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The effectiveness of urban policies facing spatial polarization

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**Abstract:** This paper intends to find whether cities can significantly exert an influence on their future and partly break away from the constraints with which they have to cope. The ability of key-actors to solve the various urban uncertainties which are thwarting urban growth will consequently be analysed. First the means available for strategic urban plans will be pointed out as specific tools in order to reduce urban uncertainties, like a contractual commitment about the stability of local taxes for instance. Contractual urban policies, the non-fulfilment and the indecisiveness of which entail the recourse to conventional tools, will provide urban actors with a special kind of spatial insurance. This latter will be stressed as the main result of such metropolitan policies. Thus the two major shapes that this insurance may take will be detailed in the second part of this paper: the first one (insurancial) will convey the advantage to dispose of a large number of heterogeneous people so that the various potential risks may be easily tackled and shared. The second one (organizational) will underline the "internal" solutions to such risks that local cooperations and synergies may embody. Dividing risks or cooperating to face them: this manichean dilemma will be challenged, considering the results of an econometric analysis. Finally, taking the diminution of the strategic importance of transportation costs compared with sunk costs and the existence of economies of scale into account, the misleading relevance of public policies making people and information movements easier will be raised. Urban policies, however exerting sometimes an unvoluntary enhancing of spatial polarization, will nevertheless emerge as useful (though partial) tools, which will underline above all the leading influence of the acuteness of urban elites.

#### **INTRODUCTION:**

"a man without plan is the enemy of the human race" "a man without passions would certainly be a very bad citizen"

R. Nimier, <u>Amour et Néant</u> J.J. Rousseau, <u>Discours sur l'Économie Politique</u>

According to Hayek (1945 p 520), "all economic activity is in a sense planning". Cities would be existentially linked to the projectual pattern. They would not exist without human collective actions and wills. The universal range of planning implies the relevance of issues emerging because of the lack of planned future, refering to individual as well as collective entities. Consequently, problems about urban exclusion, violence, etc... would acquaint us with social problems (due to a lack of - or insufficient - planning) rather than purely urban issues. As mentionned by Storper (1995 p 41); "there is a real danger in confusing an urban manifestation of a broader economic dynamics with urban causes of that problem". Thus the node of this currently emphasized crisis would lie in the lack of project for a certain number of people, who are gathered and concentrated in relatively confined and enclosed areas. However, one may wonder whether this assumed importance of planning is overstated.

Of course thinking ingenuously that voluntarism is sufficient for planning's achievement is not the point. It would be misleading to rely on the existence of a perfect predictive effect. Moreover, the never-ending internationalization and the indeniable loss, by political actors, of the means to put pressure on an increasingly footloose capitalism must be taken into account. Consequently, one cannot obviously think of considering that Strategic Urban Planning (S.U.P.) could significantly influence the power of the globalized trend and economic and financial corporations.

Thus, we may doubt the ability of S.U.P. to induce a real dynamism at the local level. At last, is the juxtaposition of the words "planning" and "city" paradoxal and inconsistent? Talking about S.U.P. would mean, in other words, thinking paradoxically about the changing of an outstandingly everlasting and durable entity, which would be pointless at first sight. Can the non-determinist dimension of spatial processes, in spite of their somewhat outstanding inertia, really be contended? This paper will therefore endevaour first of all the *means* that strategic plans have at their disposal in order to reduce uncertainties and growth impediments. Then, the *results* of such urban policies will be analysed and considered through the ability of cities to provide people with a kind of "insurance". Their efficiency will be analysed considering the factors which currently strenghten urban polarization.

# 1: Endeavouring to influence cities' future: the drawing up of strategic urban plans

# 1.1 : Strategic urban plans and reduction of uncertainties

## 1.1.1 : definitions of the different kinds of planning documents

Before beginning, the necessary underlining of the nature of strategic plans generated within cities must be detailed. Thus, according to Bouinot & Bermils (1995), the two following concepts will be stressed: what we could call "city - planning" (*projet de ville*) refers to strategic urban planning as a whole, as a global and flexible frame governing urban growth and development. This "city planning" in the French context is strongly dependent on the local political voluntarism. It may express the main ideas and programmes of local political leaders while establishing a collective ambition for a city (and/or a metropolitan area).

"City planning" is wider and more global than "urban planning" (*projet urbain*, close to the english vocable of "town planning") which focuses on the esthetic and architectural part of this latter and deals mainly with "macro-architecture". Thus, on the one hand city planning (purpose) does not necessarily entail urban planning (design), as it should always do. On the other hand, urban planning may exist even independently from the emergence of any strategic global ambition. This leads to a confusion between purpose and design, this latter depending theoretically on a prevailing and pre-existent purpose. As a matter of fact, the definition of a global economic aim is supposed to emerge before thinking about a relevant and consistent use of grounds. Moreover, several concrete cases illustrate the unnecessary stimulus given by design and architecture to urban dynamics. Design may not even be requested, considering the architectural unity embodied by the San Marco Piazza in Venice, which is known to be the result of various unorganized and juxtaposed micro-plans.

Then, precise details must be given about the complex and abstract notion of a collective urban goal: the city is obviously a heterogeneous and dissimilar entity, accordingly quite different from a pseudo-community which would gather round a collective and willingly-shared goal. Each person working or living in a city is, before anything else, searching for his own happiness and personal reward, which are very likely to be at considerable odds with any collective strategic dimension. The fundamental differences between managing a firm and a city must be kept in mind. On the one hand, the firm is oriented towards a precise goal. It is a noticeable entity conferred with concrete authority mechanisms and with an explicit system of tasks-allocating and profit-sharing. On the other hand, a city is not initially the place of organized interactional dependence, but rather, simply a coexisting spot, an unorganized crowd, without any ability or willingness to define its own global aim by itself (since collective entities have neither desire nor self-interest independent of the individuals who compose them).

