

The Lost Centre of Nicosia

by Constantinos Kypris
University of Cyprus

Keywords: Divided Nicosia, Urban centre shifting, Accessibility.

Abstract: The centre of commercial and business activities of Nicosia shifted out of the old city after the impose of the division line in 1963. In our days there is evidence that the urban centre in the south part is shifting again losing its compactness.

The syntactic properties of the urban space have been shown to relate with accessibility and movement in urban areas.

In order to answer the question about the causes of the shifting, the paper approaches the issue of accessibility in the urban center of the south part of Nicosia and directly connects it with the structure of the entire spatial system. The paper covers the period from 1957 to the present. A future scenario of unified Nicosia is discussed.

Using configurational analysis based on Space Syntax theory, the spatial syntactic properties are correlated positively to corresponding data about movement and land uses.

The paper concludes that the continuous expansion of the urban fabric to the south and the continuation of the division is affecting the accessibility to the urban centre causing the shifting. The reunification of Nicosia is possible to reverse the shifting procedure and give back to the city a compact urban centre.

1. Introduction

The urban centre of the south part of Nicosia (as characterized by the “Local Plan of Nicosia” of the Town Planning Department) which experienced a commercial boom during the decades of eighties and nineties in recent years faces a declining process in the accessibility/mobility of users and the density of commercial uses resulting in a deterioration of the social, economic and cultural life of the region. A typical example is Makarios Avenue which once constituted the commercial “symbol” of the south part of the city today is in decline. On the contrary, some axes of movement scattered within the city assume the role of local-regional centres and the informal role of the urban centre.

Economists explain the phenomenon in terms of the economic crisis, Land Surveyors explain that decline has to do with high rents, others talk about unfair competition from malls in other parts of the city or even the absence of parking spaces. This paper without rejecting other parameters, connects the phenomenon with the parameter of the changes of the spatial structure of the entire city, arguing that it may be the most determining factor that affects the

accessibility to the urban centre and therefore affects the viability of existing commercial and other land uses.

The paper investigates the last six decades of changes in Nicosia's urban space and urban function, searching for the urban centre of the city in different periods. Most of the discussion is about the south part of the city.

A first hypothesis is that the urban space affects the accessibility, movement and presence of people within the urban center of Nicosia.

Another hypothesis is that the reunification of Nicosia will enhance accessibility and will bring back the users and commercial life in the urban centre.

The research questions that the paper is trying to answer are the following:

- If a shift of the urban centre in the south part of Nicosia exists.
- What role does the change in the spatial structure of Nicosia play in the accessibility to the urban centre and the commercial decline of it?
- How much will affect accessibility in the urban centre a possible reunification of Nicosia?

The findings of this work could help in the debate for the shifting/declining of urban centres and relate the morphological changes to the shifts in urban policies and priorities.

1.1. *Historical Note of Nicosia's urban space*

Nicosia the capital of Cyprus until the end of 19th century was accommodated within the 16th century venetian walls. Some small villages were existing around and outside the walls. After the arrival of the British who placed main administrative buildings outside the walls the city started to spread outwards and virtually after 1920-30 the morphologically different urban grid had a significant presence in the city. (Keshishian, 1990).

After the second world war Nicosia offered employment opportunities and urban migration took place at first rate. The urban perimeter moved gradually outwards, and the nearby villages became incorporated in the Greater Nicosia urban area. (Transportation Study, 1987).

The intercommunal conflict between Greek-Cypriots and Turkish-Cypriots in 1963-64 led to the restriction of movement between the south and the north part of the town. (Attalides, 1981).

The division line which was called 'Green Line' cut the old city through the core degenerating main shopping streets. The division caused the south sector of the town to expand southwards and the focus of the urban life shifted outside the walls around Makarios Avenue (Transportation Study, 1987)

The war of 1974 forced about 200,000 refugees to move and many of them settled in the south part of Nicosia in government refugee estates.

During April of 2003 a few checkpoints were created allowing a kind of controlled movement between the two parts of the town.

In nowadays the south-part of Nicosia is expanding towards the perimeter integrating existing suburban areas.

1.2. *Literature review*

The term accessibility in the urban space could be said to contain the notion of "relative" adjacency between origin and destination. The word "relative" could refer to distance, time, cost, simplicity or lack of transition complexity. Transport engineers usually perceive the concept of

accessibility by defining it with metric distance or one-way coverage time (Kwan, 1998) (Levinson, 1998).

Stonor describes two basic approaches that have different criteria about the term accessibility. The first approach uses metric distance as the basic criterion to describe location access to surrounding opportunities and states that with this idea agree most scientists dealing with urban space. The second approach is based on the criterion of the perceptual ability of the moving observer in urban space and the complexity it perceives in the process of movement within the urban space (Stonor, 2011). On the same approach Charalampous and Mavridou agree that the perception of accessibility is affected by the experience "... which involves much more than a simple distance or time cost of reaching a location" (Charalampous & Mavridou, 2012).

