

pursuing their own local policies. In order to ensure a more quality growth of the town and region, the Ljubljana urban region should as soon as possible become a full-fledged entity. Any further development undoubtedly requires the elaboration of a Spatial Development Strategy for the central Slovenian region and the elaboration of a Spatial Order for the Municipality of Ljubljana area and at least other 14 neighbouring communes.

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## **Modernisation of transport during the period of industrial urbanisation – a rich legacy or burden of trends in increasing mobility in Slovene cities**

### **1. Introduction – increasing mobility as acceleration of city development**

Cities aren't »machines for living« as Le Corbusier described, but »machines' with capacity to control flows, which can, on the basic level, be distinguished into internal or inter-urban and external flows.

Internal flows are those of people, goods, information, that circle between public/private spaces in cities, while external flows can be simply described as interactions between the city and immediate/wider surroundings. The history of cities is closely knit with possibilities for maintaining and mastering these flows since they determine development and complexity of the urban structure.

Mumford (1969) finds that the first towns actually »crystallised« out of the possibility of controlling flows of people, goods and capital. Places of exchange and trade or retail quickly emerged, which represented crossings of flows and furthermore intertwined with towns as spatial concentrations of social product surplus. Concentration of flows in towns generated suitable spatial organisation, which furnished safeguarding of the condition. Harvey (1973: 240) adds that if »there is no geographical concentration of social product

surplus, then there is no urbanism«. Therefore places that don't offer places of exchange or points of concentration, which could stimulate or maintain internal and external flows, there is no differentiation of labour, surplus product or adequate density of people ready to trade and there is also no complex spatial urban development, which could generate new places needed to maintain the circle of exchange of goods and capital.<sup>[1]</sup>

The birth, expansion and development of cities have their fundaments in processes that stimulated external and internal flows i.e. ensured mobility of people, which was the rationale driving development of commerce and capital in cities. The article predominantly deals with analyses of certain types of mobility or physical mobility of people in cities and urban regions, but doesn't go into detailed accounts of other types of mobility (e.g. housing mobility, social mobility etc.). From this aspect, mobility pertains to the possibility of moving people between various places and locales (Handy, Niemeier, 1997), where certain activities unfold (e.g. place of work and residence, places of consumption, culture etc.).

The major significance of mobility for urban development is mirrored in development of urban service functions, which enable economic development of cities and safeguard established mechanisms of production and exchange. Administration, policing, tax collection, utilities services and similar institutions grow complementary to city growth. The more cities grow historically speaking, the more differentiation occurs in urban services and collective, common services, which cities need to maintain and operate themselves and foster further growth. Accordingly Castells (1977: 460) finds that cities are not only places of production, but at their most basic level function as spaces of organised consumption or places of »collective consumption«, mostly implying various services and infrastructure amenities provided by the urban authority for »reproduction of energy, knowledge and labour force«. (1977: 460-462)<sup>[2]</sup> Establishment of suitable systems of public transport, schools, hospitals, shops and other infrastructure (roads, railroads, electrification, housing, water supply, telephone lines etc.), enables faster, more efficient operation of the city and entire social system. Thus cities evolve into organised systems of conditions, which enable adequate mobility of people, transfer of goods and exchange of information, all leading to increased capital and further spatial development.

Castells' concept of collective consumption illustrates how city authorities constantly strive for such spatial organisation, which can ensure faster growth of capital in cities. For this purpose, especially in the period of intensive industrialisation, the drive for increasing mobility in cities was strongly supported. Greater mobility should condition stronger flows of people, goods and information, thus also faster accumulation and growth of capital in cities.

### **2. Modernisation of transport during the period of industrial urbanisation – from collective transport modes to individualised transport**

When we speak about intensive industrialisation and industrial urbanisation, we above all imply processes unfolding in the second half of the nineteenth century and continuing

after the 1st and 2nd World Wars, right up to the 80s of the 20th century. Industrialisation triggered enormous shifts in development of cities and other urban spaces. It started massive population movements and the quick growth of industrial cities. The key driving force behind this process was the factory system with economies of capacity. Fast growth of factories, which needed large labour forces to increase production, mobilised migration to cities thus accelerating urbanisation. (Pacione, 2001) The period of industrialisation implied concentration of population, work places, housing, infrastructure and services, which ensured unhindered operation of industrial enterprises. During this period many cities steamrolled across nearby villages, while the influence of cities could be felt even in distant rural areas that could at least partially experience characteristics of urban life.