Any idea of considering the organization as an actor is contrary to the theses of this paper. It would be an exaggeration to state that cities could be granted with rational thinking and decision making abilities. Actually such abilities are the prerogative of individuals belonging to these organizations. The organization has no goal, no values, no feelings, it only chases after a goal, but has apparently none of its own. Moreover, if there were any collective interest within the city-organization, it would concern only a subset of individual interests. *But this statement is not fitted only to the city*. Do workers in a firm aim at maximizing productive profit, the market share, rather than their own wages or their individual prestige? Most of the time the uniting organizational goal is accepted, even by tacit consent, by the members of the organization. *Even if they do not work towards its fulfilment, neither do they consciously attempt to thwart it.* 

How does the collective urban goal emerge? This goal which unites, if only tacitly, the various actors of the city seems to emanates from a few people who will be referred to as "key actors". In most cases, the focus will be especially on the mayor, sometimes accompanied by a few political and administrative persons in charge, whose importance depends on each urban configuration. Indeed, most of the time, the mayor, this "elected monarch" (at least and above all in the French context) is almost the only power-holder who can't be ignored (Le Gales 1989).

It will be assumed that key actors want their city to grow as much as possible so that they may take part in the dynamics of attracting people and wealth. Indeed, the importance of such a strategy lies in the necessity of keeping or even improving the rank of their city within the national (or international) system of cities. Actually the most important goal is to survive cleverly in the fierce competition which holds sway within this system. The lack of a context, in the French case, similar to the one described by Clark (1995) (that is, the fact that 26% of american towns possess some antigrowth poolings) encourages to trust in the validity of this postulate and argues in favour of it.

## 1.1.2. : characterization of the main specificities and advantages of French S.U.P.

Nevertheless, all these strategic options will not give rise to any (juridical or contractual) real commitment, about budgetary or schedule constraints, etc... To the best, "city planning" will be formalized by a document the contractual and juridical terms of which will be merely implicit. Indeed, there is no official text governing neither the required content of "city planning" nor obligations (and consequently penalties) that it would imply. There is no available jurisprudence. Accordingly, French "city planning" remains rather implicit and non-legal. It does not entail any commitment for people taking part to it. Thus, the more or less accurate announcement of intentions that S.U.P. merely represents does not stand for a strict commitment which could generate contentious procedures, but rather for a kind of charter.

However, this impossibility to make strategic plans more formal and executory constitutes one of the main advantage of these plans: their flexibility and adaptability. Indeed S.U.P. is "purely weak-willed and does not lay claim to realism" (De Courson 1993 p 113). It is devoid of juridical basis and quantitative goals, but constitutes from its genesis to its achievement a referring flexible frame. In actual fact, what matters most is the way local partners are working together to attempt to generate a global agreement, rather than substantive concerns. The recourse to S.U.P. provides people with the availability of some flexibility, thanks to the genesis of a frame which can adjust to contingencies the very existence of which is often hardly conceivable.

The recourse to S.U.P. would entail an advantageous raising of the understanding, for people spatially involved, and therefore the efficiency of the strategy implemented by the city. Let us use an analogy with financial markets in order to better grasp this reality. Indeed those markets are used to valorizing all the more stocks and shares because they offer a sufficient visibility, that is to say they intend to clearly and precisely communicate, convey information about their long-run global strategy and main indicators. All this can reasonably hint that a well-established strategic plan for a city could undoubtedly constitute an appreciable tool enhancing credibility and reliability in aid of private actors who are likely to locate in this city (or who are currently settled in it). Strategic urban plans also guide and mobilize people, polarizing their fleeting energies. This attempt to make the various entities' goals compatible implies in most cases the issuing of a few "war-targets", in order to pedagogically give rise to a commonly shared vision.

Finally, (French) strategic plans often confine themselves to displaying basic images, thanks to cartographic tools, which allows a kind of justification, since visible elements become more trustworthy. Things that can be represented may be irrecusable. The truth conveyed by images allows the making of compromises, for planning iconography solves in advance the problem raised by the emptiness of what does not exist yet (Lussault 1995).

This usefulness to have recourse to such implicit and incomplete contracts, though paradoxical at first sight, is nevertheless consistent with a logic without which people would give up contracting, just because agreements would be incomplete. But the reality is quite different from that. The existence of numerous incomplete contracts may be merely explained by the special ability of such informal agreements to generate a relative securing trust. Signing a contract would exert a noticeable influence on the emergence of trust. This can be justified (as Brousseau did) by the limited dimension of free-riding which could emerge in a context of radical uncertainty and limited rationality. This restriction of the systematic character of free-reding which may occur allows a clearer understanding of the reasons why contracts are not useless, as they would be if some individuals could always behave like free-riders with impunity. In actual fact, due to the limitation of their rationality, people are often unable either to detect how to have unfair advantage of their peers' weaknesses, or to assess the global cost of free-riding, compared to the advantages that it could generate. As there is no reasonably acceptable knowledge about future, then it may be "rational" to

comply with the rules of the agreement, however incomplete and weakly executory it may be, which would provide people with a relative insurance. The relatively tacit agreement (embodied by S.U.P.) about the government of a city is a clear illustration of this phenomenon.

The delegation of power that people give to elected key-actors (their representatives) does not generate any perfect insurance about these representatives' abiding by the terms of the agreement. Nevertheless if an exception is made with a few currently highlighted problematic urban situations, a relative consistence of the main displayed goals with the concretely enacted measures can be observed. A tacit adhesion and support of the majority of a given population to the strategic plan of their city expresses the will, for these people, to put an end to infinite and speculary doubts. Thus, in a way, it puts the existence of a relative trust between parties (supporting more or less tacitly their strategic plan) in concrete forms. S.U.P. and trust are consequently strengthening one another.

# 1.2: The resort of strategic urban plans to contractual tools

The arguments previously evoked prompt us to underline the reasons why the natural taking part of the members of the city could be justified. Why can the leading influence of key-actors predisposing them to draw up plans aiming at gathering people's supports be reasonably contended? The answer will be determined by focusing on the whole set of productive members involved in the city's future. Then it seems that a firm can obviously benefit from the dynamic and wellknown image of the city in which it is located and carrying on its business. City's dynamism will be sought for in order to notify the healthy and wealthy aspect of a firm, just like every potential location in an economically depressed and dull area will be turned down, despite, in numerous cases, substantial fiscal and pecuniar incentives.

Promoting city's image and dynamism, endeavouring to stimulate its economic growth: such tasks, due to their strategic dimension, logically put across the lack of anti growth coalitions in the French context. In fact, it is rational for a firm manager to adopt a rather positive position on the matter of the organizational goals stressed by key-actors. Popular support, although tacit and informal, appears to be significant insofar as the members of the city have no slight inclination to thwart the achievement of this federating common goal. In fact, popular support from productive actors to S.U.P., considering risk-aversion, will be, in most cases, a rather wait-and-see support which, however, seems rational, whereas an openly unfriendly behaviour as to S.U.P. could be confirmed to be detrimental in a long-run point of view. Adopting a markedly adverse position would represent a huge risk, compared to the cost of giving support to S.U.P., notably as to the relationship with local authorities. One can hardly stay apart from a general dynamics without been suspected (Bermils 1993).