The Space Syntax theory has connected the perceptual ability of the moving user within the urban space with the structure of the space itself. The open public area of the city as a spatial system creates ease or difficulty in accessing a street/area. This means that the urban fabric as a purely spatial system determines the quality of accessibility and thus the intensity of movement. (Hillier & Hanson, 1984). As Hillier writes "the fundamental counterpart of spatial formation is the movement", and explains that "... The structure of urban tissue considered as a purely spatial formation, is the very most powerful individual factor that defines urban traffic, pedestrians and traffic. Because this relationship is fundamental and lawful, there is a strong force in shaping historically the evolution of our cities, with its effect on land use patterns, building densities, mixing of uses in urban areas and partial-whole structure of the city" (Hillier, 1996).

As regards the relationship between space and human trade activities, Hillier, Penn, Hanson, Grajewski, Xu write that "the configuration of the urban grid itself is the main generator of the patterns of movement. Retail and land uses are then located to take advantage of the opportunities offered by the passing trade and may well act as multipliers on the basic pattern of 'natural movement' generated by the grid configuration" (Hillier *et al.*, 1993). Then they relate patterns of Movement with measured properties of the urban grid especially the measure of space syntax Integration which they consider it to be the most important in this case (Hillier *et al.*, 1993).

The choices of vehicle drivers in the process of movement are done in a similar way as they are made of pedestrians but on a larger scale. In this respect, the Penn, Hillier, Banister, Xu write that the patterns of vehicular movement are strongly related to the whole network configuration (Penn *et al.*, 1998).

Dealing with the urban centre a question that arises is why a compact and dense urban centre is regarded as a positive attribute?

Jacobs believes that urban centres should have mixed primary uses and higher encounter rates, something that has to do with the street network and writes that "without a strong and inclusive central heart, a city tends to become a collection of interests isolated from one another" (Jacobs, 1961).

Urban centres are the core of social life. Legeby correlates social action with spatial configuration and argues that social action between humans has an obvious relation on the way the cities are structured and formatted (Legeby, 2010).

Urban centres must have density. Farr is speaking about "sustainable urbanism" and that it cannot be achieved at low densities which are served by the automobile but can be achieved with compact and walkable districts (Farr, 2008).

Ritchie and Thomas write about the "sustainable urban structure" that can be achieved with a "polycentric urban structure of walkable communities" around a metropolitan centre (Ritchie & Thomas, 2003).

The structure of the urban grid can be said to be a determining parameter for the spatial quality of accessibility. The close relation between the local and the superlocal in a city's spatial system is supported by Hillier who states that any change in the city's superlocal structure can affect the local qualities of urban areas and thus the accessibility to them (Hillier, 1996). One of the main products of accessibility can be said again that is the intensity of movement which in turn creates coexistence and becomes the yeast for the development of activities/uses such as social and commercial.

The parameter of accessibility in urban centres is vital for their lives as it will bring people direct to the functional and social heart of the cities. The accessibility of people to these central cores will provide the components for developing movement densities and land uses that characterize healthy urban centers. If, for any reason, accessibility to an urban center decreases then its functional balance is shaken.

2. Methodology

The methodology followed in this paper is built around the theoretical position that the structure of the urban fabric is a major parameter which determines accessibility, intensity of movement and land uses.

Space Syntax methods and tools are used. Configurational analysis via Axial maps of Nicosia are constructed with "depthmap" software. The models represent specific periods of Nicosia as well as an experimental future scenario of Nicosia.

An axial map represents the impression that observers have of visibility and permeability as they move through the space looking at a distance, towards various directions. The axial map of an area is constructed by drawing the longest and fewest axial lines (Hillier & Hanson, 1984). Global integration is the syntactic measure that is used in the paper.

The methodology uses field research where the current status is recorded by measuring active land uses and movement flows in areas of the city during November 2016 and April 2019.

Active and inactive ground floor uses are recorded for the part of Makarios Avenue that used to be the most successful street in the eighties and nineties. In the same area flows of pedestrian and vehicular movement are recorded. During April 2019 flows of pedestrian and vehicular movement are recorded in 4 streets of the south areas of Nicosia which nowadays seem to be commercially successful and at the same time have high syntactical values of global integration.

In the comparative analysis scattergrams are used to correlate syntactical values of global integration to values of movement flows.

For every period of Nicosia's urban space comparative analysis of the spatial properties and data about movement/land uses is made. For the period 1957-1994 the paper uses material that was presented by the author in research work done in September 1994 for his unpublished MSc thesis in UCL (Kypris, 1994).

The paper is examining the urban space of Nicosia and especially the syntactical and functional urban centre in 5 different time periods and a future scenario.

1. 1957 where Nicosia was unified working as one system.
2. 1974 after the restrictions of movement in the city in 1964 and the impose of the division line after the war of 1974.
3. 1984 where a big number of refugees from the north part of the island settled in Nicosia and refugee settlements were build at the south areas of the city.

