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On: 02 October 2013, At: 08:14

Publisher: Routledge

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Regional Studies

Publication details, including instructions for authors and subscription information:
<http://www.tandfonline.com/loi/cres20>

Examining the Mega-City-Region Hypothesis: Evidence from the Paris City-Region/Bassin parisien

Ludovic Halbert ^{a b}

^a Université Paris-Est, LATTIS (UMR CNRS 8134), Marne-la-Vallée, France

^b LATTIS-ENPC, 6-8 Avenue Blaise Pascal, Cité Descartes, F-77455, Champs-Sur-Marne, France E-mail:

Published online: 05 Dec 2008.

To cite this article: Ludovic Halbert (2008) Examining the Mega-City-Region Hypothesis: Evidence from the Paris City-Region/Bassin parisien , *Regional Studies*, 42:8, 1147-1160, DOI: [10.1080/00343400701861328](https://doi.org/10.1080/00343400701861328)

To link to this article: <http://dx.doi.org/10.1080/00343400701861328>

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Examining the Mega-City-Region Hypothesis: Evidence from the Paris City-Region/*Bassin parisien*

LUDOVIC HALBERT*†

**Université Paris-Est, LATTS (UMR CNRS 8134), Marne-la-Vallée, France*

†*LATTS-ENPC, 6–8 Avenue Blaise Pascal, Cité Descartes, F-77455 Champs-Sur-Marne, France.*

Email: Ludovic.Halbert@enpc.fr

(Received October 2006; in revised form July 2007)

HALBERT L. Examining the mega-city-region hypothesis: evidence from the Paris city-region/*Bassin parisien*, *Regional Studies*. Four dimensions of the concept of polycentricity (morphological, functional, relational, and political polycentricity) are discussed based on the study of the Paris city-region/*Bassin parisien* system. The concentration of ‘Abstract Production’ workers in the Paris agglomeration and the fairly concentrated geography of firms’ information flows (as measured by their telephone calls) prevent the formation of an enlarged polycentric mega-city-region. Three explanations are proposed based on the strategies of real estate developers, information-intensive firms and policy-makers. In conclusion, the paper tries to evaluate in the Paris city-region and French context whether a limited polycentricity at *Bassin parisien* level is prejudicial at different policy-relevant scales.

Polycentricity Enlarged city-region Advanced Producer Services Abstract Production Firms’ telephone calls
Paris/Ile-de-France/*Bassin parisien*

HALBERT L. 考察“巨型城市区域”假设：基于巴黎城市区域/*Basin parisien*，区域研究。基于巴黎城市区域系统研究对多中心概念的四个层面进行探讨（形态学、功能性、相关性以及政治多中心性）。“抽象产业”工人在巴黎集结区的大量聚集以及在地理上相当密集的公司信息流（根据电话量进行考查）阻碍了多中心大城市区域进行持续扩展。根据房地产开发商、信息密集型产业以及政策制订者的策略，我们提出三种解释。文章试图评估在巴黎城市区以及法国背景下，*Basin parisien*层面有限的多中心性是否会危及其他相关政策层面。

政策多中心性 拓展的城市区域 高级服务产业 抽象产业 公司电话量 巴黎/Ile-de-France/*Bassin parisien*

HALBERT L. Examen de l’hypothèse relative à la méga ville-région à partir de l’exemple du *Bassin parisien*, *Regional Studies*. Cet article traite de quatre dimensions du concept de polycentricité (morphologique, fonctionnelle, relationnelle et politique) en s’appuyant sur l’étude relative au système ville-région de Paris/*Bassin parisien*. La concentration de travailleurs de production abstraite dans l’agglomération parisienne et la concentration relativement importante de flux d’information d’entreprise (mesurée par les appels téléphoniques) empêchent la formation d’une méga ville-région polycentrique élargie. Trois explications sont proposées qui sont basées sur les stratégies des promoteurs immobiliers, des entreprises basées sur l’information et des décideurs politiques. En conclusion, j’essaie d’évaluer la ville-région de Paris et le contexte français afin de savoir si une polycentricité limitée au niveau du *Bassin parisien* est préjudiciable aux différentes échelles politiques pertinentes.

Polycentricité Ville-région élargie Services avancés aux entreprises Production abstraite Appels téléphoniques des entreprises
Paris/Ile-de-France/*Bassin parisien*

HALBERT L. Untersuchung der Hypothese der Megastadtregion: Belege aus der Stadtregion Paris bzw. dem *Bassin parisien*, *Regional Studies*. In diesem Beitrag werden anhand einer Studie des *Bassin-parisien*-Systems bzw. der Stadtregion von Paris vier Dimensionen der Konzepts der Polyzentrität (morphologische, funktionale, relationale und politische Polyzentrität) erörtert. Die Konzentration von Arbeitern im Bereich der ‘abstrakten Produktion’ im Ballungsraum Paris und die recht konzentrierte Geografie der Informationsströme von Firmen (gemessen anhand ihrer Telefonate) verhindern die Bildung einer erweiterten, polyzentrischen Megastadtregion. Ausgehend von den Strategien von Immobilienfirmen, informationsintensiven Firmen und politischen Entscheidungsträgern werden drei mögliche Erklärungen erörtert. Abschließend versuche ich im Kontext von der Pariser Stadtregion und von Frankreich zu bewerten, ob sich eine begrenzte Polyzentrität auf der Ebene des *Bassin parisien* in verschiedenen, politisch relevanten Maßstäben schädlich auswirken kann.

