

enhance QoL. The conclusion is therefore that this is a field that needs to take a closer look at QoL only then will we be able to monitor, predict and improve QoL.

Prof. dr. Ralf Risser, Factum OHG, Austria

E-mail: ralf.risser@factum.at

Prof. dr. Karel Schmeidler, CDV-Transport Research Center Brno,

Czech Republic

E-mail: Schmeidler@cdv.cz

Dr. Linda Steg, University of Groningen, Department of

Psychology, the Netherlands E-mail: I.steg@ppsw.rug.nl

Sonja Forward, National Road and Transport Research Institute,

Sweden,

E-mail: sonja.forward@vti.se

Prof. Lucia Martincigh, Di.P.S.A. -UNIROMATRE, Faculty

of Architecture, Rome, Italy E-mail: martinci@uniroma3.it

For literature, references and sources, turn to page 39.

Roberto ROCCO

Towards a polycentric metropolis

Global strategies and unequal development in São Paulo

1. Introduction

This paper aims at describing current trends in urban transformation in São Paulo, the largest metropolis in South America. It presents evidence on the role of the public sector in promoting infrastructural adjustments in order to reinforce the role of the agglomeration as articulator of national and global flows of production, information, knowledge, finance and services. It introduces evidence that such strategies reinforce polycentricity, but also socio-spatial fragmentation, through selective investment in infrastructure in specific areas of the metropolis.

Our hypothesis is that, from a purely neo-classic economic point of view, global cities do not *need* to have homogenous development and equal access to urban networks and public services in order to promote economic growth. Economic growth is understood here as firms' increasing returns, therefore economic growth and social development are not necessarily synonyms. Economies of agglomeration can thrive in highly fragmented spaces. Moreover, differences in the provision and accessibility to services do not necessarily interfere in the role of cities as articulators of production and consumption. An "archipelago" of highly developed

centralities highly connected between themselves and between other »global places« may trigger economic growth, but might not bring comprehensive development. Moreover, differences in the provision of services and infrastructure may work as propellers of real estate appreciation, as comparative advantages are excessively concentrated in specific sites, creating areas highly prized by certain economic agents and maximizing returns in real estate development, reinforcing existing polycentric structures.

The distinction between growth and development is important in order to analyse public policies that allegedly promote both, while in reality stressing only the former.

2. The economic core of Brazil

São Paulo is a metropolis of superlatives. It is the largest urban agglomeration in South America, with roughly 18 million inhabitants (IBGE, Brazilian Institute of Geography and Statistics, 2005). According to Habitat-UN, it is one of the largest urban agglomerations in the world, after Tokyo, Mexico City and New York (UN, 2006)

The »Grande São Paulo« (Greater São Paulo Area) is a large metropolitan region located in the Brazilian federal state of São Paulo. The Metropolitan Area of São Paulo (MASP) is a politically recognized planning and administrative unit. It is the largest of 25 official Metropolitan Regions in Brazil. The MASP comprises 39 municipalities, with a total area of 8,051 km². The build-up area covers 2,139 km², stretching approximately 70-80 km in the East-West Axis and 50 km in the North-South axis.

The population density is not homogenous throughout the metropolis, but the average is 2,631 inhabitants/ km2. The core municipality (São Paulo) has a density of approximately 7,171 inhabitants/ km².

The MASP is indisputably the financial and economic core of Brazil. The region's GDP is approximately 45% that of the federal state and 15% of that of the country (IBGE, 2005).

The region is home to one of the most diversified industrial complexes in Latin America. The high level of articulation between various industrial sectors and the highly advanced services sector is evident, especially in the automobile industry. The most important industrial sectors are chemicals, automobiles, food and drink industry, heavy machinery, publishing, electrics and plastics.

The service sector employs 51% of the working force, that is, more than 2 million workers. The main branches in the service sector are telecommunications, technical producer services, informatics, postal services and general producer services. São Paulo is also an international hub for advertising and marketing. Commercial activities employ more than 1 million workers and generate 8.8% of aggregate value in the state. Large shopping centres are a common feature in many municipalities of the MASP. The city of São Paulo alone has 41 large shopping malls that employ more than 100.000 persons (ABRASCE, 2006).