By analysing the links between industrial urbanisation, modernisation of transport and mobility in cities, we will pursue the issue. Here we have to delimit historical urbanisation processes from transport modernisation processes and the modern period, which already began during the enlightenment period in the 16th and 17th century. Intensive industrialisation mainly applies to the period marked by revolutionary technological changes, advances in science, industry, emergence of new social movements, which are often linked to modernism as a way of thought.<sup>[3]</sup> (Lash, 1990/1993: 130) Modernisation as such applies to transfer of this new knowledge into practise (Dear, 2000: 96) or adaptation of day-to-day life to new social-production conditions that are typical even for the present time. Correspondingly transport modernisation during the period of industrialisation or industrial urbanisation annotates all »achieved« changes and interventions in urban transport infrastructure that occurred from the late 19th century till the late 20th century and is grounded in fast technological leaps, demands for capital flows and increased mobility in cities.

Attention will be given to articulating the »dialectics between modernisation and modernism« (Berman, 1988: 16) and methods used by advocates of modernism as the »belief in progress« to deliver urban development by technological innovations. Despite high aspirations for increasing efficiency of urban services and the quality of life in cities, modernists were only partly successful, since the consequences of rapid dismissal of apparently »outdated« technologies and not well-thought-out introduction of technological innovations into cities are apparent even today. Urban mobility of people during the industrialisation period was marked by two important transport modernisation phases. The first are collective transport modes, the second individual transport and neglect or abolishment of collective passenger transport systems.

## 2.1 Development of collective transport modes

If pre-industrial times in cities were dominated by pedestrian traffic and horse-drawn vehicles, the industrial era brought new transport modes that enabled greater mobility of people and established foundations for development of the industrial city. Before its outset, people had to live close to work, which stimulated development of small, functionally integrated cities that rarely exceeded 50.000 inhabitants. (Pacione, 2001: 248) In the mid nineteenth century development of collective transport systems, i.e. railway and tramway, were the key condition enabling separation of residential from working environments. The development of collective transport systems that had the

capacity of carrying more people for longer distances and needing shorter voyage times, stimulated specialisation in land use and increased accessibility to spaces that was until recently part of the countryside. By transport networks cities quickly expanded and integrated even more distant places.

Following introduction of collective transport modes to cities, completely new parameters of urban development emerged. By renouncing limitations concerning city size that were respected in pre-industrial times, a new interdependency of transport technologies and urban planning were established. The capacity of cities to expand and grow was from then conditioned by development of public transport, which determined the intensity of flows of people, goods and capital. Introduction of new forms of transport also demanded necessary alterations of urban spaces, best illustrated by the demolishing of old city walls: »The state policy, which sought to transfer to the crown's centralised direction the protectionism and monopolistic control of the medieval town, proved only to be a transitional dodge. For the new forces favoured expansion and dispersal in every direction, from overseas colonisation to the building up of new industries, whose technological improvements simply cancelled out all medieval restriction. The demolition of their urban walls was both practical and symbolic.« (Mumford, 1988: 414).

The need for urban expansion and development in the period of early urbanisation was strongly advocated by merchants, bankers and landowners or capitalists, who were primarily concerned about increase of profit on capital and only in the second phase about improvements to quality of life in cities. (Mumford, 1988) This became manifest on the urban structure of cities, which grew excessively outside the boundaries of medieval cities and demolished anything that stood in their path. The largest changes happened in public spaces, which were worst hit during the damaging dark, early stages of capitalist development. This was the phase, in which capitalism proved to be the destroyer of urban values, which was unstoppable on its path to increased profits and wasn't interested in old cultural and social institutions (e.g. theatres, handicrafts shops, orphanages etc.) that performed functions for the public benefit.

Because of such circumstances, during which urban growth occurred, it isn't surprising that early industrialisation can be seen as the period of rapid dilapidation of living qualities in cities. Industrial growth and increase in population counts led to diminishment of living conditions in cities and social strife, as well as pollution and increasing lack of space for development. Boyer (1986) states that modernist urban planning took roots between the end of the 19th and early 20th century, mainly as an attempt at tackling issues generated by the industrial city. This was the period when people tried to find »the instinct for improvement« (1986: 3), also the key words of the planning discourse were seen in the terms: unity, control, mastering, progress and harmony. One of the key issues poised before the reformists was how to achieve disciplining and regulation of urban masses and simultaneously maintain control over management of physical growth of cities. Intensive industrialisation and urbanisation were seen as the processes that trigger various social pathologies, meaning that they need control and directing.

Collective transport modes, which in the early industrialisation phases ensured development of cities, were challenged in the second industrialisation phase, after the 1st World War, by competitive motorised transport. The railway and tramway

were soon shunned as inadequate types of transport, which limit further growth of cities and should be supplemented with additional, more 'modern' types of transport. New types of transport were supposed to ensure satisfaction of needs for increased mobility in cities. With the purpose of further urban growth, across the present networks of railway and tram lines, local authorities started to build or improve the road infrastructure, which should accelerate flows of people and goods and ensure influx of capital into cities.