Polyzentrität Erweiterte Stadtregion Wirtschaftsdienstleistungen Abstrakte Produktion Firmentelefonate Paris/
Ile-de-France/*Bassin parisien*

HALBERT L. Análisis de la hipótesis de las regiones mega-ciudad: ejemplo de la región ciudad de París/*Bassin parisien*, *Regional Studies*. En este artículo se abordan cuatro dimensiones del concepto de policentralidad (morfológica, funcional, relacional y política) a partir de un estudio de la ciudad región de París y el sistema *Bassin parisien*. La concentración de los trabajadores en el sector de la 'producción abstracta' en la aglomeración de París y la geografía bastante concentrada de los flujos de información de las empresas (medidas según las llamadas telefónicas) impiden la creación de una región mega-ciudad policéntrica más amplia. Se proponen tres explicaciones en función de las estrategias de promotores inmobiliarios, las empresas con alto nivel de información y los responsables políticos. Para terminar, intento evaluar si una policentralidad a nivel del *Bassin parisien* en la ciudad-región de París y en un contexto francés es perjudicial en diferentes escalas relevantes a la política.

Policentralidad Región ciudad ampliada Servicios avanzados de productores Producción abstracta Llamadas telefónicas de empresas París/Ile-de-France/*Bassin parisien*

JEL classifications: L2, L8, R1, R3

INTRODUCTION

The Paris city-region seems at odds with the European Union spatial planning agenda which is setting the enhancement of polycentricity at all levels, from regional to European as a key priority (EUROPEAN COMMISSION, 1999). First, being one of the two leading European global cities, it might be depicted as one of the city-regions responsible for the concentration of central economic functions within the Pentagon region. Thus, after having faced the French government's attempts to reduce its weight within the national territory for the last forty years, the Paris city-region might have to deal with adverse European policies favouring so-called 'peripheries' according to territorial cohesion goals. Second, in spite of powerful deconcentration dynamics at the regional level, doubts are raised regarding the Paris city-region's ability to become a truly polycentric city-region capable of enhancing the development of its large regional hinterland – known as the *Bassin parisien*. In this context, the aim is to develop further the concept of polycentricity by confronting it to the various dimensions of the enlarged Paris city-region (what the Polynet project calls the mega-city-region, or MCR). This paper comes at the intersection of the two debates on the spatial organization of metropolitan economic systems.

Third wave and the metropolis

The first refers to the relationship between cities and their surrounding environment. During the 1990s, US scholars described the decentralization of business services in terms of a 'third wave' of employment deconcentration which followed the two former waves of relocation both of inhabitants/services to households and of manufacturing activities to the peripheries of cities (CERVERO, 1989). Traditional central business districts (CBDs) were believed to be inefficient in a 'post-industrial' economy and were challenged by either large suburban areas, as in Californian metropolises (GORDON and RICHARDSON, 1996), or by 'secondary economic centres', taking the forms of strips along highways or of spatially limited poles of office

spaces (CERVERO, 1989). This second hypothesis, the 'concentrated deconcentration' (HALL and PAIN, 2006), was developed in GARREAU's (1991) famous work on 'edge cities', which depicts that the triumph of a new 'American frontier' no longer related to the conquest of the West, but to the conquest of suburban peripheries on the margins of would-be inefficient urban centres.

This reversed development (SOJA, 1996, uses the term 'inside out') has been first contested by some Canadian geographers. In spite of strong deconcentration processes, or maybe thanks to them – COFFEY and POLÈSE (1996) have rejected the CBD decline hypothesis by opposing the strength of central spaces: according to their observations in Montreal and Toronto, the least productive functions of the business services economy are forced to relocate in more remote places of the city-region because they are unable to face the financial and commercial competition for central spaces.¹