4. 1994 where the city continued to grow due to continuous urbanization.
5. 2016 – 2019 which is the contemporary period of Nicosia where the city has grown integrating satellite settlements and municipalities. At the same time the city is experiencing the opening of some checkpoints after 2003 where movement is allowed between the two parts of the city.
6. Future scenario of Unified Nicosia working again as one spatial system.

3. Analysis/Results

3.1. Nicosia 1957 (one spatial system before the division)

This was the period before the impose of the division line in which Nicosia was unified, working as one system.

The axial map of this period representing global integration in figure 1 shows that the new urban fabric around the old city is starting to ‘absorb’ the global integration of the system. The most easily accessible axial lines lie around the old city and a few of them intrude into the ‘circle’. A relatively integrated area in the form of a cross is appearing in the old city (Kypris, 1994).

In the axial model of Nicosia within the walls representing global integration in figure 2 the integrated area in the form of a cross is appearing again more clearly around Ledras and Ermou streets. Commerce from a land use survey carried out by Morris in 1957 (by the Town Planning Department) was superimposed on the axial map (Kypris, 1994).

Kypris found that the best predictor of the commercial activities for the period of 1957 was the global integration of the old city within the walls. From the examination of the whole sys-



Figure 1 .
Nicosia 1957
Axial Map Global Integration
(Kypris, 1994)

Figure 2 .
Nicosia 1957 within the walls
Axial Map Global Integration
Commerce Superimposed (white)
(Kypris, 1994)

tem of Nicosia and the system within the walls a conclusion was extracted. That the commercial streets of the old Nicosia were easily accessible from the outside but what distributed the degree of commercial activities in the old city was the configuration of the old city itself (Kypris, 1994).

3.2. Nicosia 1974 (After the division)

The introduction of the division line through the core of the city in 1963 divided the town in two sectors due to the very strict restrictions of free movement. From July 1974 the division line became for many years an impenetrable border with army in both sides. This led to a very dramatic transformation of the space of Nicosia. No information for the use of the city was found for that period. The syntactic analysis reveals the integration damage that was done in the old city and the new balances that were imposed by the division. This was shown by Kypris in Nicosia's axial model of 1974 representing global integration in figure 3 (Kypris, 1994).

3.3. Nicosia 1984 (settlement of refugees)

From the map of 1984 the axial model for the south part of Nicosia was created in figure 4 (Kypris, 1994). The town has grown (settlement of refugees and refugee housing estates) and this growth affected the global integration of the core area which seems slightly more spread. (Kypris, 1994)

Data about the functional patterns of the south part of the town in this period was correlated to the configurational model. The pattern of 24-hour flows of vehicles on main street network was strongly correlated with the global integration values of the streets. Land use map of that period was correlated with the axial model (Kypris, 1994)

From the land use survey of that period by the Town Planning Department commerce (in white color) was superimposed on the axial model that represented global integration (Kypris, 1994). This graphic representation gives a visual inspection of the strong correlation between

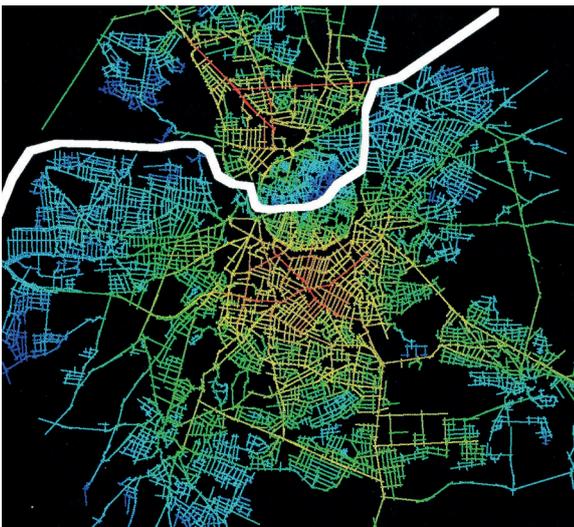


Figure 3.
Nicosia 1974
Axial Map Global Integration
(Kypris, 1994)

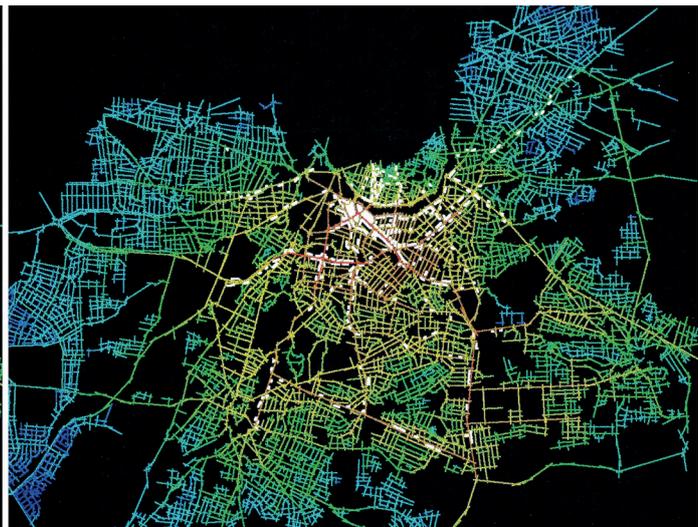


Figure 4.
South Part of Nicosia 1984
Axial Map Global Integration
Commerce Superimposed (white)
(Kypris, 1994)

spatial configuration and commercial activities. The concentration of commerce seems to be determined by spatial parameters which are related to the global. The area which has the highest degree of commerce concentration has shifted out of the old city in the new syntactic core of the town. Makarios Avenue area is the new urban centre. Some commercial activities remain in the old town which is relatively integrated to the global (Kypris, 1994).