## 2.2 Modernist »anti-urbanity« – dominance of individual motorised transport over collective transport modes

When advocating the need for building road infrastructure, many urban reformists, such as the journalist Charles Mulford Robinson, they appealed for improving the quality of life in cities. Industrial urbanisation was coined new »totalisation of poverty« (Robinson v Boyer, 1986: 27) and even as a disease or »strange evil of excessive urban generosity« (ibid.). Rapid dilapidation of social relations triggered a shift in attention to new spatial categories and environmental standards, which should help 'heal' the city. The quest for a new spatial order was directed to fast and efficient urbanistic solutions that demanded radical spatial restructuring. For this purpose Robinson heavily relied on ideal urbanistic solutions, amongst other Haussmann's concepts for renewing Paris. He wrote:

*»We discovered that often there is no better solution for clearing slums than to cut across them with a vast highway, that is full of vehicles feeding the city's industry. Just as a stream of cool fresh water that cleanses everything it passes on its route, thus the waves of traffic bring joy to urban life, which is full of hard labour and efficiency. When they run through unproductive or decaying areas, they stimulate them to wider interests and higher goals.«* (Robinson in Boyer, 1986: 54)

Robinson is an example of the planning mentality that triggered the development of idealised physical plans and technised procedures during the period of intensive industrial urbanisation, without granting special attention to the social context of cities. Thus the next step in modernisation of transport or stimulation of motorised transport and development of road transport infrastructure launched not only more motion in cities but also contributed to the diminishment of urbanity in city centres. Wirth (1964/2000: 98) gives an account of urban properties, which are: vicinity, density and variety. He describes cities as »large, dense and relatively sustainable settlements of socially different people«, living an »urban lifestyle«. (ibid.)<sup>[4]</sup>

Before urbanisation the city centre was the synonym for various events, following upon each other before coincidental onlookers while casually strolling along. Spontaneous, undetermined and free movement are the actions of 19th century *flâneurs*, as envisaged by the poet Charles Baudelaire. During the period of industrialisation the image of the targetless romantic onlooker, traversing the city out of the mere pleasure of observing street life was already a rare sight. Why the significance of the *flâneur* diminished, such an important aspect of urbanity in foregone historical periods can be attributed to changed mobility patterns in cities.

We can hypothesise that during early phases of urbanisation the *flâneur* was still a present element of diverse street life that was dependent on collective transport modes: the

train or tram. Ensured mobility of large numbers of people on fixed 'tracks' and through key nodes in the city also ensured a certain level of urban »locale« or urbanity. (Hočevar, 2000: 22-27) Introduction of motorised transport with trolley buses and buses similarly didn't stop the tradition of urbanity in city centres, which nevertheless started to crumble with increased automobile traffic. Low cost car production, ensuing after the 2nd World War, also meant the quick flourishing of individualised traffic and diminished the significance of collective transport modes, but also removed the classical *flâneur* from the streets. The new participant in urban events is no longer the *flâneur*, but a substitute 'voyager' or 'traveller', as figuratively put by Thacker (2006: 175). Car usage provided the individual with much better flexibility concerning spatial motion and correspondingly transferred independent decision-making about travel time or as the English poet Davidson wrote in 1909: »what the train orders, the car delivers«.

Until the advent of cars, city centres were always the most accessible places, thus fostering exchange, meetings and establishment of social contacts. Attention was therefore placed on pedestrian flows, the most common traffic form. It also conditioned adaptations of the urban structure and placement of shops, all prepared for the pedestrian. Since retailers demanded maximum flexibility of independent motion, large pedestrian zones were created, which should accelerate circulation and exchange of people in the city centre. When the street was changed for car use, the return to *flâneurs* as important elements of urbanity of the former, pre-industrial era, was made impossible.

Flows of pedestrians were replaced by flows of cars, thus expanding cities, increasing distances between places in the city and diminishing quantities of social contacts. The street spectacle was no longer part of urban lifestyle; moreover, it depended on regulation of car traffic. Mumford points out that the biggest mistake of the »... progressive mercantile mind was too much attention given to transport modes promising highest financial benefits«. (Mumford, 1988: 437) The new transport or road network should have brought even more visitors and increased »profitable density in the city centre« (ibid), but it also caused dilapidation of numerous useful elements of social life. With the purpose of providing road infrastructure, which should ensure better accessibility of the city centre, planners demolished numerous socially important urban elements and functionally, symbolically and historically important buildings, standing in their way. The expansion of roads, building of viaducts, parking lots, garages, avenues and one-way roads all supposedly ensured better mobility for vehicles in the city. The shortening of travel times expanded cities far into their regions, whereby the number of people travelling to city centres by car increased manifold, eventually and gradually increasing congestion. City centres were filled with cars, thus planners were forced to focus even more on solving car-based traffic issues in cities and forgot about the importance of social functions, which also substantiate a city's existence. »In this sense this disease is self-limiting, for the bare reason that in the final stage, it has to devour the beast that feeds it«. (Mumford, 1988: 436).

