

# Social rivalries and their impact in the form of road networks and public space. Historical research.

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### Abstract

Modern cities are characterized of social and economic inequalities. The available space of the city streets is unequally distributed to the different users. Car users have managed to move in disproportionately more public space than pedestrians and everyday transportation is full of hostility to vulnerable users. Social rivalries in the history of the western European city have contributed not only to the form of today's public space and road networks but to the users' behaviour as well. Studying the past and analyzing the present are essential to establish a new perception for vulnerable and powerful road users in the sustainable city of tomorrow.

Keywords: urban mobility; political power; pedestrians; vulnerable road users; public space

## Résumé

Les villes modernes sont représentatives des inégalités sociales et économiques. L'espace disponible dans les rues de la ville est inégalement réparti entre les différents utilisateurs. Les automobilistes ont réussi à se déplacer en utilisant une part de l'espace public disproportionnée par rapport à l'espace dévolu aux piétons et le transport quotidien est plein d'hostilité envers les usagers vulnérables. Les rivalités sociales dans l'histoire de la ville d'Europe occidentale ont contribué non seulement à la forme de l'espace public et des réseaux routiers d'aujourd'hui, mais aussi au comportement des utilisateurs. Etudier le passé et analyser le présent sont essentiels pour établir une nouvelle perception pour les usagers de la route vulnérables et puissants dans la ville durable de demain.

Mots-clé: mobilité urbaine; pouvoir politique; piétons; usagers vulnérables; espace public

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### 1. Introduction

For the first time ever, the majority of the world's population lives in a city, and this proportion continues to grow. According to World Health Organisation (WHO) data, by 2030, 6 out of every 10 people will live in a city, and by 2050, this proportion will increase to 7 out of 10 people.

The fate of the planet is therefore closely linked to the choices cities make in respect to issues such as climate change and sustainability. A city can be described by a number of features (size, landscape, landmarks etc.). One of these features is its public/free space form and the way the various users occupy it. A city public space includes places of recreation and leisure (squares, playgrounds, urban parks etc.) as well as the space meant for transportation (road network). The combination of the public space form and function is unique to each city according to the history and the special socio-economic conditions across time. Public space significance lies also in the fact that it is the area where social relations are established and urban consciousness is formed. Both are essential to promote responsible behaviors towards the environment, the economy and society (Vlastos & Milakis, 2006).

Modern cities are large, densely populated and the means of transportation are mainly motorized (private or public). Cars and pedestrians, powerful and vulnerable users struggle for public space. Ever since antiquity, socioeconomic and political rivalries have been reflected on the public space form and function. A certain group's power may be described as its ability to pursuit and achieve certain goals, such as special privileges in respect to other groups. The way the public space is planned, used and organized may reflect the power level of a certain group and the intensity level of rivalries. The image of the city captures the domination of different groups through history and their manifestation on the urban scape. According to Holloway & Hubbard (2001), human relation to space cannot be studied without analyzing power relations within society.

This paper presents the results of research in the history of western-European cities, their public space, urban planning theories and interventions as well as on the ways of transportation in relation to the special social, political and economic conditions of each era. It is being established that road rivalries and social inequalities are reflected across time not only on space and the way rich and poor are located but in everyday transportation as well.

## 2. Social inequalities in public space and in transportation

Public space is shared by different user groups, which is part of a story as old as the city. By choosing the way we move everyday in the city, we also choose the public space part that suits better in our trips. Across the cities history, power has changed hands a number of times. Power relations have always been a definitive factor in the way of life, the place and size of residence, the income distribution and in the end, the form of the city. City planning was a tool of the powerful groups of society, used mostly for achieving further empowerment. These groups usually set the rules regarding the space functions and more often than not, these rules have been proven able to affect drastically the identity of inherited places and make them to serve new values. Across time, residential comfort is accompanied by secular (political, military), religious and finally economic power. The powerful have always had a space surplus while the powerless have had the bare minimum for its survival.

