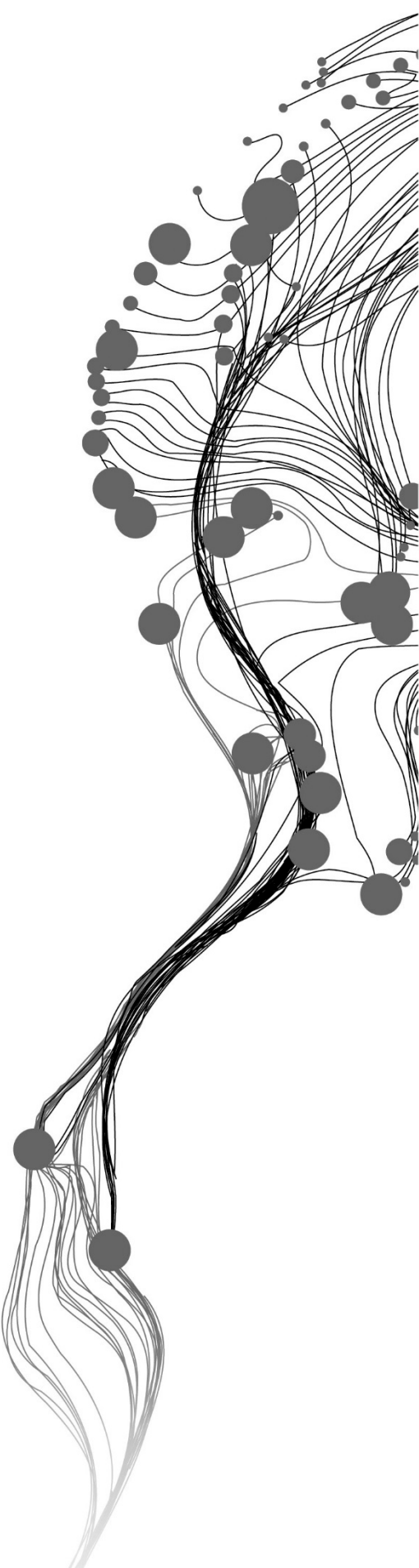


**EVALUATING THE ROLE OF
PUBLIC SPACES IN PROMOTING
SOCIAL INTERACTION IN
DIVIDED CITIES
THE CASE STUDY OF NICOSIA CYPRUS**

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February, 2017

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ABSTRACT

Social interaction is the contact between individuals, groups and environments (Talen, 1999). There are different levels of social interaction, starting with very superficial ones, for example observing other individuals and greeting them, to a high level of interaction that can be found in neighbourhoods where individuals form communities and share emotional investment in the same things. Public spaces such as streets, plazas and parks have the ability to facilitate and promote social interaction (Hickman, 2013), because they create opportunities for people to interact in the form of activities (shopping, cafés, restaurants, museums) and special events (attractions, festivals, exhibitions, etc.) (Pullan, Anderson, Dumper, & O'Dowd, 2012). The UN Habitat (2013) defines social interaction as an element of a public space.

Divided cities originate as the result of divisions within a nation (Kliot & Mansfield, 1997). With little to no relation between the two sides of the divided city, they continue to develop independently. Examples can be found in the formerly divided Berlin, in Belfast and in Nicosia (Kliot & Mansfeld, 1999). In cases where the citizens of the divided cities are allowed to move across the border, one place where they still come in contact with each other and have an opportunity to interact is the public space (Pullan et al., 2012). This implies that public spaces are, not only places of social interaction across sides of the divided cities, but also have the potential to build connections between different groups, and cultivate good will, friendship, compassion and tolerance (Mehrotra & Yammiyavar, 2013).

Previous research has focused on public spaces as binding factors within fragmented cities (Bollens, 2006; UN Habitat, 2013), and examined the different ways groups of actors use public space in divided cities in order to decrease social fragmentation (Nagle, 2009). These studies analyse the physical aspect, focusing on urban design, or the ways people use the space (Abu-Ghazzeh, 1999; Nagle, 2009). Talen (1999) measured the social interaction in public spaces using surveys, at a neighbourhood level.

This research analysed the social interaction in divided cities, and the ability of public spaces in divided cities to facilitate social interaction. The approach that was devised for the purpose of this research used a mixed method design, with an index of social interaction and expert interviews as the focal points.

The index of social interaction, as the tool used to quantify the ability of public spaces to promote social interaction, brought meaningful insights into the phenomena of social interaction in the case study of the divided city of Nicosia.

The key findings relate to several aspect - the characteristics that influence the ability of public spaces to promote social interaction in the case of the divided city of Nicosia, the importance of expert interviews for providing valuable insight used throughout the research, and to verify the results of the index of social interaction. The aspect of activity in public spaces in Nicosia presented as the most important aspect. Due to the expert interviews, it is known that the public spaces in Nicosia are not used to their full potential. The population prefers activities such as shopping, cafes and restaurants, and festivals. Therefore, the public spaces which had a bigger number of such activities scored higher and were ranked as the public spaces with a higher ability to promote social interaction. Following that, the social aspect of public spaces demonstrated a high level of significance. The presence of both communities in the public spaces, as well as the occupant density in them had a great impact on the outcome of the index, and therefore, on the ability of public spaces to promote social interaction.

Furthermore, the validity of the index was confirmed by comparing the testimonies of the experts to the results of the index. The ranking of the public spaces by the number of experts who identified them as those with the highest ability to promote social interaction coincided with the ranking done according to the score of the index of social interaction, therefore validating the findings of the index.

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TABLE OF CONTENTS

1.	Introduction.....	7
1.1.	Background and justification.....	7
1.2.	Research problem.....	8
1.3.	General research objective.....	9
1.4.	Sub-objectives and research questions	9
1.4.1.	To understand the factors influencing social interaction in public spaces of a divided city.....	9
1.4.2.	To quantify the ability of public spaces to facilitate social interaction using an index of social interaction	9
1.4.3.	To discuss the role of public spaces as places of social interaction in divided cities	9
2.	Public spaces as places of social interaction in divided cities	10
2.1.	Divided cities.....	10
2.2.	Public spaces	10
2.3.	Social interaction.....	11
2.4.	Social interaction within public spaces in divided cities	12
3.	Research methodology.....	14
3.1.	Research design.....	14
3.2.	Methodology	14
3.2.1.	Qualitative method.....	15
3.2.2.	Quantitative method	15
3.2.3.	Designing the methodology.....	15
3.3.	Adapting and applying the methodology to the case study	16
3.3.1.	Designing the interviews	16
3.3.2.	Fieldwork	16
3.3.3.	Selecting the public spaces for analysis.....	17
3.3.4.	The index of social interaction.....	18
3.4.	Data collection	18
3.4.1.	Surface area of the public space.....	18
3.4.2.	Number of different types of activities carried out in the public space	19
3.4.3.	Number of each type of activity carried out in the public space	19
3.4.4.	Number of events taking place in the public space.....	19
3.4.5.	Occupant density in the public space, walking	19
3.4.6.	Occupant density in the public space, static.....	20
3.4.7.	Presence of different age groups at public spaces	21
3.4.8.	Presence of the members of both communities in the public space	21
3.5.	Data analysis	21
3.5.1.	Quantitative analysis	21
3.5.2.	Qualitative analysis	23
3.6.	Ethical considerations.....	24
4.	Case study area	25
4.1.	Ledra Street.....	26
4.2.	Faneromeni Square	27
4.3.	Lokmaci Street	28
4.4.	Buyuk Han market	29
4.5.	Bandabulya market.....	30
4.6.	Markou Drakou Street.....	31
4.7.	Municipal Gardens	32

5.	Results	33
5.1.	Results of the index of social interaction, per indicator	33
5.2.	Ledra Street.....	35
5.3.	Buyuk Han market	36
5.4.	Markou Drakou Street.....	37
5.5.	Lokmaci Street	38
5.6.	Faneromeni Square	39
5.7.	Bandabulya market.....	40
5.8.	Municipal Gardens	41
5.9.	Summarizing the results	42
6.	Discussion.....	43
6.1.	Understanding the factors influencing social interaction in public spaces of a divided city.....	43
6.1.1.	What is a public space in the context of the divided city of Nicosia?.....	43
6.1.2.	Which qualities of the public space promote social interaction in a divided city?.....	44
6.1.3.	In what form does the social interaction take place in a divided city of Nicosia?	45
6.2.	Quantifying the ability of public spaces to facilitate social interaction using an index of social interaction	46
6.2.1.	Which public spaces perform better in the index of social interaction, and why?	46
6.3.	Discussing the role of public spaces as places of social interaction in divided cities	47
6.3.1.	How do the results of the index of social interaction compare to the perception of experts about the role of public spaces in a divided city?.....	47
7.	Conclusion.....	48

LIST OF FIGURES

Figure 1. Conceptual framework.....	12
Figure 2. Partial map of Nicosia, Cyprus, showing the location of the UN-administered buffer zone, the crossings, and the public spaces. <i>Source of base map: University of Cyprus, 2016</i>	25
Figure 3. Location of the Ledra Street.	26
Figure 4. Ledra Street, Nicosia, Cyprus.....	26
Figure 5. Location of the Faneromeni Square.	27
Figure 6. Faneromeni Square, Nicosia, Cyprus.....	27
Figure 7. Graffiti on the steps of the Faneromeni Gymnasium	27
Figure 8. Location of the Lokmaci Street.....	28
Figure 9. Hoi Polloi café.....	28
Figure 10. Lokmaci Street, Nicosia, Cyprus	28
Figure 11. Location of the Buyuk Han market. <i>Source of base map: University of Cyprus, 2016</i>	29
Figure 12. Buyuk Han market, Nicosia, Cyprus	29
Figure 13. Buyuk Han market, Nicosia, Cyprus	29
Figure 14. Bandabulya market, Nicosia, Cyprus.....	30
Figure 15. Location of the Bandabulya market. <i>Source of base map: University of Cyprus, 2016</i>	30
Figure 16. Bandabulya market, Nicosia, Cyprus	30
Figure 17. “Home for Cooperation”, Markou Drakou Street, Nicosia, Cyprus	31
Figure 18. Location of the Markou Drakou Street. <i>Source of base map: University of Cyprus, 2016</i>	31
Figure 19. Municipal Gardens, Nicosia, Cyprus	32
Figure 20. A cyclist in the Municipal Gardens, Nicosia, Cyprus.....	32
Figure 21. Location of the Municipal Gardens. <i>Source of base map: University of Cyprus, 2016</i>	32
Figure 22. Standardized values of the indicators for the physical and social aspects of occupant density of public spaces.....	33
Figure 23. Standardized values of the indicators for the activity aspect of public spaces	34
Figure 24. Standardized values of the indicators for the social aspect of diversity in public spaces.....	34
Figure 25. The result of the index of social interaction for Ledra Street. <i>Source of base map: University of Cyprus, 2016</i>	35
Figure 26. The result of the index of social interaction for Buyuk Han market. <i>Source of base map: University of Cyprus, 2016</i>	36
Figure 27. The result of the index of social interaction for Markou Drakou Street. <i>Source of base map: University of Cyprus, 2016</i>	37
Figure 28. The result of the index of social interaction for Lokmaci Street. <i>Source of base map: University of Cyprus, 2016</i>	38
Figure 29. The result of the index of social interaction for Faneromeni Square. <i>Source of base map: University of Cyprus, 2016</i>	39
Figure 30. The result of the index of social interaction for Bandabulya market. <i>Source of base map: University of Cyprus, 2016</i>	40
Figure 31. The result of the index of social interaction for Municipal Gardens. <i>Source of base map: University of Cyprus, 2016</i>	41
Figure 32. Graduated map of the results of the index for the public spaces. <i>Source of base map: University of Cyprus, 2016</i>	42

LIST OF TABLES

Table 1. Research design matrix..... 14

Table 2. The provisional indicators of the index of social interaction and their rationale..... 15

Table 3. The indicators of the index of social interaction and their rationale..... 18

Table 4. Weights of the indicators of the index of social interaction 22

Table 5. The score of the index of social interaction, for each public space..... 33

Table 6. Public spaces that promote social interaction the most, as identified by the experts..... 42

1. INTRODUCTION

This chapter explains the background of the research, defines a research problem and sets a general objective and sub-objectives of the research, designed to address the research problem.

1.1. Background and justification

Divisions are analysed from many perspectives - social, spatial, hystorical, polytical, architectural. Different branches of science approach this phenomena in different ways, trying to comprehend its' multidimensional nature. As Lebow argues, "the phenomenon of division is as varied as it is ubiquitous. This variety poses serious problems of classification and notably precludes a truly comprehensive treatment of division"(Lebow, 2007, p.47).

Van Kempen (2007) argues that no societies are perfectly homogeneous, and certain degree of disassociation exists in every society. Divisions of people over race, ethnicity, religion or social class has been present for as long as societies have existed. In some cases, divisions are more visible than in others. For instance, a physical partition is a clear statement of intent to segregate oneself to the neighbouring entity. This physical boundary is evident in cities which are often the product of conflicts of two opposing communities. Even if the walls are built to isolate opposing communities, or to restrict violence and illegal activities, they induce other problems and suffering along those lines (Abdelmonem & McWhinney, 2015). Divided cities originate as the result of nation divisions (Kliot & Mansfeld, 1999). With little to no relation between the two sides of the divided city, they continue to develop independently, and so does the society. Examples are the formerly divided Berlin, Belfast and Nicosia (Kliot & Mansfeld, 1999). Such divisions are usually done with the influence of outside agents, such as international organizations or occupiers, and they tend to be of more permanent nature as they ensure the termination of identity based conflicts (O'leary, 2007). Even though this is often the best possible solution, identity based conflicts don't get resolved by divisions, but merely suspended. A physical separation remains a constant reminder of what happened and a symbolic fabric of partition which influences current actions and future attitudes. In this sense, the built fabric becomes an object of remembrance that is paradoxical and contested, with different meanings and connotations (Bevan, 2007). They reinforce the feeling of separation and of possible conflicts in the future which can have long lasting negative impacts on perception of safety among people. In many instances, the partition creates absurd situations where families are separated and have to live on different side of borders. The actual distance can be relatively small but the restricted access becomes an overwhelming personal wall to overcome.

The spatial division of a wall creates a distinct urban environment on either side of it. This division of space has a physical function as much as it affects the administrative and political structure, thereby creating an imbalanced distribution of resources and opportunities (Abdelmonem & McWhinney, 2015). It also becomes a negative feature that deters mobility, interaction and hinders social cohesion. However, in cities where the citizens are allowed to move across the border, public spaces provide at least one option for shared spaces where people can interact (Pullan et al., 2012).

For residents of divided cities, public spaces can become a common space for shared functions and social activities, and act as refreshing change from the routine and familiarity of life on their own sides. Public spaces thus become important catalyst for change which allows people to experience life on the other side and bond with their neighbors. This interaction discourages stigmatization of their neighbors through shared experiences that promotes mutual trust and respect for the other. Hence, public spaces come to the fore as places of exchange with significant social role as a complex system of open socio-spatial engagement (Marcus & Francis, 1998a).

Public spaces are experimental environments that groups use to legitimize themselves through decisions of where to stay, gather, and socialize (McCann, 1999). They gain genuine significance where groups can react to the condition of co-existence and overcome boundaries of division in a quest to build a consensus of shared living (Abdelmonem & McWhinney, 2015). Even streets can act as shared spaces and binding factors within divided cities (Bollens, 2006, UN Habitat, 2013). Any public space, accessible to both conflicted communities, can contribute to renewing past relationships and memories of what was once a unified area.

1.2. Research problem

Researchers have long focused on divided cities, and on public spaces within these divided cities. Till et al. (2013), Kliot and Mansfield (1997), Öngül (2012) focus on the political or historical aspect of the division. These types of studies are of great significance, especially in post-conflict eras of divided cities. Lessons of the past can have a great influence on establishing future peace and coexistence in divided cities. Public spaces also play an important role in these situations, because in environments where a physical barrier that divides the city sends a clear message of exclusion, public spaces contest this notion by presenting a shared space where everyone is welcome.

A negative consequence of the divided city is a divided society. Shared or public spaces are some of the few places where the members of divided societies come in contact (Pullan et al., 2012). Furthermore, public spaces have been known to promote sense of community (Talen, 1999), which is generally lacking in divided cities.

Some studies stress the importance of public spaces as binding mechanisms in divided cities, and analyse the physical aspect and examine the ways the people use the space (Nagle, 2009). Gaffikin et al. (2010) analyse the concept of public spaces in divided cities from the perspective of urban design, and the role it plays in that context. They believe that public spaces present an important element in divided cities, since they provide an opportunity for social contact, which can lead to social interaction. Many researchers have focused on the topic of social interaction in public spaces, such as (Abu-Ghazzeh, 1999), (Talen, 1999), and others. They observed how people interact with the public space, as well as how they interact within one. Talen (1999), also measured the social interaction in public spaces by using surveys to quantify this phenomena.

A further step in analysing the role of public spaces as places of social interaction in divided cities is proposed in this study. An approach is developed that allows the quantification of the ability of public spaces in divided cities to promote social interaction. By doing so, further investigations of the public spaces with a high probability of facilitating social interactions are made possible.

1.3. General research objective

The general objective of this research is to analyse the social interaction in divided cities and the ability of public spaces to facilitate social interaction in divided cities.

1.4. Sub-objectives and research questions

1.4.1. To understand the factors influencing social interaction in public spaces of a divided city

- What is a public space in the context of a divided city?
- Which qualities of the public space promote social interaction in a divided city?
- In what form does the social interaction take place in a divided city?

1.4.2. To quantify the ability of public spaces to facilitate social interaction using an index of social interaction

- Which indicators influence the social interaction in a divided city?
- What is the weight of each indicator?
- Which public spaces perform better in the index of social interaction, and why?