Metropolis and globalization

A second and partly related debate developed at the same time is central to understanding the spatial reorganizations of large city-regions. It questions the relationship between economic globalization and metropolization. In spite of recurrent texts on the supposed 'death of distance' (CAIRNCROSS, 1997) or on the 'flattening' of the world (FRIEDMAN, 2005), more or less closely following MCLUHAN's (1964) 'global village' theory, empirical studies have reduced the credit given to the thesis of a space-less global economy. On the contrary, a whole set of academic works link (re-)metropolization dynamics and the advent of a global economy (SASSEN, 1991; VELTZ, 1996; SCOTT *et al.*, 2001). In this context, actors of the 'corporate complex' (headquarters and their many associated Advanced Producer Services; COFFEY and POLÈSE, 1996) are given the most prominent roles (SASSEN, 1991). It is not the purpose of the present paper to discuss what seems to the author a fairly restricted view of economic globalization processes and actors which, because it focuses on the 'knowledge

and information economy', tends to neglect other forms of globalization – such as the globalization from 'below' involving 'global' low-skilled, low-paid workers probably as important in number as the knowledge economy workers themselves.² In economically 'advanced' metropolitan regions – that is to say, in city-regions that count among the 'spaces of flows' of a globalizing economy (CASTELLS, 1996), the debate on the role and localization of business services activities has partly joined the one on the 'third wave' of employment deconcentration – probably reflecting the growing confusion between the intra- and inter-metropolitan scales resulting both from the deconcentration of inhabitants at an enlarged regional level and from the locational strategies of global firms.

At the intersection of these two scientific debates, this paper aims to discuss the MCR hypothesis which states that a network of neighbouring but physically separated cities is becoming more integrated as Advanced Producer Services are deconcentrating from one or more central agglomerations (HALL and PAIN, 2006). According to this hypothesis, 'concentrated deconcentration' dynamics rely on second-rank cities that have reached a critical size, especially in terms of a skilled labour force, to allow relocations emanating from the 'First Cities'. There are already polycentric-type deconcentration models proposed in the literature, at least at intra-metropolitan level (for a survey, see BOITEUX-ORAIN and HURIOT, 2002). Case studies are now needed to measure the reality, forms and factors of such spatial trends as is proposed to be done in this paper with the Paris city-region and the *Bassin parisien*.

First, what is the 'polycentric Mega-City-Region' (HALL and PAIN, 2006)? One understands that it refers to an enlarged metropolitan region encompassing a number of coalescent urban areas whose perimeters are always more overlapping as commuting distances increase and exchanges between urban centres develop thanks to transport infrastructures. The notion of polycentrism is more problematic because of its many definitions in the literature (KLOOSTERMAN and MUSTERD, 2001; PARR, 2004). Recent studies in Europe (ESPON 1.1.1 project; Interreg IIIb Polynet programme) bring in fresh insights that the author will try to summarize in a four dimensions' classification of polycentricity, reflecting distinct realities and methods of analyses.

Morphological, functional, relational and political polycentricity

This paper defines morphological polycentricity as the ability of an urban structure (1) to possess homogeneously spread cities in a given territory, and (2) to follow a constant relation between the rank of these cities and their size according to ZIPF's (1949) rank-size 'law'. In other words, a region is all the more morphologically polycentric when no city is so big as to

dominate others and that cities are as evenly spread over the territory as possible. By contrast, functional polycentricity refers to two other characteristics of urban systems. In a first sense, it describes the spatial repartition of *functions* – economic functions in this paper – between the different cities or city-regions of a given territory. This definition raises a first difficulty: should one consider an urban structure functionally polycentric if (1) some cities/city-regions share the *same* function, for instance a specialization in Advanced Producer Services as is proposed in Polynet's polycentric MCR hypothesis, or if (2) cities/city-regions are specialized in different and potentially complementary functions (the port city in logistics, a university city in the research function, a 'First city' in control functions and Advanced Producer Services, a town near a forest in the tourism function, for instance). A scientific evaluation of an urban system thus requires one to state clearly which one of these two forms of functional polycentricity is observed, if any. To make things more complicated, in spite of the existence of simple statistical indicators to measure the intensity of a city-region's functional specialization (the Location Quotient or the Isard Index, to name but two), the issue regarding the qualification of the specialization remains difficult for there might be strong functional differentiations within a city-region itself: the traditional city-centre might be specialized in cultural and tourism activities, the CBD and its modern extensions in business services, secondary economic poles like shopping centres in services to households/individuals, the airport in the logistic function, etc. Assessing the functional, or any type of specialization to a city-region, is a very strong approximation of its complex internal differentiations. In this regard, the specialization of Advanced Producer Services is very often much more a characteristic of a city-region's CBD than, say, of its suburban peripheries. A second and more dynamic definition may be proposed to functional polycentricity even though to limit confusion it is proposed to name it differently. Following the growing interest for the 'spaces of flows' (CASTELLS, 1996), functional polycentricity can be described as a form of *relational* polycentricity. The concept insists here on the importance of exchanges between the different spaces of a given regional system: polycentricity would thus describe intense flows of people, ideas, capital and/or goods during a normal working day. This even distribution does not prevent some forms of hierarchy due to the differentiated weights of each particular space within the city-region (a classical gravitational model would suggest the intensity of such flows to be proportional to the different spaces' demographic size and inversely proportional to their distance). In this definition, a polycentric MCR would be made of several cities having day-to-day exchanges (of information, workers, capital, and so on) large enough in volume, and spatially and relatively 'well balanced'. A fourth

description can be proposed when applying the concept of polycentricity to spatial planning and economic development strategies rather than to landscapes or economic functions. Political polycentricity is understood here to be a high degree of awareness of the existence of an 'MCR', as the existence of common institutions and/or partnerships, and as the political will to develop shared projects between policy-makers at national, regional and local levels dealing with all or parts of the MCR's issues. In this sense, political polycentricity might be an evaluation of a regional system's ability to go with (or to go past) its institutional fragmentation.