The MASP has one of the most comprehensive transportation systems in all Latin America. The region is connected to the seaside and to the vast South-American hinterland by numerous highways and train lines (for commodities only) and is served by three large airports.



One of the most important accomplishments in the last decades was the organisation of a comprehensive transportation system, consistent with the vision of the area as a coherent urban region. This is the result of policies carried out at the federal state level, with an emphasis on the integration of the metropolitan trains network (operated by the Paulista Company of Metropolitan Trains, CPTM), the subway system (operated by The Metro Company of São Paulo, Metrô) and the bus and trolleybus lines operated by the metropolitan company for urban transportation (EMTU). All three companies are private-public companies whose main stockholder is the Metropolitan Transportation Secretary of the State of São Paulo. Municipalities have the control over other kinds of transportation, mainly bus lines and cooperatively administrated van lines. The level of political articulation between the different municipalities is poor, what makes the articulation of large infrastructures and networks a task for the Federal State.

The metropolitan transportation system, together with a comprehensive road system, actually gives the MASP much of its coherence as an urban region. Commuting is intense in the region and between the MASP and the other metropolitan and proto-metropolitan areas forming the macro-metropolis around it (an urban agglomeration of approximately 30 million people). However, although there has been much improvement, the metropolitan public transportation system is deemed inefficient in the distant peripheries, especially those served by an outdated train system. There are black holes and whole areas are flimsy connected to the main agglomeration, making daily trips difficult. This is a result of lack of coordination between municipalities, but also the consequence of uneven development, resulting in heterogeneous and fragmented space.

2.1 A heterogeneous and fragmented space

The MASP, far from being a homogeneous agglomeration, is a collection of very different municipalities, concerning their extension, population, level of development and economic activities. The richest municipality is São Caetano do Sul, a former industrial city to the southeast of the core city, with a per capita GDP of US\$ 16,500 in 2003 (IBGE) and the poorest municipality is Francisco Morato, to the north, with a GDP of approximately US\$ 900. Some municipalities are heavily industrialized (Diadema: 64% of employment in industrial activities, 2000, EMPLASA) whereas others rely almost completely in agriculture (Biritiba: 70.7% of employment in agriculture, 2000, EMPLASA) or services (Juquitiba: 76.1% of employment in services).

The socio-economic heterogeneity of the MASP can be understood in the social vulnerability map below. The »Social vulnerability« index is a collection of socio-economic indicators that allow for the identification and spatial location of groups more vulnerable to poverty.

The largest and most important municipality in the MASP is the city São Paulo (*São Paulo Capital*). The municipality of São Paulo covers 1,500 km² subdivided in 31 »sub-prefeituras« (sub-municipalities), composed by a total of 96 districts. With approximately 10 million inhabitants in 2005 (IBGE), the core municipality gathered 55% of population of the MASP.

Apart from sheer population growth, the MASP's considerable territorial extension is a product of a particular land-use pattern that has been strongly influenced by land speculation.

This pattern has ensured that the built-up area expanded in a more or less unchecked way, leaving large areas of undeveloped space between urbanised patches. This process has increased the price of areas with access to urban technical networks and has helped accentuate social segregation by creating marked imbalances in the provision of public services and infrastructure over the territory. There is an accentuated social divide between the rich south-western vector of the metropolis and its poor outskirts. This social divide can be seen through the comparison of the United Nation's Human Development Index applied to São Paulo's districts (below).

Due to unchecked and unparalleled demographic growth in the second half of the 20th century and huge social disparities, a large part of the metropolis is built outside official urban regulations, resulting in a mixed scenario, where the "clandestine city" is intertwined with the "official" planned city (Grostein, 1987).

According to research conducted by the Department of Control and Subdivision of Urban Land (RESOLO, 2003), furtive occupation of large areas and illegal real estate developments occupied an estimated area of 338.8 km² (approximately 22.5 % of the total area of the municipality) in April 2002. Around 3 million people lived in these areas (29% of the estimated city population). These numbers do not reflect the true amount of illegal land occupation in the city, as it does not account for illegal slums and multi-family tenement houses.

The characteristics of such illegal occupation may vary, but they generally follow the same scheme: a large piece of land is illegally divided into small plots and sold for low prices to people unable to acquire land in the formal market. Urbanisation in these cases is precarious and sometimes there is a total lack of basic infrastructure.