1.4.3. To discuss the role of public spaces as places of social interaction in divided cities

- How do the results of the index of social interaction compare to the perception of experts about the role of public spaces in a divided city?

2. PUBLIC SPACES AS PLACES OF SOCIAL INTERACTION IN DIVIDED CITIES

This chapter presents an overview of the relevant literature, focusing on the main concepts of the research. Following the literature review, a conceptual framework is presented and the main relations between the concepts are presented.

2.1. Divided cities

The term divided cities is broadly used by different authors in different contexts. Some authors, such as Van Kempen (2007), and Marcuse (1993), consider highly fragmented cities to be divided cities, whereas Nagle (2009), defines a divided city as a city comprising of two or more distinct entities. According to him, these entities have to be spatially separated, mutually exclusive and relatively homogeneous enclaves. O'leary (2007), refers to this phenomena as a political partition, where an entity becomes divided by a barricade, in form of a wall, fence or other type of physical obstacle.

The physical borders dividing cities have a symbolic function as much as a practical. They represent “infrastructures of conflict”, or in some cases, “infrastructures of peace”, depending on the context (Till et al., 2013). “Infrastructures of conflict”, such as walls, barricades and buffer zones, are not only a physical divide, but also a social and symbolic one (Pullan, Anderson, Dumper, & O'Dowd, 2012). They are the reminders of the animosity that led to their construction in the first place. However, the symbolic divide may be the deepest one. It causes stigmatization, feelings of insecurity and disassociation from the population on the other side of the “Infrastructure of conflict” (Pullan et al., 2012). On the other hand, “Infrastructures of peace” are made from symbols of divisions. The main actors in the construction of “infrastructures of peace” are either the people or civil organizations that wish to send a message of unity and cooperation, and turn an artefact of conflict into a promise of peace (Till et al., 2013). Till et al. (2013) name the example of the Home for Cooperation, a revitalised building in the buffer zone of Cyprus, located on a neutral territory and administered by the Greek and Turkish Cypriots together, as an infrastructure of peace.

Even in cases where the members of the divided communities are free to move across the divide, they often opt for not to, due to their personal beliefs or out of principal (Pullan et al., 2012). In the case of the divided city of Nicosia, Cyprus, some of the members of the Greek Cypriot population consider that by crossing the divide and showing their identification at the border, they acknowledge the legitimacy of the Turkish Republic of Northern Cyprus (Webster & Timothy, 2006). This results in furthering the social divide between the two communities.

In the case of Nicosia, opening the crossings has helped the economic advancement of the both sides of the divided, and has revived the public spaces in the area (Gaffikin et al., 2010).

2.2. Public spaces

Any space which is accessible to the general public could be considered a public space. In this sense, every space that is part of the built environment can serve as a public space. Squares, streets, gardens, cafés and markets, among others, qualify as public spaces. Dymnicka (2010) argues that a public space is formed by the interactions of its users, while at the same time, shaping the interactions of the users. These are social spaces of public life whereas the public life is an interaction between life itself and a public space (Gehl & Svarre, 2013). However, what determines a public space is a set of rules and restrictions that applies to it, and determine who can use it and how.

Carr, Francis, Rivlin, and Stone (1991) introduce public space as the platform where communal life occurs and reveals itself. In literature, public spaces have been studied based on their functions at the city level, their use and the roles of different stakeholders in shaping them (Madanipour, 2010), as well as based on

its social, psychological, political and economic virtue. However, most of the research directly or indirectly relates open spaces with the social dynamics it stimulates. In its physical sense, they are urban generators that stimulate communication channels with morphological, environmental and aesthetic values (Krier, 1979; Lynch, 1960; Marcinczak & Sagan, 2011; Woolley, 2003). “These dynamic spaces are an essential counterfort to the more settled places and routines of work and home life, providing channels for movement, the nodes of communication, and the common ground for play and recreation” (Carr et al., 1991, p.3). In older areas, they are agents of urban renewal achieved through the opportunity for social interaction. For the elderly, they are spaces where they can avoid loneliness through social interactions (Kweon, Sullivan, & Wiley, 1998).

Culturally, public spaces are common points of convergence that host numerous traditional functions which allow for symbolic value embedded in identity and sense of place. The cultural and political meanings of these spaces are vital in day to day life where meanings emerge through social interactions (Low, 2000). In the cultural sense, green spaces such as parks, as a type of public spaces, have always been able to attract visitors, regardless of the attractiveness of the space itself (Lo & Jim, 2010). They also contribute to improving the educational development and benefit the mental health (Jackson, 2003; Shaftoe, 2008; Woolley, 2003). Politically, they are spaces for demonstration, an arena for negotiations of conflict and of political actions (Van Deusen, 2002; Low, 2000; Inroy, 2000; Mitchell, 1995). They can host clashes among oppositions but tensions can change over time, and the resulting effect can be witnessed in shared spaces. The economic role of public spaces can be observed in commercial complexes where they attract visitors and therefore attract investments.

The functions that public spaces allow diverge extensively and so do its users. Studies have shown that the activities in public spaces are determined by the socio-economic attributes of its users (Aziz, Ahmad, & Nordin, 2012; Aratani, 2010). It could also be influenced by the political ideology of its users, which can be observed in divided cities. The difference in personal beliefs can change the way people behave in these spaces. In divided cities, the motivation of using the open spaces may arise to complete day to day tasks as going to shops, hospitals, and performing other activities, rather than to integrate with the neighbors (Pullan et al., 2012). Amin (2002) argues that most public spaces are ‘places of transit’ where meaningful interactions among strangers are not likely. However there is the potential for chance encounters among strangers “and in such serendipities rests the opportunity for exchange and learning that can help break barriers” (Gaffikin et al., 2010, pg. 498).

As evident the roles, function and even the definition of public spaces can have varied connotations. Namal, Munasinghe, and De Silva, (2016) consider public and private spaces are inseparable, and that they exist depending on one another. With this interpretation, public spaces get a very broad meaning, which cannot be applied for the purpose of this research. Therefore, a definition of a public space can be produced, in order to define the concept of public space that will be used in this research – A public space is an urban structure, including, but not limited to, streets, squares, cafés, and parks, which are accessible to everyone, and determined by the interactions of its users, which in turn affect the interaction of the users.

2.3. Social interaction

Social interaction is the contact between individuals, groups, and environments (Talen, 1999). It is argued by Drucker and Gumpert (1998) and Marcus and Francis (1998) that individuals and groups feel the need for social interaction, and they find opportunities for it within public spaces.

Social interaction can happen anywhere, between any two individuals or groups. Being such an elusive phenomena, it is difficult to measure social interaction, and for that reason researchers approach it from many different angles. Different tools to are used to analyse it, such as social media and technology, surveys, questionnaires, interviews, used by Abu-Ghazze (1999), Easthope and Mcnamara (2013), Farida (2013), Hickman (2013) and others. Koutrolidou (2012) examined the importance of public policies that promote social interaction, as a solution in a multicultural environment.

Researchers often emphasise the importance of social interaction in public spaces on a local level, such as a neighbourhood, or a residential complex. Social interaction in these public spaces is analysed through the concepts of neighbouring, community and social cohesion. Easthope and McNamara (2013) focused on the community and social cohesion of residents in dense urban areas. Their findings showed that apart from shopping, residents socialise in parks and public spaces, underlining the importance of public spaces for social interaction. Talen (1999) analysed neighbouring and sense of community, finding that public spaces that are attractive to visitors promote sense of community.

Hickman (2013) analysed the social interaction promoted by spaces such as cafés, parks and shops, and found that much of the interaction in the analysed neighbourhood takes place in these spaces. One of the most important characteristics of these spaces is their functional role, which can be acquiring goods, entertainment or recreation.

Researchers also underline the importance of the “place of contact” in terms of promoting social interaction (Abu-Ghazze, 1999; Farida, 2013; Talen, 1999). These places of contact have a special significance in the context of divided cities. Regardless of the level of social interaction these places of contact produce, the absence of it can have great consequences in divided cities and on the future of social life in these cities (Pullan et al., 2012).

There are different levels of social interaction, starting with very superficial interaction that includes, among other, observing other individuals and greeting them, to a high level of interaction, which can be found in neighbourhoods where individuals form communities and share emotional investments in the same things (Talen, 1999). In a situation where the communities are physically separated by a divide, and neighbourhoods are relatively homogenous, any level of social interaction becomes relevant and contributes to the social life of a divided city.

2.4. Social interaction within public spaces in divided cities

The conceptual framework used in this research is presented in Figure 1. It shows the relations between the main concepts. The focus of this research is the social interaction in divided cities, between the two major communities among which the city is divided, and the public spaces that facilitate that interaction.

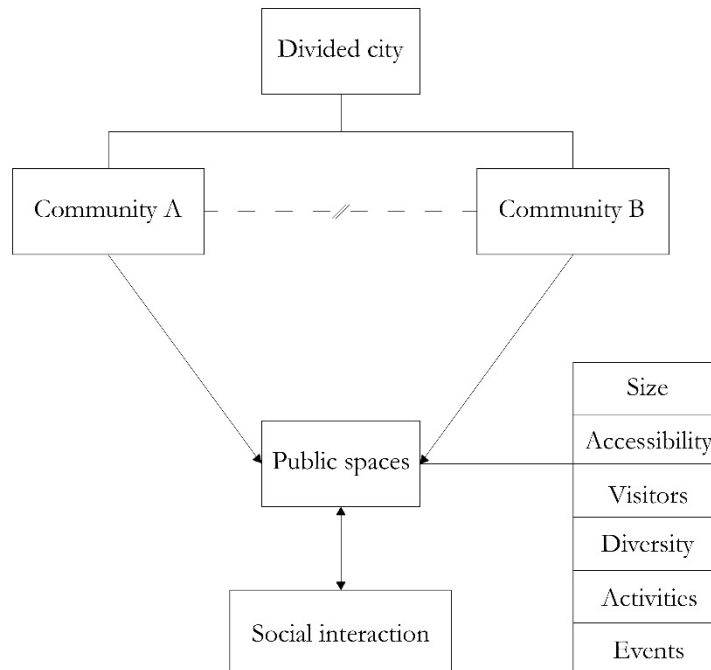


Figure 1. Conceptual framework

The two major communities of the divided city perform most of their daily activities on their own sides of the divide, such as habitation, work, studying, daily shopping, and visits to the bank or the doctor. The places where they come in contact are limited. Public spaces provide an opportunity for people to interact, by offering a shared, mutual space where people can come in contact (Hickman, 2013). This function of public spaces becomes especially important in divided cities. Their ability to promote and facilitate social interaction is in the focal point of this research.

Considering that the population carries out most of their daily activities on the side of the divide where they reside, it can be presumed that they don't use the public spaces on the other side mainly for transit. In order for public spaces to attract visitors from both sides of the divided city and become places of social interaction, they must possess certain qualities. The aspects that influence the ability of public spaces to attract visitors and interaction among them are presented in the conceptual framework. They can be grouped in three categories – the physical aspect, the social aspect and the aspect of activity.

The physical aspect of public spaces includes size and accessibility, both of which define the public space – how will it be used, how many activities and visitors can a public space accommodate, can big events be organized here.

The social aspect regards the visitors and the diversity of the visitors. People attract more people, therefore increasing the possibility for social interaction in the public spaces. And different types of visitors, from different communities and age groups influences the atmosphere of the public space. The public spaces that attract all of these groups present as more inclusive and fulfil the needs of all their users. The aspect of activity determines what types of activities and events take place in the public space. These determinants increase the appeal of the public spaces to visitors, the level of interest and provides additional reasons for people to spend time in the public space.

The combination of these aspect in every public space determines the way it will be used, and influences the ability of the public space to accommodate and promote social interaction. However, the social interaction facilitated in public spaces, also influences those public spaces in return. Much alike the notion that people attract more people, social interaction attracts more social interaction, and takes part in the shaping of the public space.

3. RESEARCH METHODOLOGY

This chapter explains the approach that was used to help answer the research questions and achieve the research objectives of this research, the methodology that was developed to analyze social interaction in divided cities, the data that was required to perform the analyses, and how that data was acquired.

3.1. Research design

In order to really understand the social interaction in a divided city, and how public spaces accommodate it, an in-depth analysis of a specific case of a divided city was required. For this purpose, a case study approach was chosen, which is a research design that signifies a detailed and comprehensive analysis of a single case (Bryman, 2012). The area of the case study, the divided city of Nicosia, Cyprus, is described in Chapter 4, while this chapter presents the developed methodology, and its adaptation to a specific case study area.

Even though the research design has some cross-sectional elements, such as evaluating and comparing different public spaces in a divided city, they are not the main unit of analysis. They are just one step in the methodology designed to analyse and uncover specific details about one phenomena – social interaction in one divided city, which makes it a case study research (Bryman, 2012).

Table 1 shows the research matrix, with the data requirements, methods of data collection and analysis.

Table 1. Research design matrix

<i>Sub-objective and research question</i>	<i>Data requirement</i>	<i>Method of data collection</i>	<i>Method of data analysis</i>
1 What is a public space in the context of a divided city?	Literature review Experts' testimonies	Expert interview	<i>Qualitative</i> Atlas.ti
1 Which functions of the public space promote social interaction in a divided city?	Experts' testimonies Results of the index of social interaction	Expert interview Direct observation Calculating the index of social interaction	<i>Qualitative</i> Atlas.ti
1 In what form does the social interaction take place in a divided city?	Experts' testimonies Results of the index of social interaction	Expert interview Calculating the index of social interaction	<i>Qualitative</i> Atlas.ti
2 Which indicators describe the social interaction in a divided city?	Literature review Field observations	Expert interview Direct observation	<i>Qualitative</i> Atlas.ti
2 What is the weight of each indicator?	Experts' testimonies Field observations	Expert interview Direct observation	<i>Qualitative</i> Atlas.ti
2 Which public spaces perform better in the index of social interaction, and why?	Results of the index of social interaction	Calculating the index of social interaction	<i>Quantitative</i> AutoCAD Map 3D Excel
3 How does the index of social interaction of public spaces compare to the perception of experts in a divided city?	Experts' testimonies Results of the index of social interaction	Expert interview Calculating the index of social interaction	<i>Qualitative</i> Atlas.ti

3.2. Methodology

In order to achieve the general objective of this research, which is to analyze the social interaction in divided cities and the ability of public spaces in these cities to facilitate social interaction, a mixed method approach was required. Mixed method approach implies the use of both qualitative and quantitative methods.

3.2.1. Qualitative method

The research design matrix, which was presented in Table 1, showed that experts' testimonies were needed in order to answer the majority of the research questions and to produce the index of social interaction. These testimonies were obtained using expert interviews, conducted during fieldwork, and later analyzed using qualitative methods and the Atlas.ti software. The information given by experts during the interviews were applied to the selection of public spaces in the divided city, to assigning weights to different indicators of the index of social interaction and interpreting the results of the index.

3.2.2. Quantitative method

The index of social interaction was designed as a tool for quantifying the ability of public spaces to host and promote social interaction. Different public spaces have different characteristics and qualities that attract visitors, therefore making it harder to compare them. The purpose of the index of social interaction was to compare the public spaces, and ultimately confront the results with the input of experts, who have first-hand knowledge of the public spaces and bi-communal¹ dynamics of the divided city.

3.2.3. Designing the methodology

The first step in designing the methodology for analyzing social interaction in a divided city was making a general outline for the index of social interaction and an initial list of indicators that the index consists of. In order to analyze social interaction, the areas where the index of social interaction will be measured, where the members of the divided communities come in contact and potentially interact, had to be determined. Public spaces were chosen as those areas, since they are available for all residents of the divided city, provided that they are permitted to move across the divide and spend time on the opposite sides. Once the area of analysis was defined, a provisional list of indicators was made, which is shown in Table 2, along with the rationale for the indicators.

Table 2. The provisional indicators of the index of social interaction and their rationale

Indicator	Rationale
The surface area of the public space	The surface area of the public space determines its capacity and the number of different activities that can be located in the public space. Bigger public spaces can host a higher variety of activities and bigger events (Van Deusen, 2002), making it more appealing to visitors
The accessibility of the public space	For a public space to function properly, it must be accessible to the population it serves (Whyte, 1988). Public spaces that are easily reachable, and at a convenient location have more visitors (Shaftoe, 2008)
Number of visitors of the public space	The number of visitors in a public space increases the chances for interaction. It also attracts more visitors, because it affects the livelihood and the vibrancy of the public space (Shaftoe, 2008)
Presence of different age groups in the public space	Accommodating the needs of all age groups increases the sense of community (UN Habitat, 2013) and therefore instigates social interaction
Presence of members of both communities in the public space	In divided cities, the residents have the option to decide whether or not to cross the divide (Pullan et al., 2012). By both communities being present in the public spaces on either side of the divide, chances of interaction between them increase
Different types of activities carried out in the public space	Activities such as shopping, entertainment, cafés, and such, can be the instigator for communities to cross divide and participate in social interaction (Pullan et al., 2012)
Number of events taking place in the public space	Events such as festivals or concerts in public spaces have the ability to build solidarity among participants (Shaftoe, 2008). Events also attract more visitors and make the public space more interesting (Holland, Clark, Katz, & Peace, 2007).

¹ Bi-communal refers to: "involving or including two distinct communities of people : of, relating to, or being a society composed of two distinct or separate communities often with conflicting interests" (Merriam Webster, 2017)

The next steps in the methodology focused on obtaining the data for the indicators, needed to calculate the index of social interaction. Since the information about which public spaces are visited by members of both communities and in what numbers often does not exist, a visit to the field and interviews with experts were required.

At this point, the design of the methodology became case specific. Preparations for the fieldwork and structuring the interviews with the experts required getting to know the case study area, the history of the division and the current situation in the divided city.