## 2.3 Mobility ≠ accessibility – mass (auto)mobility doesn't affect mass accessibility to urban services

The biggest stimuli to *automobilism* were post-war measures and programmes of infrastructure development, which

were seen as the basis for fast economic growth.<sup>[5]</sup> Paccione (2201) mentions that in the period 1950–1960 the key method in infrastructure construction followed the supply – fix model, while the user or people-oriented model wasn't recognised as important in the process of accelerating economic growth. Post-war policies were above all marked by desires to increase capacities of road systems and provide access for individual transport modes. In conjunction with the increased capacity of road networks the number of car users also grew, directly implying changes in organisation of daily life. The growing rate of *automobilism* <sup>[6]</sup> caused the birth of »automobility« or a pattern of social behaviour based on car transport. (Urry, 1999: 1) *Automobility* changes perception of time-space dimensions and allows the creation of new social spaces that bring together flows of people on proscribed routes, i.e. roads and highways. With the rise of *automobility* civil society began to transform; new forms of motion, living and socialisation emerged.<sup>[7]</sup>

Urry (1999:12-14) finds that on one hand *automobility* truly provides »sense of freedom« for the user, yet in reality the car's flexibility is also »forced flexibility«, namely in the sense of expanded suburbanisation, which *automobility* supports, leading to fragmentation of urban space and increasing separation of urban surfaces.<sup>[8]</sup> In this context mass (auto) mobility doesn't necessarily mean mass accessibility. New technologies support »time-space distancing« (Giddens, 1984: 171), thus enabling separation of social interactions from material, physical presence and simultaneously increase distances between particular nodes in the physical system, which are important for the user. For the car user distances between places of work and residence increase while accessibility to urban services, such as hospitals, kinder-gardens, schools etc. diminishes.

The relation between accessibility and mobility concepts is of key importance for the understanding of functionality of urban voyages. Accessibility applies to »the quantity of opportunities or settings of events that are accessible at a certain distance or voyage time« (Handy, Niemeier, 1997: 1175-1194), while mobility applies to »the possibility to move between various settings, where events occur« (ibid.). By increasing distances between various settings of events, the consequence of suburbanisation, in the post-war period accessibility to urban services gradually became more dependent on usage of individual transport modes or *automobility*. Here it is correct to state that the relation between *automobility* and increasing separation of urban surfaces is a two-way process. The need for *automobility* is not just a consequence of separate use of urban surfaces, but simultaneously the cause of increased separation of urban surfaces.

Single-faceted (one-dimensional) development of transport infrastructure has serious drawbacks that become most evident under unpredictable, sudden changes of circumstances in the operation of the transport system. In such cases even small changes can cause a standstill of the entire city, which depends on this exceptionally sensitive and inadaptable transport system. Trouble encountered because of an inadaptable transport system that is founded on intensive use of cars can be illustrated with the example of the roads and transport worker's strike <sup>[9]</sup> in Los Angeles in 1960. (Jacobs, 1961/1994) Because most people used cars in daily life and shunned the use of collective public transport, the streets of Los Angeles were totally congested immediately after the outset of the strike. Aerial photos show a frightening mess on the streets, while reporters brought news

about fights amongst irate drivers, forced to wait for hours or even days to get anywhere.

Similar effects of modernised transport can be recognised even in Slovenia and especially Ljubljana. After the WWII the key transition from collective to individual car transport started. In this context the road infrastructure and large quantity of voyages by car are the most important legacies of post-war modernism, which in the late 60s of the last century abandoned a fairly long tradition (57 years) of alternative collective transport, i.e. the tram.

### 3. Industrial urbanisation and modernisation of transport in Slovene cities

#### 3.1 Modernisation of transport before the WWII

If in economically developed west European countries and USA industrialisation was of key importance for intensive urbanisation of the late 19<sup>th</sup> century, in Slovenia the process was much slower. Slow industrial growth resulted in slower growth of urban population, as well as modernisation of transport. At the turn of the century the level of urbanisation in Slovenia was only 7 percent. (Klemenčič 2001: 10) Slow growth of urban population was conditioned by the poor »urban backbone« (small number of towns <sup>[10]</sup> and low level of urbanisation in the pre-industrial period), which hindered better links between industrialisation and urbanisation processes, typical for economically developed European countries. The small number of towns and urban population not only implied a small critical mass of entrepreneurs, craftsmen and other economic sectors that could participate in the accumulation of capital and preparatory phases of industrial urbanisation, but also a small critical mass of potential public transport users that would benefit modernisation of transport.