New plot owners generally build their own houses, with the aid of relatives and friends. Illegal urban expansion is generally located in peripheral areas of the core municipality and in some of the low-income surrounding municipalities.

3. Beyond the Radial Model of expansion

For Santos (1996), the introduction of the motorcar early in the 20th century determined a radial model of urban growth. The radius of the built-up area did not exceeded one kilometre until 1870, but the introduction of the motorcar (1910's) and buses (late 1940's), opened the possibility for accentuated urban sprawl and a more complex urban structure started to emerge, following the logic of occupation described above.

From WW II to the 1980's, São Paulo could be said to correspond fairly well to the »multiple-nuclei model« proposed by urban geographers Harris and Ullman (1945). Harris and Ullman addressed the structure of the mature American industrial city, but the model fits the urban development of São Paulo, because of its explicit acknowledgement of the importance of the automobile and the impact of major arterial highways and expressways on the urban structure.

Harris and Ullman's model accounts for the rapidly expanding complexity of large cities during the mid-20th century, where employment centres generated their own patterns of



residential structure at a more local level, resulting in a complex pattern of overlapping residential, service and industrial zones.

What makes São Paulo a distinctive case is the logic of occupation of land, dominated by three processes: 1. punctual planned intervention, 2. unplanned occupation and 3. land speculation. Public investment in roads and freeways, largely based on the model adopted by Robert Moses in New York and "transplanted" to São Paulo (Caro, 1975), has been much concentrated in the South-western sector of the city. This is a result of the concentration of public and private investments in that area, following a historic trend for the dislocation of the wealthy sectors of society towards the west, whereas industrial activities occupied the eastern sector of the city, along the train lines. This trend created an "island of richness" in the south-western part of the city, amidst a "sea of poverty", mostly concentrated in the eastern and southern sectors (Meyer et al., 2004).

In the beginning of the 21st century, continuous urban development occupies the best part of the municipality and overspills to the contiguous municipalities, forming a dense and extensive urban mass. Radial or multiple-nuclei development models are no longer enough to explain the complex urban structure resulting from that process.

In the case of São Paulo, the sheer size of the metropolis made the development of multiple service and employment centres clearly indispensable. This resulted first in the decentralisation out of the Central Business District and later in the development of multiple centres of service, consumption and work, while the old urban core was drained from much of its former economic vitality. This process was coupled with the absorption of smaller municipalities and the incorporation of their centres as services and commercial sub centres in São Paulo.

The development of São Paulo as a polycentric metropolis corresponds to the »centrifugal mode« described by Champion (2001) and used by Lambregts (2006). It later includes features from the »incorporation model«, with the absorption of middle and small sized cities into the urban mass.

In fact, the Greater São Paulo Metropolitan Area is characterised by the exacerbated growth of one single municipality (São Paulo) between the second half of the XIX century and the last decades of the XX century, followed by the decentralisation of industrial activity in the second half of the XX century and a dramatic decrease of population growth in the core municipality. The latter managed meanwhile to keep control over productive processes throughout the Brazilian territory.

This process is related to the role of the city as the place where various kinds of networks have been articulated through 450 years of history. Not merely transportation and communication networks are important here (the city's first function), but also business and service networks. Particular geographical, social and political factors allowed agents operating in São Paulo to keep a *quasi* monopoly of certain networks at different times in history (e.g. coffee exports or automobile production). Through time, agents controlling certain networks slowly abandoned their monopoly in order to assume new roles or added more dynamic activities to the existing ones, changing the configuration of networks operating in the city (e.g. coffee exports are still largely managed from the São Paulo Commodities Stock Exchange and a large part of the coffee production of the State of São

Paulo still passes through São Paulo before reaching factories and the port of Santos, but coffee exports are no longer the most dynamic sector of the economy).