3.3. Adapting and applying the methodology to the case study

Once it became clear that the data needed to perform the analysis was mostly primary data, preparations for the fieldwork began, with researching about the case study. The process of getting to know the case consisted of reading about the divided city of Nicosia from various sources, from scientific publications and magazine articles to social media and websites of different organizations. The initial search uncovered that a great number of organizations, centers, and committees was doing work related to bi-communal relations and organizing events to bring the two communities together.

The terms “bi-communal” and “two communities” are used because the purpose of this research was to analyse social interaction in divided cities, and observe the relationship between the two major communities, the Greek Cypriots and the Turkish Cypriots, among which the division happened.

3.3.1. Designing the interviews

The interviews were designed as semi-structured, with research objectives and research questions in mind. The template for the interviews can be found in Appendix I. The questions in the interview template aimed to get information about the social interaction between the two major communities in Nicosia and the public spaces in the city, the way they are used, what affects the social interaction in public spaces and how do the public spaces affect social interaction.

The process of gathering information about the city of Nicosia led to the conclusion that there were, in fact, many experts who were involved in some way with bi-communal relations, both from the Greek Cypriot and the Turkish Cypriot community. They were contacted by e-mail, in order to find willing participants to engage in the interview, prior to arrival on fieldwork. The first interviews, with experts that responded positively, were scheduled in advance, due to the limited time of fieldwork. Others were contacted personally, upon arrival to Nicosia. From each organization that was contacted and agreed to participate, a minimum of one and a maximum of two employees were interviewed. At the end of each interview, participants were asked to recommend other experts on bi-communal relations, therefore also implementing a snowball approach.

A total of 13 interviews were conducted during the course of the fieldwork, 4 of which with Turkish Cypriot experts, 7 with Greek Cypriot experts and 2 with international experts involved in bicomunal work.

3.3.2. Fieldwork

The fieldwork took place in Nicosia, Cyprus, from September 16th, 2016 to October 18th, 2016, during which time several tasks were performed. The main goal was to collect all the primary data needed to successfully execute the research. Firstly, the public spaces, which would be analyzed using the index of social interaction, had to be selected. Secondly, information about the activities taking place in the public spaces, the number of visitors of each of them and the characteristics of the visitors, such as age and nationality, had to be obtained. Finally, all the expert interviews had to be completed.

3.3.3. Selecting the public spaces for analysis

Cyprus is divided by an UN-administered zone, also known as the “buffer zone” or the “green line”. It passes through the center of Nicosia, dividing it into the northern and the southern part. The buffer zone can only be crossed through checkpoints. Currently, there are seven checkpoints in total in Cyprus, three of which are located in Nicosia. The Ayios Dhometios (Metehan) crossing is located in the western suburb of Nicosia and is mostly used by cars. The Ledra Palace crossing is located just outside the Venetian walls that circle the old town of Nicosia, which is at the same time the center of the city. The third crossing in Nicosia is Ledra Street, located in the very center of the old town of Nicosia. Crossings Ledra Palace and Ledra Street are intended for pedestrians.

Initially, the idea was to observe public spaces in the vicinity of all three crossing points in Nicosia.

Therefore, a list of 12 public spaces was made.

Upon arrival to Nicosia, all the public spaces from the list were visited. The criteria for selecting the public spaces that would be analysed with the index of social interaction was as follows:

- The public space is accessible to everyone, and no entrance fee is charged
- The users of the public space occupy it for an amount of time longer than needed just to pass through it
- The public space is used on a daily basis, not only during special events
- The public space is used by the members of both majority communities in Nicosia

The initial list of public spaces was evaluated according to these criteria. The evaluation was done by visiting and observing the public spaces and also by consulting the experts during the interviews. The most important condition for selecting the public spaces was the last one, regarding the public spaces being used by the members of both communities. This condition was also the hardest one to verify since it is nearly impossible for a foreigner to identify the nationality of the users of the public space just by observation. Therefore, this was determined relying solely on the testimony of the experts, who were asked explicitly, for each of the public spaces, whether they were used by the members of both communities.

The public spaces in the vicinity of the Ayios Dhometios (Metehan) crossing that were considered are the Dimokratias Street and Ayiou Pavlou Park. They were excluded from the selection due to the low pedestrian activity in the area and lack of sidewalks, as well as the testimony of experts.

“Metehan is a crossing, nobody goes to Metehan, to socialize. It’s just the border, the police. Who’s going to go to Dimokratias Street? It’s an avenue. Cars pass. Who’s going to stop, what’s the point?”

“This area is just for cars. You’re in a hurry to cross, to go to a destination. “

“This is just a neighborhood park, and not many people go there. Just children from the neighborhood. It’s never visited by Turkish Cypriots. You’re right to think that it would be visited, but no.”

Three other public spaces were also excluded after it was determined that they do not fit the previously set criteria. The cultural center “Bedesten”, despite being frequented by both Greek and Turkish Cypriots, is used only during events and not on an everyday basis, and an entrance fee is charged. The two “bastions”, located in the Venetian walls next to the Ledra Palace crossing, Mula bastion, and Roccas bastion, are not visited by either Greek or Turkish Cypriots and therefore proved as unsuitable for further analysis.

The experts were asked, during the interviews, to name other public spaces in Nicosia that are visited by both the Greek and Turkish Cypriots, but they did not identify any public spaces that were not already on the list.

The remaining seven public spaces fulfilled all the conditions and were therefore selected for analysis within the index of social interaction.

The characteristics of these public spaces are described in Chapter 4.

3.3.4. The index of social interaction

The index of social interaction was applied to the case study area. Insights gained during fieldwork and through the testimonies of experts were used to update the list of indicators that was presented in Table 2. The list of indicators for the index of social interaction for Nicosia, and the rationale for the indicators is presented in Table 3, while the changes are marked in bold letters.

Table 3. The indicators of the index of social interaction and their rationale

Indicator	Rationale
The surface area of the public space (m ²)	The surface area of the public space determines its capacity and the number of different activities that can be located in the public space
The accessibility of the public space	The indicator of accessibility proved not to be relevant in the case of Nicosia, considering that all the public spaces that were identified were equally accessible, and located at a close proximity to one another, and therefore would not have a significant contribution to the outcome of the index of social interaction
Number of different types of activities carried out in the public space	The variety of activities attracts more visitors to the area. Activities such as cafés and restaurants, shopping, entertainment, culture, etc. may be the actual reason that brought the visitors to that particular public space, and caused them to spend time there
Number of each type of activity carried out in the public space	A higher number of activities of the same type offers a wider choice to the visitors, increasing the chances of getting the visitors interested in one of them, and making them spend more time in the public space
Number of events taking place in the public space	Special events attract many people, causing them to join in a celebration or a mutual, important cause, and instigate social interaction between people
Occupant density in the public space, walking	The more visitors circulate through the public space, the higher the opportunity for social interaction. The occupant density can also indicate the popularity of the public space
Occupant density in the public space, static	The more visitors spend time in the public space, standing or sitting, the higher the opportunity for social interaction. The occupant density can also indicate the popularity of the public space
Presence of different age groups in the public space	Members of each age group visit the public spaces for different reasons. Presence of all age groups in the public space shows that it meets their diverse needs and that it is safe and inviting
Presence of the members of both communities in the public space	Presence of both Greek and Turkish Cypriots is essential because if they do not visit the same public spaces, the social interaction between them is not possible

3.4. Data collection

In order to successfully perform the analysis, both primary and secondary data was needed.

The secondary data required was the map of Nicosia, which was provided by the University of Cyprus.

The rest of the required data for the index of social interaction was primary.

3.4.1. Surface area of the public space

The data for the indicator “surface area of the public space”, was extracted from the map of Nicosia. The surface area of any structure located in the public space, which is not publicly owned, was deducted from

the total surface area of the public space. Therefore, residential, commercial and religious buildings were not counted in the total surface area of the public space.

3.4.2. Number of different types of activities carried out in the public space

The indicator “Number of different types of activities carried out in the public space”, was quantified using observation. The activities found in the public spaces were the following: Shopping, Cafes and restaurants, Education, Art and culture, Religion, Private businesses, Beauty services, Non-governmental organizations and International organizations.

3.4.3. Number of each type of activity carried out in the public space

The indicator “Number of each type of activity carried out in the public space”, was also quantified using observation. The number of all individual activities that belong to the categories determined with the previous indicator were counted, with one distinction made. During the expert interviews, it was determined that locally owned shops and cafés have a greater impact on social interaction.

“The local business owners promote social interaction. In fact, they’re the biggest supporters of social interaction. Especially in Nicosia, in the old city, within the walled city, it is very important for them to promote it. Not only for them to have more business, but also because they had this sense of collaboration in the past. Especially the older shop owners. And they want to have that culture again. So it’s not just about money, but it’s also about building the culture of cooperation as well.”

Therefore, the number of locally owned shops and cafés and restaurants was counted separately from the ones belonging to a brand or a chain. This was also reflected in the calculation of the index of social interaction. The total number of shops and cafés and restaurants was calculated by adding the number of locally owned activities, multiplied by 1, to the number of brand or chain shops and cafés and restaurants, multiplied by 0.5. This way, the locally owned activities were given a higher weight.

3.4.4. Number of events taking place in the public space

The data for the indicator “Number of events taking place in the public space” was collected from various sources. Information about events in the public spaces came from websites of different organizations, expert interviews, and social media. Since the exact number of events in every public space couldn’t be determined with absolute certainty, the average number of events per month, per public space, was used. Categories were determined, allowing slight variation in the exact number of events per month, and therefore eliminating the possibility of big errors. The following categories for the number of events were selected: 2 or less per month; 3 to 8 per month; more than 8 per month.

3.4.5. Occupant density in the public space, walking

The data for the indicator “Occupant density in the public space, walking”, was obtained by observing and counting the number of people in the public space and then dividing it by the surface area of the public space. The unit of this indicator is people per square meter.

Literature was consulted in the search for a suiting approach to counting people in a public space. Most authors resort to technology to aid them with crowd counting, especially in a clearly defined area of a public space. The techniques vary from counting heads in video surveillance recordings and images, using sensors placed at entrances, to measuring the user's Wi-Fi activity within the public space (Gan, Xie, & Hu, 2013; Ivanovic, 2014). Due to the lack of technological resources and the fact that this research focuses on seven public spaces that are different in size, shape, and type, adapting one of these techniques proved unfavorable. Therefore, a manual approach to counting was adopted. The observation methodology designed by "Space Syntax" enabled the counting to be applied to all of the public spaces, without the use of technology. “Space Syntax” is a set of theories and methods used to analyze the

relationship between the space and its users (“Space Syntax Network,” n.d.). It is widely used and has an application in many fields. For the purposes of this research, only the Space Syntax observation manual is used to count people in the public spaces.

According to the observation manual, public spaces should be divided into sections, of approximately the same size. The sections are divided by imaginary lines, called “gates”, which are observed in five-minute counting sessions. Only the people who cross the imaginary line are counted. The counting sessions are repeated at each gate at different times of day (Grajewski & Vaughan, 2001).

The counting was performed at three different times of day, morning peak hours (from 8 am to 10 am), lunch time peak hours (from 12 noon to 2 pm) and afternoon peak hours (from 4 pm to 6 pm).

Counting was not performed after 6 pm because one of the public spaces, the Bandabulya market, closes at 6 pm. Collecting data after the closing time of one public space would not provide objective results.

Likewise, it was determined during the expert interviews that another public space, the Municipal Gardens, is used during weekends predominantly by foreign workers, and not by Cypriots.

“The Municipal gardens are used every Sunday by non-Cypriots. Have you been on a Sunday to this garden? They are absolutely full of non-Cypriots. Domestic workers. So we wouldn’t go. As a Cypriot, I wouldn’t go there on a Sunday because I would feel like a total outsider. So this space is used for something else, at least on a Sunday when these people have a day off.”

Therefore, the counting was done only during work days, in order to eliminate foreseeable errors and ensure the highest level of objectivity.

Depending on the size and the shape of the public space, between 1 and 4 “gates” were determined in each public space. Long and narrow public spaces, such as streets, required more “gates” to ensure a better coverage, while open, wide spaces could’ve been covered with less “gates”. People who were walking through the public space were counted as they crossed over the “gates”, for five minutes at each gate, in the previously determined periods of the day.

The counting at all of the gates, at each of the time periods, was repeated twice, in order to ensure higher accuracy and objectivity. Therefore, the number of people crossing each “gate” was counted six times in total.

After performing the counting, the results of each of the six counting sessions in one public space were added and divided, in order to find the average number of visitors per public space. This number does not represent the average number of visitors per day, but rather the average number of people that pass through a public space during a five minute period. Then, this number was divided by the surface area of that public space. Thus, an occupant density of people walking through a public space was obtained, that allowed comparison between different public spaces.

3.4.6. Occupant density in the public space, static

The data needed for the indicator “Occupant density in the public space, static”, was collected in a similar way as indicator “Occupant density in the public space, walking”. Between the counting at each “gate”, the number of people who were static, standing in the public space, or sitting on benches or in cafés in the public space, were counted. The people who were sitting in cafés and restaurants were only taken into account if they were sitting in the external area that is located in the public space.

The counting was repeated the same number of times as for indicator “Occupant density in the public space, walking”, six times.

After the counting, the process of determining the occupant density in the public place for static users was the same as for the walking users. The average number of visitors was divided by the surface area, providing an average occupant density for static users of the public space.

3.4.7. Presence of different age groups at public spaces

The data for the indicator “Presence of different age groups at public spaces” was determined during the counting sessions. The age of the people who were either walking or spending time in the public space was estimated, the purpose of which was determining that during each of the counting sessions, at least one member of every age group was present. The age groups were classified according to the “Provisional guidelines on standard international age classifications” by the United Nations. Considering that the only tools for determining the age of the users of the public space were observation and estimation, the classification for “participation in, and users of, leisure and cultural activities” of the lowest level of detail was adopted. The age group classes are: 0-14; 15-24; 25-44; 45-64; 65 and older (*Provisional guidelines on standard international age classifications*, 1982).

3.4.8. Presence of the members of both communities in the public space

The data for the indicator “Presence of the members of both communities in the public space” could not be acquired using observation, due to the lack of knowledge of Greek and Turkish language and lack of local knowledge needed to identify the members of the Greek and Turkish Cypriot community with certainty. Therefore, the value for this indicator was determined during the expert interviews. Each of the interviewed experts was asked to identify whether the public space was visited by members of both communities or not. The testimonies of experts were counted as 1, if the answer was positive, and then added, giving each of the public spaces a maximum score of 13, which is the total number of interviews.

3.5. Data analysis

After all the data had been gathered, the analysis commenced. The next section presents the quantitative and qualitative methods used to analyze the data.

3.5.1. Quantitative analysis

The quantitative analysis started with georeferencing the map of Nicosia that was provided by the University of Cyprus. The map was in *.dwg* format, which means that the analysis was done in the software AutoCAD Map 3D. The geographic coordinate system that was selected is the “WGS 84”, in the “Universal Transverse Mercator zone 36N” projection.

The map does not cover the territory of the whole city of Nicosia, but all of the public spaces are included, as well as the location of the border and a detailed network of roads and streets.

Network analysis

The road network was used to calculate the distance of the public space to the nearest crossing point. The analysis was performed in AutoCAD Map 3D. This information will be used in Chapter 4, to describe the location and the characteristics of the public spaces.

For each of the public spaces, possible routes from the nearest crossing point to the closest point of the public space were calculated. The distances were measured taking into consideration all possible combinations with every street, for vehicles or pedestrians, which is located outside of the UN buffer zone, i.e. accessible to civilians. Then, the closest distance was chosen as the best result.

Calculating the index

Each of the indicators was calculated in their own unit and then standardized to values from 0 to 1, with 0 representing the lowest value and 1 the highest. This was done in order to bring all the indicators to a same, comparative range of values.

The same formula was used for standardizing the indicators, considering that all of them present benefits:

$$(The\ value\ of\ "X" - Minimum\ value) / (Maximum\ value - Minimum\ value) = Standardized\ value\ of\ "X"$$

The “X” in the formula stands for the value of an indicator for a public space, while the minimum and maximum values represent the lowest and highest values, respectively, of the public spaces for the indicator in question.

The exceptions are the indicators “Presence of different age groups at the public space” and “Number of events taking place in the public space”.

In the case of the indicator “Presence of different age groups in the public space”, the public spaces were given a value 1, if members of all age groups were present during each of the counting sessions, and a value 0, if some age groups were not represented during any of the countings.

Regarding the second exception, the data for the indicator “Number of events taking place in the public space” was in the form of three categories. The first category, 2 or fewer events per month was given the lowest value, 0. The second category, 3 to 8 events per month, was given a value of 0.5, while the last category, more than 8 events per month, got a value of 1.

Another indicator that stands out from the others is “Number of each type of activity carried out in the public space”. Even though the total value for each of the public spaces was standardized using the same formula used for the other indicators, this indicator had a set of sub-indicators, with their own weights. The nine types of activities that were found in the public spaces are the following: Shopping, Cafes and restaurants, Education, Art and culture, Religion, Private businesses, Beauty services, Non-governmental organizations and International organizations. The number of each of these activities in all of the public spaces was counted and then standardized using the same formula applied for standardizing the values of the main indicators. As mentioned earlier, sub-indicators “Shopping” and “Cafes and restaurants” are comprised of the combination of locally owned and brand or chain-owned shops and cafés and restaurants.