Paris, the Ile-de-France region and the Bassin parisien

Ile-de-France, the administrative region of Paris, is an interesting case in point to test the emergence of a global and polycentric MCR with regard to these four dimensions, for at least three reasons. First, the Paris functional urban area (FUA) (understood as the agglomeration and the commuters' catchment's area, whose limits broadly coincide with the Ile-de-France regional boundaries) offers favourable ground for the development of an MCR according to the MCR hypothesis: it is highly affected by globalization processes being with London one of the two prominent global metropolises in Europe; it concentrates in an unchallenged proportion a large number of Advanced Producer Services both at French and international levels (HALBERT, 2005). Second, the natural geological basin that surrounds the Paris city-region, known as the *Bassin parisien*, is large, disposes of a series of medium cities of reasonable size, and constitutes a demographic reserve almost equivalent to the Ile-de-France region's own population. Lastly, on a more practical level, it is possible to collect data at a detailed spatial level (municipalities) that allow one partly to analyse the four dimensions of polycentrism, including in a quite unique way *relational* polycentricity as indicated by telephone calls flows emitted by Ile-de-France's firms.

AN URBAN STRUCTURE UNDER THE INFLUENCE OF PARIS

The spatial organization of the *Bassin parisien* is dominated by the Paris agglomeration and its surrounding semi-rural peripheries (the whole of this constituting the Paris Urban Area or the Paris Functional Urban Area, as explained above). This utterly monocentric pattern has not always been so. During the 11th and 12th centuries, Rouen was the second biggest city in France and could compare in some degree with Paris itself. However, at least since the development of the French State, which, both under the Monarchy and under the various Republics, promoted a concentration of economic, political and cultural activities in the

capital city, the weight of the Paris Urban Area has not been counterbalanced by any other agglomerations or system of secondary cities, not only in the *Bassin parisien*, but also to some extent at the national level. In spite of major policies developed during the 1960s and the following decades, as will be seen below, no secondary metropolitan region has ever managed to gain significantly over Paris FUA in terms of demographic and economic weight. Lyon, the second ranked French city, is still eight times smaller than Paris, the ratio having not changed throughout the entire century. However, the rest of the urban structure in the *Bassin parisien* (considered here not in the wide geological basin perimeter, but as the eleven *départements* around the Ile-de-France region, thus including most major cities within a 150-km radius around Paris) follows a relatively polycentric pattern. Cities are located more or less at even distances from each other and constitute a quite homogenous but still hierarchical urban grid superimposed onto the traditional rural landscapes, broadly following a Christaller-type organization (CHRISTALLER, 1933/66). A series of middle-sized cities circle Paris linked by what is now known as the *Route des cathédrales* (Orléans, Chartres, Rouen, Amiens, Reims) organizing the *Bassin parisien's* demographic pattern (Fig. 1).

This inherited geography is only slightly modified by recent demographic changes. Growth is registered in many FUAs, including the Paris FUA, even though the *Bassin parisien* as a whole evolves at a slower pace than many parts of the national territory (the South and the West of France, for example). This demographic development (+0.5% per year on average in the last thirty years) benefits more to the FUAs located closer to the Ile-de-France region and, partly for this reason, more to northern and western FUAs, the eastern city of Reims being an exception. However, these general trends are in fact much more complex because of internal spatial reorganizations

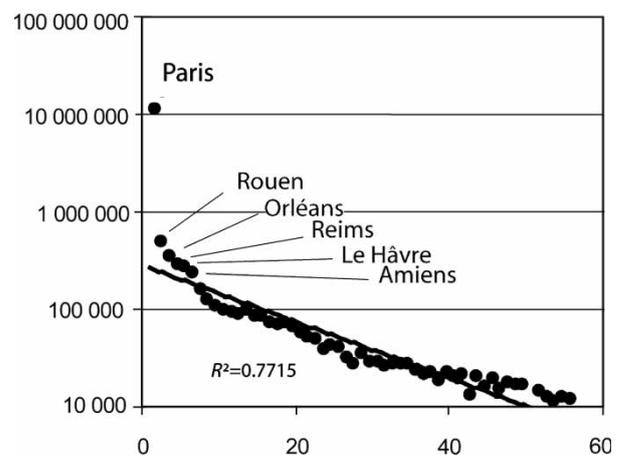


Fig. 1. Functional urban areas' rank-size curve in the *Bassin parisien*

occurring within most large- and middle-sized FUAs: inhabitants, and in a more limited proportion jobs, leave or at least grow slower in the city-centre and sometimes in the agglomeration, while more distant suburbs and semi-rural municipalities register strong, positive variation rates. The internal dynamics of the Paris FUA have unique consequences at a larger scale: deconcentration sweeps over rural interstitial spaces and reaches secondary cities of the *Bassin parisien*, thus contributing to what looks like the consolidation of an enlarged metropolitan region (for spatial spillover effects and their limitations, see BERGER *et al.*, 2006) (Fig. 2).