Although networks are geographically defined, they are socially produced and historically determined. Networks are not static, they are constantly changing and new spatial configurations based on these networks are constantly emerging. At the intra-urban level, the sheer size of the agglomeration made the existence of ever more extended functional and spatial networks necessary. At the inter-urban level, the role of São Paulo at the head of the Brazilian productive system has remained unaltered since it was established at the beginning of the XX century, when the city experienced a first wave of industrialisation, thanks to the accumulation of capitals issued from coffee plantations in its hinterland. At the inter-urban level, we can also observe the constitution of a hierarchical urban system with main nodes in the

At the intra-urban level, extended networks had to be organised, promoting the appearance of a nodal hierarchy, with the emergence of "main nodes". This happened in order to render the networks reasonably manageable and functional over an extended territory. One good example of this process is the existence of various bus terminals in many parts of the municipality. Apart from three large intercity bus terminals, the city has 24 large local bus terminals, very often connected to train stations and the underground system. These bus terminals attempt to articulate an incredibly extensive network of 990 local bus lines that transport 2.5 bil-

vast Brazilian territory.

Another sign of the necessary development of hierarchic and polycentric spatial organization is to be found in new forms of governance and political organisation of the vast urbanised territory.

lion passengers per year (SPTrans, 2006).

In the core municipality, "sub-municipalities" replaced city "regional administrations" in the early 2000's. This happened in face of the necessity to de-centralise decision making. Sub-municipalities were introduced as semi-independent administrative units; they enjoy a high degree of independence in deciding where to place investment in local infrastructure and services. They are also in charge of formulating "local master plans", which are meant at guiding local development strategies, complementing the overall master plan of the core municipality. "Sub-mayors" are indicated by the mayor of São Paulo (although there is an ongoing debate about whether they should be elected). The sub-municipality master plans were approved in 2004.

However, sub-municipalities are very large administrative divisions, comprising from 250,000 to 500,000 inhabitants, which makes it necessary to subdivide them even further into 96 districts, sometimes with more than 100.000 to 200.000 inhabitants. Urban planners claim that districts are still too large and a legal definition for smaller administrative units has been sought.

4. The Consolidation of a New Corporate Axis

The existence of a polycentric structure has produced a complex scenario for the development of business clusters. According to the *Bolsa de Imóveis de São Paulo* (São Paulo Real Estate Stock Exchange), São Paulo currently has



nine dynamic areas for commercial real estate development. These can be grouped into four large business districts (DATABOLSA, 2002).

Roughly speaking, these regions correspond to the various economic cycles the country and the city went through during the 20th century. These regions reflect economic as well as socio-cultural changes in their morphology and in the position they occupy within a changing urban structure. For each new economic phase, a new dynamic centrality was developed.

The areas are:

- 1. Centro (the old business district and the historical core of the city). Despite its evident decay during the 1970's and 1980's, when business and inhabitants fled to new developed districts and suburbs, the 1990's have brought new vitality to the region. It was perceived that the region embodied the metropolis ethos, housing many of its most important historical buildings. Great efforts were made to renovate and modernise its structure. The area houses important institutions, like the São Paulo Stock Market Exchange (BOVESPA) and the São Paulo Commodities Exchange (IBMF).
- 2. The Paulista Avenue/3. Jardins: Inaugurated at the very beginning of the 20th century and home to the coffee and industrial elites of the city until the middle of the century, it started attracting high-rise flats already by the end of the 1940's. As the economic elites moved further to the West, escaping an increased congested downtown, Paulista Avenue slowly took the role of an important commercial artery (1960's), concentrating most of the metropolis' banking sector's main offices (1970's) and high level corporate services (1980's). The congestion of infrastructure and lack of land for incorporation produced some decay, but it still sustains itself as the main avenue of the city.
- 4. The Avenida Faria Lima, 5. Vila Olímpia, 6. Itaim Area: The opening of the Faria Lima Avenue took place in 1968, but only part of the original project was completed then. The consolidation of urban development around it since then presented a major problem when projects to extend the avenue were finally approved in 1995. The Avenue was extended at its two ends, at the cost of approximately US\$110 million, of which US\$100 million were used as compensation for the expropriation of former landowners. The Faria Lima Avenue region today concentrates most of the high level real estate investment and houses the most advanced high level corporate service companies of the country, apart from the greatest number of small and medium sized »dot com« enterprises. Plans to connect it to another important avenue to the South (Berrini) in 1995 encountered great resistance from civil society and were postponed. Recently, plans have been approved and the connection is being made, thus consolidating the corporate axis already in existence.
- 5. The Avenida Berrini, 8. Avenida Nações Unidas Area: The Nações Unidas Avenue is part of the incomplete Peripheral Freeway System (Marginal) around the most consolidated part of the metropolis. This peripheral freeway was first conceived by Robert Moses in association with the municipality, in the 1950's (Caro, 1975). The system is today completely congested, due to the enormous growth in the number of motorcars, approximately 6 million automobiles in 2001 (Scaringella, 2001). However, its

western area concentrates large investment in real estate developments (shopping centres, business centres, hotels, parks, high quality high rise buildings, etc).

