The dynamic dimension of density: towards a «creative role» in urban central place policies

Introduction

In contemporary debate on planning challenges, a central role is devoted to the management of space resources in metropolitan areas whose increasing dominions are going to become more and more physically scattered and morphologically blurred. In professional practice a traditional and clearly defined issue like density, after many decades of undiscerning use and parameter banalization (due to a rather mechanic interpretation of modernism principles), has been focused with new eyes concerning recent urban transformation phenomena and connected interpretation keys. Mature reflections in this "new deal" started in the late eighties with the cultural stream at the basis of what we would have called at the very beginning of the nineties "sustainable development" with a more and more structured profile applied to urban policies. Hence, the renewed attention to density concept as one of the most important strategic issues in order to pursue virtuous, sustainable transformation of human settlements and tackle invading sprawl and waste of land resources.

Sophisticated theoretical contributions and interesting applied experimentations on such a line dealt with the virtuous connection between mobility networks and land use design, with a particular sensibility to the organic interaction of multi-activity zoning, interconnection flows, accessibility and density. Yet, densification patterns following the suggestions of "Agenda XXI" and Aalborg principles were not always consistent to the authentic essence, the "ontological" value of this indicator which should actually go beyond the traditional, reassuring, rational-comprehensive vision, in order to gain the new ambiguous, uncertain, "in fieri" universe of the future urban destiny.

So, density concept and its multiple meanings, roles, functions, uses in urban planning has been vitalized by recent important reflections and contributions (Certu 2002, Amphoux 2003, Apur 2003) that confirm the scientific community interest to explore new theoretical dimensions together with applicative innovation potentialities in disciplinary practices.

The outcomes of such studies and related experimentations strengthen the central role of density as one of the fundamental features in understanding the breathtaking transformation phenomena of contemporary urban realities, both on a technical and cultural level, in order to support the processes of disciplinary renewal.

Nowadays urban planning is searching new strategic and applicative co-ordinates: it's a tendency due to inadequacy of traditional predictive horizons based on a "static conception" of the city, still interpreted as a chaotic summary of monolithic, self-centred, autonomous activities. It's the challenge of pursuing a new "relational space", denying old boundaries and progressing towards the dynamic dimension linked to the complex relationships between land uses and urban flows, asymmetrically located in time and space.

Traditional dimensions for a polysemous concept

Anyway we should not forget that the issue of new horizons for density in urban planning is connected to the innovative contributions coming from the parallel disciplinary dominions traditionally interacting with the sphere of regional and urban planning (geography, economy, psycho-sociology, administrative law, ecology, environmental sciences, etc.). The "polysemous concept" of density is clearly argued by the French school (Certu 2002), underlying four possible semantics of the term, referred to the historical-reconstructive path as well as modern evolution.

The first, we can define as "hygienist dimension" is connected to the residential phenomenology (built surfaces or population density), traditionally linked to the movement of

urban hygienists, as a consequence of the industrial revolution in Europe starting from the second half of 1700 and mostly in the XIX century. Recently, specific recommendations of World Health Organization have been focused on suggesting pilot criteria for urban densities in developing countries. Related strategies are centered on fostering a virtuous balance between the "critical mass" of great cities (whose savage growth process should be managed and rationalized) and rural settlements, emphasizing the integration of the city with the countryside and its environmental and health advantages. On the other hand, in OCDE countries a reasonable densification of compact, accessible spaces - following a selective approach for the metropolitan areas - is suggested, together with a huge limitation of rural space consumption, according to the consolidated guidelines of public health preservation, quality of life and sustainability. It is rather interesting to notice the similarity of these principles with the doctrine of historical urban theories fostered by the great "*maitres à penser*", especially the Modernism message and its legacy in terms of hygienic approach in urban design (air, light, green areas, location criteria, etc.): inhabitant densities, as originally conceived, were often lower than those observed in many ancient textures and neighbourhoods of historical towns.