The rules and signals created and issued by S.U.P. stimulate a relative feeling of insurance by revealing information. Contractual rules and procedures, thanks to such informating signals which

introduce some rigidities, play a great part in restricting the field of possible choices and then in stabilizing the environment. Indeed their somewhat prescribing dimension makes anticipations about people's behaviour easier, since never-ending thoughts are dodged. Several concrete examples of such tools which are included in some French plans will be emphasized in the remainder of this paragraph.

Beforehand, the usefulness to the recourse (within S.U.P) to a metropolitan "professional tax" ( TP taxe professionnelle, French local tax levied on productive activities) in order to solve problems which are relative to fiscal competition will be contended. Various uncertainties are induced by the TP which constitutes the main part of French cities' fiscal resources (50%). They merely concern the equilibrium of local budgets. Indeed the TP is naturally closely linked to the overall economic situation (with a two years lag). Moreover, the resources generated by this tax may unexpectedly decrease in consequence of a potential removal of an important local firm. One has to underline that the potential clearing of those two downward flexibility sources with an increase of the rate of TP can hardly been contemplated, at least for legal reasons. In fact the trade off between low and attractive rates on the one hand, and profitable but dissuasive rates on the other hand may be outstandingly complex. Thus, fiscal competition generates a lot of uncertainties for (more or less voluntarily) competing cities.

The issues created by the existence of a fiscal competition within one sole metropolitan area must be added to the two kinds previously quoted. Its existence is revealed by a downward outbidding for fiscal rates as well as by an expansive bidding-for-firms policy (offering buildings, land, anchoring grants, ...). The main drawback for cities consists in the fact that this fiscal competition seems to be a zero-sum game (and even generating losses). Indeed firms are the only winners because they benefit from their scarce demand position within the market of locations for firms, considering furthermore the relatively competitive supply of potential locations. The whole profits of locational negociation fall to firms which moreover may use a free-riding behaviour by changing their location in order to attempt to repeat their strategy of capturing public fundings.

An advocated solution would consist for cities (which are potential location suppliers) in creating an oligopolistic context, by gathering round an unique rate of TP. This arbitray price-fixing, while being disconnected from a purely market logic which would have induced a lower equilibrium level, provides the allied cities with a relative market power. This cooperation among cities is advantageous for each member of this "local coalition". Indeed a commitment (linked to S.U.P.) about a unique rate of TP enables each party to benefit from mutually complementary assets. Thus some areas with a metropolitan TP bring together cities with important land capacities but devoid of financial basis and cities with symmetrical assets (a relative budgetary affluence due to a greater size, and a thwarting lack of available grounds). The terms of such an agreement are as follows: financial insurance (thnaks to the resources of wealthy cities) versus fiscal-capital insurance (due to its diversification and to the renewal of its possible increase by attracting firms coming from other

metropolitan areas). Nevertheless such a mutual insurance could be concretely shackled if some cities could be in a position of far too unequal resources, which would impede the agreement's achievement (some little peripheral cities actually hold both important land resources and a sufficient fiscal wealth).

The usefulness to have recourse to a metropolitan TP also consists in the informating signal that is virtually issued in consequence of this agreement. It provides firms with a guarantee that the TP will not have unchecked variations, for legal reasons governing the rules of rates variation. S.U.P. constitutes therefore a kind of cooperating discipline, for cities do not restrict their own fiscal degrees of freedom without a cooperative common and intentional goal.

The collective acceptance of a metropolitan TP also leads to the production of a level of local public good which is superior to the unsufficient level that would result from a fierce fiscal competition. In fact, in order to be released from negative fiscal externalities which would be entailed by increased fiscal rates, cities compete and lower rates so that they may be more attractive. Thanks to each cities' taking social and private costs into account, the common rate of TP would allow the internalisation of such externalities and the reduction of various uncertainties, with a kind of portfolio-diversificating policy (Guengant 1995). Consequently, cities attempt to face the risk of excessive sectorial specialization, by widening the range of the chargeable activities.

Thus the case of a firm searching for a new location and the strategy of "tax holiday" (previously stressed by Bond and Samuelson 1986) will be considered. The rational choice of a city consists in offering during the first years attractive tax relieves to firms if they decide to locate within this given city, so that it could balance the initial disadvantage which was felt because of necessary sunk costs. Moreover if the location of the firm in the city is supposed to increase the "organizational capital" of this latter, then it seems that the amount of the "tax holiday" can be considered as the equivalent of a fictive re-allocation of the collective surplus generated by each member. The amount of "tax holiday" seems to give to the firms a signal (and an interesting way) in order to value the interest of each potential location in terms of future productivity. Indeed, let us assume beforehand that a city will not ever allow initial tax relieves which could be superior to what it could collect afterwards in terms of additional fiscal resources (the firm then being a less long-run footloose entity because of its initial sunk costs). Consequently, this implies that in a highly uncertain environment the disclosure of the amount of tax holiday is a signal which allows to estimate the level of competitivity of a city, according that this amount is supposed to give information about the future fiscal resources which are, everything else equal, positively linked to the productivity of the city.

Other examples can be quoted, like the announcement of the fixing of the future rate of variation of local taxes. Thus an information is created which, once being spread, reduces a part of firms' and households' uncertainties. In the same way the "insurance" given by a commitment for several years about a strict index-link of additional local taxes on the national rate of inflation may be

emphasized. Commiting oneself to restrict additional local taxes from years to years beyond the boundaries of a fixed and wellknown amount (or rate) makes therefore anticipations quite easier. The variation of local taxes charged on firms and households, which otherwise would have been potentially very erratic, becomes strictly constrained.