Among these nine activities, one stood out for having the highest ability to promote social interaction, and that was the “Cafes and restaurants” sub-indicator. This sub-indicator was given a sub-weight of 0.2, while the other sub-indicators were given a sub-weight of 0.1, adding up to a total of 1. Prior to standardizing, the total value of the indicator “Number of each type of activity carried out in the public space” was calculated, for each of the public spaces, using the following formula:

$$SI_1*SW_1 + SI_2*SW_2 + SI_3*SW_3 + SI_4*SW_4 + SI_5*SW_5 + SI_6*SW_6 + SI_7*SW_7 + SI_8*SW_8 + SI_9*SW_9 = \text{Total value for a public space},$$

Where “SI” stands for sub-indicator and “SW” stands for sub-weight.

After calculating and standardizing all of the indicators, the next step in the calculation of the index of social interaction was determining the weights for each indicator. The indicators that were prioritized are those assumed as having the biggest influence on social interaction. This assumption is supported by the experts’ testimonies. The weights of the indicators are presented in Table 3.

Table 4. Weights of the indicators of the index of social interaction

Indicator	Weight of the indicator
The surface area of the public space	0.1
Number of different types of activities carried out in the public space	0.1
Number of each type of activity carried out in the public space	0.1
Occupant density in the public space, walking	0.15
Occupant density in the public space, static	0.15
Presence of different age groups in the public space	0.05
Presence of the members of both communities in the public space	0.2
Number of events taking place in the public space	0.15

The indicator “Presence of the members of both communities in the public space” was given the highest weight, 0.2, because it is the single most important condition for social interaction between the two communities.

The two indicators related to the occupant density in the public space were given the weight of 0.15, since the higher occupancy implies higher numbers of visitors from both communities and therefore higher possibility for interaction.

“Number of events taking place in the public space” was also given the weight of 0.15, since events attract many visitors and instigate social interaction among participants in the event, as testified by the experts.

“Absolutely, there was social interaction between the Greek and the Turkish Cypriots during the exhibition. With no difference whatsoever. Laughing together, talking together, joking together, and hugging each other, absolutely no problem.”

“Once the groups are mixed and you know that the language used is English, the interaction becomes quite easy. Because you put people in a context where they are forced to communicate. If you create the context, the people will cooperate between them. And if they like art, they will want to be part of the art, so they will cooperate somehow.”

The indicator that was given the lowest weight is “Presence of different age groups at the public space”, and that is 0.05. Through the data collection, it was discovered that the public spaces were visited by members of all age groups during each counting session, with the exception of one public space, that was missing members of one age group during two counting sessions. Therefore, the differences in the results were slight enough not to make as big of an influence on the possibility of social interaction as the other indicators.

The weights of all of the indicators add up to 1, making the final score for the index of social interaction for each of the public spaces.

After all, the values of the indicators were calculated and standardized, they were multiplied by the weight and added, in order to produce the final score for the index of social interaction. The formula for the final score of the index of social interaction was the following:

$$I_1*W_1 + I_2*W_2 + I_3*W_3 + I_4*W_4 + I_5*W_5 + I_6*W_6 + I_7*W_7 + I_8*W_8 = \text{Final score of the index of social interaction for a public space,}$$

Where “I” represents the indicator, and “W” the weight of the indicator.

3.5.2. Qualitative analysis

The data collected by the expert interviews for applied throughout this research, from selecting the public spaces for the analysis and collecting data for the index of social interaction, to better understanding the social interaction in Nicosia and validating the results of the index of social interaction.

In order to ease these processes, the interview material was analyzed and coded. The Atlas.ti software was used for this purpose. A text-based analysis was carried out on the transcripts of the interviews. Sections of the transcripts were coded and classified into “code families”, designed especially to accommodate the research questions and the needs of the index of social interaction. Those code families are: Public spaces; Activities in public spaces; Use of public spaces; Positive characteristics of public spaces in divided cities; Events; Bi-communal projects; Social interaction in public spaces; Social interaction between Greek and Turkish Cypriots; Opportunities for social interaction in public spaces.

A total of 13 expert interviews were conducted. In order to preserve the anonymity of the interviewed experts, the transcripts will not be provided in the appendix, but related quotes from the interviews will be used throughout the report.

3.6. Ethical considerations

In divided cities, the topic of the division is often a sensitive subject. No division happens peacefully, without affecting the population, and it is expected that people are partial and bias, and some might be personally affected. This research was conducted from a neutral standpoint. Therefore the questions in the interviews were carefully constructed.

Due to the sensitivity of the topic, the question of confidentiality and anonymity was raised. Before each interview, the purpose and the objective of the research were disclosed to the participants. Likewise, all interviews were done only with the participants' full consent and with the permission of the organization that the participant represents. In some cases, getting the permission of the organization took several days, and some of the participants showed reluctance to participate in the interview, which only confirmed the level of sensitivity, both on a political and a personal level. The names of the participants and their organizations will not be mentioned, along with any information that would reveal their identity. The focus of this study is social interaction between the Greek and Turkish Cypriots. Therefore politics and religion were avoided during the interviews, since they were not relevant to the objective of this research, and presented potentially contentious topics.

4. CASE STUDY AREA

This chapter provides an overview of the public spaces in Nicosia that were analysed during the course of this research, *the results of the network analysis, which measured the distance of the public space from the nearest crossing, the authors' impressions of the public spaces and their descriptions, as well as some of the experts' testimonies about some of the public spaces. All the photographs were taken by the author during fieldwork.*

The island of Cyprus has been the home of Greeks and Turks since the 16th century, ever since the Ottoman Empire conquered Cyprus. Conflicts between the two nationalities began in the 20th century, and by 1958, its largest city, Nicosia, was divided by a wire border. As the conflict escalated, the Greek and the Turkish population immigrated to the south and the north of the island, respectively. This eventually led to the military invasion by the Republic of Turkey. The United Nations intervened and formed a border, in the form of a buffer zone, within the city of Nicosia, and the whole country, in 1974 (Öngül, 2012). This division ended the conflict, and the two parts of Nicosia continued to develop separately. Nicosia is the last divided capital in the world, being both the capital of the Republic of Cyprus, where people identify as Greek Cypriot, and the Turkish Republic of Northern Cyprus, where the population identifies as Turkish Cypriot. Besides these two majority groups, there are many minorities living in Nicosia. Their presence, along with the fact that they were affected by the division as well, is acknowledged, but isn't the focus of this study.

The UN-administered buffer zone still divides Cyprus. This strip of land, wide only 3.5m at some points, and up to 5km at others, passes through the centre of Nicosia (Grichting, 2014). The buffer zone is also referred to as the “dead zone” since it was evacuated by the residents in the 1970's (Kliot & Mansfield, 1997). It divides Nicosia into the northern, Turkish Cypriot part, and the southern, Greek Cypriot part. The buffer zone can only be crossed through checkpoints. Currently, there are seven checkpoints in total in Cyprus, three of which are located in Nicosia. The public spaces that were analysed in this research are located around two of these crossings, Ledra Palace and Ledra Street.



Figure 2. Partial map of Nicosia, Cyprus, showing the location of the UN-administered buffer zone, the crossings, and the public spaces. *Source of base map: University of Cyprus, 2016*

The following chapter describes the public spaces that were analysed. Their location, as well as their position relative to the checkpoints and the UN buffer zone, is shown in Figure 2. The Ledra Palace crossing is located on the left side, just outside the circular Venetian walls that surround the city. Ledra Street crossing is located approximately in the centre of the walled city. In total, seven public spaces were analysed, three of which are located on the south, on the Greek side of Nicosia, three are on the north, on the Turkish Cypriot side, and one is located entirely in the UN buffer zone, on a neutral territory.

4.1. Ledra Street

Ledra Street is located south of the buffer zone, on the Greek Cypriot side of Nicosia. It stretches from the edge of the walled city on the south, all the way to the buffer zone in the north. The checkpoint “Ledra Street” is located on the North end of this street, hence the public space is at a 0m distance from the crossing. The location of Ledra Street is shown in Figure 3.

This street is a pedestrian area, except in the early morning hours, when delivery trucks have access the shops, cafés and restaurants. A fragment of the urban landscape, in the afternoon hours, is shown in Figure 4. In Ledra Street, there is an abundance of shops, both local and brand-owned. Local vendors sell lottery tickets and food on the street. In addition to that, there is a great number of cafés, restaurants, and both international and local fast food restaurants. A department of the University of Cyprus is located in Ledra Street, therefore there are a lot of students and young people in the area.

Ledra Street is very popular among both Greek and

Turkish Cypriots. The primary reason they go there is shopping, but there is also a large number of people sitting in cafés or on benches along the street.

According to the experts, Ledra Street and the surrounding areas were revived after the Ledra crossing opened in 2008. Before the opening, the area was highly militarised. Despite that, it was still used and visited for the shops and cafés, however it did not become as visited and popular until after the border opening.

“Ledra Street became more alive, right now, after the borders were opened. It’s more commercialised (than the north side), so you would have the bigger shops, and you would have the brands there. When you walk from the north of the Ledra Street to the south, you would see that it’s gradually getting more commercialised and more internationalised. So in the north you would see the local shops, and in the south you would see more if the global brands. But there are many communities, not just Greek Cypriots, and Turkish Cypriots, but many tourists walking and visiting the place.”



Figure 3. Location of the Ledra Street.

Source of base map: University of Cyprus, 2016



Figure 4. Ledra Street, Nicosia, Cyprus

4.2. Faneromeni Square

Faneromeni Square is located in the south, Greek part of Nicosia, at a 180m distance from the Ledra Street checkpoint, as can be seen in Figure 5.

In the area of the Faneromeni Square, one of the oldest schools in Cyprus, a church, a mosque and a museum are located. The area also includes a plateau and a network of alleys with cafés and shops. Recently, it has become one of the more popular spaces in Nicosia, due to the many locally owned cafés in the area. According to one of the experts, the cafés are the main reason Faneromeni is used whatsoever.

“Faneromeni is not being used because it’s a square, but because it’s part of a café. If cafés bring their chairs outside, it is still public in that sense. But if we didn’t have the cafés there, we wouldn’t have many people sitting there.”

Nonetheless, most of the experts agree that the Faneromeni area is frequented both by the Greek and the Turkish Cypriots.

Figure 6 presents the outside area of one of the most popular cafés in Faneromeni Square, while Figure 7 presents a graffiti found on the stairs of the Faneromeni Gymnasium which reads “No borders”.

“Faneromeni is a lovely place to sit and have coffee and chat, and I’m sure Turkish Cypriots come over and Greek Cypriots come over, and it’s a much more pleasant area than this area for example (Markou Drakou Street). People do use it, to go and hang out, especially on an evening, there are so many cafés and things like that. They did a pretty good job with that area there.”



Figure 5. Location of the Faneromeni Square.
Source of base map: University of Cyprus, 2016



Figure 7. Graffiti on the steps of the Faneromeni Gymnasium



Figure 6. Faneromeni Square, Nicosia, Cyprus

4.3. Lokmaci Street

The Lokmaci Street continues at the opposite end of the Ledra street crossing, where the Ledra Street ended. Therefore, it is at a 0m distance from the crossing, and located on the north side on Nicosia, on the Turkish side. This is shown in Figure 8.

Historically, this was the street of craftsmen and tradesmen, who made items of gold, silver and bronze and sold them in their shops. This tradition still lives on, considering that all the shops in this area are still locally owned, and many handcrafted items and homemade desserts are still being sold.

The area gained significance after the Ledra street crossing was opened, as testified by several experts.

“This area emerged after the borders were opened. It was deserted before the checkpoints opened, now they have come alive. They have attracted new and interesting uses, like cafés, cafés which breed the respect for diversity. Places which are visited by all sorts of people. The mixing of different people creates a culture of diversity. If you look at pictures of the area of Lokmaci before they opened, it was deserted. And if you compare it with the picture of how it is now, it has come alive.”

“For the walled city, we can say that new shops opened. In the Lokmaci Street. They restored their shops; they renewed the area. The shops opened up after the borders opened because there was army in the area. “

Besides all the shops in this area, there is also a significant number of local cafés, among which one stands out. Café “Hoi Polloi”, mentioned by name by several experts, attracts young, open minded people both from the Greek and the Turkish community. Café “Hoi Polloi” is showed in Figure 9, while Figure 10 shows the area of the Lokmaci Street just after the border crossing.

“At the end of this street, a place recently opened up, a café, called “Hoi Polloi”, it’s also visited by both communities.”

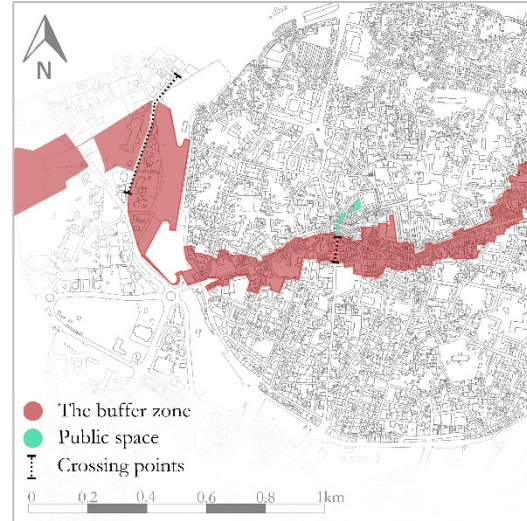


Figure 8. Location of the Lokmaci Street.

Source of base map: University of Cyprus, 2016



Figure 9. Hoi Polloi café



Figure 10. Lokmaci Street, Nicosia, Cyprus

4.4. Buyuk Han market

Buyuk Han market is located north of the buffer zone, on the Turkish Cypriot side, as shown in Figure 11. The distance from the nearest crossing, Ledra Street crossing, is 160m.

Buyuk Han originates from the Ottoman times, when it was used as a motel or an inn. The meaning of the word “Han”, when translated from Turkish, means “Inn”. In the present times, it is used as a market and a public space.

The layout of Buyuk Han is still the same as it was in the past. The open space on the ground floor is used by cafés and restaurants and by several shops. All the shops are locally owned and sell hand-made products and typical Cypriot ornaments. On the first floor, the space where the rooms of the inn used to be located is currently used by the same type of shops as on the ground floor, along with several artist workshops and studios.

Buyuk Han is very popular among tourists and locals, both Greek and Turkish, due to the peaceful atmosphere and the rich history. Several festivals take place in Buyuk Han, as well as food markets and live music sessions.

“Buyuk Han is a prime location, where Greek and Turkish Cypriots meet. For example, I go there every Saturday, and I meet my friends there.”

Every Saturday, there is a standing meeting for Greek and Turkish Cypriots at one of the cafés in Buyuk Han. Everyone is welcome to join. Likeminded people come to share ideas, discuss the Cyprus issue and reminisce about the past.

Photographs of the Buyuk Han market are shown in Figures 12 and 13.

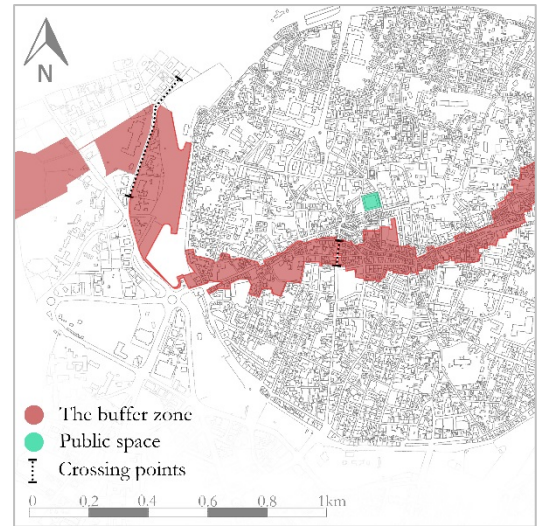


Figure 11. Location of the Buyuk Han market.

Source of base map: University of Cyprus, 2016



Figure 12. Buyuk Han market, Nicosia, Cyprus



Figure 13. Buyuk Han market, Nicosia, Cyprus

4.5. Bandabulya market

The Bandabulya market is a municipal market dating back to the year 1939. It is located in the old town of Nicosia, 300m from the Ledra Street crossing, on the north side of the city. The location of the Bandabulya market is shown in Figure 15.

The primary use of the market is commercial. Vendors, mostly of Turkish Cypriot nationality, sell the same products that were sold in the market since its' opening, fresh fruits and vegetables, meat, ornaments and souvenirs. There are five art studios and four cafés and restaurants.

The market attracts tourists, who buy souvenirs and traditional Cypriots desserts, as well as the local, Greek and Turkish Cypriot population. However, the majority of the visitors who sit in the cafés and spend time in Bandabulya are the members of the local, older population.

Figures 14 and 16 show the aisles of the Bandabulya market, and some of the merchandize that is sold.



Figure 15. Location of the Bandabulya market.

Source of base map: University of Cyprus, 2016

“Bandabulya is the old market. It’s actually recently renovated. And here you would see the Greek Cypriots also, but I don’t know if you would see them spending a lot of time. They would go there for shopping I would say. Again, it’s local people from the north selling, they also have something unique to Cyprus, like ornaments and souvenirs and etc.”

“Turkish Cypriots go there. Greek Cypriots don’t tend to go to Bandabulya. Greek Cypriots consider Bandabulya as an old market, as a thing from the past.”



Figure 16. Bandabulya market, Nicosia, Cyprus



Figure 14. Bandabulya market, Nicosia, Cyprus

4.6. Markou Drakou Street

The extent of the Markou Drakou Street that was analysed is located entirely in the buffer zone, between the Greek Cypriot and the Turkish Cypriot control points of the Ledra Palace crossing, therefore being at a 0m distance from the crossing. The location of the Markou Drakou Street is shown in Figure 18.

Seeing that this street is located inside the buffer zone, it presents a neutral ground for the Greek and Turkish Cypriots, so many meetings and political discussions take place here.