Another face of the density concept is related to the "the psycho-sociological domain" and its spin-off for urban policies. Historically, important researchers and scholars focused a rich panel of interpretations about possible identities in human intensity relationships. Durkheim' s school defined "social density" as the intensity of human individual relationships moving in the kaleidoscopic features of society. Of course the entanglement of human contacts is directly influenced by factors like population density, urban development dynamics and mobility networks. Cities are places of social density "*par excellence*". Concerning the same dimension, the "perceived density" concept refers to studies of the "Chicago school" developed in the twenties of the last century (Social psychology). Burgess, Park and McKenzie[i] approached urban space as the physical structure for local community identity and, at the same time, as the conflict domain among different social groups. According to these authors it is possible to interpret physical and functional transformations in the city through the idea of "social distance", i.e. the degree of availability of different groups to social contacts: dialogic (and dialectic) keys as symbiosis, invasion, conception, may help us to understand the galaxy of interactions among different social groups living in a specific urban dominion. It's still a topical message.

In the same line Chombart de Lauwe argued that going beyond a certain "human density threshold" can lead to behaviour pathologies. Crowding (or overcrowding) perception (Stokols 1972), increasingly observed in public and private space of contemporary megalopolis, is producing greater or lesser effects on people depending on many issues. In the different urban conditions, tolerance levels of overcrowding are to be defined through cultural, ethnic, environmental, socioeconomic features.

Two other meanings are interacting directly with urban planning: "the physical-geographical and the juridical-economic dimension". The former is focused on the concept of density in connection with the peculiar elements of urban morphology as demographic and activities concentration or sprawl, the latter on soils developing potentialities, expressed by housing or activity FAR (floor area ratio), a parameter fixing the construction rights and, consequently, determining the map of city land values.

Planners and architects are traditionally involved in the geographical dimension of density and particularly in relationships with the comprehensive issue of urban morphology pattern, both in recognition and management. It's one of the most attractive and sensitive themes about disciplinary core, whose concerns are related to crucial nodes of contemporary (and ancient) debate: settlement fragmentation, activity location criteria, main connectivity infrastructures and flows. Differently from the hygienist or psychological interpretation, density here is not aimed to define any threshold "a priori": its purpose is principally cognitive in order to allow the integration of different strategies in city development (mobility networks, social exclusion, urban renewal, "creative economy", urban marketing, etc.).

The fourth traditional dimension is embedded in the juridical and economic issues, directly linked to the real estate games played by public and private actors in urban arena. We shouldn't forget, in fact, that one of the main and virtuous missions of planning is centred on the "mitigation of conflicts" about potential land use development. Regulation of real estate transformations, construction rights and complex relationships between private interest and local administrations are crucial issues in contemporary applied disciplinary dominion and density seems to be an important parameter to manage these dialectics.

So, what type of density for present and future urban metamorphosis ?

Generally speaking, there are a lot of important considerations to be made when determining how the relationship between density and urban phenomenology should be evaluated. These include the question of the best variable to use in representing density as, for instance, the density level at which a city might be regarded as shrinking or sprawling, the scale at which density should be measured and the extent of space over which density should be characterized.

In consolidated planning schemes of advanced economy countries at local, urban and also metropolitan level, a number of variables have been used to represent activity density, most commonly concerning population and housing units or working surfaces and employment.

The scale at which density is studied is important. Depending on the scale of observation – a whole metropolitan area, a district within a city, a neighbourhood – measurements of urban density will look quite different. The geography over which densities should be measured is also contentious. In traditional blueprint practice, density is a variable whereby distribution of different activities (inhabitants, employment, education, leisure, etc.) and connected built mass or floor area ratio have to be related to the surface area of the pertinent plots or to a wider urban area. Hence, the problem (and above all the ambiguity) of a significant identity for the dominion boundaries.

Should disciplinary practices be more confident on the total area of a city in her density evaluation (gross density), or should they omit areas upon which people would not normally reside, such as water, parks, wetlands, cemeteries, industrialized areas, disposal sites, etc. (net density) ?