The part of the system that runs along the River Pinheiros actually crosses some of the most well-off districts of the city and is becoming the centre of what some planners call the »Nova Cidade« (the New City), a highly developed area of the city which concentrates most of the investment in infrastructure of all kinds.

The two last areas (Faria Lima/Vila Olímpia and Berrini/Nações Unidas) constitute what we choose to call here the »New Corporate Axis« of São Paulo. This new axis was formed entirely on public investment, especially through large investment in infrastructure and the redesign of the road system. The region was the object of two »Large Urban Projects« (LUPs) which have settled the model for partnership between the public and the private sectors in São Paulo: Urban Operation Faria Lima e Urban Operation Água Espraiada. Briefly, the two Urban Operations involved the prolonging and enlargement of two important avenues, creating great opportunities for the real estate market.

This is a very typical phenomenon in metropolises located in developing countries. Because public authorities are unable to plan the development of large sectors of the metropolis at once, urban transformation happens mostly through the opening of large avenues or along the lines of the underground. These developments are often »linear«, as opposed to the development of coherent territorial units, typical in countries in the developed world, where the public sector generally exerts a tighter control over land and is able to plan and develop coherent ensembles.

The new centre for dynamic activities of the tertiary sector in the city of São Paulo is not a regular centrality, but a linear agglomeration of high-level office towers, flats, hotels, convention centres, shopping centres and other facilities that structure itself around the valley of the river Pinheiros, in the wealthy south-western sector of the city.

5. The public sector as motor of urban transformation

In the context of extremely rapid changes brought by flexible capitalism, the city administration stands as the most flexible and perhaps the only »legitimate« actor able to take quick decisions in order to match the spatial requirements of firms.

The new processes of material reproduction have resulted in new paradigms of urban development and have led to profound changes in the city's administration. "The local power becomes an "entrepreneur" power, not limiting itself to the mere function of manager of urban services [...]. Such political choices lie simultaneously on the need to keep open connections with the world financial and economic circuits" (Davidovich, 1993:314).

The effort to keep such "open connections" with global circuits, which may theoretically result in direct investments, allocation of jobs and transference of technology, takes shape in the pragmatic actions taken by local administrators in order to adapt the metropolis to the new productive scenario and make it more competitive. In a general way, strategic planning advocates that "global cities" must de-



velop their »comparative advantages« and create conditions for agglomeration and the constitution of »clusters« of innovation and productivity. The »comparative advantage« concept was first pointed out and largely publicised by Porter (Porter, 2000) at the Harvard Business School, among others. It was first understood as a corporate management tool, but was quickly incorporated by city planners and urban managers as an important tool for the adjustment of cities to an emerging economic scenario of simultaneously dispersed production and concentrated command.

One of the most powerful notions in regional economics and economic geography is the notion of "agglomeration economies" (Moulaert and Gallouj, 1993: 91). Agglomeration economies are basically economies that are dependent on the spatial proximity of economic activity (Parr, 2002:153). Polčse (2005:1432), defines agglomeration economies as "the productivity gains derived from the geographical clustering of firms and people".

In short, it is believed that clusters of competitiveness and innovation can generate the necessary impulse for the increase of economical dynamics, thus producing a beneficial impact for the society »as a whole«.

For Levy (1999), in order for this to happen, there must be synergies between a large number of activities, which should be physically close to each other, allowing the permanent exchange of knowledge and information and allowing for the emergence of innovation. Proximity also allows faster accomplishment of agreements between sellers and buyers, according to the theory that face-to-face interactions (Storper and Venables, 2003). In his definition of »innovation clusters«, Porter also includes universities, quality control agencies, »think tanks«, professional training associations and commercial associations. Those institutions ought to produce specialised training, education, information, research and technical support, allowing for greater speed and efficiency in synergies between economic agents.

