







## 2.4

# Teenagers' Perception of Public Spaces and Their Practices in ICTs Uses

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**Abstract.** The new information and communications technologies are expanding human connectivity, reconfiguring urban spatialities and generating a kind of social space that spans real and virtual, personal and impersonal, private and public. As a result, the space and time boundaries become blurred, giving rise to novel needs for, and practices of, public space usage. However, the ways in which these new practices affect public space engagement and public life in general, remain yet unclear. In addition, variations might exist due to differences in local culture and conditions, or due to specific lifestyles and behaviours favouring isolation and privatism or, at best, interaction only with close friends and kin. The above issues become even more critical for young people, who born in a digital era are able to handle new technologies with utmost ease. This chapter sheds light on the related perceptions and practices of adolescents. Structured interviews were applied to eight teenagers living in Hannover (Germany), Lisbon (Portugal), Tel Aviv (Israel) and Volos (Greece) to gather focused, qualitative and textual data. It examines how young people of distinct sociocultural contexts perceive and use both public spaces and digital technologies. This enables to identify emergent logics, needs and patterns of socialization and public space engagement placing specific emphasis on the role information technologies can play in them.

**Keywords:** Spatial practices of teenagers · Teenagers and public spaces · Use of digital technologies · Methodological contribution

## 1 Introduction

The term “adolescent” is used in this work to mean anyone between the age of 14 and 16 years, and is used interchangeably with other terms “teenager” and “young people”. Adolescence, marking the passage from childhood to adulthood, is a crucial stage of human development. It is a period of life with substantial changes on the biological,

physical, cognitive, emotional and social fronts, that move teenagers towards a more mature sense of self and purpose. Adolescents learn how to develop and manage healthy relationships with their peers, family and other members of their social sphere, to fully understand abstract ideas and to develop their own opinions, beliefs and viewpoints along with an increasing ability to understand their environment. This personality and identity development is accompanied by a call for independence and privacy, along with establishment of close relationships with peers and other people beyond family (ACS 2013). Thus, parent attachment and adult supervision decrease and gradually teenagers come to expand their social circle of friends and acquaintance, being free to decide on their own, how, with who and where to spend their time. However, unlike adults, teens have limited control of private space, both in their homes and schools, making them to resort to public space or to cyberspace both for their isolation and social interactions (Childress 2004). Yet, little research has explored how these young people approach and use both public space and the new technologies that enable them to enter the virtual space, let alone the links between the two.

With the broad penetration of digital technologies and new media devices the world has increasingly become hyper-connected, melting together the real and virtual worlds and this makes the call to identity and address the complex, multi-causal, and even sometimes contradictory, relation of social life and spaces, termed here as urban spatialities (Menezes and Smaniotto 2017). Teenagers of the 21<sup>st</sup> Century are born in a cybernetic era and are able to handle new technologies with utmost ease (Boyd 2014). Moreover, they are not only highly digital-literate people, but also constitute the citizens, users and policy makers of tomorrow. It is therefore important to explore their perceptions, preferences, behaviours, practices and needs of both public spaces and technology. Such knowledge is expected to shed light on how (“smart”) cities would, or should be developed in the near future, taken under proper consideration the views of teenagers.

On these grounds, this chapter comes to elucidate the aforementioned issues, examining the perceptions and practices of teenagers (14–16 years of age), using informal interviews structured in the form of a questionnaire with eight adolescents living in Hannover (Germany), Lisbon (Portugal), Tel Aviv (Israel) and Volos (Greece). It examines how teenagers of different sociocultural contexts perceive and use public spaces and ICTs, in an attempt to identify emergent logics (and needs) of socialization and public space engagement. This enables also to explore, in a preliminary manner, the links between public space and the use of ICTs. Obviously, a study of eight people does not intend to obtain a statistical representation; it simply aims to identify specific aspects and patterns of teen behaviour to guide future research on related issues.

