reducing people to mere users, ICT allows and demands the appropriation, change and adaptation, in an endless vicious circle. ICT and the social interactions enable therefore an evolution of a more people-centred framework not only for urban, but also for cultural, economic, and political development. In general, the provision of a framework based on cooperation can lead to an enhancement of democracy and people's empowerment, provided that the will and support to use ICT, and to develop cooperation are available. In other words, to achieve this, cities must be viewed as platforms, with citizens encouraged to utilise technology to creatively built and redefine core functionalities [28].

ICT can be therefore considered as a driving force, medium and tool, operating as a mediator between users and their virtual and real worlds. ICTs cause and enable innovative outdoor social practices, which challenge spatial and social experts to use them in policies, methodologies, design and research to produce responsive and inclusive urban places. For this work, the last topic is an important issue, as ICT opens new opportunities for socio-spatial research. Although the social practices are a well-known phenomenon, more data about users' needs and the meanings they seek in public spaces, is always welcome than these evolving in line with rapid changes in economy, society and governance.

Promising is the increasing use of hand-held GPS (global positioning system) devices. A study conducted in Lisbon [29] found that the used technology enabled an easy and simple record of data and was therefore an effective survey method that provided clear evidence of people's behaviour and movement patterns. GPS has several advantages over traditional methods for mapping spatial behaviour, as it is a cost-effective method for gathering data, and allows the precise and continuous tracking of individuals. It also provides spatially rich data, including velocity and timing information. Using GPS and geographic information system (GIS) technologies together is gaining in importance in the fields of transportation and urban planning. It also has potential as a tool used for monitoring recreational use in outdoor environments. The combination of GPS and GIS allows new types of analysis, and this can result in measures for the improvement of surveys on and planning of public spaces. Comparing the gained data with other data collection methodologies such as interviews seems to be easily achievable. There is, however, another aspect to which thought must be given. The quality of data could make such survey vulnerable, as data loss (witnessed by the study in Lisbon), or considering open and green spaces dense canopy cover can cause signal disturbance or is dependent upon weather conditions are all potential issues. Digital technology undoubtedly enhances inter/-multidisciplinary potential for research working methodologies.

V. PROPOSAL FOR AN ETHNOGRAPHIC APPROACH

A. Preliminary Considerations

One of the main objectives of the Project CyberParks (COST Action TU 1306) is to increase and advance knowledge on how to bring people to be more outdoors, enjoy public spaces and for interactive communication, recreation and learning. This makes the call for better understanding the relationship between the physical space, its features and opportunities and how people use the spaces and particularly what are people's needs on spaces ([30], [31], [32]). Within this perspective, the scientific programme of CyberParks considers three intrinsically related areas: a) public spaces along their production and design and the way people use them, b) ICT with their opportunities, novelties and potential, and c) social, behavioural and health research.

The methodological proposal is intended to be a contribution to the current discussion in the Project and draws upon the inter-disciplinary research within the Working Group on Urban Ethnography. The leading questions for this Working Group are: How do people use public spaces? What do they want from public space? Does this differ by socioeconomic status, gender, age? Moreover, linked to the use of technology and to the scientific programme of the Project CyberParks it is relevant to better understand what technological developments are most likely to change/enhance user behaviour or develop new behaviours, and what is known about the relationship between new media use and spatial practices. Answering these questions requires a careful and detailed empirical research encompassing data collection and analysis of certain socio-spatial aspects. Therefore, it is important to establish a framework to guide and define the scope of ethnographic data to be gathered and analysed. This, on the other hand, implies having to grapple with the questions posed to the Working Group, deconstructing them into single components. This means in short the need to reflect on the relationship between new media use and spatial practices in order to cover the knowledge requirements.