Nevertheless, the achievement of this commitment may be difficult for various reasons, as for instance in the case of the noticeable rise of the National Insurance contribution for cities' workers (the French CNRACL) which was enforced by the State to cities can be quoted. This National Insurance contribution actually plays the part of a state adjusting variable. Consequently, given the few degrees of freedom that cities have at their disposal, the increase of these previously mentionned contributions will necessarily entail a recourse to additional local taxes in order to balance this unforeseeable budgetary loss. The main problem is that this can invalidate, independently of its own will, the possibly announced ambition of a city to restrict its recourse to taxes due to its healthy local management. However the perception of state enforced decisions by local population and their unintentional consequences on local management is rather dark and almost non-existent, which could prompt such people to reduce their involvment and their trust towards the strategic plan of their city.

In the same way, a municipal council will have difficulties to issue a coordinating and insuring signal, like for instance a signal of "stabilization of local taxes". Such a signal may be hardly understandable for several reasons: it may be misinterpreted by people who would observe their own increased rates, without considering neither the stability of the charged percentage nor the increase of their taxed wealthes. Such a gap between the message which is issued and information which is finally received partially calls into question again the ability of an efficient reduction of uncertainties conveyed by such signals, because of the induced suspicion that this gap could generate. The same issues apply to the tax-holiday policy. The bounded individual skills constitute therefore a thwart to the efficiency of such signal-policy. More generally, contractual non-fulfilment insurmountably shackles the usefulness of many contractual measures included in strategic plans. As a matter of fact, it is impossible to foresee any detail or situation which may occur. Each contractual tool is bound to reduce a certain number of uncertainties while ignoring unexplored fields and even possibly generating new uncertainties. Accordingly, this contractual non-fulfilment added to neverending speculations prompt us to get further than the only theory of contracts and take an alternative way in order to lessen uncertainties into account. Thus, it would be interesting to consider the impact of non-contractual tools, conventions as it is.

## 1.3: The creation and reinforcement of conventions by S.U.P.

According to Lewis, a convention is a regularity R in the behaviour of the members of a population P set into a recurring situation S if the following conditions are granted: everyone complies with R and thinks that other people comply in the same way. Everyone prefers a general conformity to R rather than a slightly les-general conformity to it. An alternative convention R' exists. Finally, all these conditions are common knowledge. Conventions can also be defined as implicit rules (about thoughts or behaviours) socially generated which provide people with an ability to know how they'd rather behave in a given situation, without appealing to a private computation ( for instance on which side of the road must one ride? cf Gomez 1995). Conventions do not acquaint us with concrete actions of other people. However they enable us to bound them more precisely, to know the paths they will not turn into in spite of discovering the ways they will choose. So conventions only constitute the cognitive frames of actions. Their instrumentation depends on rules.

Let us examine the case of a budgetary orthodox convention which applies to the "financial stability agreement" signed by and French cities and the State. This agreement intends to stabilize and guarantee (thanks to a triennial contract) the amount of national subsidies granted to cities. According to this convention, growth would depend on healthy and virtuous finances. Thus the adaptation of such convention by all institutionnaly interdependent entities (State, cities, ...) becomes advantageous for each of them. Indeed, this choice is the result neither of a contract (each city is managing its finances autonomously), nor of a constraint (as long as cities have not become insolvent), not even of an economic computation: indeed, an alternative choice R' is available (by virtue of which growth would rather be favoured by a budgetary expensive policy). The great advantage of strategic urban plans is to allow the recourse to both contractual and non-contractual tools in order to reduce uncertainties. Their ability to generate and stimulate conventions, paradoxically thanks to their weakly-strategic part, has to be highlighted.

One has to focus on the more or less truthfulness and operational dimension of strategic urban plans. Are we talking about a realistic strategic plan or only about "placebo" planning? (De Courson 1993). This "placebo" pattern of strategic plans is much more omnipresent than people would automatically believe. Thus the placebo part of several major French strategic plans is considerable. Let us refer to the "plan d'ordonnancement" of the city of Nîmes whose will to set up a new reference basis of urban actions has been emphasized by Motte (1997). Moreover, the strategic plan of Toulouse merely stands for a relative hazy charter, without quantitative explicit goal. It looks like a kind of summing up of the main previous operations, an inventory of fixtures rather than a really prospective document moving towards the future. Nevertheless, this commonly observed importance of the placebo part of S.U.P. does not systematically invalidate the interest of the existence of this latter. Indeed, it will make great strides forward as to local growth, just by creating and stimulating some conventional tools. These improvements can be achieved just by starting upon negotiations and debates, by producing sometimes incantatory documents, by undertaking actions the

visibility of which is commonly considered as equivalent of their efficiency. One can thus argue that S.U.P. can't but be successful if it leads to re-establish a relative trust, even if social and economic indicators may remain rather disappointing (unemployment, congestion, ....).

Thus key actors lead to use various rhetoric means in order to manage to stimulate the emergence of a relatively global and elliptical agreement. The recourse to sufficiently indefinite and federating elements will advantageously darken the potential divarications which are likely to be revealed. Frequently, such considerably placebo plans look like general charts or assessments rather than prospective strategic visions. For instance, they may insist on formerly realised operations and weaken the importance of the new ones, in order to enable cities' inhabitants to become impregnated with urban historical and cultural patterns, so that this assessment may become commonly known. Thus the placebo part of strategic plans seems to be at least as important and crucial as the perspectives-part is. Then strategic urban plans have to shape their own environment by producing regularities. Consequently, one must focus on the possibility for strategic plans to create and reinforce conventions. Enacting public policies implies defining key-ideas, values which will constitute a new conventional frame. In spite of their commonly noted lack of efficiency, public policies nevertheless mainly work towards establishing definitions, standards, landmarks, which are relative to the field they are supposed to positively organize. As in the case of environmental policies, in default of doing away with any polluting or nature-damaging sources, these policies enabled to highlight such sources. This made their precise characterization as well as the proposal of potential remedies possible.

In the same way, the strategic plans which are established by urban entities stabilize their members' perception of the conditions and factors which may be in favour of cities' soaring. Focusing on previously achieved infrastructure and operations as well as on the level of investments they represent and the induced ploughing back of profits they may have benefited from is not a neutral phenomenon. Even if strategic plans mainly insist on fame and image rather than really strategic concerns, their placebo dimension will advantageously lead on the one hand to locally anchor the empirical manifestations of the previous growth and on the other hand to value more theoretical elements about its achievement. In actual case, many cities have had recourse to such properties of creating and developing conventions thanks to either their strategic plan (in the occasion of its disclosure) or surveys and documents the periodicity of which is more frequent (like municipal newspapers and informating surveys). Such documents, in a less long-run point of view, account for the impact and the progress of the main "war-targets" around which cities decided to gather. Strategic policies would accordingly exert a kind of crucial intellectual function.