Markou Drakou Street is where a great number of organization, both international and non-governmental, are situated. The majority of these organizations are located in the “Home for Cooperation”. This building is an educational centre, where many events, dialogues, workshops and Greek and Turkish language courses take place. In the same building, a café is located, where many entertainment events are organized, such as bicomunal music nights, dance lessons, and festivals. All the events that take place here are bicomunal.

All of the experts identified the Markou Drakou Street as a place frequented by the Greek and Turkish Cypriots, in most part thanks to the “Home for Cooperation”, and the events that happen here.

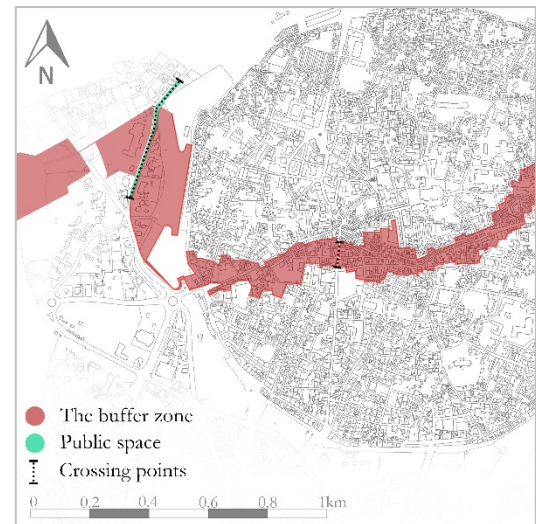


Figure 18. Location of the Markou Drakou Street.

Source of base map: University of Cyprus, 2016

“This space here (Markou Drakou Street), ok, it’s controlled by the United Nations, but it’s usually very quiet unless somebody arranges an event or something. You don’t see people hanging out here, there’s nothing to do here.”

Other experts observed that the usual visitors of the Markou Drakou Street are always the same people, who participate in the events and engage in social interaction.

“You see this space here? We try to do things here (Markou Drakou Street). The “Home for cooperation” is very active, so is the “CCMC”, people are active here. But you always see the same people who’re going to come and interact here. It’s always the same people”

Besides these organizations, several private businesses are located here, educational centres, as well as a restaurant where many diplomatic events take place.



Figure 17. “Home for Cooperation”, Markou Drakou Street, Nicosia, Cyprus

4.7. Municipal Gardens

The Municipal Gardens are a park, located on the Greek side of Nicosia, 390m south of the Ledra Palace border crossing. The location of the Municipal Gardens is shown in Figure 21.

This large green area is one of the few green areas in Nicosia. Besides many benches, a children's playground, and one café, there are no activities in the Municipal Gardens.

According to some of the experts, the Municipal Gardens are used frequently by other minority communities in Nicosia, who are the main users of the gardens during the weekend.

"The Municipal Gardens are frequented by Shri-Lankans and Filipinos. The Asian minorities use it more than the Greek and Turkish Cypriots."

Experts from the Turkish Republic of Northern Cyprus, who are not very familiar with this area, suggested that it is used by cyclist from the Turkish side, while others claim that the park is frequented during events.

"Some of my friends are passing and riding bikes in this park. If it is this park. But I am not sure about it. But I know some, as I said, Turkish Cypriots will pass from the checkpoint and go to the park in the Greek side, and they're riding bikes and spending time there."

"People are using public spaces, for example this park over here, Municipal gardens. They have the "Fork market". It's usually some Fridays, they have food stalls and things. They are using that, they do concerts and things like that. Somebody might go and pick up coffee from "Starbucks" and go and sit in a park, and just use the space that way."

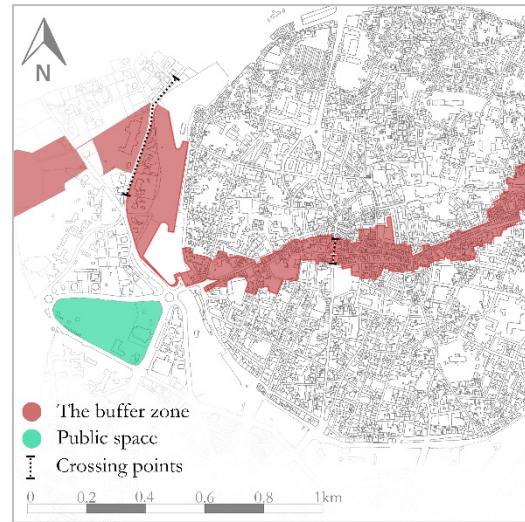


Figure 21. Location of the Municipal Gardens.
Source of base map: University of Cyprus, 2016

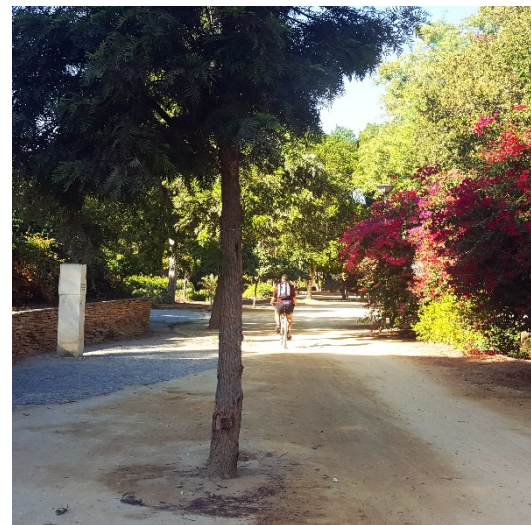


Figure 20. A cyclist in the Municipal Gardens, Nicosia, Cyprus



Figure 19. Municipal Gardens, Nicosia, Cyprus

5. RESULTS

The following chapter presents the results of the index of social interaction. The main outcome of the index is a score for each of the public spaces, representing their ability to promote and facilitate social interaction between the Greek Cypriot and the Turkish Cypriot community. The results of the index are presented per indicator, as well as per public space.

Table 5. The score of the index of social interaction, for each public space

Public space	The score of the index of social interaction	The rank of the public space
Ledras Street	0.72	1
Buyuk Han market	0.65	2
Markou Drakou Street	0.54	3
Lokmaci Street	0.54	4
Faneromeni Square	0.53	5
Bandabulya market	0.27	6
Municipal Gardens	0.22	7

Table 5 shows the final score of the index of social interaction for each of the analysed public spaces, sorted in a descending order. The highest possible value of the index is 1, and the minimum is 0. The higher the score of a public space, the higher it ranks among others.

All the results presented in this chapter are either standardized values of the indicators or the cumulative value of the index, therefore they don't have a unit.

The entire index of social interaction, with all the weights, indicator values and the standardized values, can be found in Appendix II.

5.1. Results of the index of social interaction, per indicator

Figures 22 to 24 show the results of the standardized values, from 0 to 1, for each of the indicators. The indicators are grouped in aspects of public spaces that influence their ability to promote social interaction, as was presented in the conceptual framework (Figure 1). Figures 22, 23 and 24 provide an overview of how a public space compares to the others, based on each indicator.

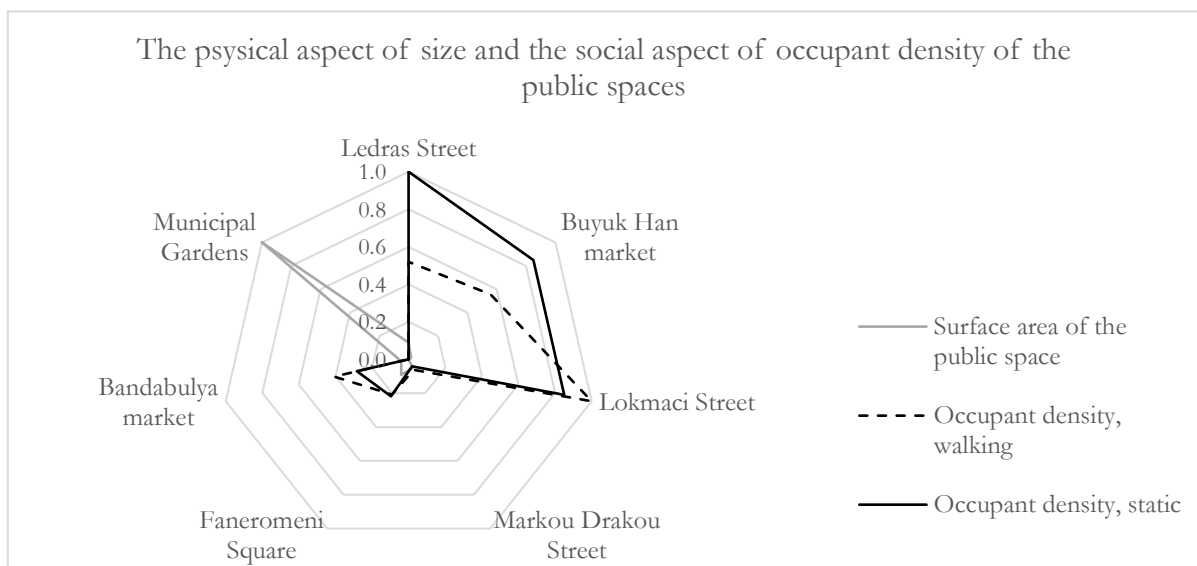


Figure 22. Standardized values of the indicators for the physical and social aspects of occupant density of public spaces

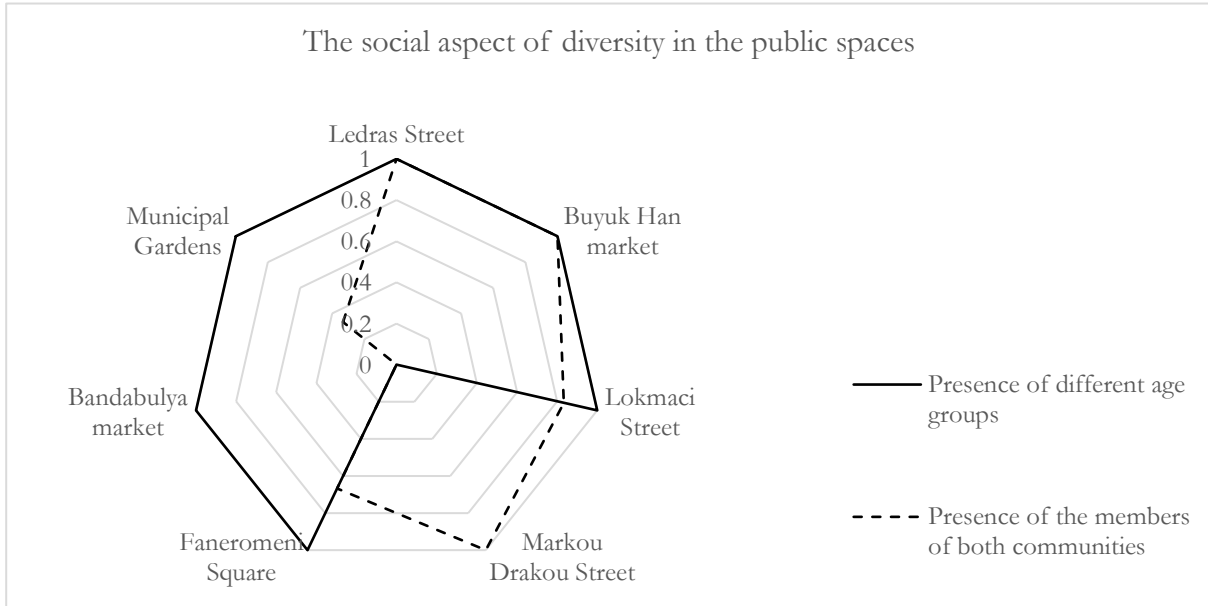


Figure 24. Standardized values of the indicators for the social aspect of diversity in public spaces

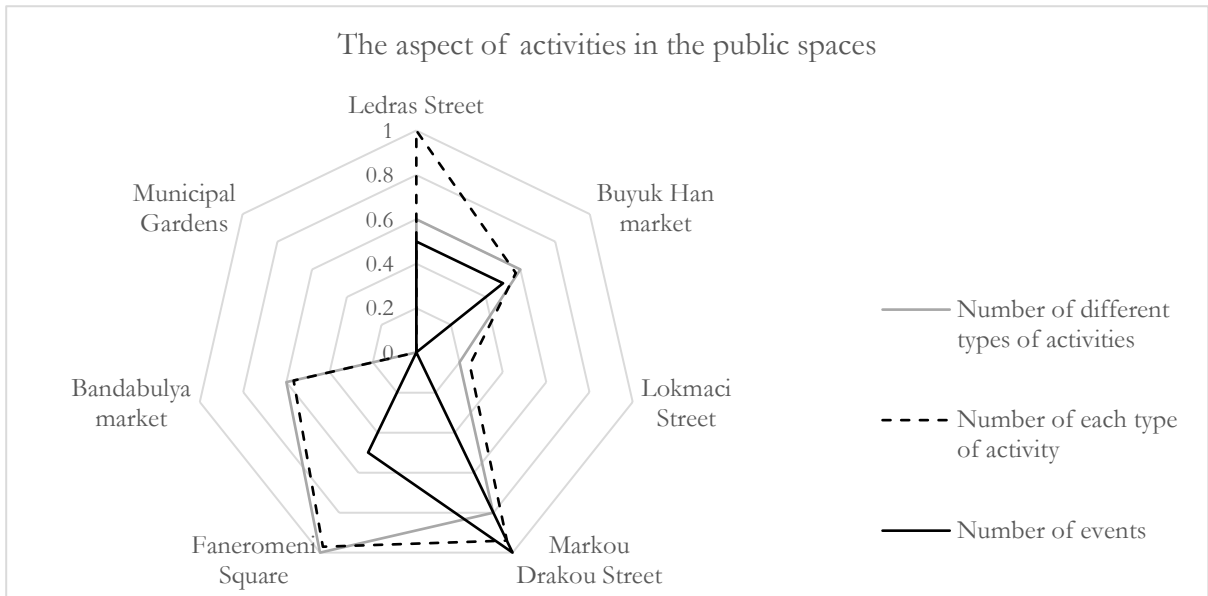


Figure 23. Standardized values of the indicators for the activity aspect of public spaces

In Figure 22, the physical and social aspect of occupant density are presented. This social aspect is tightly related to the physical aspect of size. It is interesting to see that the public space with the biggest standardized value of the surface area indicator has the lowest occupant density, both for walking and static visitors.

Figure 23 shows which of the public spaces are visited by both members of both communities and members of all age groups.

Figure 24 presents the aspect of activities in public space, which includes the different types of activities, number of those types of activities and the number of events in the public spaces. It can be noticed that the pattern of activities and events doesn't vary extremely in the public spaces.

The following sections will describe the results of the index for each public space individually, reflecting back on these figures.

5.2. Ledra Street

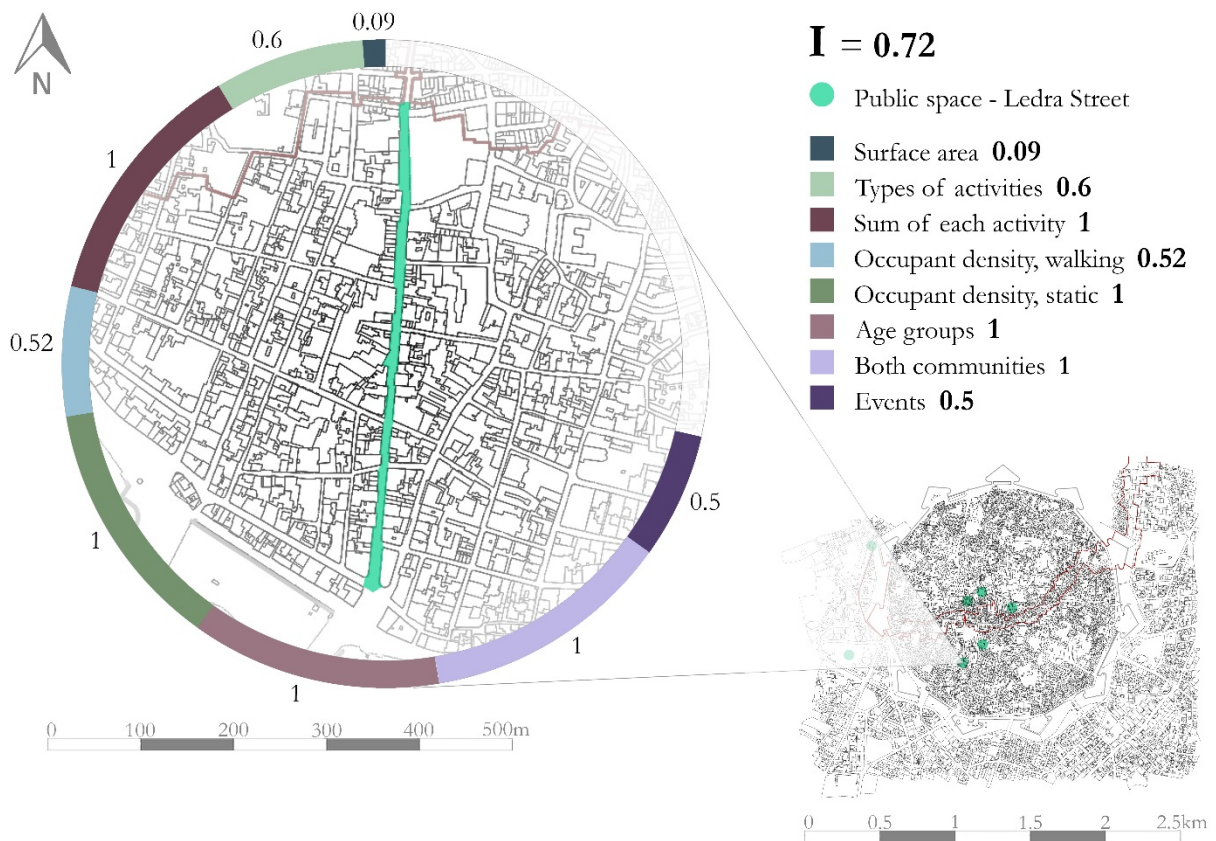


Figure 25. The result of the index of social interaction for Ledra Street. *Source of base map: University of Cyprus, 2016*

The results of the index of social interaction for the Ledra Street are shown in Figure 25.