In western European countries the comparison between "*densité nette*" and *"densité brute",* in the same area or in parallel urban conditions, is rather effective for the compact textures at "*hyper-ilot"* or district scale due to specific morphology conditions, while it is not significant and practically useless in suburban peripheries and metropolitan fringes. Excluded areas can, in the aggregate, amount to a sizeable share of the city. The issue becomes further complicated when we consider that the exclusion of areas such as open water and industrial areas - because of their role in influencing housing costs - might influence measurements of density (Gordon and Richardson 1997a). On the other hand, such bias is probably unavoidable and the negative and positive effects of omitted land uses may balance on the whole anyway. To sum up, we know that density is essential to interpret urban phenomena as concentration or sprawl, but there is little agreement about the appropriate specification of its measurement.

However, contemporary studies and reflections about urban dynamics are following new ways.

New horizons and connected urban issues: time, places, mobility, accessibility

Recent studies and experiences in Europe, connected to innovation methods in operational metropolitan and urban planning, are based on the relationship between "time factor" and city-users gravitation around central places. The issue is about observation of the complex «city users» trajectories, superimposing on the commuting pressure of the other traditional actors in urban scene (residents, students, workers, usual visitors, etc.). Focus is on analysing, evaluating (and, consequently, meta-planning) the intensity of the city spaces,

determined by the attraction of “displacement generators”, poles of excellence with high "relational magnetism". It’s an approach starting from precise observation of «Brownian movements» traced by molecular paths belonging to a kaleidoscopic plurality of people pulsing and pressing on urban public and private attracting poles. Starting from simple considerations concerning the increasing importance of erratic displacements in urban daily mobility (about 65% in advanced economies according to OCDE) it’s almost physiological the intuition of validating the concept of "diachronic density", searching for models and parameters able to represent the dynamic dimension (nearly instantaneous) of the city.

Time considerations have become crucial and strictly embedded in our contemporary metropolitan universe. What about factors affecting time-related approaches, density and mobility ?

Cities have always been sites of innovation and change: nowadays these features are increasingly due to their growing heterogeneity and “multi-polar identity”. In a highly differentiated society with a strong degree of fragmentation in labour, the dimension of “instantaneous time” is becoming increasingly crucial as a way to manage the interaction among personal daily activity programs. New problems are to be tackled with the complexity of tasks and the consequent fragmentation and de-synchronization in the use of time causing new individual and collective costs.

Several factors have been identified as contributors to urban time de-synchronization. The main one is obviously the evolution of life-styles influenced by the economic cycles and cultural metamorphosis of metropolitan communities. The well known “push factors” with residential sprawl and physical enlargement of urban dominion, splintering of work practices and location criteria, increase of “polygonal mobility trips”, diffusion of ICT contribute to unlock the need for contextualization in supply and use of services.

In addition to fragmentation and de-synchronization, contemporary metropolis is increasingly affected by mobility and nomadic populations with a new demand for transportation infrastructure and services. One particularly interesting case is the development of a specific market for aesthetics and symbolic activities as an important part of the economy of places, especially urban places.

Museum	Exhibition	City	Visitors (total)	Visitors (daily av.)
Van Gogh Museum	Van Gogh et Gauguin	Amsterdam	739.117	6.719
Art Institute of Chicago	Van Gogh et Gauguin	Chicago	690.951	6.281
Galleria degli Uffizi	Masaccio : the invention	Florence	600.453	3.925
Scuderie Papali al Quirinale	Cento capolavori dell’Hermitage*	Roma	573.753.	3.365
Guggenheim	Brazil : body and soul	New York	561.232	2.849
Palazzo Te	Gonzaga. La Celeste Galeria.	Mantova	518.933	3.961
National Museum of western art	Chefs-d’oeuvre du Musée	Tokyo	516.711	5.616
Tate Modern	Picasso	London	467.166	4.671
Palazzo Reale	Picasso: 200 opere 1898-1972	Milano	458.981	3.400
Hirschorn Museum	Metropolis in the machine age	Washington	458.432	2.451
Centre Georges Pompidou	La révolution surréaliste	Paris	450.000	4.500
Musée du Louvre	Les artistes de Pharaon	Paris	450.000	4.285