This combination of factors, according to Levy (1999), explains the »renaissance« of many global metropolises. Global cities presumably accommodate networks that help generate creativity and innovation. Such networks would allow permanent recombination and change, following the essential need for flexibility in today's economical order.

Such line of thought has been appropriated by urban planners and local governments, in the form of strategic plans, nourishing the idea that cities whose networks operate at the global level must be able to compete between themselves. From this point of view, São Paulo can be understood as the place where networks operating in a large area of the South American continent are articulated and managed, in competition with large metropolises that offer similar comparative advantages AND which operate over a similar geographical base: Buenos Aires and Santiago of Chile. The greatest advantage of São Paulo, which cannot be overcome by the other two South American global cities, is the articulation of networks and links in the huge Brazilian market, over which São Paulo reigns.

Urban transformation following the appearance of flexible capitalism and globalisation is irrevocably attached, in the Brazilian case, to the penetration of transnational corporations and the response given by local administrations to their structural requirements. This response has often translated itself in the form of Large Urban Projects, such as

Faria Lima Avenue (area 4). This kind of large infrastructural intervention is made in order to provide places where business can agglomerate, but the preponderant factor seems to be concentrated and controlled real estate appreciation. This exaggerated concentration of resources increases returns for landowners, investors, developers and clients, while other sectors of the metropolis are not optimally occupied or developed, emphasizing spatial and social fragmentation.

6. Conclusion

Heavy public investment has been allocated to certain areas of the metropolis, leaving other parts of the metropolis without poor or any investment. This created marked imbalance in the provision of services and urban technical networks, which did not affect the role of São Paulo as the head of the Brazilian productive system and the main South American »global city«. From the standpoint of productivity and competitiveness, the metropolis does not »need« to be socially or spatially homogeneous, as »agglomeration economies« can take place in an archipelago-like configuration. The metropolis becomes in effect increasingly heterogeneous and discontinuous, both spatially and socially. Heterogeneity in the form of deep unevenness in the distribution of urban services, infrastructure and accessibility is a tool for land and real estate appreciation, because comparative advantages are made scarce and economic agents have to compete for relatively few spots, inflating the price of real estate in a very uneven form.

This is consistent with Robert Kurtz's theories on the »archipelago« of developed areas within a territory, not necessarily interconnected, and not necessarily spreading wealth through the whole.

The processes described are questionable in the light of the analyses of social patterns in the metropolitan territory. Economic and social sustainability become central themes for further and equitable growth. Third World Metropolises must change to remain competitive in the global arena, but they have to do so combining the "adaptation" of their spatial structures and the solution of their own internal problems and inherited contradictions. As the case of São Paulo suggests, these contradictions are paradoxically intensified by the effort of adaptation to the new global scenario.

Roberto Rocco, architect, TU Delft, Bouwkunde, Department of Urbanism, Chair of Urban Renewal and Strategy E-mail: rocco@bk.tudelft.nl

Figures

Figure 1: São Paulo in relation to other South American metropolises. Map by R. Rocco. Data sources: NASA 2002, UN Habitat 2006, IBGE 2006.

Figure 2: The Metropolitan Area of São Paulo and its political components (2004). The municipality of São Paulo (highlighted) is the largest one and where urbanisation is more intense. Large urbanised areas are also to be found in the northeast of the main municipality (Guarulhos) and the southeast (the ABC cities, where the automobile and chemical industry have agglomerated. Map: Roberto Rocco. Satellite photo source: NASA (2004)