It is largely because of internal deconcentration processes that an enlarged Parisian city-region³ – or MCR under Polynet's terminology – seems to consolidate around the Paris FUA within a set of ten to twenty medium and small surrounding cities that send a noticeable proportion of daily commuters to the Paris FUA and receive increasingly more francilian weekenders visiting their country house. A functional integration is at work within this enlarged area – at least in terms of the *residential* function – which fuels daily or weekly exchanges of people with all the social and economic consequences one can think of. Considerable financial transfers are observed from the (Paris FUA) place of work where wealth is generated to the place of living where it is given back in local taxes and spent in the local economy, thus fuelling local job creations (DAVEZIES, 2004). Some

non-household-related activities may follow the same trend as firms move some of their functions closer to new sub-regional markets and to labour pools in secondary cities. During the 1960s and following decades of the Fordist era, the *Bassin parisien* has become the manufacturing region where Parisian plants relocated thanks to incentives from the central government. In the 1990s, some warehouses, call centres and R&D centres have followed. Thus, MCR deconcentration affects not only manufacturing and services to households, but also some business services (logistics, a limited number of back-offices activities and R&D laboratories) (THIARD, 2001).

BUSINESS SERVICES, ADVANCED PRODUCER SERVICES AND FUNCTIONAL SPECIALIZATION IN THE PARIS MEGA-CITY-REGION (MCR)

Yet, business services are still predominantly concentrated in the Paris FUA, and more specifically in the central part of its agglomeration: an economic core described elsewhere as the *central metropolitan triangle* links the three business hot spots of Paris's western districts, La Défense and Boulogne-Billancourt/Issy-les-Moulineaux (HALBERT, 2004a). It is fast developing all around the Parisian circular road (the *Périphérique*), in the neighbouring Southern, Eastern and Northern municipalities like the former industrial bastion of St-Denis, which now

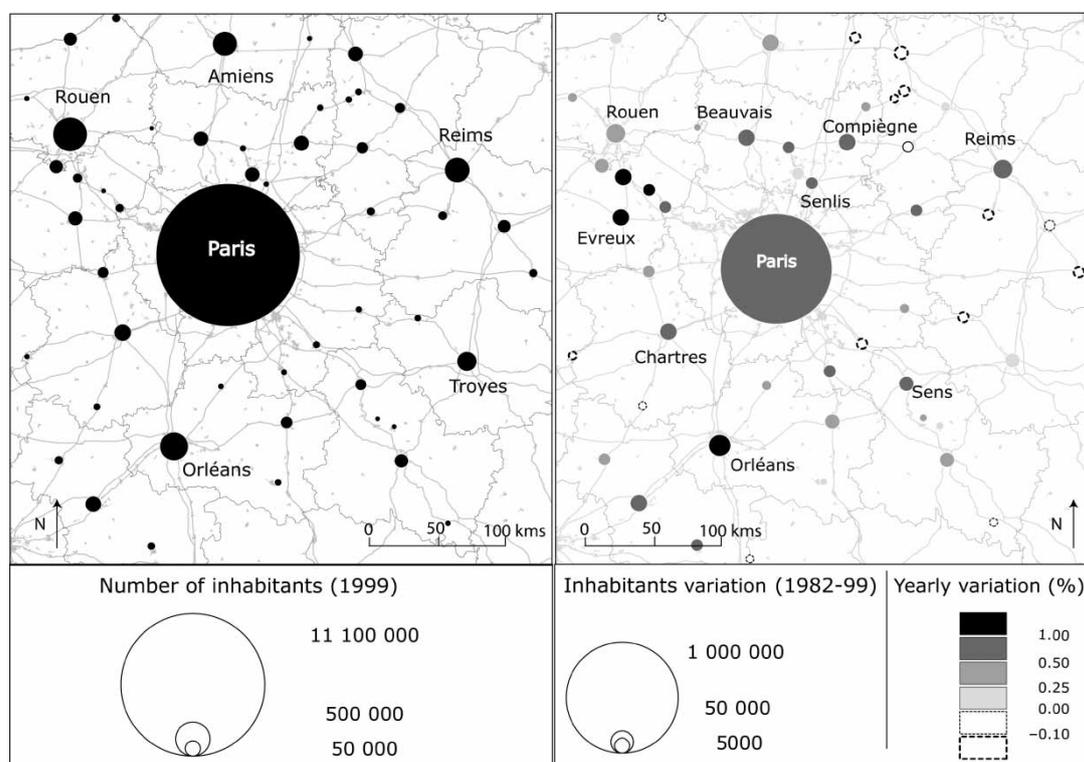


Fig. 2. Demography in the Bassin parisien (functional urban area level), in 1999 and 1982–99 variations
Sources: INSEE, National Census (1982, 1999). Drawn by L. Halbert (Latts/CNRS), 2006

hosts numerous movie studios, banking and insuring glass-type offices, and the Stade de France.