Total and daily average visitors to the most important exhibitions in the world (years 2000- 2002). Source: The Art Newspaper 5/03, www.kwart.kataweb.it/*

Beautiful cultural objects have always been the pride of cities, and the symbolic testimony of the wealth of its citizens. Until recently, however, this activity was not directly productive: economy and culture were very clearly distinct and in a sense opposed sectors of urban life. In last years the number of metropolitan businessmen, tourists and city users tracing restlessly complex trajectories, with apparent erratic paths, through regional and urban spaces, has grown very fast. These entangled trips do not belong to renewed "romantic *flaneurs*" as the impressive literature poetically defined the ideal, aristocratic gentlemen of the XIX century, but are generated by a twisted skein of arches mixing together leisure, cultural, consumption and personal reasons. The enclosed table show how many visitors were recently attracted by cultural events (exhibitions or permanent collections).

Creative economy potentialities are clear. Let us consider, for instance, the recent but quite consolidated experience of the Guggenheim museum in Bilbao.

Its effect on the local economy has been even more marked than the revival through culture in the 80s of another declining industrial city, Glasgow. This has been achieved at a price. The considerable investment by the Basque authorities in the Museum itself of about $100 million, the ongoing annual payments to the Foundation for the use of Guggenheim brand and the loan exhibitions are part of an even bigger investment in a new subway system by Sir Norman Foster, a $53 million Congress Hall for concerts and conventions, a $500 million expansion of the port, rebuilding of the airport and the waterfront.

All these interventions had been already defined and prepared with the "Strategic plan" studies some years before and were coordinated at a metropolitan level by the "*Plan Territorial Parcial Bilbao metropolitano*" edited by *Diputation Foral de Bizkaia* (subregional Authority of the Autonomous Community, Basque Country). The recent developments implemented in Bilbao, including the new Museum of Fine Art and the Arriaga Theatre, the new *Palacio Euskalduna* for conferences and music, the network of libraries, the opera season, the rehabilitation of the river front, the new tramway line and so on, are of vital necessity to the city's progress.

Of course the most important project of all was the Guggenheim. It was a real challenge and probably we can define it as a "creative economy" investment of Bilbao's gamble. It has certainly been the symbol for the city's new image on the international stage. The choice that the Basque authorities made was not a simple one. To be selected as the European headquarters of the Guggenheim, the New York Foundation had to be convinced that Bilbao was a serious and viable option. Moreover there were a lot of local oppositions by different actors, particularly inhabitants, in the metropolitan arena. The local people did not realise the great economic (as well as cultural) benefits. They only saw culture as a cost, not as an investment for the future. Strong opposition to the project was also expressed by rival cultural institutions who feared that their own subsidies would be cut.

The gamble has paid off way beyond policy makers' best dreams. The first feasibility study estimated that 400,000 visitors per annum would repay the investment of €132,22 million. This seemed very ambitious, yet in the first year the new museum received 1,360,000 visitors, more than three times the original estimate. After eight years the average is still about one million visitors per year. Of these visitors, 79% in the first year and 89% in the second came to Bilbao for the express purpose of visiting the museum, or, having come for other purposes, prolonged their stay in order to visit it. The money spent amounts to about €210 million per year. The increase in the GDP in the first year— €144 million — means that the Basque authority recovered its investment in the first year. In conclusion the Guggenheim operation demonstrated itself as a new generation investment, matching the cultural demand of contemporary age. Cities competition based on aesthetics, symbolism, "*griffe* architecture" and wise financial programmes is open.

