AN INVESTIGATION OF URBAN IMAGE AND IDENTITY
Findings from Adana

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ABSTRACT

This paper investigates the impact of fast urbanization to urban imagery, focusing on residents' perception. Following the works of Lynch, the study determines the changes in the perception of residents in terms of urban image elements using the questionnaires which are conducted in the city of Adana within the time span of twelve years. The study discusses the attributes of the buildings highlighted by residents as representatives of urban imagery and develops suggestions to improve and sustain urban environmental quality. The results show high levels of variation in terms of image elements and how the urban form is perceived by the residents. The study argues the results in respect to principles for creating an imageable city and guidelines for environmental management and sustainability.

Keywords: Urban, image, Adana, *imageability*

KENT İMAJI VE KİMLİĞİ ÜZERİNE BİR ARAŞTIRMA
Adana Bulguları

ÖZET

Bu makale kent ve mimari çalışmaları üzerine farklı bir yorum getirmekte ve hızlı kentleşme sonucu gerçekleşen fiziksel değişimin, kentin kimlik ve imajına olan etkisini, kent bütününden tek yapı ölçeğine kadar inen geniş bir bakış açısıyla ele almaktadır. Çalışmada Lynch tarafından geliştirilen "imageability" (okunabilirlik) kavramı esas alınarak 20. Yüzyılda tek merkezli, ışınsal bir gelişim gösteren Adana kentinde yapılan alan çalışmasıyla, kentlilerin on iki yıllık bir sure içerisinde kentsel imaj elemanları hakkındaki fikirlerinin değişip değişmediği araştırılmıştır. Kent bütününde gerçekleştirilen fiziksel çözümleme ile kentlilerle yapılan anketlerin bulguları karşılaştırılarak özellikle kentlinin imaj algısında nasıl bir değişim olduğu sorgulanmış, kentte ne tür yapıların imaj elemanı olarak öne çıktığı belirlenerek çevresel kalitenin iyileştirilebilmesi için öneriler geliştirilmiştir.

Anahtar Kelimeler: Kentsel, imaj, Adana, okunabilirlik

INTRODUCTION

Urban environmental quality is a complex topic which includes subjective values and attitudes that vary according to social groups and individuals. Physical, social and psychological dimensions of the impacts of uncontrolled and fast urban change to urban identity and image have been studied by various researchers extensively. The initial studies, starting with Lynch (1960) focused on the perceptions of the residents', architectural images and the analysis of physical structure of the urban environment. The more recent studies however addressed sustainability and started discussing urban identity and image in relation to the social components[1].
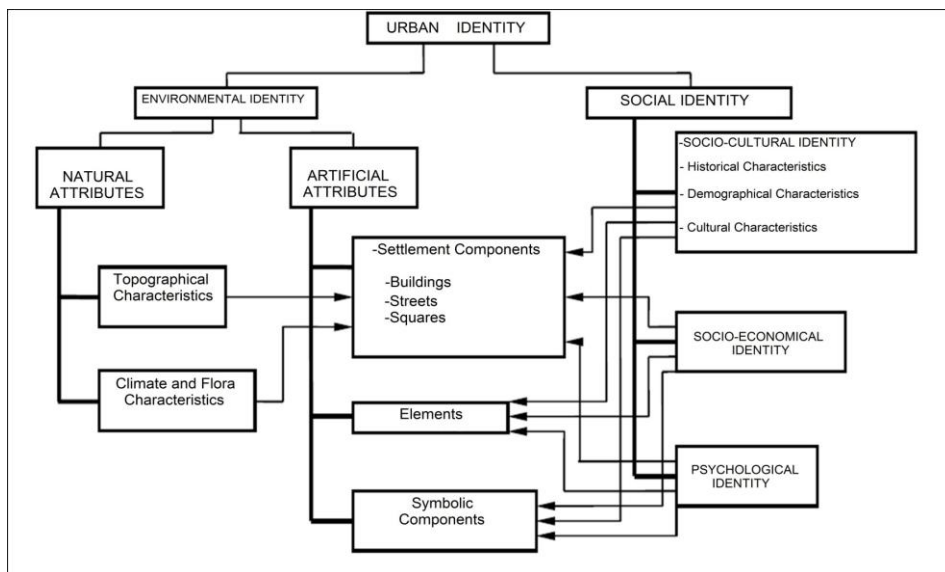