Yet, current dynamics are more complex.⁴ If relative deconcentration from the Paris municipality to closely located western municipalities has been important between the two Censuses of 1982 and 1999, around two-thirds of the growth goes to other remaining *départements*, not only in the Ile-de-France administrative region, but also in some surrounding *Bassin parisien* FUAs (Table 1).

This is true both at the intra-metropolitan level (from the central part of the Paris FUA to its fringes) and at the MCR level (from the Paris FUA to secondary FUAs). The cartography of business services jobs' variation at the municipal level shows a growth following three logics: (1) a proximity effect (the closer an FUA is to Paris's FUA, the strongest the growth), (2) a western preference (business services grow faster in western FUAs than in the eastern part of the *Bassin parisien*); and (3) a hierarchical diffusion (from the higher ranks of the urban hierarchy to the lower levels). In this sense, the 'third wave' of business services deconcentration is at work both within and between FUAs and it tends to favour some form of functional polycentricity, even though in a very limited way, as will be demonstrated below (Fig. 3).

The definition of Business services as a statistical category is both too encompassing and too restrictive to grasp Advanced Producer Services and, maybe in a wider definition, what REICH (1991) calls the 'symbol manipulators' which are considered in the present paper to be central actors in the spatial and economic transformations of global city-regions. As a reminder, the business services sector ranges from Ernst & Young top accountants to Dentressangle's truck drivers, from Axa insurance company clerical staff to BCG international market analysts, from a trader on one of Société Générale's floors to a low-skilled, low-paid and often immigrant cleaning worker for a local facility management firm. This sector-based approach thus includes many not so 'advanced' jobs – in terms of control power, skills (some forms of) knowledge and, needless to mention, purchasing power. Meantime, it excludes many workers that are symbol manipulators

but who work in firms that are registered in industrial sectors. According to the French classification, a lawyer employed by a car-maker is classified as part of the car industry sector, whereas a contracting lawyer hired by the same car-maker to do an equivalent job is listed as a business services professional (legal and accounting in the French statistical nomenclature). Yet, they both do the same task; they both play the same role in the productive system, the same function for the business community, i.e. the justice or legal function in this example. Because of sectoral data's limitations, it is proposed in this part of the paper to focus on a functional approach – subsequently allowing one to study *functional* polycentricity – based on the *Professions et Catégories SocioProfessionnelles* classification of the French National Census Bureau (INSEE). The INSEE collects every eight to nine years the main activity of all workers in France at the place of work according to a typology of 455 jobs (teacher, researcher, manager, cleaner, blue collar factory worker, truck driver, etc.) and this regardless of the economic sector of their employer. Based on this category and revisiting empirical works undertaken in the 1990s by the Paris-1 University STRATES laboratory (BECKOUCHE and DAMETTE, 1993), fourteen major functions are proposed to describe a given productive system of which five are of particular interest to this paper. These functions (research and development, management, marketing, art and culture, and legal functions), when restricted to people working in the business services and industrial sectors of a given productive system,⁵ is a reasonably effective proxy of Advanced Producer Services and other 'symbol manipulators' of the business world – workers that from now will be called *Abstract Production* workers because according to the economic base theory they are involved in so-called 'productive' activities (hence the 'Production' term) and, more specifically, on handling information and knowledge rather than material goods (hence the 'Abstract' term). As low-skilled jobs are believed not to be strategic actors of global city-regions in the Polynet approach, the paper will only concentrate on the so-called 'upper category' of workers ('*Executives and Superior Intellectual Professions*', according to INSEE's classification) and

Table 1. Demographic and employment deconcentration in the Paris city-region/Bassin parisien

Ring	Inhabitants		Employment		Business services	
	Total (1999)	Percentage per year (1982–99)	Total (1999)	Percentage per year (1982–99)	Total (1999)	Percentage per year (1982–99)
Paris	2 125 250	–0.17	1 600 820	–0.61	666 440	–0.26
Inner <i>départements</i>	4 038 570	0.20	1 771 920	0.58	729 730	4.20
Outer <i>départements</i>	4 688 350	1.16	1 659 890	1.95	517 530	5.48
Surrounding <i>départements</i>	3 943 990	0.44	2 160 480	0.31	407 370	2.07
Total	14 796 160	0.48	7 193 110	0.44	2 321 070	2.19