As a public space with the highest score of the index, it can be noticed that the values of four of the indicators are maximal.

The high value of 1, for the indicator “Number of each type of activity carried out in the public space”, or abbreviated “Sum of each activity”, is the result of the highest number of shops and cafés and restaurants among all the analysed public spaces, as much as 84 shops and 32 cafés and restaurants, both local and brand owned. Besides that, there is one beauty salon and a University. These 4 types of activities resulted in a score of 0.6 in the previous indicator, “Number of different types of activities carried out in a public space”, but regardless of that, the sheer number of each of these individual activities accumulated into the highest score for the indicator “Number of each type of activity carried out in the public space”, which can also be seen in Figure 23.

The score for the “Occupant density in the public space, static” is also 1, showing that the highest number of people occupy the public space, standing or sitting there, considering its size, as seen in Figure 23. This can be related to the high concentration of cafés and restaurants, most of which have a sitting area outside, in the Ledra Street, therefore making the outside area of the café a part of the public space, in the functional sense.

All of the age groups are present in Ledra Street, as well as the members of both communities, as testified by all of the experts. In fact, many of the experts identified Ledra Street as one of the places in Nicosia where social interaction between Greek and Turkish Cypriots occurs.

“If you go to Ledra Street, you will see. They (Greek Cypriots and Turkish Cypriots) are in the same streets shopping, same stores, asking questions, answering question, they communicate without problem. Day by day, this is more often. They speak to each other. Some of them (Turkish Cypriots) know how to speak Greek, or English.”

5.3. Buyuk Han market

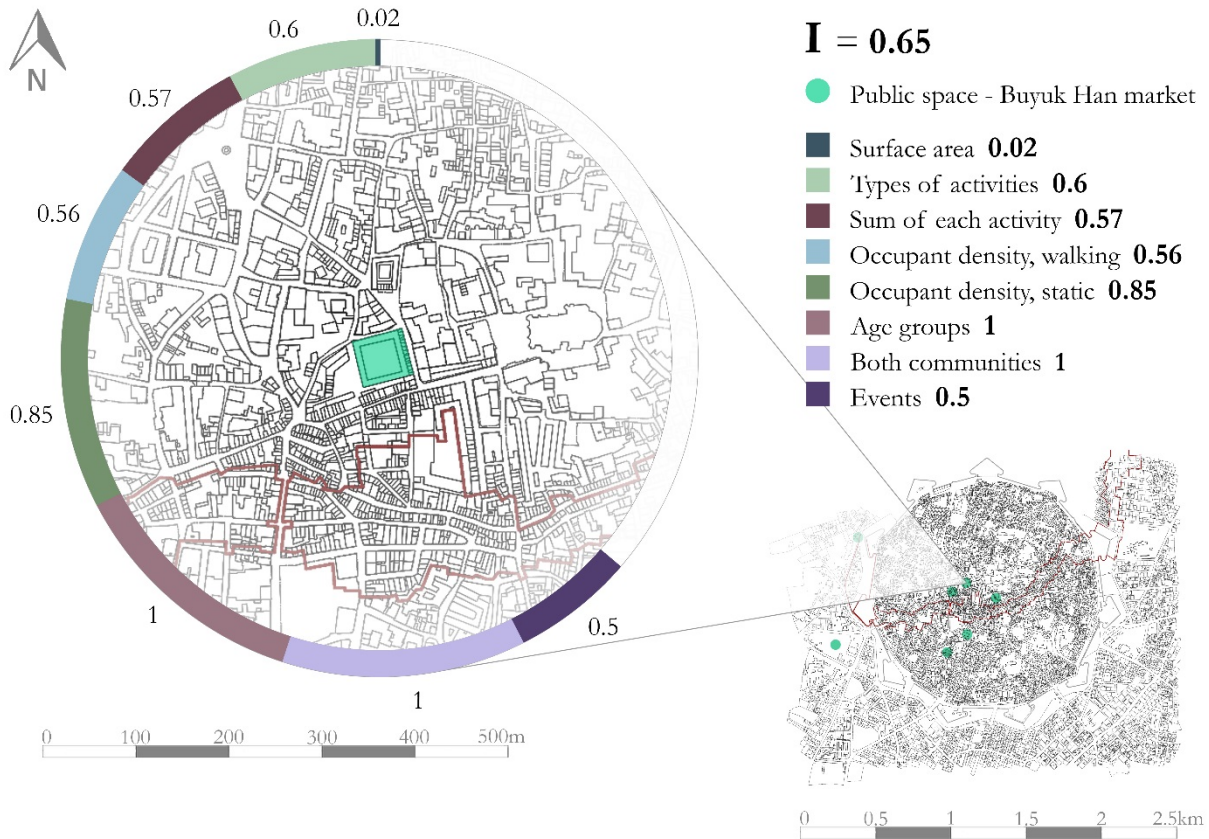


Figure 26. The result of the index of social interaction for Buyuk Han market. *Source of base map: University of Cyprus, 2016*

The score of the second highest ranking public space, Buyuk Han, is presented in Figure 26.

The highest indicator values that contributed to this public spaces index score are “Presence of different age groups in the public space” and “Presence of members of both communities in the public space”. It also scored significantly high in the “Occupant density in the public space, static” indicator, the second highest after Ledra Street, and “Occupant density in the public space, walking”, the second highest after the public space Lokmaci Street, as shown in Figure 22 and Figure 22, respectively.

Among the activities located in Buyuk Han are art and culture, a beauty salon, cafés and restaurants and 38 locally owned shops, giving it a value of 0.57 for the indicator “Number of each type of activity carried out in the public space”, and putting it in the middle rank, compared to the other public spaces, which is shown in Figure 23. Regardless, this is a high concentration of the activities, shops especially, considering that the surface area of the public space is the second smallest among all the analysed public spaces, as presented in Figure 21.

The experts identify Buyuk Han as one of the favourite places of both Greek and Turkish Cypriots, and a place where social interaction occurs often between them.

“I think social interaction in certain areas in the north exists. For example, Buyuk Han. Buyuk Han is a very popular place where both Greeks and Turks go.”

“For social interaction, they will go to Buyuk Han. It’s very popular. On this side (The Greek side), we have nothing like the Buyuk Han. We have Faneromeni. But Faneromeni doesn’t have the same appeal, because it’s not enclosed, it’s open, too open.”

5.4. Markou Drakou Street

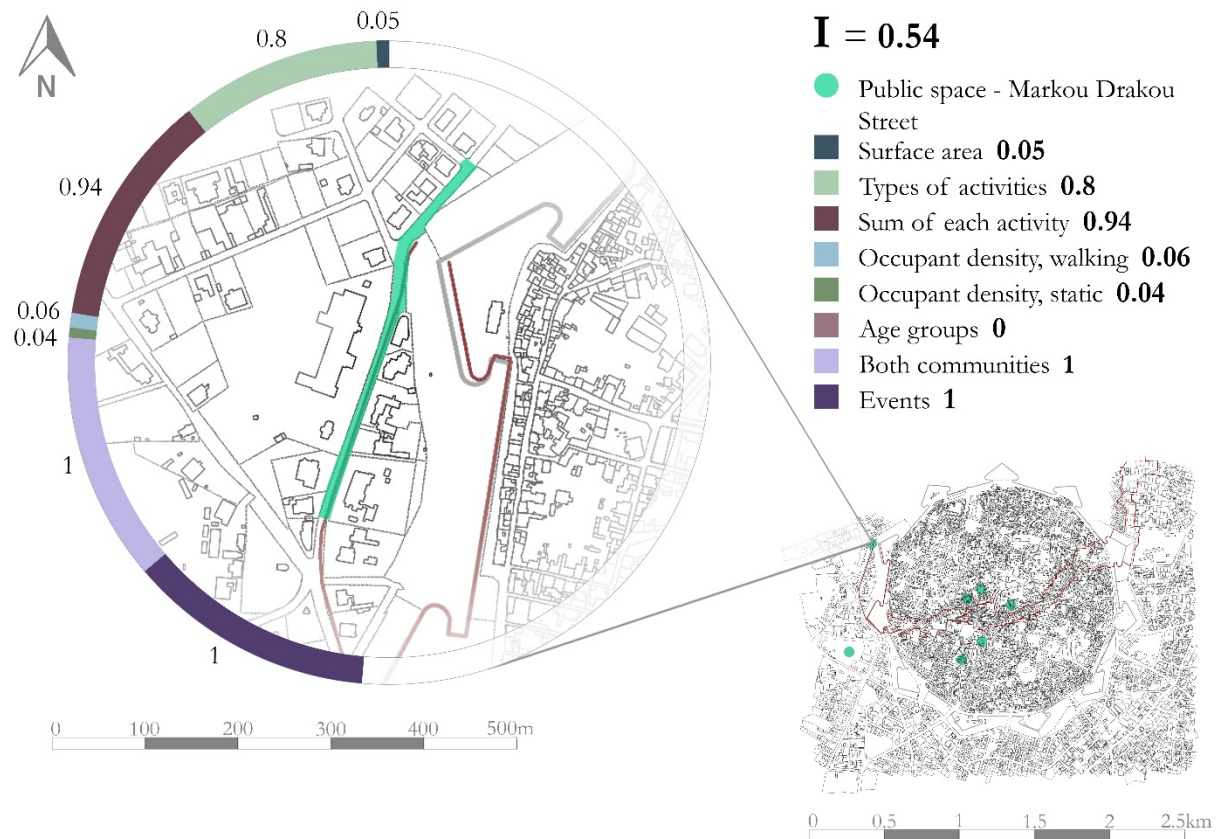


Figure 27. The result of the index of social interaction for Markou Drakou Street. *Source of base map: University of Cyprus, 2016*

The final score of the index of social interaction for Markou Drakou Street is shown in Figure 27. Markou Drakou Street owes the third place among the public place to the “Home for Cooperation”. The majority of the activities in Markou Drakou Street, of which there are many, are located in the “Home for Cooperation”. The value of the “Number of different types of activities in the public space” is 0.8, the second highest, as presented in Figure 21. Those activities are cafés and restaurants, educational institutions, private businesses, international organizations and as much as 8 non-governmental organizations, all of which are bicomunal and constantly working on promoting social interaction between the Greek and Turkish Cypriots.

What stands out is the very high score of 1 for the indicator “Number of events taking place in the public space”, shown in Figure 23. The majority of these events take place in the Home for Cooperation, almost on a daily level, but there are also festivals and other events that take place in the entire Markou Drakou street. These events include music, workshops, dance, lectures, debates etc. and they are all bicomunal. Another value that stands out is the score of 0 for the indicator “Presence of different age groups in the public space”, which is shown in Figure 22. The age group that was not represented during several occasions of data collection is the “0-14 years old” group. But, this can be related to the low occupant density, both of walking and static visitors. The values of both of these indicators are the second lowest, higher only then in the Municipal Gardens, as seen in Figure 22.

“This street is the buffer zone street. So, there are interactions of course, even while crossing the border, you would pass beside each other. Apart from the Home for Cooperation, spending time together, like to be present at the same time, I don’t know if it’s possible in the street, apart from a place like this (Home for Cooperation).”

“This place (Markou Drakou buffer zone) is not a very pretty, attractive area. We have the guy’s restaurant there, his bins are always there, and people just walk past, unless we actually arrange an event. For example, we had the University fair last Tuesday and we had people from both communities and people hanging out, chatting, but it was because of that specific event.”

5.5. Lokmaci Street

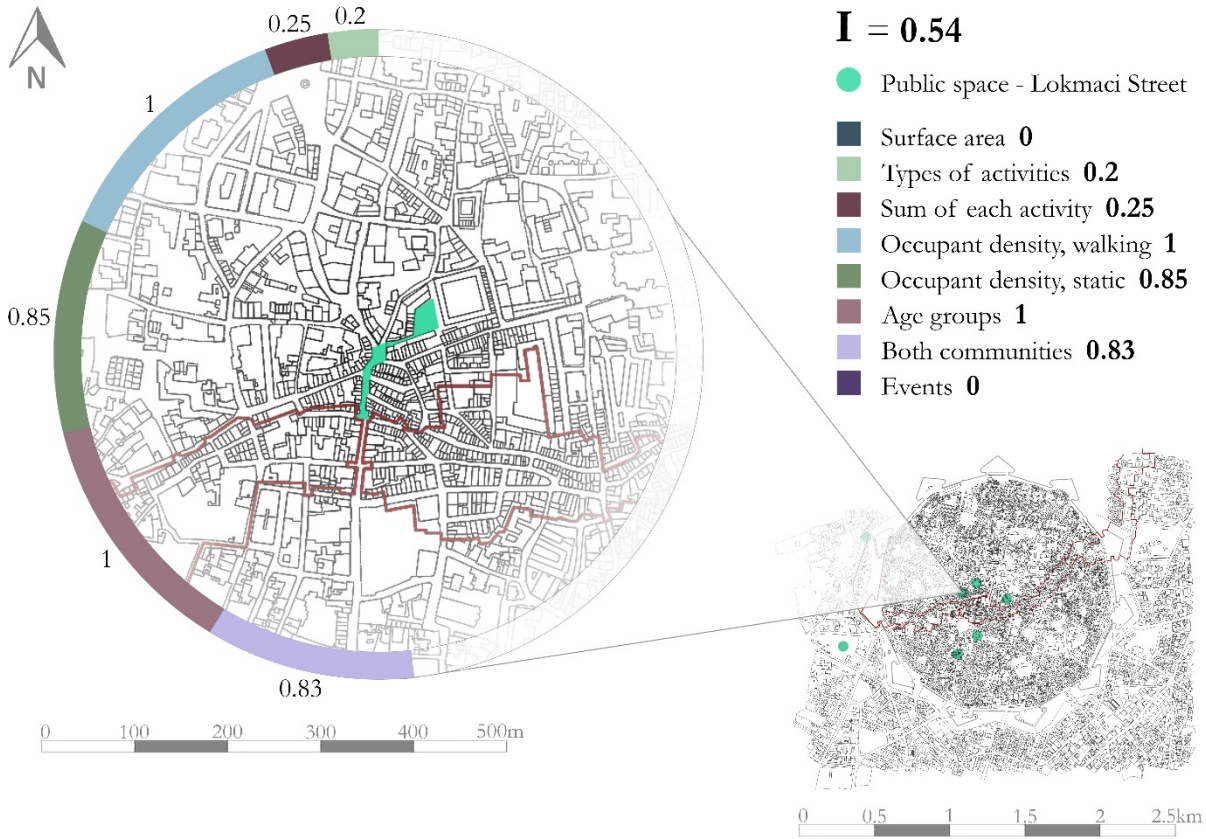


Figure 28. The result of the index of social interaction for Lokmaci Street. *Source of base map: University of Cyprus, 2016*

Figure 28 shows the score of the index for Lokmaci Street.

Despite having the smallest surface area and the least events per month, shown in Figures 21 and 23, respectively, this public space ranks as the fourth public space, based on its ability to promote social interaction. The index score of Lokmaci Street is just 0.005 points lower than the score of the Markou Drakou Street.

Only two types of activities are available in Lokmaci Street, shopping and cafés and restaurants. There are 31 shops and 9 cafés and restaurants in total in Lokmaci Street, all of which are locally owned. Both of these indicators have the second lowest value among the public spaces, 0.2 and 0.25 respectively, but still seem to attract many visitors. The occupant density for visitors that walking in the public space is the highest among all the public spaces, while the value for the occupant density of static visitors in the public space is the second highest, the same as in Buyuk Han, lower only than in Ledra Street. This is shown in Figure 22.

The indicator “Presence of different age groups in the public space” has the highest value of 1, as seen in Figure 22. However, the indicator “Presence of both communities in the public space” does not have the highest value, but rather the second highest, 0.85, as shown in Figure 22. One of the interviewed experts does not believe that both the Greek and Turkish Cypriots spend time in Lokmaci Street, and identified it as a place where the members of both communities can’t be found. Other experts disagree.

“Lokmaci, it’s no meeting place. There’s nothing there. You walk and you go to Buyuk Han, you walk and you go to Bandabulya, there is nothing there. It’s just the border.”

“If you cross from the Ledra Street checkpoint, and you go to the Turkish Cypriot community, there are a lot of people that will hang out there in that area, there on the Turkish Cypriot side, just across from the checkpoint, in Lokmaci Street.”