The dynamic dimension of density: prodromal studies and experiences

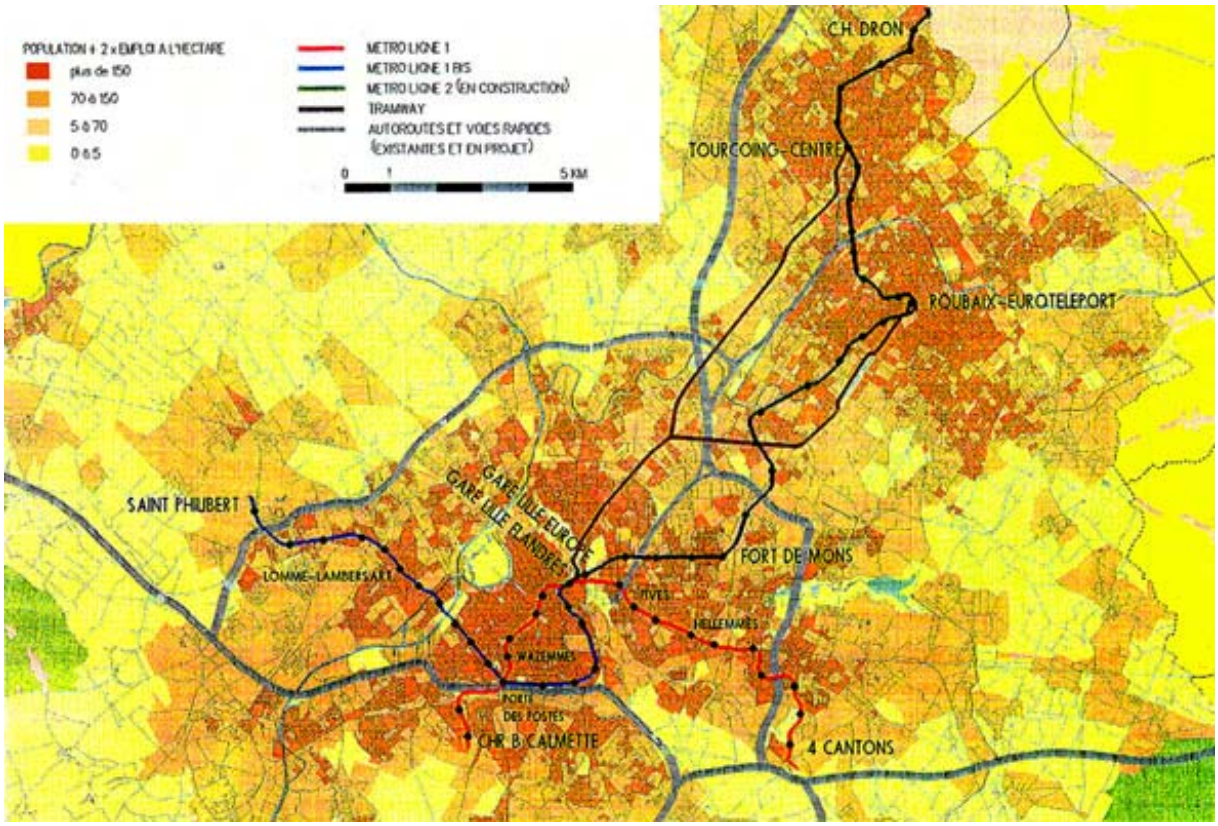
Consequently, it's relevant to verify what is in progress in contemporary planning studies and practical experiences, particularly in Europe where urban space resources are quite limited, comparing different cultural approaches and specific choice criteria.

Over the last decades the Paris metropolitan area showed complex and sometimes contradictory evolutions. The d.h.n. (*densité de activité humaine*) analysis revealed a rising tendency at inner urban level and a decreasing trend in suburban belts, while in Paris "intra moenia" net and gross activity density showed divergent evolutions: up for the former, down for the latter. So, should we speak of densification or de-densification ? The inadequacy of evaluation criteria, still based on a static vision of urban phenomena, is evident. In order to decode this data it is necessary to introduce other evaluation issues, connected to the most important functional and morphological transformations implemented through the last generation of "*projet urbains*" (Fouchier 1998).