Figure 1: Formation of urban identity (Örer, 1993, 46)

The concept of "identity" is defined as the *qualities of a person or group which make them different from others*[2]. Urban identity, on the other hand, is defined with natural and artificial urban elements and socio-cultural characteristics of urban environments (Ilgın, 1997). It is argued that urban identity is composed of "social" (socio-cultural, socio-economic and psychological) and "environmental" (natural and artificial) components (Figure 1). The artificial attributes that define environmental quality are discussed in terms of settlement, elements and symbols, which are shaped according to political, economical, social and cultural values. The physical characteristics of urban environments continuously change according to values, which is inevitable, however the scale, conditions and effects of change are required to be controlled in order to protect and sustain urban identity.

Identity is described as a phenomenon that includes cohesion, identification and satisfaction, among other psychological and social processes (Pol, 2002). It is argued to

be a necessary condition for sustainability (Pol et. al., 2002), nevertheless it may vary according to social conditions and urban properties. As a result of rapid urbanisation, cities have grown and therefore, urban sustainability has been even more important, but difficult to achieve. Even the slightest changes of the parameters constituting urban identity might create different patterns and identities in various parts of the cities. Therefore, it is necessary to define identity and its components to decide which urban qualities are to be sustained and analyze changes in the urban environment in order to sustain urban identity.

This study tries to define urban identity in the case of the city of Adana and investigates its components through Lynch's *imageability* analysis and questionnaires conducted with the residents. The core aim of the study is to examine sustainable qualities of urban image and identity and develop suggestions to improve urban environmental quality.

METHOD
A multistage methodology was developed for the study. The first stage involves the *imageability* analysis for the whole of the city of Adana, following the five elements suggested by Lynch. While the *imageability* analysis enables to identify artificial attributes in an urban environment, it has limitations for this study in terms of determining the changing perceptions of the residents, and therefore questionnaires were used to support physical analysis in the second stage. The results of the questionnaires undertaken in 1996 (Oral (Saban), 1996) were compared with the results of a recent questionnaire conducted in 2008. The questions were organized in line with the previous ones used for similar studies and citizens who lived in the city for a long time were selected as respondents in order to examine the ongoing perceptions of the citizens.

THE CITY OF ADANA
Adana is an ancient Cilician city situated on the River Seyhan (ancient Sarus), thirty miles from the Mediterranean Sea, which was a major town during Roman times and the Ottoman Period. Because of being located at the centre of a fertile agricultural land (Çukurova Plain) and on trade routes, the city has accommodated several civilizations. The actual development of the city of Adana started with the rehabilitation of swamps surrounding the city into agricultural land in the second half of the nineteenth century (Toksöz and Yalçın, 1999), and selection of the Çukurova Plain for cotton production by the British Government due to the civil war in America (Great Britain Parliament, 1866). Following the construction of barriers to control flow of the River Seyhan in 1905, the establishment of a school for agriculture and completion of the İstanbul-Baghdad railway line which passed along the city (Quataert, 2008), Adana became the social and financial centre of the Region in the first years of the 20th century. The population of the city has risen accordingly, particularly in the second half of the 20th century due to the development of agricultural industry.

The urban development was initially controlled and directed according to the first development plan of the city, prepared by Hermann Jansen in 1940[3]. However the population of the city has risen uncontrollably as a result of internal migration since

1980s, and therefore new residential areas around the historic core were established in order to accommodate newcomers. Despite the growth of the city, a unitary development plan was not prepared, commercial centre was retained and no additional commercial or cultural centres were planned to serve the population (except for shopping malls in the outer skirts of the city), which resulted in the city to grow in a radial form. Today the city displays areas of differing identities; however, the majority of the newly established areas present an ordinary character consisting of high rise apartment blocks. In brief, the city has struggled to sustain its historic character against fast and uncontrolled urbanization.