3.4. Nicosia 1994 (urbanization)

The axial map of Nicosia in 1994 shows the distribution of global integration in figure 5 (Kypris, 1994). The syntactic core in the south part of the city is placed around Makarios Avenue area. The changes on the integration core of the south part of Nicosia since 1984 appear to be minor but from a very close examination we observe that the syntactic core is still spreading towards the south (Kypris, 1994).

During the summer of 1994 observations concerning the pedestrian and vehicular movement in the old and new core of the south part of Nicosia were carried out by the author (Kypris, 1994). During the observations it was noticed by the author that in the area of Makarios Avenue in the new core, most of the ground floor uses were successful shops and all the ground floor premises were active.

From certain points on 42 streets (gates) in the old and new city the flow of pedestrians and vehicles was counted. The mean numbers of the counting were correlated to the values of global integration. The correlation was strong showing that global integration could be a reliable predictor for the patterns of movement and Makarios Avenue area was the syntactic and the functional urban centre (Kypris, 1994).

3.5. Nicosia 2016 – 2019 (contemporary with open checkpoints)

Recording land uses and movement flows (2016)

During November of 2016 the author recorded the active and inactive ground floor uses of Makarios Avenue area from the junction with Evagorou Avenue up to the junction with Digeni Akrita Avenue. This part of Makarios Avenue used to be the commercial centre in 80's and 90's.

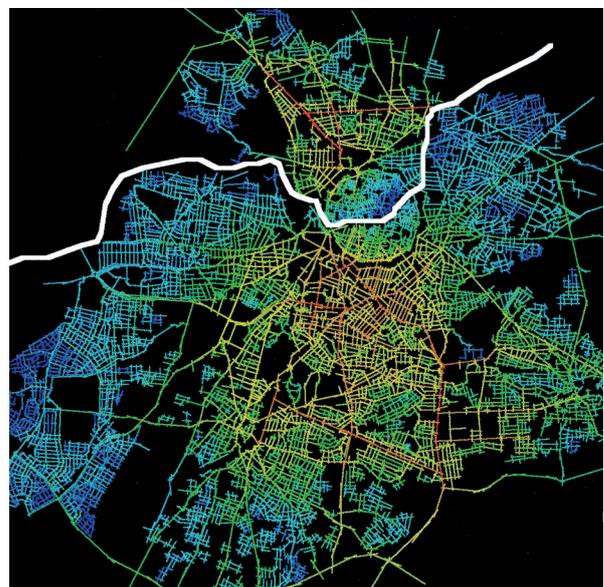


Figure 5.
Nicosia 1994
Axial Map Global Integration
(Kypris, 1994)

It was observed that from 101 total ground floor uses that were recorded 74 were active while 27 were inactive. Of the 74 active ground floor uses, the 61 concerned commercial uses. The 27 inactive ground floor uses seemed to have functioned as commercial shops in the past. 31% of commercial uses were inactive. Although there was no record of the ground uses in the field investigation conducted by the author in June 1994 (Kypris, 1994), the author noticed that 100% of the ground uses were active.

During the same field investigation in November of 2016 the author recorded pedestrian and vehicle flows at specific points (gates) on Makarios Avenue and on streets connected to the avenue.

These gates are shown in figure 6. These were the same gates that were used in the field investigation during June 1994 (Kypris, 1994).

The measurements have been made on 24th of November 2016 (Thursday) in two series of measurements. The first series was made between 10:00 and 12:30 in the morning and the second series between 15:00 and 17:30 in the afternoon. During these time periods the commercial shops were open. The weather during the measurements was cloudy with the temperature between 16 – 20 degrees Celsius which favored the movement of pedestrians and bicycles. The measurement time of the movement at each gate lasted 5 minutes each time.

The results of movement measurements were divided into two main categories, pedestrian movement and vehicular movement (including motor vehicles, motor scooters and bicycles). The average number of movement flows for the two measurements made at each gate are shown in the Movement measurement table (Table 1) is then calculated. In this table the average number for pedestrian movement and vehicular movement was given and named total movement.

Movement measurements taken in November 2016 can be compared with movement measurements taken in June 1994 (Kypris, 1994). As in 2016, the 1994 measurements were made in the exact same gates, time periods and similar weather. These measurements are shown in the same table in parenthesis.