Considering that CyberParks' main goal is to advance scientific knowledge about the relationship between people, digital technology and urban public space, this makes the call to consider the public space both in its materiality and how people live and experience it. A framework has also to take into consideration knowledge to be gained from fields as planning and design of public spaces, including civic engagement, co-creation, and participatory processes. The final purpose is to deliver evidences and to enhance methodological and conceptual tools, both aiming at promoting innovative practices in policies and urban design that, making use of ICT, transform spaces into more inclusive and user-friendly places. The proposed approach is to be understood as a set of possibilities for thinking about and creating public spaces. Hence, for designing an ethnographic approach it is important to consider cross-disciplinarity, where the concept of social design is a key component.

B. The Framework

The envisioned approach is advanced in Table II. It is structured in two phases: (1) the interrelations between ICT and Urban Public Space (UPS), and (2) intersections between ICT, planning and citizen participation. Each phase is further broken down into dimensions, and each dimension unfolds other analytical sub-dimensions, which in turn are operationalised by variables.

These variables, as measurable representation, contribute to quantify and guide the ethnographic data to be analysed. Although these variables may possibly be better described with the use of indicators, at this stage, working on a more detailed analysis with variables and indicators is not appropriate, as defining them depends on the specific motivation and goals of each study to be undertaken. In ethnographic case studies, indicators have to be defined in accordance to study type and techniques to be implemented. Another requirement is to define scope and method to carry out the study.

Turning to the matter in hand it should be noted that Phases 1 and 2 are created solely as a matter of organisation. Although they are interrelated, they are not defined as sequential stages, but with different programmatic contents of study:

- Phase 1: Intersections between ICT and urban public space (UPS). It aims to identify the liaison between people, how they use the UPS and the role of ICT in socio-spatial interactions. This phase aims at advancing knowledge of the physical nature of a space, its functionality and people's relationships with these spaces and the meaning ascribed to them, through the analysis of the use, social appropriation, the representations, images and imaginary regarding the space, preferences, needs, and level of satisfaction with UPS.
- Phase 2: Intersections between ICT, planning and citizen participation. It aims to identify the effect of ICT on the use and intensity, number of users, citizens' participation and on the production of UPS. This through the analysis of the relationship between use of ICT, space and citizenship, of particular interest are local participatory practices, expectations on the UPS and the relationship between the logic of socio-spatial exclusion and digital divide, and results for urban planning and design of participatory methods.

The assessment of the proposed dimensions does not produce rigid results, because the framework tackles diversity of spaces and users. Each one creates systems of relations - the social practices, enriching the diversity of urban dynamics.

C. Implications of the Use of the Approach

Exemplary for some dimensions, variables are identified, as well as their analytical indicators, pointing out potential methods and technical support. This approach provides the description the specific features of the social use and appropriation of urban public space. It affords the following benefits:

- Improving the capability to respond to urban social diversity and complexity;
- Tool for mapping social practices;
- Collecting and recording data and information on space production;
- Promoting articulation between different techniques of information gathering and assessment (e.g. visual techniques of observation; interviews and surveys, etc.);
- Enhancing inter/multidisciplinary potential through the working methodologies.

The authors argue that using case studies, these five aspects can contribute to a better understanding of the use and appropriation of space by specific individuals or groups, and improve the design of socio-urban initiatives that aim to achieve social integration and participation having ICT as a mediator.

VI. DISCUSSION AND OUTLOOK

This paper reviewing literature proposes an analytical ethnographic approach that may serve as a standard for assessing and validating data on social practices, and guiding for further drawing operational methods. It also offers a perspective proposing both formative and reflective approaches that appears to reflect better the nature of the relationship between people, space and technology. The ethnographic framework discussed here refers to a close and inside view. It can also be associated with the idea of proximity and assiduousness to the contexts of study, thus making it possible to empirically detect concurring regularities and sociocultural patterns, as well as overcome the most visible expressions of the contemporary city, often associated with multiple fragmentations.

At this point, it is essential that an ethnographic study contributes towards:
- Innovative theoretical approaches on the relationship between the socio-cultural, physical and virtual dimensions, functional and environmental space, in order to promote a reflection and definition of urban design;
- Increasing the understanding of the relation between culture, society and space, the dynamics of degradation, socio-spatial exclusion and segregation;
- Going beyond a simple collection and registration of information.