5.6. Faneromeni Square

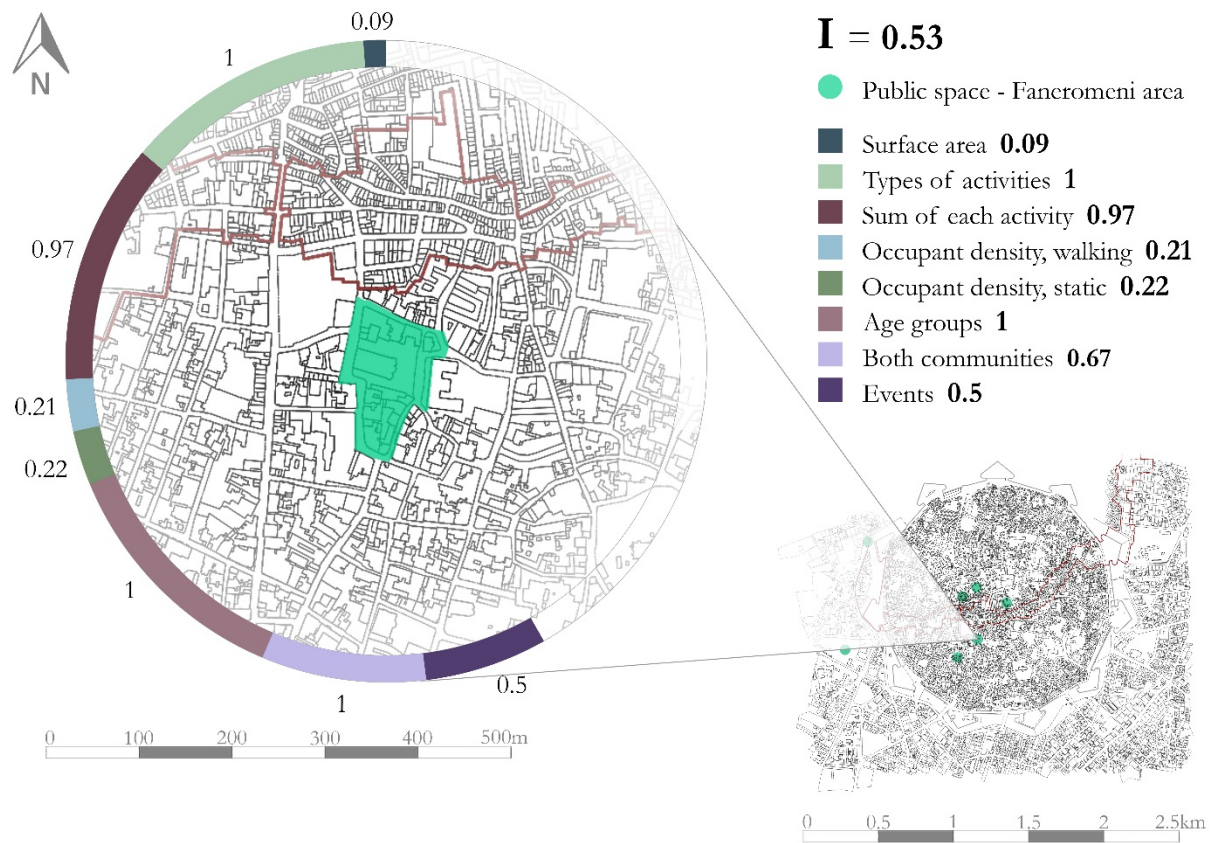


Figure 29. The result of the index of social interaction for Faneromeni Square. *Source of base map: University of Cyprus, 2016*

Faneromeni square ranks as the fifth public space according to its ability to promote social interaction.

The result of the index and the values of the indicators for this public space are shown in Figure 29.

The area of the Faneromeni Square has the biggest choice of the types of activities, the most among all the public spaces, giving it a score of 1 for this indicator, as presented in Figure 21. In this area, 6 different types of activities are available: Shopping, Cafés and restaurants, Education facilities, Art and culture, Private business and Religious buildings. Of all analysed public spaces, this is the only one where both a mosque and an orthodox church are located. The score for the indicator “Number of each type of activity in the public space” is 0.97, the second highest, after Ledra Street, as shown in Figure 22.

The occupant densities for walking and static visitors of the public space rank among the lowest, which is presented in Figures 21 and 22, respectively.

Regarding the value of the “Presence of the members of both communities in the public space” indicator, not all the experts agree that both members of the Greek Cypriot and Turkish Cypriot communities are present at Faneromeni Square. Namely, 11 of the 13 interviewed experts testified that they have seen members of both communities at this public space. This can also be seen in Figure 24.

“Faneromeni is a lovely place to sit and have coffee and chat, and I’m sure Turkish Cypriots come over and Greek Cypriots come over, and it’s a much more pleasant area than this area for example (Markou Drakou Street). People do use it, to go and hang out, especially on an evening, there are so many cafés and things like that. They did a pretty good job with that area there.”

“Faneromeni square, it’s frequented by Greeks, I don’t think it’s frequented by Turks.”

5.7. Bandabulya market



Figure 30. The result of the index of social interaction for Bandabulya market. *Source of base map: University of Cyprus, 2016*

The score of the index of social interaction for Bandabulya market is presented in Figure 30. Compared to the other public spaces, Bandabulya market is one with the second lowest score.

The indicators with the lowest values of 0 are “Presence of the members of both communities in the public space” and “Number of events taking place in the public space”, as shown in Figure 22, respectively. Only 7 of the 13 interviewed experts testified that there are member of both the Greek Cypriot and the Turkish Cypriot communities present at Bandabulya market, which strongly influenced the total score for the index of social interaction for this public space, being the indicator with the highest weight.

Except for the indicator “Presence of different age groups in the public space”, which has the value of 1, all of the other indicator values rank in the middle range compared to the other public spaces.

In addition, none of the experts named the Bandabulya market as a public space where social interaction occurs.

“If you are in Bandabulya, and you see Greek Cypriot shopping, you don’t interact. I mean, he’s or she’s doing her shopping, so if there’s nothing, I mean he doesn’t need help or she doesn’t need help, you don’t get in touch.”

5.8. Municipal Gardens

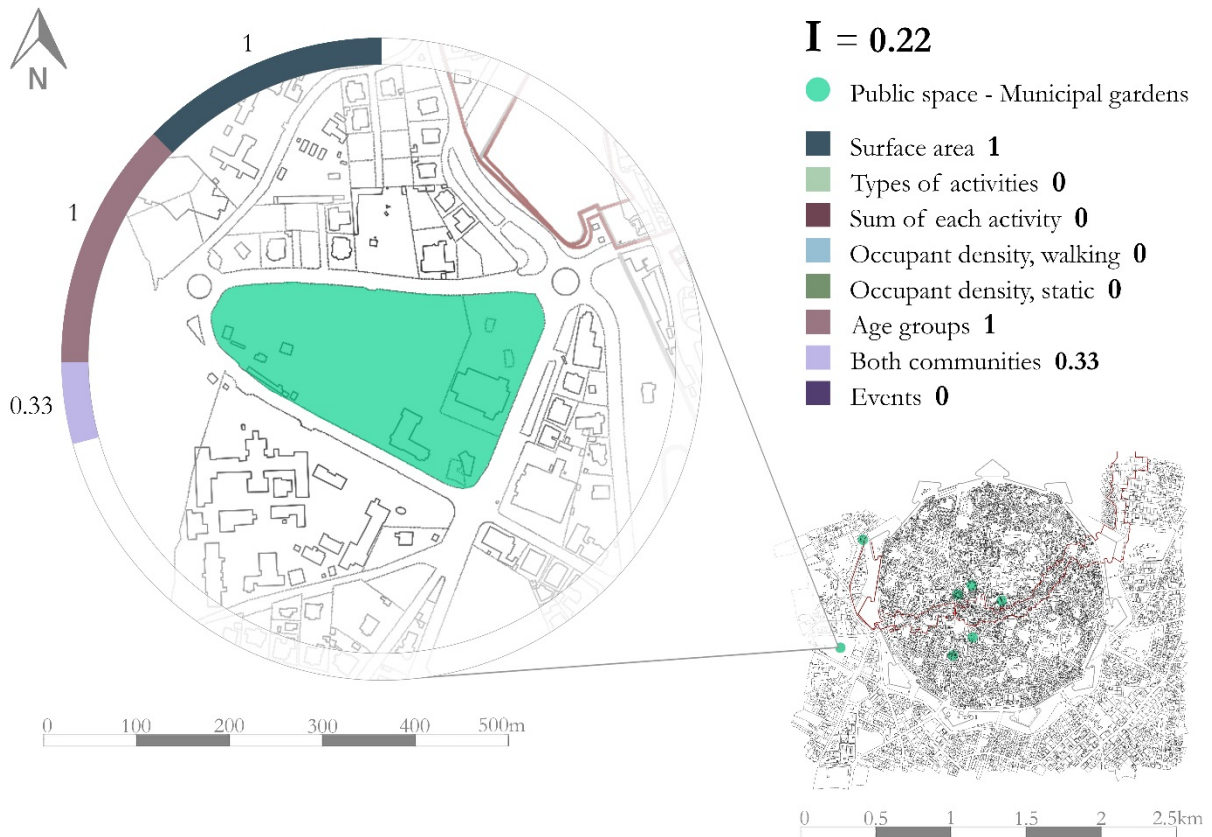


Figure 31. The result of the index of social interaction for Municipal Gardens. *Source of base map: University of Cyprus, 2016*

The results of the index of social interaction for the public space Municipal Gardens are shown in Figure 31. This public space has the lowest score among all the analysed public spaces, 0.22.

The values of most of the indicators are 0. However, this does not mean that the occupant density for visitors that are walking or spending time in the Municipal Gardens is 0 people per square meter, it simply means that the value of these indicators was the lowest among all of the public space before they were standardized. The value of the indicator “Number of events taking place in the public space” is also 0. Some of the experts talk about the events that happen in the Municipal Gardens, but due to the low frequency of these events, this indicator resulted in the lowest score, compared to the other public spaces. This can be seen in Figure 23.

There is only one type of activity in this public space, and that is one café. Therefore, the values of the “Number of different types of activities carried out in the public space” and “Number of each type of activity carried out in the public space” are again the lowest among the public spaces, as presented in Figure 23.

Figure 21 shows that the surface area of this public space is the biggest of all the public spaces, almost eight times bigger than the second largest public space.

“Yes, during the day I see Turkish Cypriots in the Municipal Gardens, during the night, I don’t think they go there. But I never saw social interaction between Greeks and Turkish Cypriots there. It was only families, just sitting, having their ice cream.”

“I think that the Municipal gardens are frequented mostly by foreigners. Not Greek and Turkish Cypriots. Definitely by Shri Lankan and Pakistani, third world countries, sort of Asian countries. No, I don’t think that any Greek and Turkish Cypriots come. That’s my opinion, I might be wrong.”

5.9. Summarizing the results

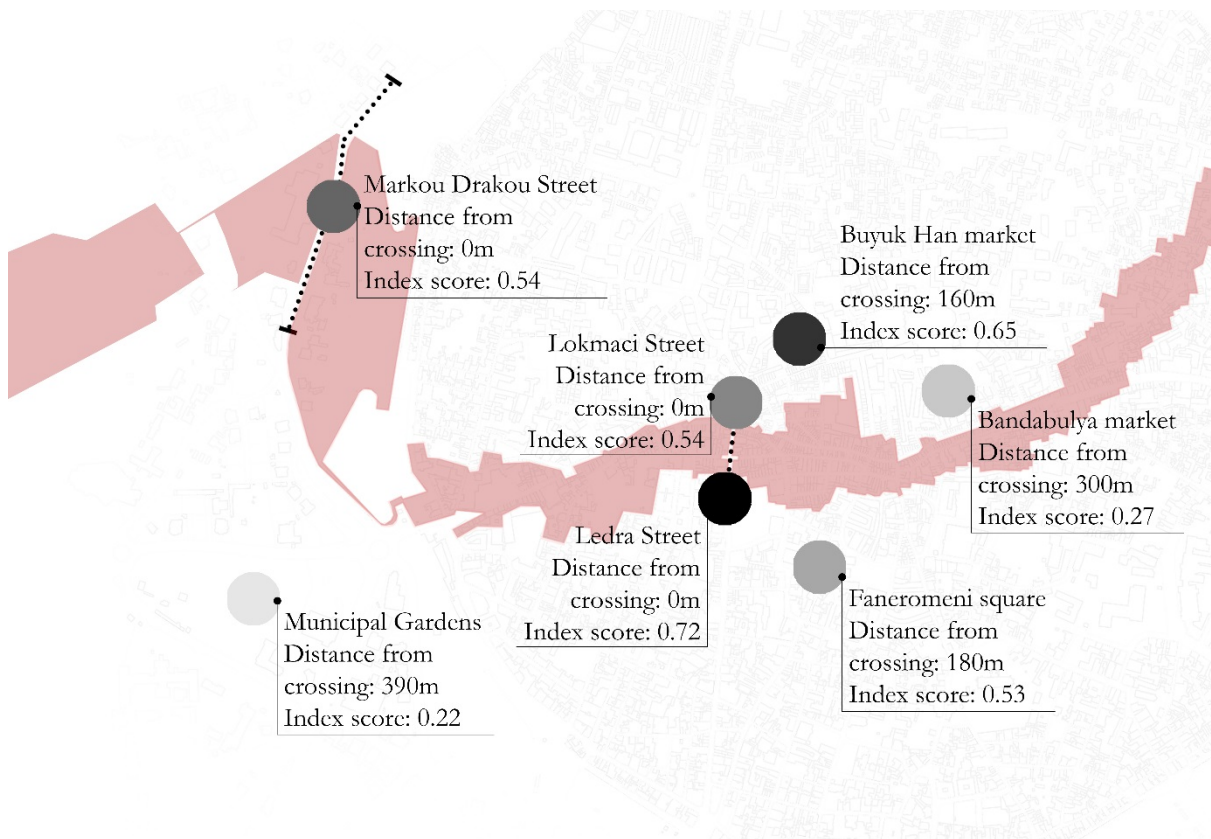


Figure 32. Graduated map of the results of the index for the public spaces. *Source of base map: University of Cyprus, 2016*

The results of the index of social interaction for each of the public spaces, as well as their position relative to the border and the distance from the nearest crossing are shown in Figure 32. The public spaces are presented on the map in graduated symbols, where the darker colours represents higher scores of the index, and consequently, the lighter colours represent the lower scores of the index.

Another outcome worth mentioning is the testimony of experts about the public spaces that, in their opinion, promote social interaction the most, and have the biggest ability to do so. The number of times a public space was identified as such by the experts is shown in Table 6, along with the score of the index of social interaction, the ranking among other public spaces according to that score, and the distance to the nearest border crossing.

Table 6. Public spaces that promote social interaction the most, as identified by the experts

Public space	Ledra Street	Buyuk Han market	Markou Drakou Street	Lokmaci Street
Number of experts identifying it as a place that promotes social interaction the most	6	6	4	3
Ranking within the index of social interaction, and the score of the index	I/0.72	II/0.65	III/0.54	IV/0.54
Distance of the public space to the nearest border crossing	0m	160m	0m	0m

6. DISCUSSION

This chapter presents a deeper look into the results of the analysis, and provides the answers to the sub-objectives and research questions that were set in Chapter 1. An understanding of the phenomena of social interaction in divided cities is provided, and how the public spaces in these cities promote it.

6.1. Understanding the factors influencing social interaction in public spaces of a divided city

In the previous chapter, it was shown through the index of social interaction that the public spaces in the divided city of Nicosia have different characteristics, and substantially different performance in the score of the index. This is caused by the different factors that influence the ability of the public space to promote social interaction. In order to understand what those factors are, we must first examine what is a public space in the context of Nicosia, which functions of these spaces promote social interaction and in what form does the social interaction take place in the divided city of Nicosia.

6.1.1. What is a public space in the context of the divided city of Nicosia?

In the context of the divided city of Nicosia, all of the public spaces that were analysed are publicly owned areas and properties, with free access. All of these spaces are unique and attract visitors for different reasons.

The majority of the public spaces are located within and around the walled city, the center of the city. Until the opening of the Ledra Street crossing, this area was heavily militarized, and it was not very appealing to visitors. Even though the area was used, it became significantly more visited and lively after the borders were opened, as testified by the experts and mentioned in the previous chapters. Some of the public spaces in this area were revived and reopened as the borders were opened. So, for the newer generations of Cypriots, frequenting and sharing these spaces with the community from the other side of the divide is still a new concept. People are going back to using, or learning to use the area of the walled city and the public spaces within it for social and civic life, as opposed to having these spaces used for militarized, border defining purposes.

One of the main streets and public spaces in the pre-conflict era, was the Ermou Street. Greek and Turkish Cypriots worked there together, until the division happened. Now, the UN buffer zone passes through the majority of the Ermou Street, restricting access to it. However, the citizens of Nicosia still remember the cooperation and sharing the spaces of the city, and commemorate it through a festival called “Ermou 1900”, organized by the “Centre of Visual Arts and Research”.

“Ermou 1900, every Saturday before Christmas, Greek and Turkish Cypriot craftsmen, peddlers, come here in Ermou Street, and we dress up people as they were in the 1900s, and they sell their products, as they used to in the 1900s at Ermou Street, which was the most commercial street in the city, it was the hub, the heart of the city.”

This is an example of a public space that has vanished with the division. However, another public space emerged from it. The Markou Drakou Street would not be a public space if it was not for the “Home for Cooperation”. Till et al. (2013), defined it as an “Infrastructure of peace”, which, as such, brings people together. The “Home for Cooperation” with its bicommunal nature and many events is what brings people to the Markou Drakou Street, and is also defined by the experts as one of the public spaces with the highest levels of interaction.

Experts’ testimonies on the use of public spaces and their role in Nicosia acknowledge one fact - they are not used to their full potential. However, there is improvement, and the public spaces are becoming more important.

“In Nicosia, there is still a lot of work to be done for these public spaces to be used at their maximum potentials. Cypriots are not that familiar with the idea of hanging out in the park. The idea is to have a space where it’s free, to be used, it does not have any segregation, no exclusion, so anyone can use it for different purposes. I’m not sure if we are there yet, as an island, the feel of appreciation of a public space, and to respect a public space as such.”

“I think that they are becoming more popular. People, given the weather we have here, like sitting, lounging, basking in the sun, you know. And this is something that, in a way, replaced the neighbourhood coffee shop of the old times. And people like strolling and walking, and it’s becoming more popular. And I think that if we are careful in the way we keep these places, and not destroy them, and not let them turn into tourist traps, I think these public squares have an important role to play because they will become meeting places”

This might be related to the fact that the area where most of the spaces are located is so close to the buffer zone, which has only recently, in the last decade, become available. Now, these spaces are being used more frequently, because of what they have to offer.