The table shows that total movement was reduced by 39% and pedestrian movement by

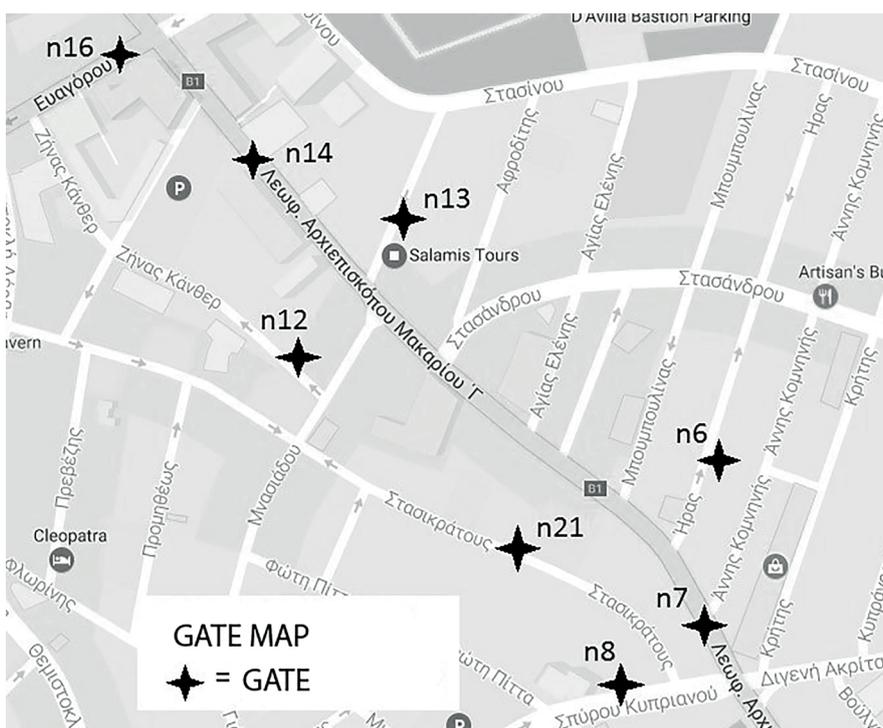


Figure 6.
Nicosia 2016
Makarios Avenue
Map with Gates
(Map from Google Maps)

Table 1. Nicosia, November 2016. Table of Movement flows in the urban centre. (In parenthesis are given the corresponding flows of June 1994 (Kypris,1994)). (With bold the percentage reduction of movement flows from 1994 to 2016).

	GATE	STREET	PEDESTRIAN	VEHICULAR	TOTAL MOVEMENT
1	n6	IRAS	2.5 (6)	4 (5)	6.5 (11)
2	n7	MAKARIOU EAST	19 (53.5)	105.5 (151)	124.5 (204.5)
3	n8	DIGENI AKRITA	6 (17)	172 (232)	178 (249)
4	n12	NTE TYRAS	5.5 (8.5)	13 (11)	18.5 (19.5)
5	n13	ARNALDAS	1 (11)	3 (9.5)	4 (20.5)
6	n14	MAKARIOU WEST	18.5 (91.5)	100.5 (114)	119 (205.5)
7	n16	EVAGOROU	8 (55)	156.5 (236)	164.5 (291)
8		ALL MAKARIOU MEAN	18.75 -74% (72.5)	103 -22% (132.5)	121.75 -41% (205)
9		ALL STREETS MEAN	8.64 -75% (34.64)	79.21 -27% (108.36)	87.86 -39% (143)

75% from 1994 to 2016. This shows that the movement and the presence of people in the urban centre has diminished significantly although the opposite should have happened due to the increase of Nicosia's population and the increase of private vehicles from 1994 to 2016.

The comparison of 1994 and 2016 helps us to understand the decline of the commercial life of Makarios Avenue the former commercial centre of Nicosia.

Syntactic analysis of the urban space (2016)

In this part the Axial model of Nicosia at 2016 was created showing global integration in figure 7.

Speaking with syntactic terms, the integration core in the south part of Nicosia has shifted and spread to the south. A super grid has arisen spreading the integration on main streets in a big area of the city. The compactness of the previous core seems to be lost.

An exception of this is the area in the old city around Ledra street. The opening of the checkpoints helped the area to become locally integrated and successful in recreational activities (recreational park-attractor). It was decided by the author not to include the crossings in the global model because there are restrictions of free everyday movement by the whole population of Nicosia. (Natural movement as Hillier describes does not apply). Also as stated by Charalampous about the syntactic analysis of space that "all destinations are considered equal" (Charalampous & Mavridou, 2012), which unfortunately cannot be applied due to the Socio-economic isolation between Greek Cypriot and Turkish Cypriot due to the current political situation and the different administration regimes of the city. These connections may work more like cross-border crossings in the sense that the airports and ports of a city can