## 3. The secular and religious power expression on public space

The inner drive to explain the world, as well as the fear of the unknown, have inspired humans religions and deities. The pursuit of god's satisfaction (in order to avoid unpleasant natural events, or have a good crop and health etc) have created the first class elite of people with special abilities (knowledge, perception, administration, diplomacy), responsible to communicate with the unknown. Priests were the first special group with the privilege to have the production surplus (Dimitriadis, 1987). They had significant effect on the society's organization and functions. Even with no simultaneous secular power, they could greatly affect it.

The gathering area had always had political importance. It was the decision making area, where the tribe's elderly were the important ones. With the introduction of religion in societies, people started praying in public space. The areas of secular and religious authority had to be easily distinguished and convince of their importance; to prevail. The first big cities centers were usually the palaces – the lord's residence- as well as the clergy's seat with its dominating temples (Sarigiannis, 2011). Around 2000 B.C. there were two major cities in



Mesopotamia, Babylon and Ur. Both had their administrative and religious authorities located in the center of the city, with vast open public spaces. The residential area was densely inhabited and the main temple (ziggurat) was elevated on a platform. Elevation as a domination tool has been used often in secular and religious buildings. The symbols of power had to be visible from everywhere and accessible with the suitable roads. In both great Mesopotamian cities the secular/religious center was directly connected to the city gates (Dimitriadis, 1987) through wide streets, whereas the secondary road network of the dense city was comprised of narrow spiral streets, often leading to dead ends (Sarigiannis, 2011). Authority has always planned public space in order to display its power, either by big squares in front of public buildings or grandiose streets accessing them.

## 4. Economic power in public space

Gradually another form of power, the economic power, was emerging next to the secular and religious power. It was related to the accumulation of goods and wealth and was more intense in commerce-oriented societies. During the Classical Period (4<sup>th</sup> century B.C.) the administrative center of the city gradually shifts from the Acropolis to Agora (Dimitriadis, 1987), the economic and sociocultural center. Acropolis becomes exclusively the area for religious ceremonies, whereas Agora includes buildings and open or sheltered public spaces, related to decision making, everyday life and urban life (Ward-Perkins, 1974). Agora does not require special symbols and grandiose buildings because it does not represent a central authority. There is one main street (Panathinaia) that splits in two roads leading to the two respective gates. While this street has monumental significance (it connects the old center –Acropolis- with the new –Agora), the various functions outweigh the monumentality. Areas for commerce and interaction (Agora and the Galleries) are mixed with administrative buildings (Court House and Parliament) and religious spaces (the Temple of Apollo and the 12 Gods' Altar). Panathinaia Street has a beginning and an end, it is a destination on its own and not just a crossing axis and it may be characterized as one of the first linear squares.

During the Hellenistic period that followed Philip's (father of Alexander the Great) wars, the city-state concept in Greece seized to exist and the communication and transportation networks became more and more important. As states grew bigger and their lands multiplied, secular authority needed economic growth in order to maintain land and power. Commerce promotion through improved transport networks and its organization in specified areas and under specified rules (taxing, laws) are factors that aid secular authority maintain its position. Alexander the Great's short war campaign established a large empire, with many new cities and new road networks to connect them rapidly, enabling commercial transactions. These new cities were created as military bases and quickly developed into commercial stations due to their location (Sarigiannis, 2011). Old cities, having already the necessary infrastructure (population, markets, roads, harbors) were easily and rapidly developed and acquired inter-local significance. Within a short period an organized network of towns and transit commerce is emerged. Commerce becomes a new power form and cultural life moves away from the Agora (Ward-Perkins, 1974), which was situated in the city centers. Gradually as economic power prevails in societies, space is utilized to the extreme, often disorderly, and ancient markets become the central bazaars of eastern cities. The Hellenistic new cities were planned to serve merchants as well as visitors and travelers. The primary road network was simple, wide, usually one axis connected the city entrance and exit with the market. In certain cases (i.e. Thessaloniki, Jerash) it was a network of three or four streets that limited the market square (Sarigiannis, 2011).