## **2 Teenagers, Information Technologies and Public Space**

ICTs have greatly changed society and how people work, learn, communicate and interact, and increasingly the way they spent leisure time. This trend will continue to proliferate, as the digital realm is getting more and more ubiquitous in our lives (Bahillo et al. 2015). Computers, internet and mobile devices became ordinary part of

life, even stronger in teens' lives. They use ICT devices to communicate, for social interaction and learning, and increasingly for entertainment. RSPH (2017) notes that 91% of teens use internet mainly for social media and acknowledges a causal link between, and a negative impact of, internet intensive use and the physical and psychological health of young people, especially of females, causing anxiety, depression and the like. While teens are quite confident with ICT use (digital literate), very little is known about their behaviour and needs on public places and the role technology can play in this relationship.

For many readers it may come to a surprise that young people are among the most frequent users of public space (Travlou et al. 2008). This is partly due to the fact that, as minors, they have no formal (legal) rights to spaces of their own (Childress 2004), something that makes them to depend on public space both for their isolation and social interactions (Lieberg 1995; Worpole 2005). Thus, parks, squares, alleyways, sidewalks, and the like, become the appropriated places whereby adolescents resort to stay private, as well as to meet and to interact with their friends and peers (Matthews 1995; Depeau 2001). As a result, these places are imbued with their own cultural values and meanings. This suggests, at least, the need to examine public space in the way young people understand, approach and appropriate it.

Despite the fact that public space plays an important role for adolescents physical, mental, emotional and social development and well-being (Robinson 2000), teenagers' appropriation of public space is usually seen in particularly charged ways, attributing these public spaces a sense of "difference" in relation to adults' space (Jupp 2007; Lieberg 1995). Thus, young people are seemingly invisible in the urban landscape (Travlou et al. 2008); they are excluded from the dominant "adult" public space through controls and rules, afforded only with "leftover" or "token" spaces (Matthews 1995; Childress 2004), which are usually not sufficient to their needs (Lieberg 1995). In their attempts to contest adults' spatial domination and to declare their independence, adolescents develop their own "micro-geographies" in space (Matthews et al. 1998). That is, they resort to alternative patterns of public space usage and leave their own markers (e.g. graffiti) as symbolic gestures of resistance to adult hegemony (Bell et al. 2003; Valentine 1996; Matthews 1995). These actions are sometimes seen as threats to the safety of other user groups (ACS, 2013), giving rise to conflicts and generating stricter controls on the part of the adults (Livingstone et al. 2015; Bell et al. 2003). At least partly, due to these restrictions, young people's spatial freedom and mobility appears to be decreasing, and teenagers retreat to virtual space (through mobile phones and the internet) and/or to semi-public spaces (such as, the indoor space of shopping/leisure centres, libraries, churches, etc.) as a new experiential place for isolation and interaction (Childress 2004). The latter study highlights an increase in the sedentary lifestyle, raising further concerns about youngster's obesity and related health risks, let alone the devastating effects on their personality and well-being due to disconnection from the natural environment and from nature in general (Louv 2008).

The way cities, the build environment and open spaces are designed, and function affect people's life. There is a growing body of evidence illustrating how spatial planning and urban design impact on public health, sociability and well-being. An environment that encourage people to walk, cycle, move physically and exercise leads to increased social interactions and healthy relations with one other (Smaniotto Costa

2016). This highlights that urban planning decisions have a key role to play in combating growing levels of obesity and helping prevent lifestyle related diseases, through facilitating physical activity and social interaction (COB 2011). ICTs' place in these processes is also significant. As scholars (e.g. Hampton and Gupta 2008; Hampton et al. 2010; Hatuka and Toch 2014) have pointed out, ICTs affect public space use and design enabling involvement in outdoor social practices, and public participation and empowerment. Thus, a vast spectrum of innovative ways of public space engagement becomes a possibility, where ICTs constitute a resource to be used in the production of more responsive, liveable and inclusive urban environment (Smaniotto et al. 2017). On these grounds, it is paramount to explore the role and impact of ICTs on public spaces from a teenagers' point of view.