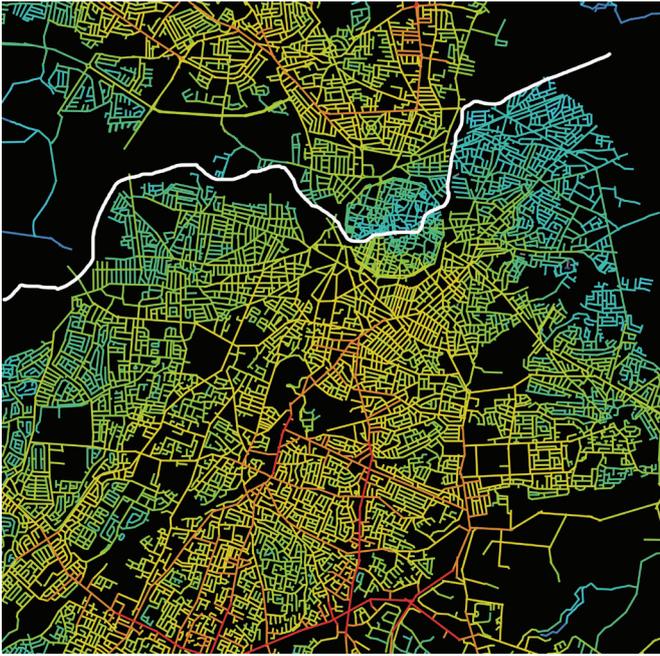


Figure 7.
Nicosia 2016
Axial Map Global Integration

operate. This is a kind of fault on the global model in Ledra area that in the future needs to be repaired on the axial models.

Correlation of global integration values vs total movement (2016).

Global integration values derived from the syntactic analysis of the urban fabric of the south part of the city were compared with movement values measured at the gates.

Scatergram of figure 8 shows the correlation between the two sets of values. The mean number of total movement (pedestrians and vehicles) seems to have a strong correlation to values of global integration showing again that global integration could be a reliable predictor for the patterns of movement ($R^2 = 0.731$)

Nicosia of 2019

The axial model of Nicosia in 2019 representing global integration is much more alike the corresponding model of 2016 which was given in figure 7.

During April of 2019 field observations concerning movement and land uses in Makarios avenue area (as was done in 2016) were repeated by the author. At the same time field observations about movement in commercially successful streets in the south areas of the south part were also carried out in order to be compared with the corresponding observations of Makarios Avenue area.

This was done to investigate the contemporary tendency of Nicosia's functional pattern.

Active and inactive ground floor uses of Makarios Avenue area from the junction with Evagorou Avenue up to the junction with Digeni Akrita Avenue were recorded by the author (as was done during 2016). It was observed that during April 2019 a percentage of 32% ground land uses were inactive. A percentage of 35% of commercial uses were inactive that to said 4% worse than 2016.

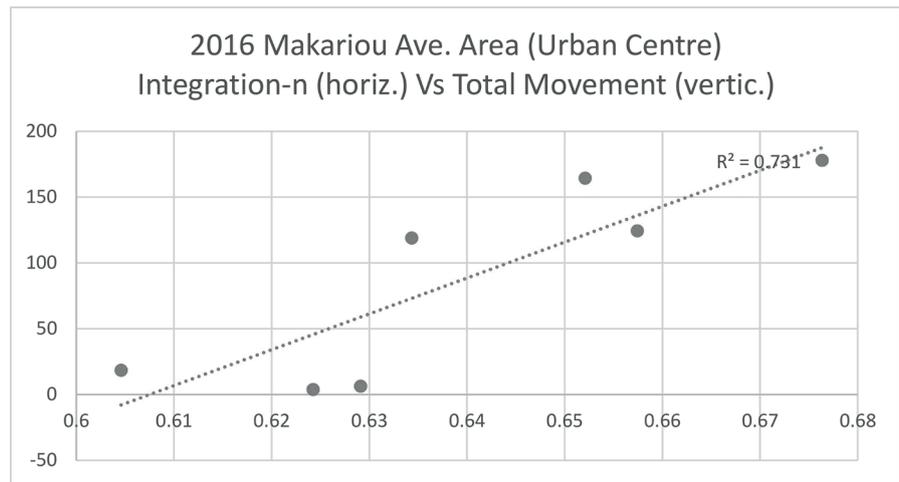


Figure 8. Nicosia 2016 Global Integration Vs Total Movement

Table 2. Nicosia, April 2019. Table of Movement flows. (In parenthesis are given the corresponding flows of November 2016). (With bold the percentage reduction of total movement mean flows in the urban centre streets from 2016 to 2019). (In bold parenthesis the comparison of Makarios Avenue mean (n7+n14) with south area streets mean (t1-t4)).