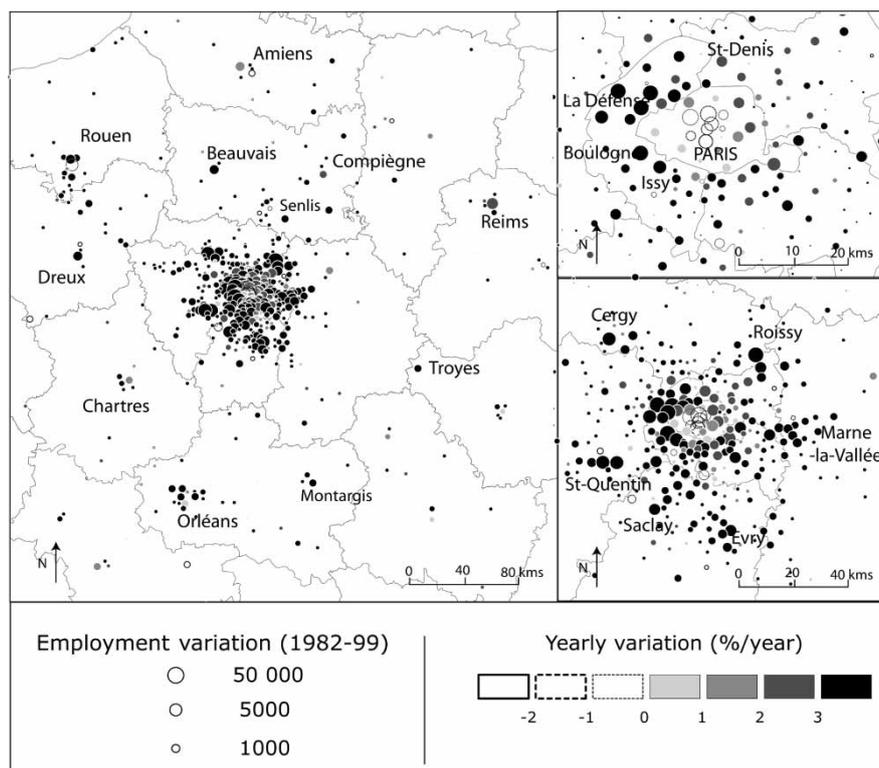


Fig. 3. Business services variation in the Paris/Bassin parisien region at municipal level, 1982–99
Sources: INSEE, National Census (1982, 1999). Drawn by L. Halbert (Latts/CNRS), 2006

which are called here *High-level Abstract Production workers*. By crossing sectoral, functional and social data, a relatively efficient approximation of the highly skilled knowledge workers of the Paris MCR is given,⁶ which should enable a study of functional polycentricism (Fig. 4).

The geography of *high-level Abstract Production* jobs is spatially more selective than the ones of employment in general and of business services in particular. Not only does the Paris FUA concentrate these functions well above what could be expected based on its sole weight in terms of inhabitants or jobs, but also does this concentration remain unchallenged between 1982 and 1999 (Table 2).

The Paris FUA growth rate is higher than in most surrounding FUAs. Thus, if there is a relative deconcentration process, it occurs only at an intra-metropolitan level, within the Paris FUA, not at the *Bassin parisien* level. But even at this intra-regional scale, it is a much more spatially limited process compared with other indicators (inhabitants, employment and business services deconcentration). It is restricted to (1) the central metropolitan triangle and (2) to a limited set of secondary economic centres, i.e. some municipalities in some New Towns (Cergy, Noisy-le-Grand, Guyancourt) and along some corridors, especially in the South-Western technopolitan quadrant. In other words, if business services deconcentration – which results from job losses in Parisian districts and high

growth rates both in more peripheral Ile-de-France municipalities and in the *Bassin parisien* FUAs – is one of the engines of the changes of the geography of employment over the last thirty years, the trend is utterly different for Abstract Production-related functions which remained strongly concentrated (Fig. 5).

Thus, the functional polycentricism described by the MCR hypothesis as the development of knowledge and information-related jobs in secondary FUAs is not confirmed. Results suggest on the contrary a reinforcement of their concentration within the Paris FUA, and more specifically in its triangle-shaped central economic core and in the neighbouring municipalities, following what is called here a ‘peri-central deconcentration’ trend. Does it mean that functional polycentricism is irrelevant in grasping the transformation of the Parisian MCR? Yes, if this is understood as equivalent to a more balanced location of Abstract Production functions both in the Paris FUA and in the secondary FUAs. No, if one considers functional polycentricism as a regional division of a given productive system’s functions. Following other works on intra-regional division of labour under the Fordist production era (DAMETTE and SCHEIBLING, 1995), it is demonstrated elsewhere that the *Bassin parisien*’s urban system shows a clear functional *division* of labour (HALBERT, 2004a; GILLI, 2006): the Paris FUA is specialized in Abstract Production functions (research and development, management, marketing,