All the above, and especially the apparent invisibility or, perhaps, disappearance of teens from public spaces and their alleged antisocial behaviour, make a call for an inter-generational dialogue and further study on the issues (Lieberg 1995). With a view to initiate such a forum where adolescents can articulate their needs, preferences, views, concerns, etc. regarding urban public spaces, the present exploratory study aims to introduce some aspects that stand out from the perspective of eight adolescents living in different sociocultural contexts of four distinct cities.

### **3 ICTs and Public Space: The View of Teenagers**

#### **3.1 Study Methodology**

The questionnaire used was composed of two main blocks of questions: The first block concerns the interviewees' profile, containing 34 (mostly closed) questions, which collected socio-demographic data, information on the different ways' ICTs are employed, how free time is spent, and public spaces are used, in addition to other aspects of interviewees' social life. The second set of questions, all open, gathered opinions on public spaces (quality, frequency of use, etc.) and how the ICTs could increase their use by the respondent and their friends and peers. The last question of this block asked for additional comments regarding all aspects of the issues raised. The initial idea of this question was to initiate further discussion in the form of informal conversation within the topics of study.

In order to implement the process of inquiry, each one of the authors identified (and then interviewed) two adolescents who were, somehow, part of the interviewer's wider social network in the cities they live. This choice enabled to speed up the process of inquiry and fostered the establishment of more relaxed conversations-interviews, that made the collection of information not only easier but also oriented it towards more in-depth and qualitative kind of data. The process of inquiry took place between May and June 2017.

#### **3.2 General Information About Interviewees and Their Families**

The following information presents key demographic characteristics, composing the profile of the eight adolescents participated in the study:

- The majority of interviewees (six in number) are female, the only two boys are each from Hannover and Tel Aviv.
- The interviewees are between 14 and 16 years old (two girls of 14, one boy and two girls aged 15, and one boy plus two girls are 16 years old).
- Seven of them are in the secondary school (five attend the 9<sup>th</sup> grade and two in 10<sup>th</sup> grade, one in 8<sup>th</sup> grade).
- Six of the interviewees live in a household composed of three to four people, one respondent, from Lisbon, lives in a household of five, and one from Tel Aviv in a household of six persons.
- Except for a single case (Tel Aviv), whose mother completed only primary education, all other parents have a university degree; out of these seven, four have completed postgraduate studies (two mothers from Lisbon and Volos, and two fathers from Hannover and Volos).
- Except for one parent who is retired (Lisbon), all other parents are currently employed. In terms of professional occupation, there are six people who are highly educated professionals, e.g. doctors, engineers, etc. (three parents from Lisbon and three parents from Hannover), two mothers working in service and sales sector (respectively in Hannover and Tel Aviv), five people are employed in education (one mother from Tel Aviv and four parents from Volos), one is a businessman (from Hannover); and for the remaining two people (from Lisbon and Tel Aviv) such information have not been provided.
- Five of the adolescents identified themselves as belonging to a household with moderate to high income, and the other three indicated their family income to be moderate to low (one from Tel Aviv and two from Volos).

### 3.3 Study Results

Regarding how the eight interviewees use ICTs and related devices, as expected, all adolescents have some kind of digital devices at home and, in particular, some of them are for their personal use. The following information presents synoptically our findings:

- Smartphones: all household members of respondents from Hannover and Tel Aviv and one from Lisbon have own personal smartphones. In the other families some members do not own a smartphone, presumably the too young ones, these are one family member in Lisbon and two family members in Volos.
- Desktop computer: with the exception of two cases, one in Lisbon and in Hannover, all families had at least one desktop computer. Notably, a respondent from Tel Aviv reported of having two desktops at home.
- Tablets: four of the cases reported of not having a tablet at home (Hannover, Lisbon, Tel Aviv and Volos). One case (Hannover) reported having four tablets in the household, one for each member of the family. Interesting is also the case of a Lisbon family mentioning that there is a tablet in the household, but it is not working. The last case, a Volos family of four people counts on two tablets.
- Laptop/Notebook: all households report that there is at least one laptop/notebook available. In two families (one from Hannover and one from Lisbon), all members

have for their own such a device. The second family from Lisbon reported four notebooks for five people.