GATE	STREET	PEDESTRIAN	VEHICULAR	TOTAL MOVEMENT
n6	IRAS	4 (2.5)	9.5 (4)	13.5 (6.5)
2	n7 MAKARIOU EAST	7.5 (19)	100.5 (105.5)	108 (124.5)
3	n8 DIGENI AKRITA	5 (6)	99 (172)	104 (178)
4	n12 NTE TYRAS	6.5 (5.5)	0 (13)	6.5 (18.5)
5	n13 ARNALDAS	2.5 (1)	6.5 (3)	9 (4)
6	n14 MAKARIOU WEST	23 (18.5)	80 (100.5)	103 (119)
7	n16 EVAGOROU	15.5 (8)	125.5 (156.5)	141 (164.5)
8	ALL MAKARIOU AVE. MEAN (n7+n14)	15.25 (18.75)	90.25 (103)	105.5 (121.75)
9	ALL URBAN CENTRE STREETS MEAN (n6- n16)	9.14 (8.64)	60.14 (79.21)	69.28 -21% (87.86)
10	t1 TSERIOU	5	116.5	121.5
11	t2 IOSIF HATZIOSIF	5	128.5	133.5
12	t3 STAVROU (NEAR IOSIF HATZIOSIF)	26	121.5	147.5
13	t4 STAVROU (NEAR STAVRAETOU)	21.5	140.5	162
14	ALL SOUTH AREA STREETS MEAN (t1-t4)	14.4	126.8	141.1 (+34%)

In Makarios area 21% less vehicles and pedestrians were recorded in 2019 than in 2016 (Table 2).

In Stavrou ave. area and Tseriou ave. (Avenues in southern area of Nicosia) 34% more vehicles and pedestrians were recorded than Makarios Avenue area in the urban centre.

The reduction of the number of total movement and the increase of the number of inactive commercial uses from 2016 to 2019 reveals that the decline of the urban centre still continues.

3.6. Future Scenario of unified Nicosia

The positive correlation of the syntactic values with movement values “allows” further investigation of the Nicosia’s syntactic global structure of future scenarios since this investigation can predict to some significant extent patterns of movement (and land uses) in the urban space.

A particularly symbolic future scenario is the reunification of Nicosia. The axial model of global integration (Figure 9) was created from contemporary maps of Nicosia. This model was created on the condition that there will be free movement, habitation and employment opportunities in the whole city

Observing the axial model of the unified Nicosia (Figure 9) seems that the syntactic urban center of the city will move again around Makarios Avenue area. A reverse procedure seems that will start bringing again the compactness of the urban centre of eighties and nineties. At the same time most of the streets that have a strong dynamic (high values of global integration) in the current system of Southern Nicosia remain strong in the new reunified system. The prediction of the new dynamics of the urban space gives reasonable hope that commercial and other uses will return to Makarios Avenue.

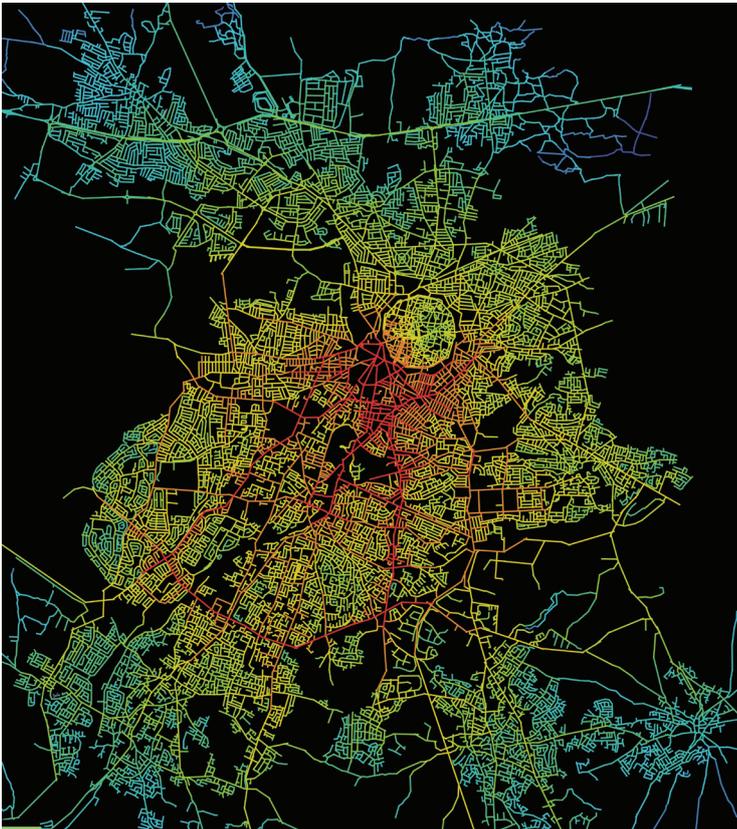


Figure 9.
Unified Nicosia. Axial Map Global Integration.

3.7. Comparing the axial models of 1994, 2016-19, Unified Nicosia.

The comparison of the three axial models of 1994, 2016-19 and Unified Nicosia (figures 5, 7 and 9) reveals the shifting of the syntactic center (the most integrated area).

In 1994 the urban center coincides with the most globally integrated area of the city. This can explain the high movement values and the commercial success that had for years.

In 2019 some axes in the south are displayed with greater integration. This may explain the pressure on the urban centre and the commercial competition from scattered axes (e.g. Stavros Avenue).

In the spatial scenario of the reunified Nicosia, the urban center “rediscovers” its original position in the most globally integrated area, claiming again greater traffic densities, pedestrian movement and commercial land uses. At the same time axes of movement that act today as local centres seem to be strongly integrated, giving unified Nicosia a possible scenario with a local centres around a metropolitan centre.