THE *IMAGEABILITY* ANALYSIS OF THE CITY OF ADANA

The urban culture in Adana and urban identity which reflects the culture has been in a vast transitional process since 1950s, depending on the urban expansion and complex relationships between the society and urban environment. The first step in identifying environmental identity during this process is arguably the physical analysis of the city and the definition of the urban imagery elements. In order to achieve this first step, an analysis following Lynch's *imageability* theory is adapted for this study. Lynch defined *imageability* as "*the quality in a physical object which gives it a high probability of evoking a strong image in any given observer*" (Lynch, 1960, p. 9). An *imageable* city is one whose landmarks, centres, districts and routes are differentiated yet well-connected, forming a larger unit we can picture mentally, where we are well-oriented and can move about confidently without fear of becoming lost.

The visual quality of the urban environment, in Lynch's theory, relates to the physical elements of the environment and the mental image of its users. Users perceive an urban environment in its fragmentation into elements and patterns. All perceptions are different and special, and are related to users' knowledge, experience or familiarity with an urban site. Almost every sense is in action all of the time. The visual qualities of some elements and features are used as generalities in the process of navigating in the urban environment. Lynch also analyzed the effects of physical, perceptible objects, and from this the five elements of the urban environment were derived. The five elements derived from the analysis of urban objects in Lynch's theory are:

− *paths* - are the channels along which the observer customarily, occasionally, or potentially moves, they may be streets, walkways, transit lines, canals, railroads,

− *edges* - are the linear elements not used or considered as paths by the observe, they are the boundaries between two paths, linear breaks in continuity: shores, railroad cuts, edges of development, and walls,

− *districts* - are the medium-to-large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters 'inside of', and which are recognizable as having some common, identifying characters,

− *nodes* - are points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling, they may be primarily

junctions, places of a break in transportation, a crossing or convergence of paths, moments of shift from one structure to another, and

− *landmarks* - are another type of point-reference, but in this case the observer does not enter within them, they are external, and they are usually a rather simply defined physical object: building, sign, store, or mountain; some landmarks are distant ones, typically seen from many angles and distances, over the tops of smaller elements, and used as radial references.

The results of the *imageability* analysis of the city of Adana indicate that the River Seyhan, being a natural edge divides the city into two parts, Seyhan in west and Yüreğir in east. Apart from this natural edge, other edges in the city such as the intercity highway and irrigation canals are located in east-west direction (Figure 2A). Although one might argue that regions divided by edges display internal identities separate from each other, the results show that edges did not make a contribution in establishing such urban identities. Rather an ill-balanced development in favour of the western flank of the river is observed.

The oldest settlement in Adana has been the Tepebağ Tumulus and its outskirts in the western flank of the river. The eastern flank, on the other hand, was a fertile plain which was hence not settled until the mid 20th century. While the eastern flank displays a homogeneous physical structure, the western flank can be divided into four districts having differing urban identities (Figure 2B). The findings show that edges have also been paths in the city which connect districts with each other (Figure 2C). This might be as a result of the roads constructed on both sides of the irrigation canals and the connection of the intercity highway with the city traffic through eight junctions two years ago. Despite the continuity of the paths in east-west direction, the newly developed northern parts of the city are not connected strongly with paths established in north-east direction, which arguably brings traffic congestion in certain routes and possibly continuity of urban identity in east-west direction.