TABLE II. FRAMEWORK FOR AN ETHNOGRAPHIC PERSPECTIVE FOR THE PROJECT CYBERPARKS

Phase 1| Intersections between ICT and Urban Public Space (UPS) · The role of mediation between ICT and use of the UPS. · The role of mediation between ICT - use of the UPS - and social interaction	
DIMENSIONS OF ANALYSIS	**VARIABLES OF ANALYSIS**
UPS use and appropriation: · Practices and behaviours of use and appropriation of the UPS. · Relationship between ICT use and UPS use. · Relationship between ICT use, UPS use and dynamics of social interaction.	1. How people use the public space: · The relationship between the use of ICT and the socio-spatial practices. · Influence of ICT use in people's behaviour in UPS (behaviours/practices remain or are they altered?). · Frequency (hour, day, week, month) to use the UPS. 2. Social, physical and environmental characteristics and services of the UPS: · Relationship between practices and behaviours to use the UPS and the socio-demographic characteristics of the users. · Relationship between socio-demographic characteristics of users, the physical and environmental characteristics and the services offered in the UPS.
Socio-spatial representations: · Images and imaginary respect to UPS. · (Real) Needs regarding the UPS. · Requirements concerning UPS. · Satisfaction in relation to UPS.	3. How users represent the UPS: · How people interpret their relationship with the UPS, and between this relationship and ICT. · What representation do users build from other people in the relationship established between ICT, sociability and UPS use. · Identification of the most attractive elements in UPS. · Identification of the aspects less valued in the UPS. · Explanatory aspects of choice of UPS (why this and not another UPS). 4. Expectations regarding the UPS users: · Identification of needs, requirements and preferences. · Identification satisfaction level with the UPS. 5. Expectations regarding the use of ICT and increased participation in decisions concerning the production of space: · Satisfaction with the use of technological tools developed by CyberParks Project. · Identify needs, suggestions and new ideas to technological tools (secondary) support.
Phase 2| Intersections between ICT, planning and citizen participation · The influence of ICT on the variation of intensity of use and number of users. · The influence of ICT in citizen participation. · The influence of ICT in the production of UPS.	
DIMENSIONS OF ANALYSIS	**VARIABLES OF ANALYSIS**
ICT and UPS use and citizenship: · Practices of citizen participation. · Expectations of citizen participation in relation to urban space. · Logics of UPS exclusion and info-exclusion.	6. Participation and citizenship: · Mapping of participation practices. · Mapping of potential practices with digital resources (or ICT resources). 7. Using the UPS, ICT and social inclusion · Identify groups (potentially) excluded from the UPS. · Identify groups (potentially) excluded from ICT. · Identification increment aspects to promote a social inclusion through the relationship between ICT and UPS.
Planning and urban design: · Participatory methodologies.	8. Development of an interactive approach for collaborative planning and design proposals: · Design of new methods of cooperation. · Design of new policy proposals. · Definition of goals and priorities for the development of public policies.

It is important to create conditions for the analysis and construction of knowledge to enable the following:

- To put high value in the human dimensions in the analysis and characterisation in urban design;
- To take into account the users' perspective, namely in terms of symbolic dimensions, socio-spatial and cultural practices, individual satisfaction and well-being;
- To advance knowledge of the relationship between the behavioural dimensions, the sociocultural dynamics and the environment;
- To contribute to develop public spaces that, when responding to variety of social needs, set out vitality, quality and socio-urbanistic integration.

In fact, the described approach is concerned with:

- Defining and clarifying the socio-cultural aspects that synthesise practices, perceptions, interests and common social projects;
- Clarifying and emphasising the importance of socio-cultural aspects that express consistency, at the same time socio-spatial transformation;
- Identifying and highlighting the socio-cultural particularities of appropriation and organisation of public space;
- Comparing and generalising different contexts, in order to bring references and socio-cultural common practices and distinguish the most varied aspects;
- Detecting and analysing the socio-cultural aspects that, in their relationship with the space, give rise to situations of socio-spatial exclusion and segregation, as well as socio-urban vulnerability.