During the seventies the Federal Housing Authority in the United States tried to introduce an integrated activity indicator for density, the LIR (Land use Intensity Rating), a complex merge of parameters expressing the density of green, residential, leisure and parking surfaces. It was conceived as a sort of "densitometer", a synthesis of all standard functions in the residential habitat. Notwithstanding the original approach, LIR was never actually implemented in planning practice, due to its complex applicative procedure. Its value is above all prodromal.

At the end of the nineties innovation methods, although with a quite empirical approach, were set up and tested in selected diagnostic reports supporting the first edition of the last SDAU (*Schèma Directeur d'Amenagement et d'Urbanisme*) of Lille Metropolis, finally approved in 2003.

The final goal of this analysis was the best choice for a new metro line (the number 2 of the already famous VAL) turning the so called "transit oriented development" principles upside



Lille metropolis: mobility network and activity density analysis are expressed through a specific indicator integrating population, employees and city users. Source: studies SDAU Lille Métropole 2003,ADUML

down. Lille's priority was on the contrary the identification of the most effective scheme in order to strengthen the high performance transportation network connecting and integrating the "*poles d'excellence*" with the rich galaxy of towns and villages widespread around the north-eastern axis of conurbation whose large dominion is practically crossing the border with Belgium (*Métropole transfrontaliere*). In the integrated indicator experimented by Lille Urban Community, the human activity density was enriched, doubling the amount of employees.

It's an explicit attempt at integrating the "usual footprint" of commuters and the enhanced pressure of city users gravitation, in order to define the best possible infrastructural balance between the existing mobility network and a new transit line. Of course it's still a rough appraisal because every geographical condition and activity class has a peculiar range ratio between visitors and local jobs, depending on the same features mentioned before (physical, socioeconomic, cultural, environmental, etc.). For instance, referring to the same studies for Lille SDAU, average ratio for this typology of density was evaluated in about 1:1 – 1:2 for Euralille CBD private offices, while it was about 1:100 – 1:200 and more, for shopping malls and important museums.

Concerning the connection between primary accessibility systems and great activity poles, several reflections have been at the basis of the recent Rome Master Plan ("Piano Regolatore Generale", adopted by the City Council in 2003) whose strategy is defined through a new central places system (strictly related to primary transportation networks and privileged accessibility nodes), explicitly evoked as one of the crucial keys for the virtuous transformation of the city. Cultural links with "ABC" policy, invented and implemented in the last decades in the Netherlands, are evident, although the complexity of the Roman condition and the outcomes of planning practice forced policy makers to enrich the model introducing specific evaluation keys. The goal was to find new measures for controlling the correct balance of mobility flows, privileged accessibility and urban transformation; hence, the nexus between the identity places of the historical city and the new centralities in the developing peripheries. Particular attention was devoted to the planning criteria for parking surfaces. The link with usual commuter gravitation, city users weight and modal share of accessibility was identified as crucial: parking standard supply should be dimensioned starting from virtual demand of visitors and urban "carrying capacity" (distinguished into classes, depending on the city users weight for the different activities). If the new pole is served by a mass transit line within walking distance, parking standards can decrease in coherence to the lower suggested class.

Activity urban "weight"	Private use parking mq/mq FAR	Public use parking mq/mq FAR
Residential	4/10	1/10
Office		
low	2/10	2/10
medium	3/10	6/10
high.	4/10	8/10
Hotel, congress hall, etc.		
medium	3/10	4/10
high	4/10	15/10
Industry		
medium	3/10	2/10
Agricolture		
low	----	----
medium	3/10	1/10

Rome City Council Master Plan 2003 (adopted) – Planning activity parking surface
Source: Comune di Roma, NTA; www.comune.roma.it/

"Real time project": Amsterdam 2002, comprehensive map reporting daily mobile and stopping behaviour of several different city users. Source: www.waag.org/realtime/

But what about the dynamic dimension of density and the possibility of exploring the chrono-programming planning ?