Thus the <u>means</u> that the city has at its disposal in order to deal with various "urban" uncertainties have been detailed throughout the first part of our purpose. The underlined theoretical patterns showed the city as a place which grants located people with a special kind of "insurance". Now one may wonder on which logics this insuring ability depends as well as which potential <u>results</u>

may be achieved in consequence of the resort to such logics. How many degrees of freedom do strategic urban policies give to the city's key actors, as to the trend of this latter's future?

# 2: Challenging the efficiency of strategic urban policies versus polarization?

Strategic urban plans, thanks to the contracts and conventions they appeal to, provide key actors with a relative insurance. This latter, however contractual or conventional it may be, seems to deal with several different logics (which appear to be antagonistic at first sight) and express different conceptions of risk-tackling. Thus, the following paragraph will focus on what will be defined as the two main insuring logics.

#### 2.1: The different kind of urban "insurances"

First of all, the "insurancial" (based on a systematic search for reversible choices and on costs minimization) and "organizational" (appealing to industrial synergies) modes of reducing uncertainties will be emphasized. Then the connexions between these two logics will be underlined and the potential superiority (in terms of growth) of one of them will be questionned.

# 2.1.1: definitions of the two ideal-types: insurancial and organizational cities

Urban milieu is merely characterized by the outstanding and sustained development of the level of the division of labour. The more it increases, the more specialization (generating productivity gains) is spreading, the less each individual is independent from his peers. Cities therefore exist due to people's imperious need of social interactions. The division of labour (generating increasing returns) and the enlargement of the demand that this latter entertains constitute a chain-reaction process (Kaldor). Krugman (1991) expresses the same idea with his supply / demand circle, according to which firms locate where market opportunities can be found whereas workers locate where firms are already settled. This argument was previously advocated by Marshall.

Nevertheless, this interactional interactive logic raises the issue of the emergence of transaction costs (because of the division of labour) as well as their reduction. Thus a partition between cities which are dependent of local organization and inter-industrial synergies (endogeneous growth) on the one hand, and others the strategy of which is based on reversible choices and cost minimization on the other hand (which is relevant to exogeneous growth) will be highlighted. Organizational-cities and "agglomerative" or "insurancial" cities will then be distinguished (Veltz 1993).

The early beginnings of this contrast seem to go back to Marshall who used to display the advantages of both "labour pooling" and "assets sharing", in other words the advantage of numerous people sharing risks versus the interest to dispose of knowledge and learning networks, in order to

benefit from the secrets which are "in the air". Marshall's districts appear therefore as spatial entities which harmoniously unite the respective advantages of these two logics.

Organizational cities are based on the existence of direct relationship between firms, and on the resources of inter-communication networks. On the contrary, "insurancial" cities rely on purely cumulative advantages which are confered by spatial agglomeration. Thus, they merely search for long-run flexibility and the reversible choices that it induces, in order to better face the occurence of future risks the very existence of which is still currently unknown. The advantages of such an exogeneous and cumulative growth is to allow to share out risks and uncertainties among an increased number of potential economic links.

However one may be prompted by the previously mentionned example of Marshall's districts to consider the two ideal-types of cities as complementary ways of flexibility, of uncertainties' tackling, of insurance, rather than relentlessly opposite notions. These two kinds of insurance, although refering to distinct principles, are based on common concepts, like agglomerative externalities. Urban growth is supposed to be based on agglomerative positive externalities, which have to be superior to negative externalities. Thus one can assume that the never-ending agglomerative trend of the Paris metropolitan area (despite noticeable polluting and trafic-congestion harmfull effects) is due to the seemingly important access to other elements which over-compensate all these unpleasant occurences. Thus pecuniar externalities would stimulate exogeneous sources of growth whereas technological externalities would constitute the basis of endogeneous urban growth.

# 2.1.2 : from the opposition to the mutual reinforcement of the exogeneous and endogeneous modes of urban growth

As to our preliminary questioning about the degrees of freedom which could be given to keyactors in consequence of their putting a strategic urban plan into practice, the following problem must be stressed: is it possible to state the superiority (or the more significant efficiency) of one ideal-type of cities compared to the other one? Some researches appear to express their opinion in favour of the insurancial solution, as done by Glaeser et alii (1992) who came to a conclusion about the importance of the diversification of the urban productive structure as opposed to activities' specialization. Indeed one may consider that productive diversification is rather a party to the emergence of insurancial behaviours which are based on risk-sharing whereas specialization is more in favour of knowledge externalities.

The main theoretical argument backing this sensed isnurancial superiority is about the individual preference for diversity and / or flexibility (Kreps 1979). This preference, according to Kreps, can be justified on the one hand by the fundamentally uncertain character of individuals' preferences and future tastes, and on the other hand by the fact that previous choices, in such a

context, highly restrict future potential choices. This cumulative circle between supply and demand which is developed in Krugman's papers is consistent with such preferences. Thus producers emigrate in the neighbourhood of areas where the diversity of populations will enable them to overload their current and future need of human capital. In the same way, the diversity of people is expected to make sales easier. In a symmetrical point of view, consumers (who supply their work force) will geographically prefer to locate in areas which are characterized by a diversity of goods and services, in other words a diversity of producers. Indeed, their job search will be facilitated and there will be every chance that their consuming needs, however varied they may be, will be satisfied, moreover at a lower cost thanks to the competitive pressure exerted by the great number of suppliers.

Nevertheless, the remainder of this paper will try to contend the priority of the organizational deciding factors of urban economic growth. As a matter of fact, how could a sustained development of western cities which are characterized by numerous land, real estate .... over-costs be conciliated with the lack of spatial exodus towards cost-attractive areas if these cities were not benefiting from substantial externalities? If agglomeration was not generating sufficient advantages, why would people agree to pay such high rents in order to be located within cities? (Thisse and Torre 1996).

Consequently, the increasing importance which would be given to the organizational factor would justify the apparent paradox of the concentration of technical and human capital within costly areas. Indeed, according to Veltz (1996), what matters most is the relevance of the grouping of resources, that is to say the quality of organization rather than the cost and the use of each resource. The differences of wages around the world are so amazing that there would be no firms left in western countries if costs and wages were really playing a prominent part.