# 5. Private against public and the battle of power forms

Many of Western Europe cities were created as military camps during the Roman Empire. The administrative, economic and social center of the city is located in the area of the former camp administration (the cross-section of two basic vertical axes). It was the area of space surplus that was transferred during the centuries from one powerful group to another (military to merchant) and was evolved into fora, galleries, public buildings and theaters. This transition was initially organized smoothly with the establishment of respective buildings. As cities grew, secular authority and wealthy merchants acquired even more power and demanded for more public space. It is estimated that Rome had a population of one million people during the early Christian years (Sarigiannis, 2011). Its area kept expanding and its center had the chaotic sense of a metropolis. As the city grew, the forum needed more buildings (i.e. for food or animals) and new storage space. Several markets were thus created with respective free spaces – squares for the population as well as the merchants' needs. Gradually a disordered total of squares, markets, monumental streets appeared including a dense gathering of great public buildings with private mansions. In 64 A.D. the great fire became an opportunity to plan the city, again. Urban regulations were established, such as buildings maximum heights (70ft – 21,4m) and road widths (Ward-Perkins, 1974). These



regulations often changed according to the emperor in power and his relations to a certain economic power group: the constructors, whose interest did not lie within the free public space.

When the powerful show off through public space use and occupation, the weak citizen tries to keep up with this model. The first rivalry between private and public interest appears in ancient Rome. The citizens' tendency to occupy public space appeared for the first time. The survival of several ancient roman streets proves the significant state effort to fight against economic power and protect public space. The first mediterranean metropolis recognized the importance of traffic control adopting certain traffic regulations in the city center. No vehicles were allowed in the city center from dusk till dawn with few exceptions (Ward-Perkins, 1974). Access to the Forum was allowed to pedestrians, only. This policy obliged the wealthy to move in the city center just like the weak. Similar policy was applied in Pompeii where Forum was accessible only on foot (Webb, 1990). There were also elevated zebra-crossings in every crossroad and a vast network of sidewalks.

After the fall of the Roman Empire, the spread of Christianity and the raids from the north, Western Europe cities lost their power, became smaller, were closed behind walls and political power was replaced by religious power. In the beginning of the 9<sup>th</sup> century A.D. although Charlemagne conquered the largest part of Western Roman Empire, the permanent leader of every city was the Bishop. The symbol of power was the prevailing cathedral, recognizable, accessible, typical to each city, often elevated and with a square in front. The Catholic Church believed that many ancient public buildings (theaters, baths etc.) were related to paganistic habits and encourage people to transform them into houses. Arenas (Arles, Lucca) with their distinctive circular shape were ideal for residence and defense against raids (Christie, N., & Loseby, S.T. 1996). The only public space preserved was in front of the cathedrals. The landlords, representing the secular power of the times, were living outside the walls and regulated their production according to the nearby city's needs. Public space depreciation and the lack of a powerful state, with urban planning regulations, led to the prevalence of the private over the public, affecting thus the medieval city planning.

During the 10<sup>th</sup> century A.D, the raids gradually seized and the Nordic races became successful merchants (Saalman, 1968). Nobles (landlords) and the Church, possessing farming lands, started treating commerce positively. Cities became meeting places for the merchant- travelers and visitors from surrounding villages, trying to buy or sell goods. Open air commerce bloomed inside the walls, close to the city gates, where merchants stopped to sell their merchandise. There was no reason for them to move further into the city center, as the area was already large enough (the areas close to the walls were not preferred for residence) and on a basic passage. Open-air commerce, wherever existed, was the main reason that public space was protected against urban sprawl. This explains also the existence of triangular openings in streets close to central road crossings, in the few squares and the city gates that were favorable marketing spots (Saalman, 1968). On the contrary, the roads that lead to the city center or go through residential areas became narrower, as the private overwhelmed the public. Taxing the transiting goods (entrance-exit) at the gates was the main city revenue but the procedures of controlling, weighing and registering were extremely slow. The waiting time for the visitors, merchants and farmers was several days. This led to the establishment of inns, taverns, houses and little business outside the walls, in order to serve these people. Similar examples are met throughout history, whenever commercial activity was blooming (Mesopotamia -Babylon and Ur-, ancient Greece -cities surrounding an acropolis). There was no planning whatsoever and public space was the bare minimum needed for commercial operations. The main advantages of the small towns that formed outside the walls ("faubourg") were that there were no taxes imposed on the goods and there was unlimited land for expansion. Gradually the "faubourg" got larger and larger during the Middle Ages and acquired larger markets than the ones within the walls, where space was limited. The city authority soon realized that revenues were being lost and decided to build larger walls to include the "faubourg". Breaking down the old walls created more free space in the form of a ring road. The use of it depended on the authority, the era, and the trends towards public space as well as on the size of the demolished walls. In many cases the walls had already been transformed into residence even before their demolition. In the space created open air markets run, houses and public buildings were built (the first city councils took place in private spaces). Except for travelers that needed public space to display their merchandise, there were also shop owners that needed space in front of their shop, for people to pass by. Yards inside building blocks were divided in workshops or new houses and narrow, spiral corridors allowed access to them (Barley, 1977). All streets were possible markets and their width and shape formed according to the market power against house owners "suppressing" public space. By the end of the Middle Ages, the Roman road networked was completely altered. Most roads width was just enough for people and merchandise to move. Successive main streets occupation led to streets with the same starting and ending points (cathedrals, squares or public buildings) but curved, in order