The concentration of nodes in the city centre and the short distances between them (Figure 2D) arguably suggest the differing characteristics of the districts and that the historical city centre is still the natural centre of the city. This idea is supported with the concentration of the landmarks in the same areas (Figure 2E), which also is a result of the radial development of the city keeping the historical commercial centre in the middle.
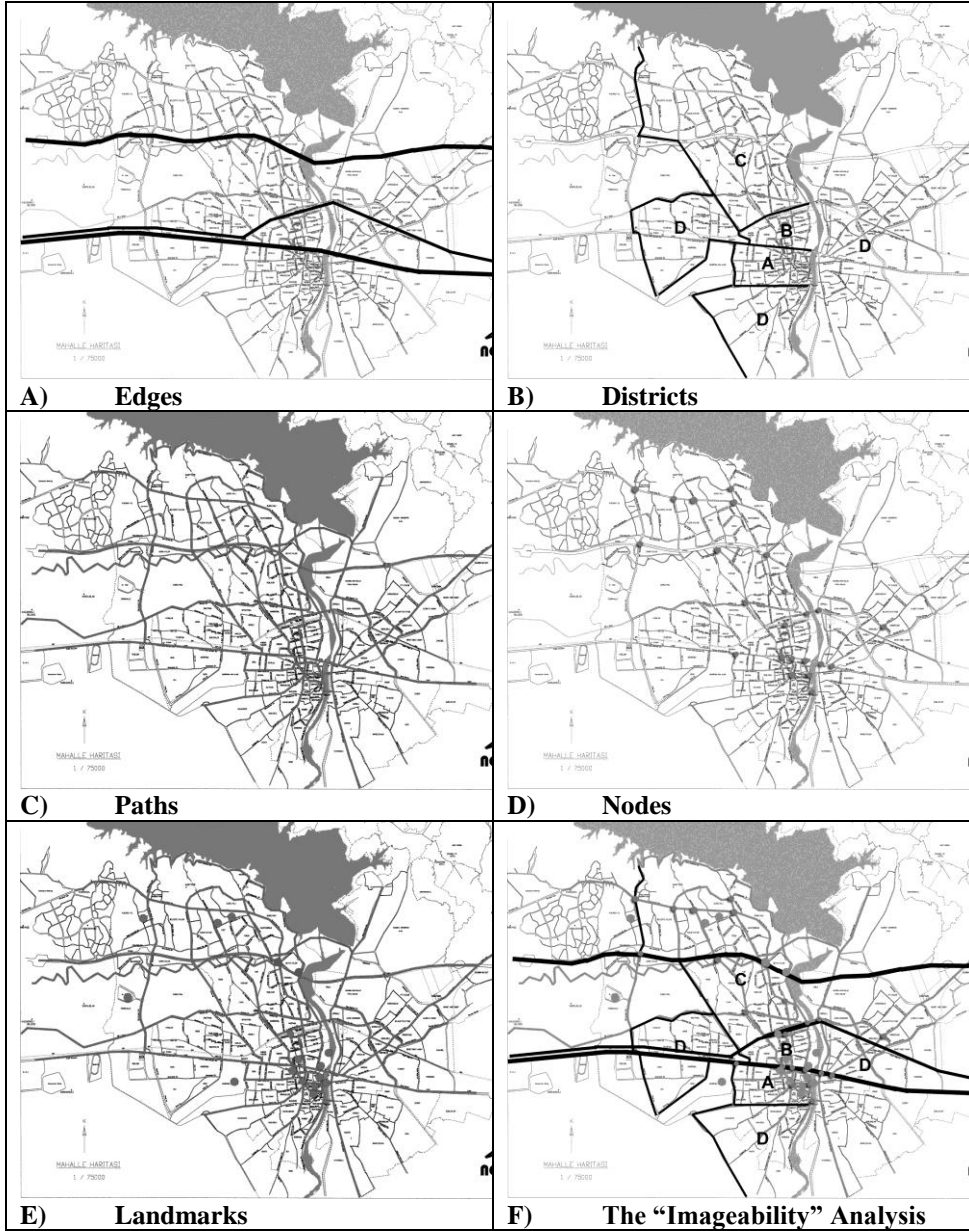
Figure 2: The "Imageability" Analysis Of The City Of Adana

As a result of the findings of the *imageability* analysis, four districts displaying different urban patterns and identities can be defined in Adana (Figure 3). While the historical city centre embraces the traditional urban life of the society where culture is reflected in

urban space, the first modern urban development according to the plan prepared by Hermann Jansen urbanized the area between the historical city centre and the new railway station. This area was composed of houses for differing social backgrounds; some civic buildings such as the Public House (*Halkevi*) and recreational areas including a large park and a stadium. Although the layout of streets survived until today, most of the residential buildings have been destroyed and converted into high-rise apartment blocks.