2.1.3 : an illustration with ordinary least squares : the different productive functions as sources of the dynamics of urban employment

The aim of this statistical insight is to question the superiority of the organizational mode of growth in the French context during the last years. A positive conclusion would therefore challenge the previous results of Glaeser and alii, even if spatial and temporal contexts are markedly different. In this point of view, employment has first been detailed in several productive functions, according to the statistical frame created by Beckouche and Damette. This has led to the underlining of 28 potential variables which may be advocated in order to explain French employment variations between cities from 1982 to 1990. Our spatial sample is made up of the 214 French cities in which employment is mainly concentrated. Thus an ordinary least square (OLS) regression has been undertaken, which has led to an estimated relation between the growth of employment within French cities and some of the 28 productive functions. The OLS stepwise regression stressed the perticular relevance (and statistical significance) of the five following variables

- DFAUA : variation of the share of the function "public administration" in the global employment from 1982 to 1990
- DPCIFI : variation of the share of the function "financial services" in the global employment from 1982 to 1990
- -DPBMIN : variation of the share of the function "production of manufactured goods" in the global employment from 1982 to 1990
- -SPBMBA82 : specialization index in building trades and public works in 1982
- SFRHC90: specialization index in the function "culture and leisure" in 1990.

The following tables sum up the main introductory outputs. The five selected variables conduce to explain 66% of the variability of employment, which is rather satisfactory. Nevertheless, before proceeding to analyse the impact of these 5 variables, the robustness and the significant dimension of the OLS values and outputs have to be checked thanks to several diagnostics.

tables 1 & 2 : summarized statistics

Multiple R R square Adjusted R square Standard error	0.81328 0.66142 0.65328 5.81561		
Regression Residuals	DF 5 208	Sum of Squares 13742.70215 7034.8293	Mean Square 2748.54043 33.82129

The PPPlot and the plots about residuals which have been computed allowed first of all to accept the assumption of normal (N(0,1)) and homoscedastic errors. One of the main snag accross which one often comes and which is too often exempted from any insight is the existence of collinearities between several variables. Thus, a first checking can be undertaken thanks to the correlation matrix. This latter does not show any excessive linear link, since the maximum correlation index is about 34% between DFAUA and SFRHC90 and all other indexes are significantly inferior to 24%, which is rather reasonable. However, collinearities may involve more than two variables. Therefore, futher diagnostics are required. Two arguments must be considered.

The first one is a "tolerance" index (available for each variable) which is defined as 1 minus the  $R^2$  which would be achieved by regressing this given variable in relation to the other independent variables. A high level of tolerance (60% being a reasonable threshold) expresses therefore the weakness of this  $R^2$  between independent variables and a lack of major collinearity issue. The BCOR matrix which displays over its diagonal the correlation indexes between the  $\beta$  estimates, conveys the same idea.

table 3 : values of β estimates and tolerance indexes

	β	SE (b)	Beta	Tolerance	VIF	T	Sig T
DFAUA	-0.226271	0.024354	-0.415948	0.812117	1.231	-9.291	0.0000
DPCIFI	-0.096972	0.018055	-0.230953	0.880305	1.136	-5.371	0.0000
DPBMIN	0.236663	0.024021	0.416445	0.911120	1.098	9.853	0.0000
SPBMBA82	4.482465	1.278895	0.146743	0.928638	1.077	3.505	0.0006
SFRHC90	6.183125	2.002178	0.138166	0.813210	1.230	3.088	0.0023
Constant	6.787388	1.818107				3.733	0.0002

<u>table 4 : correlation matrix between  $\beta$  estimates</u>

BCOR	DFAUA	DPBMIN	DPCIFI	SPBMBA82	SFRHC90
DFAUA	5.9310e-4	0.19841	- 0,15139	- 0,04976	0.34176
DPBMIN	1.1610e-4	5.7700e-5	0.18208	0.03387	0.15147
DPCIFI	-6.6570e-5	7.8970e-5	3.2600e-4	0.15098	0.10642
SPBMBA82	-0.00155	0.00104	0.00349	1.63557	-0.19495
SFRHC90	0.01666	0.00728	0.00385	-0.49919	4.00872

The second major diagnostic for collinearity consists in a variance-decomposition table for every  $\beta$  coefficient in relation to eigenvalues which were determined by a previous matrix diagonalization. Consequently, a pathological situation of collinearity can be diagnosed when the two following criteria are carried out : a "condition index" superior to 30 and an eigenvalue which accounts for more than 50% of the variance of at least two coefficients. The following table does not reveal any situation in which both criteria would be carried out.

table 5 : variance decomposition matrix

Number	Eigenval	Cond Index	Constant	DFAUA	DPCIFI	DPBMIN	SPBMBA82	SFRHC90
1	4.21669	1	0.00249	0.01186	0.00978	0.01775	0.00391	0.00557
2	0.87406	2.196	0.00125	0.00145	0.72517	0.01279	0.00441	0.00994
3	0.48052	2.962	0.00363	0.00442	0.10593	0.94354	0.00559	0.00546
4	0.31501	3.659	0.00076	0.65658	0.11559	0.01373	0.00372	0.06995
5	0.08035	7.244	0.01356	0.1783	0	0.00974	0.44706	0.68998
6	0.03337	11.241	0.97831	0.14738	0.04354	0.00245	0.53532	0.2191

table 6 : correlation indexes between independent variables and residuals

	DFAUA	DPCIFI	DPBMIN	SPBMBA82	SFRHC90
SRESID	-0.01326	-0.01104	0.05173	-0.01430	-0.00929

Finally, the lack of significant correlation between residuals and each of the independent variables (which would have meant the potential omission of an important relevant variable) confirms the previous diagnostics and allows to achieve this reliable linear relation:

CROISSAN<sub>i</sub> =  $\beta_{\dot{1}}0 + \beta_{\dot{1}}1$  DFAUA +  $\beta_{\dot{1}}2$  DPBMIN +  $\beta_{\dot{1}}3$  DPCIFI +  $\beta_{\dot{1}}4$  SPBMBA82 +  $\beta_{\dot{1}}5$  SFRHC90 +  $u_i$  (equation 1),

which can be expressed with the estimated values:

 $CROISSAN_i = 6,79 -0,23 DPFAUA + 0,24 DPBMIN -0,10 DPCIFI + 4,48 SPBMBA82$ 

$$(1,82) \quad (0,024) \quad (0,024) \quad (0,018) \quad (1,28)$$

+6,18 SFRHC90 + u<sub>i</sub> (equation 2)

(2,00) (standard deviations of  $\beta$  are quoted below)

The following fundamental points can therefore be emphasized. First of all, growth seems to be stimulated by both insurancial and organizational factors. In actual fact, in order to determine the insurancial, organizational or mixed nature of each of the 28 variables, one may refer to their definitions stressed by Carret-Olivier and Reynard (1995). Thus, for instance, SFRHC90 (culture) seems to be rather organizational because of its independence with any logic of cost-minimization and flexibility (contrary to DPCIFI). In return, the functions which are closely linked to production (DPBMIN, SPBMBA82) give evidence of the necessary constitution of an "exogeneous" cumulative basis, of critical thresholds in order to generate an endogeneous dynamics.