For both research and planning practice, it should be of interest to invest in developing an approach and analysis that consider the socio-spatial dynamics from a close and inside look and take into account the images, practices, preferences and needs of people. As Tornaghi and Knierbein [33] acknowledges the social practices change in space and through space, and these in turn change processes of space production. A comprehensive understanding of social practices enables the development of public open spaces that are designed to draw people in. The experiences show that vibrant public spaces boost the economic development, and are steps towards urban justice and sustainability.

REFERENCES

[1]   McQuire, S. (2006). The Politics of Public Space in the Media City. First Monday, Special Issue #4. Available at: http://firstmonday.org/ojs/index.php/fm/article/view/1544/1459 [Accessed 15 January 2016].

[2]   Frick, D. (2007). Spatial synergy and supportiveness of public space. *Journal of Urban Design*, 12 (2), pp. 261-274. Doi: 10.1080/13574800701306369

[3]   Mitchell, W. J. (2003). *Me++ The cyborg self and the networked city*. Cambridge, MA: MIT Press.

[4]   COST Action CyberParks. www.cyberparks-project.eu.2015

[5]   Apostol, I., Antoniadis, P. and Banerjee, T. (2013). Cyberspace design: a new challenge for planners. Proceedings of the Institution of Civil Engineers - Urban Design and Planning, Vol. 166, Issue 3, pp. 156-163.

[6]   Townsend, M. and Weerasuriya, R. (2010). Beyond Blue to Green: The benefits of contact with nature for mental health and well-being. Melbourne. Available at: www.hphpcentral.com/wp-content/uploads/2010/09/beyondblue_togreen.pdf [Accessed 15 January 2016].

[7]   Moughtin, C. and Shirley, P. (2005). *Urban design: Green dimensions*. Burlington: Architectural Press.

[8]   Thomas, S. (2013). *Technobiophilia: Nature and Cyberspace*. London: Bloomsbury.

[9]   Smaniotto Costa, C. and Hoyer, J. (2014). Why Invest in Urban Landscapes: Impacts of European Research on Paradigm shift in Urban Planning. Focus. *Journal of the City and Regional Planning Department*, Vol. 6, pp. 61-68.

[10]   Barker, R.; Shoggen (1973). *Qualities of Community Life*. London: Jossey - Bass Publishers.

[11]   Wicker, A. (1979). *An Introduction to Ecological Psychology*. San Francisco: Brooks / Cole Publication.

[12]   Menezes, M. (2010). Ser urbano em espaço público: Captar a (in)visibilidade das práticas de (in)sustentabilidade urbana. In: Gomes, M.F. and Barbosa, M. J. Cidade e Sustentabilidade: Mecanismos de Controle e Resistência. Rio de Janeiro: Terra Vermelha, pp. 41-58.

[13]   Menezes, M.; Allen, Judith; Vasconcelos, Lia (2012). Using Visual Methodologies to Understand the Urban Cultural Landscape. In: *Lusófona Journal Architecture & Education*, nº 6-7, Lisbon, pp. 125-144. ISSN: 1646-6756. Available at: http://revistas.ulusofona.pt/index.php/revlae/article/view/4120 [Accessed 3 april 2016]

[14]   Magnani, J.C.G. (2002). Insider and a close-up view: notes on urban ethnography. *Revista Brasileira de Ciências Socais*; Vol. 17, n.º 49, 2002, pp.11-29.

[15]   Magnani, J.C.G. (2000). Rua, símbolo e suporte da experiência urbana. Available at: http://nau.fflch.usp.br/sites/nau.fflch.usp.br/files/upload/paginas/rua_simbolo%20e%20suporte%20da%20experiencia%20-%20magnani.pdf   [Accessed 26 February 2016].

[16]   Magnani, J. C. G. (2000). Quando o campo é a cidade: fazendo antropologia na metrópole. In: Magnani, J. C. G. and Torres, L.L. (Eds.) *Na Metrópole - Textos de Antropologia Urbana*. São Paulo: EDUSP, pp. 12-53.