to have as many shops as possible. At the end, the old roman grid was transformed into a variety of vertical, radius and spiral streets of uneven widths and the street "labyrinth" became a feature of the medieval city. A similar procedure transformed the bazaars of the eastern Hellenistic cities after 7<sup>th</sup> century A.D. The carriages were gradually replaced by camels and animals walking one behind the other, as a caravan. The wide ancient street (allowing the opposite movement of two carriages) was abandoned by the planners and was determined as adequate width the opposite movement of two animals (Christie, N., & Loseby, S.T. 1996). The remaining space was given to private initiative and commerce. Pedestrians filled the gaps between public space occupation and merchandise carrying animals.

Cities that had failed to protect their central public space during the Middle Ages, created their markets near the old gates. There were large and powerful cities like Florence that had managed to save their central free space. In Florence, towards the dawn of Renaissance (13<sup>th</sup> cent. A.D.), secular power demolished political rivals' residence in order to build an administrative center and a public space in front of it (Palazzo Vechio – Piazza della Signoria), while religious power had its own square in front of the cathedral (Piazza del Duomo). Competition among cities led to more grandiose buildings, above the urban scale that created obstacles to the rational city operations. Competition among secular and religious power in order to attract citizens was evident in everyday life. People were given the option to pass through Florence Duomo, making it a place for rest on their everyday routes (Saalman, 1968). Secular power delayed answer in 1385 A.D was given by forbidding commercial traffic through the Piazza della Signoria, offering it to the pedestrians (Webb, 1990). Three centuries later, at a display of power in everyday transportation, the city lord Cosimo I built his famous sheltered Vasari Corridor, so as he and his family could move comfortably from their residence to the administration area, even through religious buildings, away from the people.

Continuous increase in the merchants' power at the end of the Middle Ages led gradually to violent or not, political claims and reforms. Merchants were wealthy, united in unions, interested in the city as they were linked to its existence and progress. Landlords wanted to avoid conflict with them, as they depended on commerce. The first medieval years power fell to the hands of bishops; likewise the last medieval years city administration passed to the hands of the wealthy and better organized merchants. During Renaissance the principles of Humanism were set and man is settled in the center of the scene. The streets were recognized as part of the public space and became evident both to the authority and the architects that everyday transportation was essential to the city sustainability. In each city special sociopolitical conditions formed public space differently. In Flanders cities had their centers where the market was and the power of the newly born bourgeoisie is evident with the form of an independent civil court. Contrary to the building of monumental structures of royal or religious power, the change in public space administration was reflected to small or large buildings not necessarily focused in certain areas, squares or main roads.

On the opposite side, in Rome the Pope was the absolute leader who, in the 15<sup>th</sup> century A.D., advanced to great projects of urban reform (alignments, widenings, and new roads). The 16<sup>th</sup> century A.D. Rome is transformed into the founder of large scale urban planning (Webb, 1990). Each Pope tried to leave his mark by planning a new road, accompanied with the necessary demolitions (Via Alessandrina for Alexander VI, Via Giulia for Julius II, Via Leonina for Leo X), with Paul III paving the 3 miles long "imperial route" through palaces, monuments and large churches, thanks to the demolition of about 200 houses and 4 churches!. Sixtus V filled the roman urban landscape with symbols- landmarks, united visually (through alignments and perspective) or conceptually (obelisks in front of churches and main crossroads). Monumental roads for pilgrimage, scripts and emblems on buildings, public fountains and monuments left no room to question the religious power. Public executions took place in public space near the Vatican and not on the Piazza del Campidoglio, which was the square of civil authority (Celik et al, 1994).