Indeed, if the variables which are the more correlated with the growth of employment (DFAUA: -42%; DPBMIN: +41%) are considered, then one may point out the non-inconsistent influence of any kind of elements, as well insurancial as organizational. Then the two following trends seem to emerge:

1: growth merely depends on the functions dealing with the production of manufactured goods, with building trades and public works. Consequently, this casts a new light on the importance of the productive dimension, which appears to be the main basis and incentive for economic urban growth. In actual fact, the frequently contended phenomenon of post-industrial urban societies should be qualified. All the surveys which are based on industrial divisions of employment (different kinds of industries and services, ....) lead obviously to underline the "addicted to the past" nature of industrial activities (in relation to growth) contrary to the promising nature of services. Nevertheless, one can easily notice that the functional division of employment allows to rediscover the central and unavoidable dimension of productive activities in terms of growth enhancing. Thus the insurance conveyed by cities would in the first place require a strengthening of their productive basis. Unfortunately, this result is insufficient in order to come to a conclusion about the superiority of one of the growth-models previously considered.

2: the negative sign of the DPCIFI variable seems rather paradoxical at first sight. Thus the growth of cities' employment would be negatively influenced by the importance of the function "financial services". This surprising statement would consequently challenge the domination of the typically insurancial functions which are notably linked to global cities, as introduced by Sassen. Moreover, a relative functional homogeneity would prevail, so that a growth-favourable context could emerge. Thus there would be no point in willingly trying to specialize a city in internationally "winning" activities. In other words, it would be useless to believe that an increasing of the density of banks in a medium size city, the productive basis of which would be incomplete and unstable, could generate an endogeneous growth dynamics.

# 2.2 : Urban policies facing the unavoidable trend of urban polarization: between constraint and shackle.

## 2.2.1: path dependencies and sequential link between exogeneous and endogeneous growth

As underlined by Benko and Lipietz, agglomeration would be a kind of spatial learning. Spatial gathering would be an imperious necessity in order to make cities' adjustments to an unstable environment easier. Thus proximity would be a temporary palliative which would be searched for as long as it could generate some advantages that cannot be achieved for the moment because of the current strict competition. Facing the increasing environmental uncertainties, proximity would stand for a shelter allowing to carry out the required learning.

From this point of view, the agglomeration of factors and skills takes on perticular importance. The gains of the past are the basic foundations of the future urban growth. Accordingly, the achievement of a critical size is central in order to benefit from this cumulative logic. The polarization of activities would be a necessary (although insufficient) condition in order to induce a local endogeneous dynamics. Thus Krugman's statement according to which proximity is interesting only after certain thresholds being reached would be verified. The genesis of endogeneous growth requires a previous exogeneous and purely cumulative agglomeration. Then increasing returns may be able to alter the preliminary ("first nature") distribution of intrinsic returns and establish a path-dependent growth-trend.

As a matter of fact, this sequential link between exogeneous and endogeneous growth seems to be circular. Such a reciprocal relation would contribute to justify the concomitant character of the obvious dynamism of rather insurancial cities and the previously assumed superiority of the organizational growth model. Indeed organizational virtues would in their turn reinforce the cumulative dimension of growth and would therefore maintain the inertia of the urban system of cities. The case of the Paris metropolitan area clearly illustrates this phenomenon, as Paris appears to be the more insurancial and the more organizational French city. Indeed its productive diversity, its

easy resort to flexibility and its synergetic potentialities are considerable.

# 2.2.2 : Trade off between sunk costs and transportation costs and reinforcement of the polarization in order to solve uncertainties

The previously contended spatial inertia would therefore be strengthened due to a progressive concentration of strategic factors (like human capital) in a restricted number of locations. Thus a firm searching for the maximum flexibility is nevertheless constrained by the location of its workers, the concentration of which is more and more developed. Excessive search for flexibility and fear of any anchoring behaviour would paradoxically set up a relative spatial lock-in. This analysis of polarization is challenging Ricardo's theories which are based on a progressive reduction of wealth differences. The relative decrease of transportation costs should have entailed an increased fluidity of productive factors and then it should have made their homogeneization easier. However, while nowadays transportation costs are relatively weak in relation to fixed costs, the existence of scale economies clearly leads to a context of monopolistic competition and stimulates a virtuous dynamics of mutual reinforcing between supply and demand.

A competition which is based on spatial differentiation is substituted for a previous one which used to be characterized by product differentiation. The model of Krugman (1991) shows that, in such a context, history prevails against expectations. It explains the reasons why a never-ending flow of people search in the first place for proximity-externalities whereas they were expected to more uniformly fill the space. Consequently, one may wonder whether the impact which could be exerted by strategic urban policies should be qualified and challenged.

Thus Calmette & Le Pottier (1995) show that such a context undermines (for instance) the relevance of planning policies which aim at developing communication means in order to reduce spatial enclaves. Indeed, any improvement in the amount of costs and/or transports would merely increase the concentration within previously historically favoured areas. Nevertheless, it seems that the commonly assumed positive link between growth and the development of transports and communicating means is still deeply anchored in people's prejudices, even in key-actors' opinions. The national plan for the development of the French territory can be quoted in support of this statement, for it bases the development of any kind of areas on an increased disconnection of telecommunication prices in relation to the distance. in the same way, the almost inmost will of key-actors to obtain a high speed train connection in their city, which is markedly criticized by Uhrich (1996) may be stressed.