A Historical City Centre	B Area Developed by Jansen	C The New City	D Slum Areas
Landmarks			
Historic Houses	The Town Hall	Dream Park	A Slum House
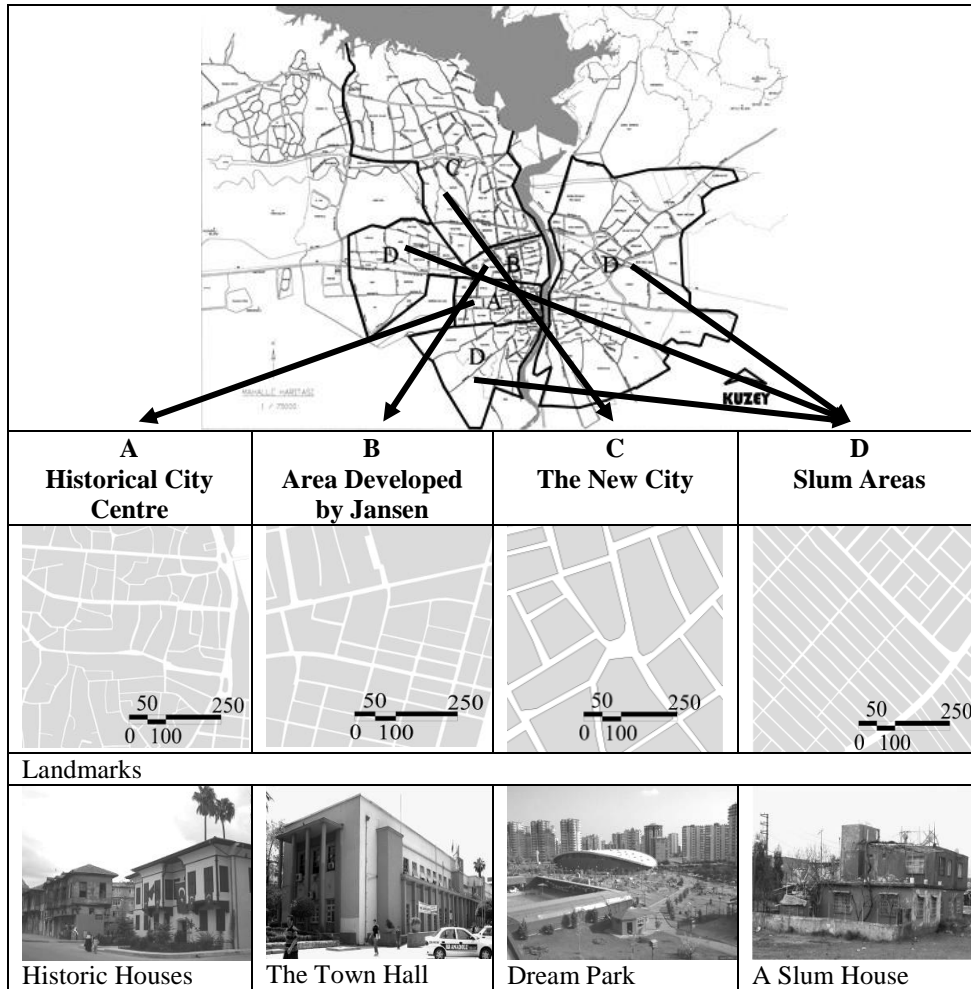
Figure 3: Districts Displaying Different Urban Patterns And Identities In Adana

The new city was established for a population of 1 million people and was composed of high-rise apartment blocks with flats having an area of approximately 150 m^2. While ground floors of those apartments were used as shops, only one park and a cinema

complex were designed in the area. The outskirts of this area, on the other hand, were developed to contain villas within walls for wealthy residents, which have high security measures.

The largest of all the districts in the city of Adana is the slum areas surrounding the eastern, southern and western parts of the city. These areas have been developed since 1950s due to the internal migration from rural areas caused by the establishment of industrial enterprises in and around Adana, and the financial and social constraints in the eastern parts of the country. The initial migrants, aiming to obtain a shelter for themselves and their family constructed formless houses against the law on the public domain, which were later legalized by the politicians. The slum areas, because of the inadequate implementation of the law have therefore been outspread around the city uncontrollably and constituted the largest areas.

In summary, the city of Adana displays areas of differing characteristics which reflect the cultural and socio-economic transformations. The historical city centre and the area developed according to the Jansen plan are clearly the areas with high environmental quality and hence where urban identity was reflected. While these areas are sustained until today with their urban form and layout, most of the buildings have been replaced with new and higher ones, which might damage the perception of the residents in terms of urban identity and image elements.

THE FINDINGS OF THE QUESTIONNAIRE

The second stage of investigation focuses directly on the residents' perception and examines how the identity of the city is described and whether the image of the city has changed and on what grounds this change has occurred. The questionnaires were prepared and undertaken in the city of Adana, in order to examine the perception of residents in terms of urban image elements within the time span of twelve years. The first question was asked in the 2008 questionnaire only, while the rest were asked both in 1996 and 2008. Five questions in total were asked to the residents, which are as follows:

1.   What is the identity of the city of Adana?
2.   Which three buildings do you like most in the city?
3.   Which building recurs first in your mind about Adana?
4.   How do you perceive the form of historic city centre?
5.   How do you perceive the form of the new city?