Novak (1991) explains that before the WWII Slovenia actually developed important industrial capacity, but as a typical latecomer to industrialisation. Formative processes of industrialisation conditions weren't triggered by domestic accumulation of capital but foreign investments into the most lucrative disciplines.<sup>[11]</sup> Correspondingly only particular areas were developed into so called »industrialisation enclaves« (Novak, 1991: 132), while most of Slovenia, as an entity, lagged behind in the preparatory phases of staging conditions for intensive industrialisation.

Because industrialisation in Slovenia happened in enclaves, construction of the first urban public transport network began only at the turn of the 20<sup>th</sup> century, when Ljubljana was confronted with a gradually growing population and had to better its traffic management. The earthquake that struck Ljubljana in 1895 surely damaged many buildings, but nevertheless also definitely relieved the city of constrictions and allowed widening of streets, development of transport infrastructure and industry and accelerated urbanisation. In 1850 Ljubljana had 17.256 inhabitants, 20 years later there were 22.770 and in 1900 already 33.955 (Brate, 1990: 22), meaning an adequate critical mass of potential public transport users.

The opening of the electric tramway in Ljubljana in 1901 was a big step in the city's development; some authors actually entitle this event as »the biggest breakthrough in the

city's history!« (Brate, 1990: 81) Between 1935 and 1940, when construction of the tramway system reached its peak, the city's territory was widened. Many neighbouring townships and villages, now joined by tramway tracks, were merged with the city (e.g. Moste, Vič, Šiška, Dravljje, Šentvid, Ježica, Rudnik etc.). This was the time when so called »Big Ljubljana« came into being (ibid.) with some 100.000 inhabitants. The city was connected by a single collective public transport system that enabled greater population mobility and stimulated the development of retail, industrial and social institutions. In this »golden« development period Ljubljana built a new market place, cemetery, prospects along the Castle Hill, housing colonies for workers etc.

Since it covered most of the settled area of Ljubljana, the collective public transport system wasn't only a boon for the development of economy, but because of the frequency of use [12] was a key connecting element of the city's public life. Brate describes how the electric tramway actually jump-started »Ljubljana's metropolitan life«. (1990: 20) One of its more important features was low travel fare. Compared to railway traffic, which at the time offered three travel classes, and tramway systems in other cities,[13] the Ljubljana tram equalised social classes to the level of passengers, since they all used the same vehicle. Its price accessibility ensured frequent use and facilitated varied street life, i.e. provided Ljubljana's urbanity.

Despite its success in the pre-war period its functionality in urban traffic gradually began to diminish, mainly because of poor maintenance and new technological innovations. Furthermore after the WWII its dilapidated tracks made the network less cost-efficient. Motorised traffic became more frequent and congestions became common on the narrow city streets, causing delays and preventing higher vehicular frequencies. Another drawback was low travelling speed: the top speed was 30 km/h. In 1952 the Municipal Council named a special traffic committee whose findings were »that concerning the urbanistic arrangement of the city, the tram is outdated. It endangered the growing road traffic and needed too many precious surfaces for its operation«. (Brate, 1990: 142)

### 3.2 Modernisation of transport after WWII

The building industry boomed after WWII, the road infrastructure was improved thus accelerating the growth of motorised traffic in Slovenia. Nevertheless until the mid sixties the key transport modes in Slovene cities were still public and not private vehicles. After the demise of the tram in 1958 for a short period its substitute was the trolley-bus and soon after the bus. After WWII buses were the main vehicle of public transport and remained so until the late eighties,[14] the time of the break in urban transport. Reasons can be found in the increased number of private cars, and furthermore lower costs and expenses tied to purchase and maintenance of cars. Before this period the number of registered cars was significantly lower (graph 1).

The crisis in collective public transport that reached its culmination around year 2000, was only partly conditioned by growth of individual car use, the other part was a result of historical circumstances and specific post-WWII urbanisation in Slovenia. In most economically developed countries the same period was marked by trends of metropolisation, meaning concentration of people and economic activities in capi-

tal cities and quick expansion of urban areas. In Slovenia this trend was less expressed and was substituted with a (partly politically enforced) concept of polycentric urban development with industrialisation of the countryside. Diminishment of agricultural activities (de-agrarisation) wasn't followed by adequate processes of intensive urbanisation within the reaches of larger Slovene towns. Despite initial processes of socialist modernisation (big plans, construction of large urbanistic ensembles, housing estates etc.) the Slovene spatial system never reached a high level of urbanisation,[15]. Furthermore, after a short period of increased concentration of people and capital in urbanised areas, a counter policy was applied to curtail the growth of urban population.