- Other technological equipment: with the exception of one case from Lisbon and the two cases of Tel Aviv, all other families stated that there is at least one such device in the household, namely: N2DS and Kindle (in one case from Hannover), iPod, SmartWatch and mp3 (one case from Lisbon), and mp3 player (one case from Volos).

Teenagers were also asked about the use of GPS through the ICT devices they own. Three of the interviewees (one from Tel Aviv, Volos and Hannover) replied that they did not make such use. All others reported that they use this function mainly for locating and consulting transport services. All teens have reported they have internet access at their homes and at school (both Wi-Fi and cable connection), and they use it for research purposes and for obtaining all kind of information.

Adolescents were asked to identify from a list of seven places (home, school, other family members' home, friends' home, shopping centres, public spaces, and public transport) where they access the internet most. Unfortunately, only in Lisbon the question was answered as expected; in all other cases this question was unsatisfactory answered, preventing us from drawing comprehensive conclusions on the issue. For example, the respondents from Hannover marked the places where the internet are accessed (with no identification of relative importance between the places), whereas the respondents from Tel Aviv and Volos indicated the importance of some, but not all of the places (presumably only those used). In any case, the answers indicate the following:

- Home: Except for one case (Tel Aviv), all other interviewees have selected this option. Moreover, the two cases of both Lisbon and Volos, reported "home" to be the most frequent place for accessing the internet.
- School: The two interviewees from Hannover marked this as a place of frequent internet access, whereas all responders from Lisbon identified "school" as the second place of importance. The other cases, i.e. in Tel Aviv and Volos, teenagers reported that they use the internet for research, without however providing further information on where they access to it.
- Other family members' home: Only the cases of Lisbon and Volos have place identified as important; in Lisbon it came as second, while in Volos it was classified fourth and fifth most frequent way to access to internet. One of Hannover's respondents selected this option (but without ranking its importance); and for the cases of Tel Aviv no answers were delivered.
- Friends' home: This place was selected by two interviewees, one from Hannover and from Tel Aviv. This option was select as first and second place in Volos, and the fourth and the fifth in Lisbon.
- Shopping centre: This place was marked by one case in Hannover and by another in Tel Aviv. In Lisbon, it was marked as the third and last rank.
- Public spaces: It was ranked second and third in Volos, fifth and fourth in Lisbon. It was marked as important by one of the Hannover teenagers.
- Public transport: This place was ranked as last and third in importance by teenagers of Lisbon and fourth of Volos. One interviewee from Hannover ranked it too.

The frequency of internet connection was explored in the next question, revealing that teenagers have access to Wi-Fi internet services to a great extent. Both respondents from Volos, one from Lisbon and one from Tel Aviv reported that they are always connected, whereas the other two respondents from Lisbon and Tel Aviv and the one from Hannover, indicated that they stay connected several times during a day. Notably, only one interviewee (from Hannover) replied to have internet access only a few times a day. Turning to the question of how many hours the internet is used every day by the teenagers, the majority of interviewees mentioned to use it between four to seven hours, and only two of the respondents (from Tel Aviv and Volos) use it about one to two hours per day. Moreover, these answers allow us to spot the following findings:

- Girls specify that they spend more time using the internet than boys (to note, however, that only two boys participated in the study);
- Internet time used for email communication seems to be quite lower relative to time spent in other activities, especially those related to social network/media;
- Regarding the time teenagers spend connected to the internet for recreational activities has been mentioned most often.