- Figure 3: Satellite photo of the Metropolitan Area of São Paulo, with infrastructure highlighted in white (highways) and yellow (railway). Source: Meyer et. al (2004:121).
- Figure 4: Schematic map depicting the Metropolitan Transportation System, with the integration of the underground system (Metrô), metropolitan trains (CPTM) and trolleybus (EMTU). Regular bus lines are mostly operated by municipalities and, due to their number, cannot be represented at this scale. Source: STM (2005)
- Figure 5: Social Vulnerability Map. Darker colours indicate higher vulnerability to poverty, including low literacy, unemployment and violence indexes. Municipalities in white have either no data or very sparse population. Source: SEADE/ PMSP (2004)
- Figure 6: United Nations Human Development Index applied to São Paulo's districts. Various social and economic indicators are used in order to produce the UN IDH, which is generally used to measure the human development of countries. In this case, the same indicators were used in order to compare human development in the various districts of the core municipality. There is clearly an »island of richness« in the south-western vector of the city, which has indicators comparable to those found in European countries. Only 3.46% of the total population lives in these areas. On the other hand, the majority of the population (55, 38%), lives in areas where socio-economic indicators are comparable to those found in Africa. Map by R. Rocco, based on data produced by the Secretary of Development, Labour and Solidarity, Municipality of São Paulo, 2002.
- Figure 7: The »Clandestine City«. Irregular Land Occupation in the City of São Paulo. Data source: PM-SP (2002) and Brazilian Census (IBGE, 2000)
- Figure 8: Lambregts' »alternative paths for the evolution of polycentric urban regions« (Lambregts, 2006: 116, apud Champion, 2001: 665)
- Figure 9: The city of São Paulo is divided in 9 regions, 31 sub-municipalities, 96 districts and hundreds of »bairros« (neighbourhoods), the smallest administrative unit. Source: SEMPLA (2004).
- Figure 10: Network of Attraction Poles and Centralities in the City of São Paulo. Attraction poles refer to large urban infrastructure or urban facilities, like commuting points (inter-modal stations or large bus, underground or train stations) and large shopping centres. "Centralities" refer to business or commercial nodes, either planned or the result of the incorporation of neighbouring cities. Source: SEMPLA (2002).
- Figure 11: The evolution of business centralities in the city of São Paulo, according to the approximate time period of greater dynamism. The most dynamic business centre has made a loop of approximately 14 km towards the South-West, from the old historical core to the banks of River Pinheiros. Map by R. Rocco. Satellite photo source: NASA, 2004.
- Figure 12: Main Areas for Commercial Real Estate Development in the City of São Paulo. Map by R. Rocco, 2006. Source: Bolsa de Imóveis do Estado de São Paulo (2002).

For references and literature turn to page 51.

Luka MLADENOVIČ

Regeneration of the city: The Tobacco factory in Ljubljana

More elaborate preparation, better order, success assured?

1. Introduction

On May 1, 2004, after more than 130 years, the manufacture of tobacco products came to an end at the Tobacco Factory Ljubljana (Tobačna Ljubljana). Thus ended a long period of uncertainty for one of once the most important and for many most characterstic Ljubljana's factories.

The shutdown may be understood as a result of two wellknown trends. On the town scale it is a trend of shutting down or moving out industrial facilities from the immediate vicinity of the town centre. The main reasons for this are incompatibility of activities with other urban functions and inflexibility of locations due to the lack of space for further growth. Looking at the bigger picture, it is a trend moving manufacture to the countries with a more low-priced workforce so as to reduce production costs. Such a development comes as no surprise, and it is expected that in the future the few remaining large factories in the town will follow. In the very town centre there has been for years a forlorn abandoned factory »Rog«, which at this time has temporary tenants, but the story of its revival is far from a happy-end. This is why Ljubljana needs an exemplar case of a succesful renegeration of an abandoned industrial area, put to general use of urban public and not restricted to but few users.

In 1871 when the Tobacco Factory Ljubljana was established it was situated in the outskirts of the town, strategically positioned alongside the railway. The available surface was large enough to allow the construction of an entire factory complex, a real small town within town, built in the typical industrial architectural style of the second half of the 19th century. An incessant development and numerous technological innovations introduced during its operation were placing the factory at the very top of European industry.

Since the establishement of the factory the town has spread considerably and the factory complex no longer lies in its outskirts. The location of Tobačna has now been described as a part of the inner city as it is less than ten minutes walk away.

2. An opportunity

It wasn't difficult for the town to recognise the exceptional opportunity brought about by the factory shutdown and renewed availability of such a huge surface. In the past few years several industrial complexes all across Europe have been succesfully regenerated. With their characteristic design and architecture they represent an important part of towns' past. After an appropriate regeneration their aesthetic qualities have become ever more recognisable.