After WWII changes in employment possibilities started in Slovenia coupled with expansion of urban areas. However (partly because of unattainable metropolisation) extensive urbanisation never started, meaning expansion of social and behavioural characteristics of urban lifestyle to the population. An important part of the population that remained in the countryside were the so called semi-peasants or semi-workers, who spent part of their working hours in factories and the other part on their farms or crafts shops. Slovenia, despite being one of the most developed parts of the former Yugoslavia, in comparison with other parts, experienced much slower growth of urban population in cities (e.g. in Bosnia and Hercegovina, Croatia or Macedonia). Most of the population, even after intensive industrialisation took roots, maintained a certain resistance to moving and living in densely populated urban areas.

Automobile traffic has adapted well to the under-urbanised and dispersed settlement system in Slovenia, since it provides access even to the smallest and most distanced settlements in the spatial system. We cannot of course neglect some of the negative effects caused by this traffic arrangement.. Formation of a transport system with few passengers using public transport and is mainly operated by car traffic stimulates dispersed suburbanisation of people [16] and economic subjects, which affects mainly urban centres and local suburban towns. It can be seen as diminished quantity of visitors in the city centre and redirection of car-driven consumer flows to the urban periphery or »edge city« (Garreau, 1991), the BTC shopping centre for example. The case of Ljubljana shows that *automobility* has completely changed mobility patterns of vast numbers of users of retail and entertainment services.

### 3.3 The burden of increased (auto) mobility in Slovene cities – the case of Ljubljana

In 1999 there were 146.188 registered motorised vehicles, out of which, 125.105 were cars. (Statistical yearbook, 2000) The results of a public opinion poll entitled »Rather critically about traffic« (Ninamedia, 2000) show that only 30 percent of the city's inhabitants use bus connections (16 percent use them regularly, while 14 percent stated that they use them often) and only 18 percent take the bus to get to work. (Štravs, 2000) The number of cars in the city is 130.000–140.000 per day (including commuters and inhabitants driving to the city to work). On average in Ljubljana there are 1.3 passengers per car, which points out uneconomic use of transport vehicles and poises large pollution burdens on the city. For comparison in Vienna there is one car per three people, in Ljubljana per 2,1 people. (Mičić, 2000) The ratio of public and private transport in the capital

city is 20 to 80 in favour of private transport vehicles (in European urban centres the ratio is almost equal, i.e. 50:50). (Štravs, 2000: 45).<sup>[17]</sup>

Spatial systems with poorly developed public transport services have less flexible time-space networks, thus diminishing the variety of possible mobility modes offered to the individual. Because of limited possibilities or poor public transport services there is less diversification of mobility patterns, which could stimulate economic activity of the third and fourth sector. Fields such as retail, catering, information services, public services, cultural offer etc. are very dependent on possibilities offered by various public transport networks. The higher the flexibility of networks or transport infrastructure, the better is the offer of the city as a whole, and a better foundation for economic development. The system's flexibility is determined by variety or elasticity of the individual's »time-space geography« (Hägerstrand, 1975), which is tied to transport possibilities. The more advanced the offer of transport services, the more elastic becomes the time-space geography and accessibility to urban offer increases.

Lately most large, developed, modern European cities are the settings of tough competitive battles between city centres and their peripheral areas in their fight for more visitors. Large shopping centres on city edges are very quickly adapting to daily habits and consumer practises. They rely on (auto) mobility patterns that emerged from modernist ideas about urban development (they have adequate quantities of parking space, they lie close to highway junctions etc.). On the contrary city centres cannot adapt their safeguarded historical structure to daily needs of »car-oriented consumers« but need well-developed public transport, which can provide better individual flexibility in an individual's mobility network (figure 1).

The city centre has other advantages, which can be found in its richer ambiental (aesthetic) context and can be connected to the individual's identity representations of city. Because of its singular ambiental setting that grew out of history, the city centre is a kind of city's status symbol. In view of present conditions and particular needs this aesthetic quality isn't enough to attract wider publics; therefore a city centre cannot survive without massive financial investment in better public transport services, which could offer attractive alternative methods for access, besides the quintessential car.