4. Discussion/Conclusion

The paper approached the issue of accessibility in the urban center of the south part of Nicosia and its connection with the structure of the entire spatial system.

The research questions that the paper attempted to answer were the following:

- If a shift of the urban centre in the south part of Nicosia really exists.
- What role could the changes of the spatial structure of the city be played in the accessibility to the urban centre and the commercial decline of it?
- How much will a possible reunification of the entire city affect the accessibility of the urban centre?

The field research has shown that the former urban centre of the eighties and nineties faces a state of decline in terms of movement and commercial uses.

There is evidence that the functional pattern of Nicosia has followed the spatial transformations in all stages of the contemporary history of Nicosia. The urban centre is shifting and following the configurational changes of the urban space.

The imposition of the division line in 1963 disintegrated and degenerated the commercial streets inside the old city. This caused the immediate shift of the urban centre to the syntactically new core. The sudden growth of south Nicosia during the last decades pushed the syntactic core towards the south spreading out in a form of a super grid. It was observed that Makarios Avenue area, the former centre of the city life has become more segregated in the axial models and in real life in terms of movement and commercial uses. Scattered axes in the south area of the city are competing the urban centre being more successful than Makarios Avenue area. Nicosia, today, does not have a compact and homogenous urban centre.

From the syntactic analysis it seems that in the case of reunification the new configurational core will shift again just outside the walls helping Makarios Avenue area and part of the old city to be strongly integrated. It is possible that the functional pattern will follow again the spatial configuration giving to Nicosia Jacobs's, “strong and inclusive central heart” (Jacobs, 1961).

Future research about Nicosia's urban space could include more data about the functional

pattern of the south and the north part of the city. At the same time axial models should be constructed that represent the real impact that the crossings have on the global urban system.

The findings of this paper could help to inform urban policies and priorities. Shifts in urban policies must be made to stop the disintegration of the urban centre. The Municipality of Nicosia has issued the “Area Plan of the centre of Nicosia” in April 2016 which includes many policies and priorities to regenerate the urban centre (Municipality of Nicosia, 2016). Although the policies cover a wide range of urban parameters in the urban centre in a systematic way, they do not deal with the expansion in the perimeter and the urban sprawl of the south areas of the Town. This paper discussed the impact that the superlocal has on the local area of the urban centre. The continuous expansion of the south part of the Nicosia is affecting negatively the urban centre and urban policies must deal with the perimeter and include measures to stop this phenomenon, until one day does happen the possible spatial solution which is the reunification of Nicosia.

References

- Attalides M. (1981), *Social Change and Urbanization in Cyprus. A study of Nicosia*, Social Research Centre, Nicosia.
- Charalampous N., Mavridou M. (2012), *Space Syntax: Spatial Integration Accessibility and Angular Segment Analysis by Metric Distance (ASAMeD)*, in Hull A., Silva C., Bertolini (Eds.), *Accessibility Instruments for Planning Practice*, COST Office, pp. 57-62.
- Hillier B. (1996), *Space is the machine*, Cambridge University Press, Cambridge.
- Hillier B., Hanson J. (1984), *The social logic of space*, Cambridge University Press, Cambridge.
- Hillier B., Penn A., Hanson J., Grajewski T., Xu J. (1993), *Natural movement: or, configuration and attraction in urban pedestrian movement*, in *Environment and Planning B: planning and design 20/1*, SAGE Publications, pp. 29-66.
- Jacobs J. (1961), *The Death and Life of Great American Cities*, Random House, New York.
- Kwan M. (1998), *Space-Time and Integral Measures of Individual Accessibility: A Comparative Analysis Using a Point-based Framework*, in *Geographical Analysis*, 30(4), pp. 191-216
- Keshishian K. (1990), *Nicosia, Capital of Cyprus, Then and Now*, The mouflon book and art centre, Nicosia.
- Kypris K. (1994), *Nicosia, Spatial and Functional Transformations*, Unpublished MSc Thesis, Bartlett School of Architecture and planning, UCL, London.
- Legeby A. (2010), *Urban Segregation and Urban Form. From residential segregation to segregation in public space*, Unpublished PhD, KTH Architecture and the Build Environment, Stockholm, Sweden.
- Levinson D.M. (1998), *Accessibility and the journey to work*, in *Journal of Transport Geography*, 6 (1), pp. 11-21.
- Penn A., Hillier B., Banister D., Xu J. (1998), *Configurational Modelling of Urban Movement Networks*, in *Environment and Planning B: planning and design 25/1*, SAGE Publications, pp. 59-84.
- Stonor T. (2011), *Understanding Movement: Theory, technology & practice*, Space Syntax. Presentation in NCPC, London.
- Department of Town Planning and Housing, Ministry of Interior (2018), *Local Plan of Nicosia*, Nicosia.
- Municipality of Nicosia (2016), *Area plan of the centre of Nicosia*, Nicosia.
- Planning and Transport Section, Public Works Department (1987), *Nicosia Transportation Study*, Nicosia.