At the end of 2002 the "Amsterdam City Archive" together with a private firm (Waag Society) set up an interesting experiment, monitoring «Brownian movements» of a representative group of citizens, through a simple GSM daily recording system.

The results of the "Real time project" were showed at the exhibition "Maps of Amsterdam 1866 - 2000". The satellite data were automatically converted in a series of individual maps reproducing the mobile behaviour of city users and their gravitation intensity on public space systems in time. When the different types of users drew their lines, it became clear to the viewer just how individual the map of Amsterdam can be. A cyclist can produce completely different favourite routes than someone driving a car. The means of transport, the location of home, work or other activities together with the mental map of the particular person drafted his/her own trajectories and timing. The intensity gravitation maps give impressive results about molecular movements in the city and could allow local authorities to set up effective policies for the accessibility to public space system, the management of mobility infrastructures and future development scenarios of the city.

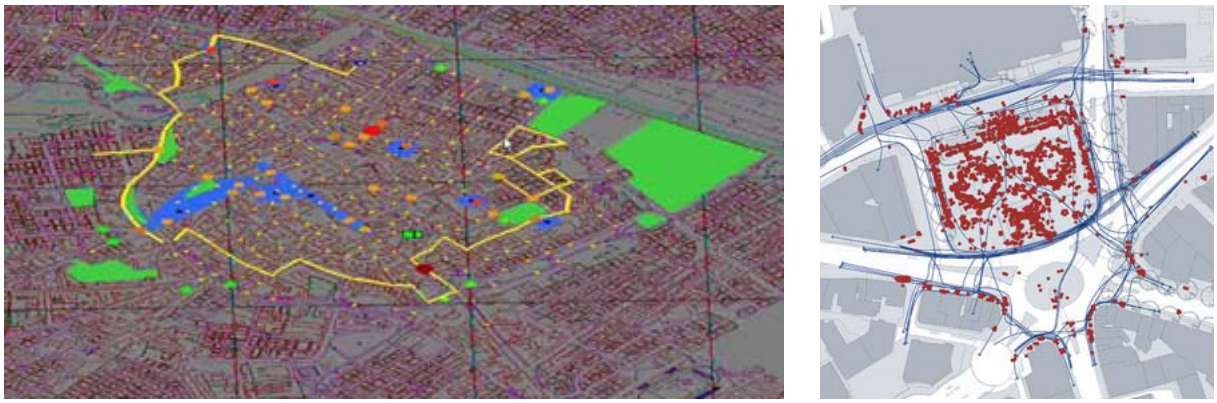
Coming back to Italy, there is an already consolidated school working on the «time planning approach» for metropolitan and urban development (Bonfiglioli, Mareggi 2004). These studies, based on the so called chrono-topic model, have been applied to activities management in several urban contexts. A physical-mathematical model ("*Mobilis"*), simulating urban mobility flows, was set up in recent years by a multidisciplinary research group from Bologna, Milano Bicocca and Milano Politecnico universities. It can be applied to different conditions and scales, going from historical pedestrian cores up to urban sectors or metropolitan dominions, including various modal trips (pedestrian, bicycle, public transport, private car, etc.). It has already been experimented with encouraging results in Paris,

studying Les Halles district daily flows, in Rimini (the historical centre and railway station neighbourhood), Milan (Bicocca university campus) and Senigallia (the whole town). It is based on the hypothesis that urban mobility is influenced by the existence of "chrono-topic areas", attracting specific citizen categories with a precise time schedule. In other words, a chrono-topos can be defined as "the prime agent of time-dependent urban activities, i.e. the agent that introduces time relations in mobility which could not be expected otherwise" (Bazzani, Giorgini, Servizi, Turchetti, 2002). These "excellence poles", usually collecting a relevant "palette" of activities around the primary function (high education or health, consumption, leisure, culture, etc.) play a crucial role in the organization of personal daily agendas: individual journeys can be represented by a stochastic scenario in which the chronotopic attractions draft a complex system of trajectories in the city. Of course the attractive capacity and flow density of the poles depends on other features such as local accessibility, the transportation network performance, the socioeconomic identity of activity users, the quality of urban environment.