“I think these are the spaces which were previously the border areas that people had common memories of those spaces, and now they have been opened up. And because they are spaces gluing the city together, or linking the city together, they are available for interaction. It is also convenient because they are accessible. People who live for example in the north, they come to the area near the border, near the buffer zone, it’s the same with the Greek Cypriots. It’s convenient. They have been also improved, done up, so they are increasingly attractive to people.”

“The Cypriot culture has never favoured active public spaces. Maybe because Cypriots were more home-based. I think the role of public spaces is not very prominent in the Cypriot culture. It’s not particularly visited or populated. It’s not a major element in the city. Of course, it’s there, and people put chairs and they sit there and they have coffee, but people go to the restaurants, they go to cafés. If you go to any part of Nicosia, you find people in cafés, rather than in a square. The cafés have taken away from the old coffee shop, they have become more prominent than the public square.”

The experts’ testimonies indicate that the public spaces in Nicosia do not play very important role in the everyday life, but there are signs of improvement. The revival of the public spaces around the buffer zone has brought more activity to that area, both human and economical.

6.1.2. Which qualities of the public space promote social interaction in a divided city?

As seen in the conceptual framework (Figure 1), and corroborated through the expert interviews and the results of the index of social interaction, the qualities that influence the ability of the public space to promote social interaction are incorporated in the three aspects of public spaces. These aspects are physical, social and the aspect of activity in the public space. It is the representation of these aspects and their combination that determines the ability of public spaces to promote social interaction.

The physical aspect of public spaces

The physical aspect of public spaces includes the size and the accessibility of the public space. Accessibility was ruled out as an indicator while computing the index of social interaction due to the fact that all of the public spaces are easily accessible to residents from both sides of the divide, being located closely to the border, and described by experts as such. However, examining the results of the index of social interaction, it became evident that the three out of the four public spaces with the highest score for the index of social interaction are located adjacent to the border, or, more precisely, at a 0m distance from the crossing, and the fourth one is only 160m from the nearest crossing. The two lowest ranking public

spaces are those who are the furthest away. This can be observed in Figure 32. Nonetheless, this might as well be a result of other factors that influenced the result of the public spaces, considering that the two public spaces with the lowest score if the index are only at a 300m and 390m distance from the nearest crossing point, and can be easily accessed from both sides of the divide.

The factor of size was considered as beneficial for the ability of public spaces to promote interaction, due to the increased surface area available for hosting various activities such as more shops or cafés, and more people, hence more events and festivals. However, the public space with the by far the biggest surface area, is the one with the lowest score of the index of social interaction. This finding concurs with the study of Abu-Ghazze (1999), who found that it is the smaller public spaces that have a bigger role in promoting social interaction and instigate the stronger connections between their users.

The social aspect of public spaces

The social aspect of public spaces included the indicators of occupant density of both walking and static visitors, and diversity – presence of different age groups and both communities in the public space.

These factors are in most cases closely related to the score of the index.

The public spaces with the highest index of social interaction are the ones with the highest occupant density, apart from one, the Markou Drakou Street. The same applies for the indicator of the presence of different age groups, where all the highest ranking public spaces have all of the age groups present, except for the Markou Drakou Street. The final indicator of the social aspect of public spaces, presence of members of both communities, scored the highest among the highest rating public spaces, including the Markou Drakou Street.

Therefore, in order to answer the question why did the Markou Drakou Street obtain such a high score in the index of social interaction, while having low performance in both the physical and social aspect, the aspect of activities must be examined.

The aspect of activities in public spaces

This aspect included the different types of activities, their individual number and the number of events in the public space. From what was seen from the expert interviews, in the context of Nicosia, this aspect plays a very important role. Both Greek and Turkish Cypriots visit public spaces for the shopping, cafés, culture, events and festivals, and other activities that are offered within the public spaces. Therefore it is not surprising that the public spaces with the highest score if the index of social interaction have the highest values in the indicators related to this aspect. In fact, the Markou Drakou Street has the single highest score in the indicator of events in public spaces, and significantly high scores of the different types of activities and each type of activity. The contribution of the aspect of activities is the reason this public space ranks third among the public spaces according to the index of social interaction. Moreover, it also ranks third according to the number of testimonies of experts who identified it as a public space with the highest ability to promote social interaction. The experts underline the importance of events, which make up for other shortcomings of public spaces and manage to facilitate social interaction.

“This place (Markou Drakou buffer zone) is not a very pretty, attractive area. We have the gny’s restaurant there, his bins are always there, and people just walk past, unless we actually arrange an event. For example, we had the University fair last Tuesday and we had people from both communities and people hanging out, chatting, but it was because of that specific event.”

6.1.3. In what form does the social interaction take place in a divided city of Nicosia?

Before the borders were opened in 2003, the social interaction in Nicosia was very limited, if not even non-existent. Since they opened, the social interaction started to take place and make an impact on the population.

“I don’t think that now, after so many years that the borders opened, I don’t think that people...they used to see it as a problem, when the Turkish Cypriots would come and shop here, maybe they would

be a bit hostile or uncomfortable more. But not now, not anymore. They don't think of it like that, they are just human. It changed because of the interaction. Because of the people getting together, meeting, talking, and having the opportunity. As kids, we used to think of them (Turkish Cypriots) as monsters, not people. But when the borders were not there anymore, they are just people. It's like they are people like all other people. We don't see them now as monsters or something else, and this is because of the opening."

"It depends on the social place. Then, we got all child, we all got child, and when we go for a park for children, when I see another mother, I say hello, hi, and yes."

The social interaction in Nicosia is place-dependent. The majority of experts agree that the form of interaction between the Greek and Turkish Cypriots depends on the place where it's happening. However, it is present to a certain degree, especially in cafés and in areas with high concentrations of them.

"This street, Lokmaci, I think this is the most commonly used street and interaction, and around this area there is a few places that are so convenient, people just hang out and meet there. Recently, there is a couple of new bars that opened in the north, and Greek Cypriot youth, I would say youth up until 35 let's say, maybe slightly older, they are going there frequently. Not necessarily because they have friends of whatever, but they feel so comfortable to cross and go and sit there and have a drink or whatever. So this street is becoming quite used now by both communities just to sit down and chill. And it's very nice, you would say that older people and maybe middle aged, they were so much more comfortable interacting because they knew people, and they knew why they were doing it. Whereas now, through kind of very casual occurrences people start to do the same.

There is this one, that is very fashionable right now, "Hoi Polloi". A lot of Greek Cypriots go to this one. Because, this place opened, all of a sudden that street also became a lot more used."

6.2. Quantifying the ability of public spaces to facilitate social interaction using an index of social interaction

The ability of public spaces to facilitate social interaction was quantified using the index of social interaction. The results were used to compare the public spaces among each other in order to conclude what influences their ability to promote social interaction, and were later confronted with the testimonies of experts for verification.

6.2.1. Which public spaces perform better in the index of social interaction, and why?

The public spaces that preformed best in the index of social interaction and the aspects where they proved stronger are listed below.

- Ledra Street – Physical aspect, Social aspect, Aspect of activities
- Buyuk Han market – Social aspect, Aspect of activities
- Markou Drakou Street – Aspect of activities
- Lokmaci Street – Social aspect
- Faneromeni Square – Physical aspect, Aspect of activities

The strong aspect of activities is present with four out of five public spaces that scored above 0.50. The social aspect showed to be the second important aspect for influencing the ability of public spaces to promote social interaction.

6.3. Discussing the role of public spaces as places of social interaction in divided cities

According to the experts testimonies based on the case of Nicosia, the role of public spaces is significant because these are the rare spaces where the two communities come in contact and have the opportunity to interact.

“I think that public spaces help people to come together, and be active, instead of being individuals. They become part of a team. It’s a place to connect. But I don’t know. We do have public spaces, downtown, the Faneromeni Street, where a lot of events are taking place, and I think it’s a great way to have people in an open space and react with each other. People just go to the public spaces with their children, or their friends and they drink coffee. There are a few artists, doing what they do. And they participate in events, in fairs, there is music going on, and drinking and having fun. This is what I think people use them for, having fun. That is the main use of public spaces.”

The current situation in Nicosia, as seen from the expert interviews and the observations made in the fieldwork, points to coexistence and a friendly dynamic.

6.3.1. How do the results of the index of social interaction compare to the perception of experts about the role of public spaces in a divided city?

Table 7. Public spaces that promote social interaction the most, as identified by the experts

Public space	Ledra Street	Buyuk Han market	Markou Drakou Street	Lokmaci Street
Number of experts identifying it as a place that promotes social interaction the most	6	6	4	3
Ranking within the index of social interaction, and the score of the index	I/0.72	II/0.65	III/0.54	IV/0.54
Distance of the public space to the nearest border crossing	0m	160m	0m	0m

As we seen in the previous chapter and the sections of discussion, the public spaces that rank the highest, Ledra Street, Buyuk Han market, Markou Drakou Street and Lokmaci Street concur with the testimonies of experts. In fact, the number of experts that identified the public spaces as those who have the highest ability to promote social interaction ranks the public spaces in the same manner as the index of social interaction does. Table 6, repeated from the Chapter 5, presents these rankings for the four public spaces with the highest ability to promote social interaction.

7. CONCLUSION

This research analysed the social interaction in divided cities, and the ability of public spaces in divided cities to facilitate social interaction. The approach that was devised for the purpose of this research used a mixed method design, with an index of social interaction and expert interviews as the focal points.

The index of social interaction, as the tool used to quantify the ability of public spaces to promote social interaction, brought meaningful insights into the phenomena of social interaction in the case study of the divided city of Nicosia.

The key findings relate to several aspect - the characteristics that influence the ability of public spaces to promote social interaction in the case of the divided city of Nicosia, the importance of expert interviews for providing valuable insight used throughout the research, and to verify the results of the index of social interaction. The aspect of activity in public spaces in Nicosia presented as the most important aspect. Due to the expert interviews, it is known that the public spaces in Nicosia are not used to their full potential. The population prefers activities such as shopping, cafes and restaurants, and festivals. Therefore, the public spaces which had a bigger number of such activities scored higher and were ranked as the public spaces with a higher ability to promote social interaction. Following that, the social aspect of public spaces demonstrated a high level of significance. The presence of both communities in the public spaces, as well as the occupant density in them had a great impact on the outcome of the index, and therefore, on the ability of public spaces to promote social interaction.

Furthermore, the validity of the index was confirmed by comparing the testimonies of the experts to the results of the index. The ranking of the public spaces by the number of experts who identified them as those with the highest ability to promote social interaction coincided with the ranking done according to the score of the index of social interaction, therefore validating the findings of the index.

Taking the methodology for analysing the social interaction in divided cities and the ability of public spaces to facilitate it, the applicability of the index of social interaction is possible on any case of the divided city where residents can move freely across the divide. Furthermore, the index can be applied to the minorities that also reside in the divided city and are in some way affected by the division.

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APPENDIX I – THE INTERVIEW TEMPLATE

Introduction and purpose of the study

Good afternoon, my name is Marija Kukoleca. I am a student at the University of Twente, Faculty of Geo-Information Science and Earth Observation (ITC), the Netherlands, attending an MSc course in Urban Planning and Management. As part of the MSc course, I am performing a research project entitled “Evaluating the role of public spaces in promoting social interaction in divided cities”, applied to a case study of Nicosia, Cyprus. I am specifically focusing on the social interaction between the Greek Cypriots and the Turkish Cypriots. My research consist of two parts. The first part is developing a social interaction index, measured at public spaces. The second part of my research is focusing on discovering the experts’ opinions and perceptions of the social interaction in Nicosia. In order to achieve that, I would like to interview you. Any information made available to me during this interview will only be utilized for the research objectives and not for any other purpose. Additionally, this interview will be anonymous - I will not mention your name or the name of your organization anywhere in the final document. Furthermore, if you would like to receive a copy of the final document, I will gladly send it to you.

Do I have your consent to use the information that will be provided during this interview for the purpose of my study?

Introduction of the interviewee

1. How long have you worked in this organization?
2. What are your role and responsibilities within this organization?

Introduction of the organization

1. What is the name of this organization?
2. Can you tell me a little bit about this organization?
 - When was it founded?
 - What is the mission of this organization?
 - Does this organization deal with bicommunal relations?
 - In what way?
 - When did this organization start dealing with bicommunal relations?
 - How did the border openings influence the work of your organization?
3. Are there any collaboration with other organizations, either from the Greek or the Turkish side?
 - Which organizations do you collaborate with?
 - How often?
 - In what way?
 - What is your experience with these collaborations?
 - Was there any collaboration with these organizations before the opening of the border crossings in 2003?
4. Can you tell me a little bit about your projects?
 - Are there any ongoing projects?
 - Are they individual or done in collaboration with another organization?
 - Which past projects were most successful?
 - Why?
 - How does the Greek Cypriot population react to the projects?
 - How does the Turkish Cypriot population react to the projects?
 - Are these projects supported by the municipality (either Greek or Turkish)?
 - Were there any projects before the opening of the border crossings in 2003?
 - Is the number of projects increasing through years?

Social interaction and public spaces

1. What is the role of public spaces in Nicosia?
How are the public spaces used?
Does social interaction occur in public spaces in Nicosia?
Does social interaction between the Greek and the Turkish Cypriots occur in public spaces?
In what way?
2. Are there any other places in Nicosia that are visited both by the Greek and the Turkish Cypriots?
What are those places?
Does social interaction between them occur in those places?
Why is that?
3. How did the opening of the border crossings influence the use of public spaces in Nicosia?
Are there any public spaces that emerged or gained significance after the border crossing opening in 2003?
Were there any public spaces that emerged as the result of the division or gained significance after the division of Nicosia?
Are there any public spaces that lost their significance after the division of Nicosia?
4. Which events attract the most visitors from both the Greek and the Turkish Cypriot population?
Why is that?
What do those events have in common?

Besides the interviews, another part of my research is focusing on measuring the social interaction in specific public spaces. The public spaces I chose to evaluate are shown in these maps.

5. Do you recognize these public spaces?
6. Are these public spaces used by both the Greek and the Turkish Cypriots?
7. Did you ever notice social interaction between the Greek and the Turkish Cypriots in these public spaces?
8. Was there a change in the way these public spaces are used after the opening of the border crossings?
9. In your opinion, which of these public spaces have the highest level of social interaction between the Greek and the Turkish Cypriots?

*Thank you for your time. Do you have any further comments or remarks?
Is there anyone I could contact further, in order to discuss these issues?*

APPENDIX II - THE INDEX OF SOCIAL INTERACTION

Indicator	Weight	Sub-weight	Value	Ledras Street	Faneromeni Square	Loknaci Street	Buyuk Han market	Bandabulya market	Markou Drakou Street	Municipal Gardens
The surface area of the public space	0.1		Value	5225.8	5308.4	1750.3	2379.8	3324.4	3708	40939.2
			Standardized value	0.09	0.09	0.00	0.02	0.04	0.05	1
Number of different types of activities carried out in the public space	0.1		Value	4	6	2	4	4	5	1
			Standardized value	0.6	1	0.2	0.6	0.6	0.8	0
Number of each type of activity carried out in the public space		0.1	Shop, locally owned	45	30	31	38	58	0	0
			Shop, brand owned	39	1	0	0	0	0	0
			Shop, value	64.5	30.5	31	38	58	0	0
			Standardized value	1	0.47	0.48	0.59	0.9	0	0
		0.2	Cafes and restaurants, locally owned	24	18	9	5	4	2	1
			Cafes and restaurants, brand owned	8	2	0	0	0	0	0
			Cafes and restaurants, value	28	19	9	5	4	2	1
			Standardized value	1	0.67	0.30	0.15	0.11	0.04	0
		0.1	Education, value	1	2	0	0	0	3	0
			Standardized value	0.33	0.67	0	0	0	1	0
			Art and culture, value	0	2	0	3	5	0	0
			Standardized value	0	0.40	0	0.60	1	0	0
		0.1	Religion, value	0	2	0	0	0	0	0
			Standardized value	0	1	0	0	0	0	0
			Private businesses, value	0	1	0	0	1	3	0
			Standardized value	0	0.33	0	0	0.33	1	0
		0.1	Beauty services, value	1	0	0	1	0	0	0
			Standardized value	1	0	0	1	0	0	0
			NGO, value	0	0	0	0	0	8	0
			Standardized value	0	0	0	0	0	1	0
		0.1	International organizations, value	0	0	0	0	0	2	0
			Standardized value	0	0	0	0	0	1	0
			Total value	0.43	0.42	0.11	0.25	0.25	0.41	0
			Total standardized value	1	0.97	0.25	0.57	0.57	0.94	0
Occupant density in the public space, walking	0.15		Average number of people	78	32	50	38	39	7	6
			Occupant density	0.01	0.01	0.03	0.02	0.01	0.00	0.00
Occupant density in the public space, static	0.15		Standardized value	0.52	0.21	1	0.56	0.41	0.06	0
			Average number of people	186	42	53	72	34	6	8
Presence of different age groups in the public space	0.05		Occupant density	0.04	0.01	0.03	0.03	0.01	0.00	0.00
			Standardized value	1	0.22	0.85	0.85	0.28	0.04	0
Presence of the members of both communities in the public space	0.2		Standardized value	1	1	1	1	1	0	1
			Value	13	11	12	13	7	13	9
Number of events taking place in the public space	0.15		Standardized value	1	0.67	0.83	1	0	1	0.33
			Value	3 - 8 p.m.	3 - 8 p.m.	2 or less p.m.	3 - 8 p.m.	2 or less p.m.	more than 8 p.m.	2 or less p.m.
Index of the social interaction	1		Standardized value	0.50	0.50	0	0.50	0	1	0
			Standardized value	0.72	0.53	0.54	0.65	0.27	0.54	0.22