[17]   Rapoport, A. (2013). Human Aspects of Urban Form: Towards a Man - Environment Approach to Urban Form and Design: Elsevier Science.

[18]   Low, S. M. (2000). *On the Plaza: The Politics of Public Space and Culture*. Austin: University of Texas Press.

[19]   Low, S. M. (2000). Culture in the modern city: the microgeographies of gender, class, and generation in the Costa Rican plaza. *Horizontes Antropológicos*, 13(6), pp. 31-64.

[20]   Thompson, C. W. and Travlou, P. (Eds) (2007). *Open Space: People Space.* Abingdon: Routledge.

[21]   Smaniotto Costa, C., Allan, Kasperidus, H., Šuklje Erjavec, I. and Mathey, J. (2008). *GreenKeys @ Your City - A Guide for Urban Green Quality*. Dresden: IOER.

[22]   Thompson Ward, C. (2002). Urban Open Space in the 21st Century. *Landscape and Urban Planning*, 60 (2), pp. 59-72.

[23]   Šuklje Erjavec, I. (2010). Designing an urban park as a contemporary user-friendly place. In: G. Maruši and B. Nikši M. (Eds). Human Cities - Celebrating Public Space. Oostkamp. Stichting Kunstboek, pp. 39-51.

[24]   Gehl, J. (1987). *Life between Buildings: Using Public Space*. New York: Van Nostrand.

[25]   Whyte, W. H. (1980). *The Social Life of Small Urban Spaces*. Washington: The Conservation Foundation.

[26]   Smaniotto Costa, C., Scherzer, C. and Sutter-Schurr, H. (2006). Tage im Grün - Nutzerwünsche Nutzungs-verhalten und im öffentlichen Freiraum - eine Untersuchung in Dresden. *Stadt und Grün*, 11, pp. 12-19.

[27]   Hampton, K. and Gupta, N. (2008). Community and Social Interaction in the Wireless City: Wi-Fi use in Public and Semi-Public Spaces. New Media & Society, 106, pp.831-850

[28]   Grech, G. (2015). Cities as Platforms. Available at: http://techcrunch.com/2015/08/07/cities-as-platforms [Accessed 10 August 2015].

[29]   Smaniotto Costa, C., Menezes, M. and Mateus, D. (2014). How would tourists use Green Spaces? Case Studies in Lisbon. Project CyberParks - Cost TU 1306. Entretextos, 52, Lisbon. Available at: http://www.ceied.ulusofona.pt/pt/investigacao/publicacoes/entretextos/197-publicacoes/entretextos-2014 [Accessed 15 February 2016].

[30]   Ioannidis, K., Smaniotto Costa, C., Šuklje-Erjavec, I., Menezes, M. and Bahillo Martínez, A. (2015). The Lure of CyberPark - Synergistic Outdoor Interactions between Public Spaces, Users and Locative Technologies. In: Theona, I. and Dimitris, C. (Eds.), Hybrid City 2015: Data to the People, Athens, pp. 272-281.

[31]   Hicks, L., & Higgins, J. (2010). Exergaming: Syncing Physical Activity and Learning. Strategies. *Journal for Physical and Sport Educators*, 24(1), pp. 18-21, Doi:10.1080/08924562.2010.10590908

[32]   Thomas, S. (2014). Cyberparks will be intelligent spaces embedded with sensors and computers. Available at: http://theconversation.com/cyberparks-will-be-intelligent-spaces-embedded-with-sensors-and-computers-26837 [Accessed 15 July 2014].

[33]   Tornaghi, C. & Knierbein, S. (2014). *Public Space and Relational Perspectives*. New Challenges for Architecture and Planning. Routhledge

Marluci Menezes
Laboratório Nacional de Engenharia Civil – LNEC
Lisbon, Portugal
marluci@lnec.pt

Carlos Smaniotto Costa
CeiED Interdisciplinary Research Centre
for Education and Development
Universidade Lusófona - ULHT
Lisbon, Portugal
smaniotto.costa@ulusofona.pt