In France, Germany, Denmark and other European countries, secular power, who was enforced and affected by Renaissance, built squares through demolishing old walls and houses. New types of squares were accompanied by the display of power. In France we have the "place royale". Its shape was not specific (there were round, semicircular or squared) and main streets led to them symmetrically (i.e. in case of squared, the middle of the sides). In the center the king's or the lord's statue was situated, usually elevated. In Spain, the space remained from the commerce was used by royalty. The areas previously dedicated to markets, were the basis for the new urban symbol, far from the Arabic models. The type of "plaza mayor" was created, that was paved and surrounded by buildings. The king could attend public events preferably at a higher level than the rest. The king's absolute power over the merchants' financial power was sealed with the prohibition of vehicle traffic



within the square. For equilibrium reasons though, the buildings surrounding the square usually had sheltered galleries for commercial activities.

By the 18<sup>th</sup> century, aristocracy had recognized the public space significance for cities and sought to gain absolute control over it. For the first time, a public square was shut to the people. In France it was fenced and dedicated to the King's celebrations and events (Place des Vosges, Paris), while in England private parks and squares are created. Enlightenment promoted the principles of freedom, equality, tolerance and new sociopolitical conditions that were to eliminate absolutism. The few fenced squares in France started opening to the public, whereas in England (London) the ruling class kept its own.

## 6. Economic power domination in public space

The last efforts of secular power to maintain absolute control reach at an end with the emerging of the new powerful class of industrialists. Old cities got enlarged to the extreme, new cities were created and land speculation became a feature of the industrial city. Speculation and urbanism deteriorated living and health conditions. Space usage in Western Europe reminded the Middle Ages. The main difference was that in the industrial era of fast profit and labor hands abundance, bourgeoisie (merchants, industrialists, bankers) was not in favor of the city sustainability against the ruling class. Bourgeoisie had become the ruling class and was in many cases against the labor class. The spread of diseases (cholera, plague etc.) forced state and city governments to look for solutions that would improve living conditions. Hygienists' ideas were welcome and cities moved on to major urban interventions, like the creation of urban parks and squares (regularization).

These interventions often included large scale demolitions, a display of both secular and economic power. The wealthy aimed to a more comfortable transportation and higher earnings due to the land value increase, while secular power tried to control the city better. Typical example is Haussmann's interventions in Paris. Great urban interventions took also place in Barcelona by Cerda, in London by Paxton and in Berlin by Stubben aiming mostly to the mass transportation and the road network. Public space expands from the squares to the surrounding streets. Circular traffic started shaping the concept of a roundabout, distances grew longer, transport speed changed due to the expansion of public transportation means (train, tramway –horse-driven or electrical), the building of metro (London 1867, Bucharest 1896) and the invention of car and motorcycle, towards the turn of the 19<sup>th</sup> century, altered radically urban scape (Pinol & Walter 2012).

By the beginning of the 20<sup>th</sup> century, religious power has stopped power display through public space occupation and secular power has also diminished similar attitudes. Former kings' palaces are turned into parliaments and administration centers, preserving the symbolism of public space in front of authority buildings. Poorer people have always been squeezed in small places or even driven away by the wealthy. Transportation is an extension, a supplement of our living space. Since the mid-19<sup>th</sup> century, when vehicles and pedestrians coexistence has become more intense, vehicles have had priority, either because of their volume -in case of a collision the pedestrian would suffer- or because the vehicle would be carrying someone more important than the pedestrian. Progressively a tendency appeared, to distribute public space according to the power of each user and the powerful would have priority. The 20<sup>th</sup> century was the century of the car, dominating in public space. Owning a car became more affordable and middle class managed to acquire a car necessary for its transportation and a symbol of power at the same time. Many cars need also many parking spaces. Like a child affected by the parents, people gaining power in their transportation will act according to the behavior adopted by the more powerful. Streets were filled with cars struggling to go everywhere, even in narrow streets, where the wealthy had no reason to go into. Everyday transportation got filled with aggressive drivers realizing that their power symbol lost its sense when they were in the same place with others having the same power symbols. Parking in front of their house or destination gave a unique sense of power. The result was that space, protected until then against the Middle Ages and Industrialization Era, was given away to the new powerful transportation group, car owners. Squares, instead of being a pedestrian's shelter, became roundabouts or parking lots until the mid-20<sup>th</sup> century.