The next set of questions explored how teenagers spent their free time. First, on a given list of activities (watch TV, go for a walk, stay at home with friends, play computer games, listen to music, study, read books, access social networks, other) the teenagers are asked to rate on a scale of 1 (low) to 7 (high) what they usually do in their free time during the week. The results show that the majority of the adolescents spend most of their free time in playing computer games and in studying (both answers scored equally high), and in listening to music (scored third). Apart from these, other preferred activities that are high scored are: watching TV (indicated by one respondent from Hannover and one from Tel Aviv), book reading (mentioned by the other respondent from Hannover), accessing social network (selected by one teenager from Tel Aviv and one from Volos) and walking (indicated by the same respondent from Volos).

The second question explored which places from a given list (shopping centre, cinema, theatre, museum, concert/festival, club/association, urban park, square, garden, or other) teenagers visit most during their free time. It becomes evident that semi-public places and, in particular malls, cinemas, museums and theatres, score top in the preferences of respondents. Interestingly, public open spaces, such as squares and parks, score lower, but above other places of social gathering such as festivals, clubs or associations. These findings corroborate the arguments raised in the literature that adolescents tend to withdraw from public spaces and to resort to semi-public spaces as the new rhetorical and experiential landscape. Regarding the individual responses, teens from Hannover are more into spending time in festivals and clubs, Lisbon's teenagers are more into theatres and museums, Tel Aviv respondents spend time in parks and shopping centres and in Volos in cinemas and squares.

Teenagers were also questioned about their practices and behaviour in public spaces. They have been asked on the frequency they go to a public space, how much time they usually spend there, what they do there, and with who they go. As regards the first question, the answers show that four out of eight teenagers visit public spaces every day (the two teens from Lisbon, one from Hannover and one from Tel Aviv); others mentioned to go only on weekends (both from Volos) or sporadically (one

respondent from Hannover and one from Tel Aviv). With regard to the time spent in public spaces, three respondents (the two from Tel Aviv and the one from Hannover) replied that they go to the public spaces for an hour or less per day, others that they stay between two to four hours a day (two from Lisbon, one from Hannover and one from Volos). One adolescent (from Volos) replied that during the summer she stays in parks and squares about six hours per day. The interviewed teens expressed to go to the public spaces mainly to meet with friends (seven out of eight), to walk (six respondents), to relax and rest (five respondents), to picnic (three respondents), to read and study (three respondents), to practise sports and exercise (two respondents) and to attend events and play games (two people in each category, respectively). All teenagers mentioned to go to public spaces with their friends and some with family members (the two from Lisbon, one from Hannover and one from Tel Aviv).

Finally, a number of questions explored what teenagers think of public spaces and the role ICTs can play in increasing their use. The first question is about the teens' judgment upon the public space suitability for the needs of adolescents. Respondents were generally positive; the two teens from Tel Aviv answered with "definitely yes", highlighting the fact that the parks they use have sections that enable privacy and isolation. This approval was also shared by the teenagers from Hannover and Lisbon, as they answered with "rather yes". On the other hand, adolescents from Volos were not satisfied with the public spaces, reporting a number of problems and deficiencies they see in these places. This builds the bridge to the next question: what teenagers do think is missing in these places and what should be done to increase the usability for young people. The teens from Tel Aviv reported no problems, as they are satisfied with the public spaces they have. Furthermore, three teenagers highlighted problems of dog fouling (one each from Hannover, Lisbon and Volos), others pointed out issues of maintenance and cleanliness (one each from Lisbon and Hannover, and the two from Volos), two have highlighted the need of more natural elements and pleasant environment (one each from Lisbon and Hannover), the girl from Hannover brought out the need of coffee shops nearby green spaces, one of the Lisbon girls stressed the absence of drinking water in parks, and the one from Volos asked for more events and cultural activities in public spaces. Remarkably, three of the interviewees (two from Volos and one from Hannover) highlighted the lack for privacy for teenagers and emphasised the need for special places within parks, where adolescents (as well as other people with special interests and needs, as children) can claim for themselves, places where they can loiter, hang out and interact with their friends and peers. The third question of this block asked if ICTs can improve public space usage, and if so, what kind of ICTs would be most supportive. Six adolescents, out of eight, replied to this question (the two who did not are from Hannover), all in a positive manner. Three teens highlighted the need of providing online information (the girl from Lisbon and two from Tel Aviv) related to public-space facilities and functions (such as, the available public-space qualities and the activities that can be performed in them, and the availability and frequency of public transport). The two teens from Volos stated that high quality Wi-Fi would be very helpful, it would improve communication and coordination between teenagers, and eventually attracting more young people, making "these spaces more fashionable". They also suggested the development of special apps attached to public spaces (like Pokémon-go).