#### **CONCLUSION:**

Finally, our purpose leads to a qualified statement in relation to our preliminary raised issue about the efficiency of strategic urban policies and their ability to generate real degrees of freedom. Indeed the strategic dimension of urban plans' drawing up has been emphasized, considering notably its restrictions of expectations and its genesis of cognitive landmarks which are relieved by urban marketing tools (like municipal newspapers). Thus, strategic urban plans express key actors' voluntarism, their conviction that significant actions can be undertaken in order to enhance urban growth. Several advocated contracts allow to markedly reduce the variability of choices, their induced uncertainties and then the impediments to local dynamism.

Nevertheless, this local growth pattern has been characterized as a point of intersection between mutually reinforcing dynamics (endogeneous and exogeneous). Moreover the relative decrease of the cost of distance, considering the increasing importance of scale economies and sunk costs, establishes a new frame for urban dynamics. Thus, facing the current multiplicity of uncertainties and the quick pace of innovation and learning, it seems that polarization has to be taken for granted instead of being considered as a temporary trend which could be significantly thwarted thanks to policies, however specific they would be.

The current growth dynamics would merely express a survival imperative and a search for everlastingness rather than a significant possibility to challenge the "rank - size" law. However, as underlined by Braudel, the importance of urban elites would naturally prevail against any spatial relentless determinism and may, in a few cases, provoke a (positive or negative) long-run bifurcation, which would remain an exception.

#### **REFERENCES:**

ANAS A. (1992): "On the birth and growth of cities: Laissez-faire and planning compared", Regional Science and Urban Economics, vol 22, n°2, juin, pp 243-258.

ARTHUR W.B. (1990): "Silicon Valley' locational clusters: when do increasing returns imply monopoly?", Mathematical Social Sciences, n°19, pp 235-251.

BLACK D.A. & HOYT W.H. (1989): "Bidding for firms", <u>American Economic Review</u>, vol 79, n°5, pp 1249-1256.

BOLTON R. (1992): "Place prosperity vs people prosperity revisited: an old issue with a new angle", <u>Urban Studies</u>, vol 29,  $n^2$ , pp 185-203.

BOND & SAMUELSON (1986): "Tax holidays as signals", <u>American Economic Review</u>, 76, pp 820-826.

BOUINOT J. & BERMILS B. (1995) : "<u>La gestion stratégique des villes : entre compétition et coopération</u>", Armand Colin , 210 pages .

BOVAIRD T. (1992): "Local economic development and the city", <u>Urban Studies</u>, vol 29, n° 3/4, pp 343-368.

CALMETTE & LE POTTIER ( (1995): "Localisation des activités : un modèle bisectoriel avec coûts de transport", Revue Économique, 46, 3, pp 901-910).

CLAVAL P. (1981): "La logique des villes: essai d'urbanologie", LITEC, 634 pages.

CREMER J. (1990): "Common knowledge and the co-ordination of economic activities", in AOKI, GUSTAFSSON & WILLIAMSON (eds): The firm as a nexus of treaties, Sage Publications

DE COURSON J. (1993): "Le projet de ville: un essai pratique", Syros, 175 pages.

GLAESER E.L. , KALLAL H.D. , SCHEINKMAN J.A. & SHLEIFER A. (1992) : "Growth in Cities" , <u>Journal of Political Economy</u> , vol 100 ,  $n^{\circ}6$  , pp 1126-1152 .

GOLDSMITH M. (1992): "Local Government", <u>Urban Studies</u>, vol 29, n°3/4, pp 393-410.

GOMEZ P.Y. (1995) : "Des règles du jeu pour une modélisation conventionnaliste" , Revue Française d'Économie , vol X , n° 3 , été , pp 137-171 .

GUENGANT A. (1996) : "Croissance urbaine et solvabilité des villes" in PUMAIN & GODARD (eds) : <u>Données Urbaines</u>, PIR Villes, Anthropos collection Villes, pp 25-29.

HAYEK F. (1945) : "The use of knowledge in society" , <u>The American Economic Review</u> , septembre,  $n^{\circ}4$  , vol 35 , pp 521-530 .

KRUGMAN P. (1993): "First nature, second nature and metropolitan location", <u>Journal of Regional Science</u>, vol 33, n°2, pp 129-144.

KRUGMAN (1991) : "History and industry location : the case of the manufacturing belt" ,  $\underline{AEA}$   $\underline{Papers}$  and  $\underline{Proceedings}$  , vol 81 , n°2 , may , pp 80-83 .

LUCAS R.E. (1990): "Why doesn't capital flow from rich to poor countries?", American

Economic Review, Papers and Proceedings, vol 80, n°2, may, pp 92-96.

MARSHALL A. (1990) : "Organisation industrielle : la concentration d'industries spécialisées dans certaines localités", <u>Revue Française d'Économie</u>, vol V, 3, été, pp 155-170.

MÉNARD C. (1990): "L'économie des organisations", Repères, La Découverte, 125 pages.

NELSON P. (1974): "Advertizing as information", <u>Journal of Political Economy</u>, vol 82, n°4, julyaugust, pp 729-754.

RAUCH J. (1993): "Productivity gains from geographic concentration of human capital: evidence from the cities",  $\underline{\text{Journal of Urban Economics}}$ , vol 34, pp 380-400.

ROSEN S. (1985): "Implicit contracts: a survey", <u>Journal of Economic Literature</u>, vol XXIII, septembre, pp 1144-1175.

STORPER M. (1995) : "The world of the city : local relations in a global economy" , communication à la  $V^{\circ}$  conférence du RESER , Aix en Provence , 14-15 sept 1995 , pp 1-60 .

STULL W.J. (1986): "The urban economics of Adam Smith", <u>Journal of Urban Economics</u>, 20, pp 291-311.

THISSE J.F. & TORRE A. (1996) : "Externalités de proximité et localisation industrielle", communication au XLV° congrès de L'AFSE, 26-27 septembre 1996, Paris, 10 pages.

UHRICH R. (1996) : "L'aménagement du territoire? ... autrement !", <u>Revue d Économie Régionale et Urbaine</u>, n°5, pp 999-1008.

VELTZ P. (1996) : "Mondialisation Villes et Territoires - l'Économie d'Archipel" , PUF , Économie en Liberté , 262 pages .

YOUNG H.P. (1996): "The economics of convention", <u>Journal of Economic Perspectives</u>, vol 10, n°2, spring, pp 105-122.