### 7. Managing transport public space; proposals and efforts

The variety of transport modes of different characteristics, as well as the numerous accidents of varied significance pushed towards traffic prioritization. Since antiquity, there have been limitations in vehicle access in areas of importance (Forum, squares) but the first complete plan was introduced by Leonardo da Vinci in late 15<sup>th</sup> century. When he visited Milan, he took notice of the narrow, complicated road network, where



heterogeneous traffic was mixed and channeled among stores, merchant kiosks and workshops. He realized the lack of health conditions and the difficulty in moving around and he created his own proposal on the ideal city. First he grouped the communication relations among the different functions of the city (houses, palaces, churches, market etc.). Then he zoned the areas depending on their use, prioritized the main over the secondary streets moving to their complete separation, through levels of different heights. Da Vinci had realized that the problem was linked to the rivalry on the street between user groups as well as to the public space occupation by commerce that required vehicles for the transportation of merchandise. He proposed the creation of three traffic levels: water channels for the transportation of great commercial volumes that would be located lower than the streets level, which would be dedicated to carriages, allowing the nobles (the group he wanted to protect thennowadays it could be vulnerable users) to move freely on another level higher than streets (Istituto Geographico de Agostini 1957).

At the beginning of the 19<sup>th</sup> century, living conditions in cities were as difficult as in the end of the Middle Ages. The sociopolitical changes occurred, introduced new ideas and proposals on the society organization and urban planning. Utopist Robert Owen (1771-1858) came up with a modern urban planning complete proposal, including social, economic and political parameters and a cost estimation. He tried to address the city problems through organized communities, up to 1500 persons, where they would live and work in multi-storage building complex. In this complex land uses would be separated and everyday distances would be reduced. Due to Europe sociopolitical circumstances Owen's proposal was applied in the USA (New Harmony, Indiana). Charles Fourier (1772-1837) also suggested separate land use in an organized structure of one building (Phalanstery – around 1.500 persons). Disturbing operations would be located far from the Phalanstery, that would also house any education, recreation and light work uses, diminishing everyday transportation needs. Inside the Phalanstery people would walk mainly in a covered network of corridors ("street gallery") on the 1st floor level, higher than the vehicles moving on the ground level. According to Fourier, the pedestrian was acknowledged and protected from the weather conditions, having adequate natural lighting and ventilation (Benevolo 1967). Fourier's ideas were also applied in new communities in USA (Sylvania at Pennsylvania, Brook Farm at Massachusetts). In France, engineer and visionary Henry Jules Borie published (1865) a study (Aerodomes) for the improvement of everyday life through a multilevel system of transportation (using also building roofs and terraces). Architect and urban planner Eugene Henard (1849-1923), the first designer of the roundabout, also believed in multilevel transportation in everyday life. Like Leonardo da Vinci, Henard suggested that heavy vehicles would move on a lower level than public transportation while pedestrians would walk on a higher level. The importance of pedestrians was acknowledged by Henard who designed mechanically moving corridors (treadmills) and pedestrian zones.

The 19<sup>th</sup> century utopists and visionaries set the most important element of the city, pedestrians, in a higher level than wheeled and motorized traffic. Their major contribution in the improvement of everyday transportation was that in some countries (England) pedestrian was acknowledged in everyday transportation. One significant attempt was made with the "Town Improvement Clauses Act" in 1847. According to this Act, city streets were separated to vehicle oriented (carriageways) of 9,14 m (30ft) width and pedestrian oriented (footways) of 6,09m (20ft) width (Pinol & Walter 2012).