## 4 The Lessons Learnt: Discussion and Conclusions

This small-scale study outlines the view of eight teenagers living in different cities: Hannover, Lisbon, Volos and Tel Aviv, to provide some insights on teenager's perspectives and on their ICT practices in relation to public open spaces. Teenagers as Digital Natives belong to the "Z" generation, a generation born completely within the technological age having a true global culture with quite uniform characteristics.

That said, it is almost natural that ICTs are scored very high in the preferences of teenagers interviewed. If there are any differences among them, these should be attributed to the local conditions in each country, the standards of living, differences in education, culture, degree of ICTs penetration and provision of quality public spaces. Even so the results let us to draw the following conclusions:

- Teenagers are using intensively the most advanced tools and particularly smartphones, which become a very common device among more and more youngsters of any gender.
- Differences in socio-economic status do not matter, both lower and higher economic levels use ICTs to a similar degree. Of course, some parents are more cautious (and protective) with regard to how their children should engage with technology, and in these cases, teens have to negotiate the access to digital media and technology.
- ICTs devices are acquiring the status of "humanized friend" among the adolescents. ICTs become not only the everyday companion of teenagers but in some cases their 'best friend', substituting other friends and peers.
- Possession of smartphones and other mobile devices gives teenagers a kind of social status, prestige and acceptance by their peers. It is also a medium for showing off, or, as Veblen (1899) terms it, for "conspicuous consumption".
- Internet, especially wi-fi, is a companion of teens and they use it in diversified situations, needs and contexts, and through different devices. This means that providing wi-fi in public spaces can be a way to lead more young people to get outside and maybe engage with the city and nature.
- Equipped with advanced ICT services, public spaces would attract teenagers, but yet this requires the provision of "private" and retreat places they need for doing a number of activities, e.g. getting together, for entertaining themselves and for practicing sports, etc.
- This reinforces the need to better prepare public spaces to meet the needs and preferences of teenagers. Their activities in public spaces, as reported, are common across to all four cities examined.
- "Good" public spaces can play an important role in teens' socialisation. As Childress (2004) has shown, teens need to mark "their" places (with graffiti, skateboarding or even loitering). This calls for providing teenagers a legitimate and unchaperoned public space, designed in such a way as to make them feel welcomed.
- Teenagers do miss useful information regarding amenities in open spaces and especially about facilities aimed at young people. This becomes an opportunity for technologies to provide such information, motivating teenagers to be more outdoors and forget for a while the gaming indoors.

This small study, due to its limited sampling and resources did not address risks of a digital technology addiction by teenagers, this is an issue that has been increasing being investigated. However, an aspect that becomes clear in the relationship of adolescents with technology, is the speed of the changes in a teenagers' life, be them physical, mental, sentimental and social. These continuous and accelerated changes provoke also changes in their perspectives. The same adolescent interviewed in May might manifest him/herself in a different manner compared to, say, six months later. This goes also in line from a technology perspective, the rapid and continuous digital development poses a continuous challenge for those interested in the nexus people, places and technologies. We cannot stop changes, but we can try to understand these and inform and educate teenagers, and especially in a co-creation process engage young people in the production of more inclusive and responsive public open spaces.

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