105 questionnaires were collected in 1996, while in 2008 the number of the questionnaires answered was 133. It was particularly paid attention that the respondents were residents of the city for a long time and that the ratios in terms of sex and education level were balanced. While in 1996 51, 4 % of the respondents were male and 56, 2 % of them were college graduates, in 2008 51, 9 % of the respondents were male and 72, 9% of them were college graduates.

Urban Identity

69, 2 % of the respondents in 2008 stated that the city of Adana represented an urban identity, however 33, 1 % could not define what the identity was. The respondents

highlighted the fact that the city displayed a "*rural-urban*" identity, which brought up the impacts of fast and uncontrolled urbanization. Adana was well-known with cotton production for decades; however as corn and wheat production ha**s** increased in the cultivated areas in the last decades, cotton was not considered as the major element of identity by the residents. Only the 2 % of the respondents mentioned cotton in a nostalgic way. Other components of identity that rose as a result of the questionnaire were "*kebab*" and "*citrus trees*", which show that residents' perception of identity can not only be described with physical components, but also with social and cultural attributes.

1996		2008	
1. Hotel Seyhan (N: 10 9,8 %)		**1**. Hotel HiltonSA (N: 15 11,5 %)	
2. Galleria (N: 7 6,9 %)		**2.** The Central Mosque (N: 13 9,8 %)	
3. The Big Clock Tower (N: 3 3,2 %)		**3**. The Cultural House of the Mayor (N:9 6,8 %)	

Figure 4: The Most Favourite Three Buildings Highlighted In The Questionnaires

The analysis of the questionnaires undertaken in 1996 and repeated in 2008 revealed that favourite buildings in the city were the hotels, which are easily recognizable because of their location and size (Figure 4). The second favourite building in the list of 2008 is the Central Mosque, which is also easily recognizable because of its location and size. In fact all the buildings highlighted by residents were the buildings that were high, large in scale or standing on their own in a large plot. The analysis revealed that buildings of reasonable height and size are liked most by residents despite a consideration for their aesthetic quality or cultural background.

Urban Image
The cultural buildings were highlighted as representatives of urban image both in 1996 and in 2008. The reason behind this might be the rising consciousness for cultural heritage, the importance given to historic buildings or the location of these buildings (mostly on major arterial roads). Nevertheless, the selection of the mosque as the second most favourite building, which is an imitation of Ottoman mosques arguably overrules the possible argument supporting the consciousness level of the residents. The city was hit by an earthquake in 1998 and several buildings have been restored since then. This might have had an effect on the perception of residents' as local media informed the residents about historic buildings and their restoration since the earthquake.

The analysis showed that no differences happened in 12 years in relation to the first building that recurs in residents' mind about Adana (Figure 5). The ancient Roman Bridge which respondents mentioned most is the oldest bridge in use in the world; however this information is not shared by the majority of the residents. Hence, the reason behind this case might be the fact that the bridge is a landmark, the major urban element that people use in giving directions to each other.

The analysis revealed the decrease in usage of public recreational areas, which is in line with the change of life style in the urban environment. While going for a picnic to the coast of the Seyhan Dam Lake was a major social activity for the people in the past, today people prefer shopping malls built in the outskirts of the city, trendy cafes and cinemas. As the commercial centre of the city was retained, two buildings which are also the names given to the space (The Small Clock Square and the Big Clock Tower) were highlighted both in 1996 and 2008. In 2008 the historic railway station was added to the list of buildings recurred in residents' mind, which might be a result of the increasing number of people who commute to the neighbouring city Mersin for work, if not the appreciation for architectural heritage.