Since the eighties the Space Syntax firm (founded and developed by Bill Hillier, a professor of architectural and urban morphology at the Bartlett School, part of University College, London.) has been undertaking studies and research on an intensive observation of city user "Brownian movements", either for pedestrian trajectories or for private and collective motor traffic. Research groups have developed advanced movement analysis techniques and opened new horizons for the diagnosis of problems and the potential design solutions connected to flow management and urbanity of central places.

It's the case of the public realm around Trafalgar Square, considered - together with Parliament Square - the heart of the national government and, for many, the very heart of London itself. A master plan for the area was commissioned in 1996 by Westminster City Council and the Greater London Authority, calling for improvements in the quality of the public realm, which – although of supreme historic importance – was perceived to be unpleasant, unsafe, and dominated by traffic. An initial analysis of pedestrian activity patterns highlighted two key issues: Londoners avoided the centre of Trafalgar Square and tourists failed to make the journey between Trafalgar Square and Parliament Square.

Trafalgar Square was the first element of the master plan to be completed in 2003: the great success of the renewal project - including a major, new staircase -, comes from the skilful and specific solutions, with a selective pedestrianisation of the public realm and the re-connection of Parliament Square to the wider area. Precise analysis and realistic simulations allowed to design the dynamic configuration of public space and the quality of this method was confirmed by the present levels of pedestrian animation in the square increased thirteen times.



On the left, Rimini centre, map with the chrono-topic movements of a standard city user (lines) and activity density (spots); source: www.physycom.unibo.it/it/mobilis.php. On the right studies on Trafalgar square in London, representing pedestrian activity, performed by Space Sintax Laboratories (dots for stationary, lines for walking). Source: www.spacesintax.com

Towards a future sense of urbanity ?

How is it possible to matrix and target these reflections in order to interpret the increasing demands of urbanity springing up in contemporary conurbations ?

New life rhythms require a sharp sensibility towards the links between "relational space" and time management fostering the shaky balance of individual identities and collective dimension. The "urbanity sense" today seems to be connected to the virtuous interpretation of the restlessness of urban landscape, where the Euclidean, steady space and the "absolute Newtonian perception of time" has been replaced by the shrinking, compressed space-time. Borderline, smart, unusual visions of kinetic, diachronic reality - expressed through new applied methods (with connected approaches, as "chrono-density" indicators, previously mentioned) – help to sketch new strategies in order to manage the future destiny of the cities; it might be the premise for a new "topological space", marked by functional complexity, spatial articulation and symbolic values. Fractal ontology is emerging: it's a hazardous issue of contemporary urban evolution; disciplinary efforts are mostly devoted to cope with splintering, widespreading phenomena, self-referential gated communities and activity zones. Contemporary studies underline increased difficulties in decoding recent urbanization episodes: new generations of central business districts and shopping malls, suburban strips entirely geared to the car, specialized citadels (universities campuses, theme parks, advanced incubators, interconnection nodes, logistic platforms, pharaonic retail outlets, suburban segregated residential areas, etc.). It's a chaotic proliferation of "metropolitan monads" whose relationship space is almost completely self-centred, a powerful and worrying kaleidoscope looking for new interpretation keys and connection patterns.

The main characters in this complex galaxy are flows (people, freights, services, info), scanned through pulsing densities and gravitation intensity. Innovation in planning is passing through the kinetic conception of urban phenomenology; density in its dynamic dimension can play an important role in recognizing and emphasizing the emerging features of contemporary urbanization process: asynchronous time and topologic space; they effectively represent the floating condition of uncertainty in present age. Hence a new attitude based both on the "poietic" hints of accessibility approach and the effectiveness of diachronic analysis of city user trajectories and gravitation phenomena as conceptual and operative support elements to conceive new high performace networks and smart relationship places for what Geddes named "cities in evolution".

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