By mid-20th century some European cities (Rotterdam, Copenhagen and others) built pedestrian areas, mainly in their centers. Until nowadays more cities across Europe created car-free zones and pedestrian streets, many regulations were adopted and many suggestions were made promoting walking. Unfortunately, outside the pedestrian zones the already established power relations in transportation have been maintained, car has been treated as the ultimate leader and pedestrians have been squeezed on the street sides. In the 21st century pedestrians still have to cross or enter the streets and accidents occur frequently. Even though there have been proposals for the separation of car and bicycle traffic and actions in favor of the pedestrian (pedestrian bridges and tunnels), the debate on the necessity of flow separation is still young.

## 8. Conclusions – Principles to a sustainable city

Public space has been used throughout history as a means to display the power of religious or secular authority over the people. The appearance of an economical powerful class of merchants and industrialists, gradually led to the distribution of public space according to economic criteria. Product carrying carriages were considered more important than the pedestrian, as they were creating revenue. Today cars are dominating public space, displacing pedestrians on the narrow space next to buildings, sidewalks, making them cross the streets when allowed by signaling. The motorcycle, even though more vulnerable than the car, exercises its power when it is



moving or parking on the few space meant for the pedestrians. Even pedestrians, though, become aggressive against others who walk at a smaller pace, feeling delayed and obstructed, as they "have business to attend and don't waste their time strolling around". Transportation is treated according to its destination and its importance. People going to work have more right than the student, the plain stroller. A professional would be justified when he applies his power with a verbal attack against a student or an elderly or even a mother with a baby in the stroller.

In a city there will always be powerful and weak according to secular, religious and mostly economic criteria. Their primal rivalry negates the initial concept of the city itself, which is social co-existence in a specific area. As long as transportation is treated with just economic criteria, the city can never become sustainable for everyone. A sustainable city must be democratic and protect the weak and vulnerable. Everybody should feel equally safe in moving, stopping and generally living the city. In order to achieve better everyday life we have to consider the quote of K. Doxiadis: "The failure of the city to serve man leads to the need to re-examine it. Nothing related to the city must be taken for granted" (Kyrtsis 2006). Re-determining the principles of social co-existence, empowering the vulnerable in their transportation, limiting power enforcement and treating public space as an expansion of the private space are fundamental for the sustainable city of tomorrow.

### References

Argan, C.G. (1969). The Renaissance City. New York, USA: George Braziller Inc.

Barley, M.W. (1977). European towns: their archaeology and early history, London, England: Academic Press.

Benevolo, L. (1967). The origins of modern town planning. Cambridge, USA: The MIT Press

Celik, Z., Favro D., & Ingersoll, R. (1994). *Streets: critical perspectives on public space*. Berkeley, USA: University of California Press.

Christie, N., & Loseby, S.T. (1996). *Towns in transition: urban evolution in late antiquity and the early Middle Ages.* England: Scolar Pr.

Dimitriadis, E. (1987). Istoria tis Polis kai tis Poleodomias: apo tin proimi poli os tin emfanisi tis synchronis Poleodomias. Thessaloniki, Ellada: Aristoteleio Panepistimio Thessalonikis.

Holloway, L., & Hubbard, P. (2001). *People and Place: the extraordinary geographies of everyday life*. Harlow, England: Prentice Hall.

Istituto Geographico de Agostini (1957). Leonardo Da Vinci. London, England: The Cresset Press

Kyrtsis, A.A. (2006). Constantinos A. Doxiadis: texts, design drawings, settlements. Athens, Greece: Ikaros.

Pinol, J.L., & Walter, F. (2012). La ville contemporaine jusqu'à la Seconde Guerre mondiale, Paris, France.

Saalman, H. (1968). Medieval Citie. New York, USA: George Braziller Inc.

Sarigiannis, G. (2011). *Istoria tis Polis kai tis Poleodomias: I archaia poli*. Athina, Ellada: Ethniko Metsovio Polytexneio.

Vlastos, Th., Milakis, D. (2006). Poleodomia vs Metafores: apo tin apoklisi sti syglisi. Athina: Papasotiriou

Ward-Perkins, J.B. (1974). Cities of Ancient Greece and Italy: Planning in Classical Antiquity. New York, USA: George Braziller Inc.

Webb, M. (1990). The City Square. London, England: Thames and Hudson Ltd.