#### 4. Conclusion – untapped potentials of modernism and transition to »late modernism«

If by emphasising higher efficiency and functionality of traffic (dismantlement of tramways and full support for motorised traffic) modernist thinking was anti-street and anti-urban, contemporary post-modern ideas about city try to merge pre-modern and modern ideas. By stressing the role played by pedestrians that have good access to public transport, post-modern ideas focus on flows of people that can move about the city without using cars. Furthermore we cannot speak about diminishment of traffic density in cities, but about limitations for certain types of transport, i.e. cars, and simultaneous encouragement for public transport and »pedestrian traffic«. The quest for an optimal mobility pattern, which can improve spatial accessibility for a wide and hete-

rogenous range of people, has become the key norm of post-modern physical planning, which is oriented to safeguarding urbanity and high quality of life in cities.

In Slovenia post-modern physical planning norms are still an unattainable goal. Thus physical planners prefer to rely on modernist thinking about urban functioning. Short-sighted limitation of car traffic, which actually represents the only transportation vehicle supporting present city life, without improving alternative public transport systems, is a typical modernist, i.e. idealised and radically utopian method of solving problems, which is furthermore devoid of detailed analyses of consequences on future development of the city itself and its urban region. Diminished intensity of primary transport modes usage can imply limitations in access for people, goods, information and capital. In this case measures, such as: excessive widening of pedestrian zones, organising one-way roads for car traffic, increasing parking fees and other proposals that emphasise the importance of pedestrian flows in city centres, would be counter-productive and limit future development of the city.

Jakhel (1979) mentions that amongst the most common experiments for revitalising city centres during the sixties and seventies of the 20th century, were pedestrian zones, which should help accelerate development of urbanity in city centres. Pedestrian zones were only partially successful since planners, by establishing »non-traffic« zones in sensitive urban areas (traffic nodes and parking spaces) also provided barriers that prevented accessibility by cars, thus discouraging drivers (people) from venturing into city centres. Since the entire spatial system of Slovenia is very much dependent on car traffic, excessive hindering of such accessibility, without simultaneous provision of good public transport services, would inherently mean diminished attraction of city centres for residents and visitors. Pedestrian flows and suitable public transport are two faces of the same coin that are indivisibly joined and are the basis for any future development of urbanity in the city centre of Ljubljana.

Because of the strong entrenchment of spatial planners in modernism, instead of speaking about possibilities for a »post-modern shift« in physical planning, it would indeed be better to speak about transiting from modern to »late modern«. (Giddens, 1990: 109-144) Authors such as Giddens claim that modernism has far from exhausted all its emancipation potential, which has to be re-established and strengthened. Late modernism is an attempt at revision, whereby the positive properties have to be preserved and the negative put aside. The idea of late modernism, which strives for safeguarding of the »belief in progress« and need for constant improvements of quality of life in cities, is very similar to the concept of »dialectic utopianism«. (Harvey, 2000: 173-183) According to Harvey dialectic utopianism is the only method of physical planning, which can, under conditions of flexible accumulation of capital, successfully control issues that emerge from unequal distribution of economic resources in urban areas.

The essence of dialectic utopianism is in the dismissal of precisely defined utopian planning goals and transition to utopianism, which is »seen as a process, rather than materialised spatial form«. (2000: 173). Harvey warns that so far all radical utopian projects that had highly devised goals failed in the course of implementation or were confounded by constant redefinition of essential goals. Utopian spatial planning goals are much too often perverted because of compromises

made with key players, the societal stakeholders.<sup>[18]</sup> Materialised spatial utopias have to constantly negotiate with »spatial properties and spatial geographies« (2000: 180) that master the certain space. Because of constant negotiation concerning spatial development, dialectic utopianism has to be devised, which is truly »temporal-spatial« (2000: 182), i.e. joining time and space into a single package that isn't separated into two different entities, as was characteristic for classical (modernist) utopias. In attempted realisation of classical utopias time was always linear (measured by distance of the goal), whereas time in the dialectic utopian concept is cyclical and constantly coordinated with the spatial condition.

Therefore the embarkation point for spatial planning is »utopianism of small steps«, and furthermore as an »experiment, which in fact cannot succeed, but nevertheless remains the constitutive element of planning« (Kos, 2002: 29). Utopianism of small steps enables games and fantasizing, which are increasingly pushed aside by rigid formal rationality. In conditions of increasing intensity of flows of people, information, goods and capital, fast and often chaotic spatial changes occur, thus utopian dimensions of physical planning are inherently necessary »exercises in style«, which can point out directions for solving ongoing problems in cities. Concerning the increasing crisis of legitimacy in planning it seems that »functional utopian thinking« (Wallerstein, 1999) has large potential, which resides in the possibility of activating social-critical potential amongst the publics and offers support for advocates of public interest.