In conclusion, the highlighted buildings by residents both in 1996 and 2008 mainly consist of historically, socially or culturally recognizable buildings. These findings support the views of Porteous (1971) who claim that people perceive their environments through integrating the five urban elements defined by Lynch in their minds, rather than considering each of them separately. The findings also showed that the buildings in the historical city centre are more likely to be perceived by the residents, which support the results of earlier findings such as Ayvalıoğlu, (1987) and Dülger Türkoğlu (2002), and contrast strongly with the findings of Banerjee and Baer (1987) arguing that edges and paths are highly perceived by the residents. It can be argued that the buildings recurring in residents' mind constitute clues for urban identity. The Roman Bridge, therefore, can be considered as the major component of identity of the city of Adana and a starting point for reclamation of the city's identity.

1996		2008	
1. Roman Bridge (N: 25 23, 8 %)		**1.** Roman Bridge (N: 34 25, 6 %)	
2. The Coast of the Lake (N: 17 16, 2 %)		**2.** Railway Station (N: 12 9, 0 %)	
3. The Small Clock Square (N: 12 11, 4 %)		**3.** The Big Clock Tower (N: 12 9, 0 %)	

Figure 5: The First Three Buildings Or Areas Recurred In Residents' Mind About Adana

The Urban Form

The perception of residents in relation to urban form was examined using figures which symbolize urban schemas. Four symbols were used: a schema representing the neighbourhood pattern of the traditional Anatolian town (A), a figure symbolizing the city walls (B), a figure representing the major arterial road in the city centre (C) and finally a figure representing the organic street pattern (D) (Figure 6). Respondents were asked to identify which figure represents the historical city centre. The analysis revealed that the residents have been sharing the same view despite the time span of 12 years, in terms of urban form of the historical city centre, which was represented with the organic street pattern.
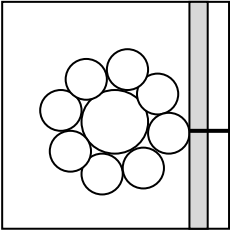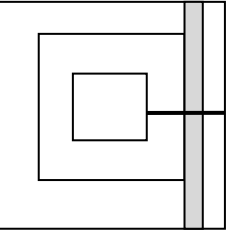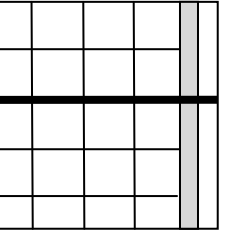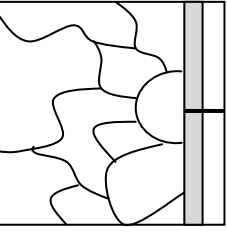
	A Traditional Anatolian Town	B City Walls	C Abidinpaşa Avenue	D Organic Street Pattern
1996	N: 20 / 19, 0 %	N: 6 / 5, 7 %	N: 8 / 7, 6 %	N: 70 / 66, 7 %
2008	N: 28-9 / 21, 8 %	N: 8 / 6, 0 %	N: 7 / 5, 3 %	N: 88 / 66, 2 %

Figure 6: How The Urban Form Of The Historical City Centre Is Perceived
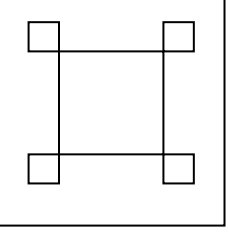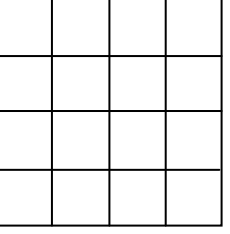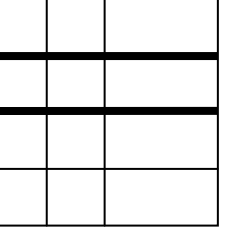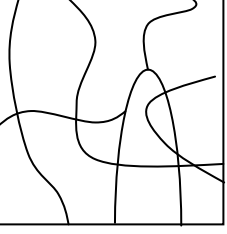
	A City Centre and Suburbs	B Monotonous Street Pattern	C Dominant Avenues	D Spontaneous Street Pattern
1996	N: 10 / 9, 5 %	N: 43 / 41, 0 %	N: 15 / 14, 3 %	N: 34 / 32, 4 %
2008	N: 12 / 9, 0 %	N: 13 / 9, 8 %	N: 25 / 18, 8 %	N: 82 / 61, 7 %

Figure 7: How The Urban Form Of The Newly Established Residential Areas Are Perceived

Using the same method, the urban form of the new city was examined. Similarly, four figures were shown to respondents and it was asked to choose the most suitable figure that represents the new city (Figure 7). The first figure was a symbol of city centre and suburbs (A), second was representing the monotonous street pattern (B), third was a symbol of dominant avenues (C) and finally fourth was a symbol of spontaneous street pattern (D). The results revealed that peoples' views on the urban form of the newly established residential areas have changed considerably. While in 1996 people believed that new areas would be in a monotonous street pattern, in 2008 they realized that the areas reflected a spontaneous street pattern displaying that newly established areas are not legible and lack landmarks which would enable people to identify their location in the area.