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#### Notes

- [1] Only in cities did the exchange of private property – commodities attain a sort of power and attraction, which is different from the natural or organic bonds between man and earth or ownership of land. »The distinction between cities and villages can be described as separation of capital from land ownership: as the birth and development of capital that is independent of land ownership and has its origins in labour and exchange«. (Wittfogel in Jakhel 1979: 95).
- [2] By reproduction of work force, knowledge and work energy Castells implies the maintenance of the extant production system that brings economic benefits. Moreover, it is the preservation of extant production relations, which are applied to increase economic capital in cities.
- [3] Berman (1988) uses modernism to mark discussions about changes in perspective and attitude, which accompany modernisation, while Lash (1990/1993: 130-145) ties modernism as a thought pattern to terms of instrumental rationality, anti-rationality and substantive rationality.
- [4] The issue of urbanity concerns space as a social dimension and encompasses emotions, coincidence and possibility, complexity and diversity, as well as coexistence of contradictions in the same place. Urbanity cannot be objectivised and discussed only by particular segments. The street spectacle, which describes urbanity in this article, is therefore only one of its possible descriptions.
- [5] One of the more glaring examples is the Federal Highway Act adopted in USA in 1956. Many authors (e.g. Jacobs (1994/1961)) describe how the national act surely accelerated construction of highways and gave economic impetus to development, but simultaneously triggered the greatest, unstoppable process of suburbanisation and environmental degradation in USA history.
- [6] The level of *automobilism* is calculated from the ratio between number of inhabitants and increase in number of cars from the last and previous year.
- [7] Because of their dependence on automobile voyages, Urry (1999) coined western civil societies as »automobile societies«. (ibid.)
- [8] Explicit separation of spatial functions on large areas, especially in USA, has been termed »zoning« (Pacione, 2001), which demarcates the system for regulating land use.
- [9] Of course there are many other factors that can suddenly cripple a developed transport system (e.g. oil crisis and fast increase of prices of oil derivatives).
- [10] In the period between the wars there were only 31 towns in Slovene territory recognised by the government. (Lah 1999: 14).
- [11] Important and profitable economic branches were the railway (connection Vienna–Trieste across Slovene territory) and public transport in cities, after all, the electric tram in Ljubljana was for most of its existence owned by foreign companies (Siemens & Halcke, Siemens–Schuckert (ibid.)).
- [12] In its first year of operation in 1901 the tramway carried more than 330.000 passengers; by 1930 the quantity grew to 5.447.000 and in 1932 already exceeded 6.786.940.
- [13] The tram in Dubrovnik for example had two sections (the first for upper and second for lower social classes).
- [14] As late as 1985 Slovene trunk bus carriers operating 3369 buses catered to around 307 million passengers (Stamejčič, Stergar, 2004: 1); five years later the number of passengers dropped to 280 million and 121 million 1995 and 58 million in 2002 (graph1). In the period 1985–2002 the number of buses was reduced to 1769, while the number of passengers carried by buses diminished by 84 percent (ibid.).
- [15] In Slovenia the share of urban population is about 55 percent, while in other west European countries (e.g. Belgium, almost 97 percent, Germany, 96 percent, Great Britain and the Netherlands, between 90 and 93 percent) and east European countries (e.g. Czech Republic, almost 73 percent, Slovakia, 69 percent, Poland, 61 percent) the share is higher. (More details in Klemenčič 2001, Pacione 2001, UN 1996).
- [16] The spatial system of Slovenia is becoming increasingly dependent on car traffic, implying greater bondage of inhabitants to private transport and consequentially adaptations of the settlement system to new dominant types of transport. In conjunction dispersed settlement areas with low population densities are being built near highway exits (more in Bačnar, 2002).
- [17] More in Uršič, 2003.
- [18] The compromise between key societal actors represented by various (economic, political) interest groups is certainly paradoxical, since utopian projects are in fact the vehicle offered to limit their power, which is seen as the obstacle in spatial development.

#### List of illustrations:

**Graph 1:** Number of registered private cars in '000 (1970–2003) Source: (1990, 1995, 2000, 2003). Statistical yearbooks 1990, 1995, 2000, 2003, Ljubljana, Zavod Republike Slovenije za statistiko.

**Figure 1:** Visions of the tram-based public transport system in Ljubljana (Dalmatinova Street) Source: (2002) *Lej ga, tramvaj! Oddelek za urbanizem Mestne občine Ljubljana*. [http://www.renderspace.si/index.php?get=34&task=Multimedija&id=72&active= \(15.11.2006\)](http://www.renderspace.si/index.php?get=34&task=Multimedija&id=72&active= (15.11.2006))

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Translated by Ivan Stanič.