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This investigation concerning the urban form show that the residents have a certain and clear idea about the street pattern and general composition of the areas. Consequently, it can be argued that residents should be included in the design process as their view on urban form is directly related to legibility.

CONCLUSION
Lynch defines four elements that constitute visual quality in a city: legibility, imageability, image and identity. Furthermore, five image elements are also defined by Lynch for physical analysis of urban areas. Nevertheless, how residents' perceive components of urban imagery is still a relevant area of investigation. This study addressed this issue and attempted to examine the perception of residents' concerning the identity and image components of the city, through the case of Adana.

The findings revealed that the recently developed residential areas of the city, which constitute more than five times bigger an area than the historical city centre, were not paid sufficient attention by the residents and that no buildings in those areas were highlighted as favourite buildings. This result is harmonious with the statement "*cities which accommodate homogeneous societies and show a slow growth produce more legible and perceptible urban environments in a long period of time*" (Southworth, 1985, p. 52). Consequently, it can be argued that the historical city centres are more likely to present an urban identity compared to the residential areas created in a short period of time.

The following suggestions can be made as a result of the analysis:
• The historic and socio-cultural structure of a space must be considered in creating urban imagery, in order to prevent artificial urban elements that might harm unique urban qualities,
• The urban imagery can be improved and sustained by way of establishing new landmarks and view points,
• Legibility can be achieved by way of visually connecting landmarks, which is arguably a feasible method,
• The residents' perception can be directed through city tours, photography courses and projects that would enable people to perceive the city from different points,
• An educational campaign can be undertaken aiming to increase the level of consciousness of residents'.

These suggestions are in line with the principles developed by Southworth (1985) to achieve an imageable city. Southworth also emphasizes the significance of image making based on the history of a place, which was also in line with the findings of this study. As the newly developed residential areas are poor in terms of history, legibility and environmental quality, a unitary approach should be developed for those areas using urban design principles.

In terms of environmental management and sustainability, the findings clearly showed that the main problem in achieving and sustaining high quality urban environments is

the lack of information and consciousness about the history and identity of the city and the urban environment. As Pol and Castrechini (2002, p. 159) declared, *the slower speed and more traumatizing nature of social change with respect to urban change should be taken into consideration* in this respect, and long-term management policies should be introduced in order to increase the level of knowledge and consciousness of the residents to achieve sustainability.

In conclusion, residents perceive the environment they live in mainly using their basic senses; however social, cultural and personal attitudes also have an important effect on their perception. The quality of the urban environment can be improved by way of considering every aspect which shape physical form of the cities and residents' views can contribute to the decision-making process. The views of the residents, on the other hand, can change in the course of time and it is clearly necessary to manage and direct them by way of increasing the level of *imageability*.

NOTES
[1]   See for example E. Pol "The Theoretical Background of the City-Identity-Sustainability Network", *Environment and Behaviour*, Vol: 34, No: 1, 2002, pp. 8-25; M. A. Aguilar "Identity and Daily Space in Two Municipalities in Mexico City", *Environment and Behaviour*, Vol: 34, No: 1, 2002, pp. 111-121; D. Francescato, and W. Mebane, "How Citizens View Two Great Cities: Milan and Rome", R.M. Downs and D. Stea (ed.) *İmage and Environment*, USA: Aldine Transaction, 2005, pp. 131-148.
[2]   Cambridge Advanced Learner's Dictionary
[3]   Prof. Hermann Jansen was entitled to prepare the master plan of Ankara in 1928 and during the period of preparing detailed plans for various parts of Ankara, he was appointed to prepare plans for seven other Turkish cities, of which four (Mersin, Tarsus, Adana and Ceyhan) were located in the Çukurova Region. The local government of Adana appointed him in 1932 to prepare the first development plan of the city and he submitted a plan in 1937 and the final development plan in 1940.

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