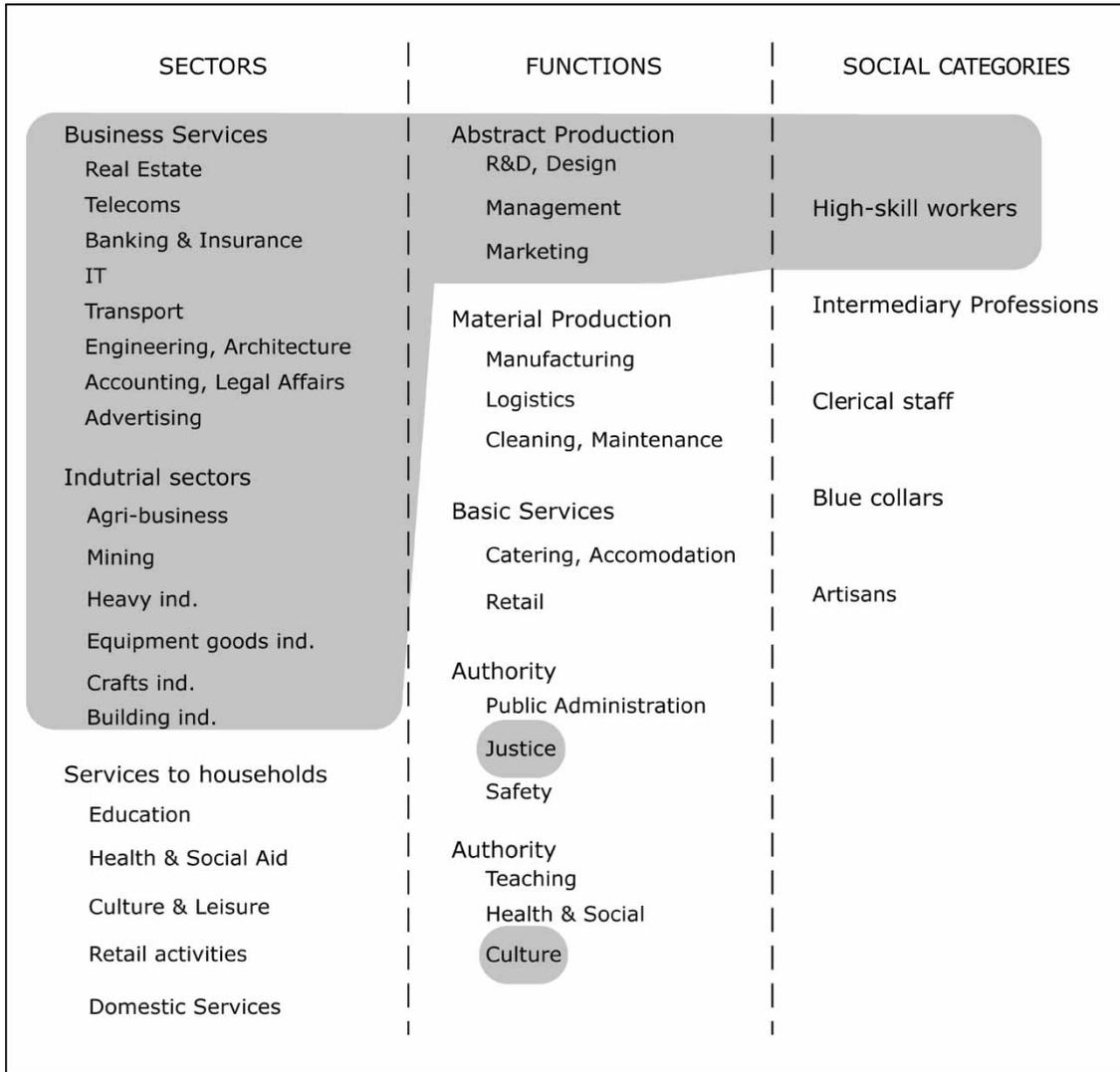


Fig. 4. High-level Abstract Production workers: a sectoral, functional and socio-professional definition

culture and the arts); second-rank cities in public services and some basic production activities (manufacturing, logistics); small cities in basic services to population and some production activities (partly linked to the local agricultural economy), etc. If this is not sufficient to qualify a fully polycentric economic geography because it is still utterly hierarchical due to the Ile-de-France region's weight, this hints towards

the existence of some complementarities between the different urban areas of the Paris/Bassin parisien urban system. Functional specialization is, therefore, more efficient a term to describe current changes, much more than the functionally polycentric MCR concept defined as a potentially equal specialization of primary and secondary cities in Advanced Producer Services.

Table 2. Location quotient in business services, abstraction production and high-level Abstract Production workers in the Paris/Bassin parisien mega-city-region (MCR)

Ring	Business services		Abstract production		High-skill abstract production	
	1982	1999	1982	1999	1982	1999
Paris	155	129	140	119	152	132
Inner suburbs	104	128	115	129	129	152
Outer suburbs	85	97	87	99	86	95
Surrounding cities	58	58	61	63	41	38

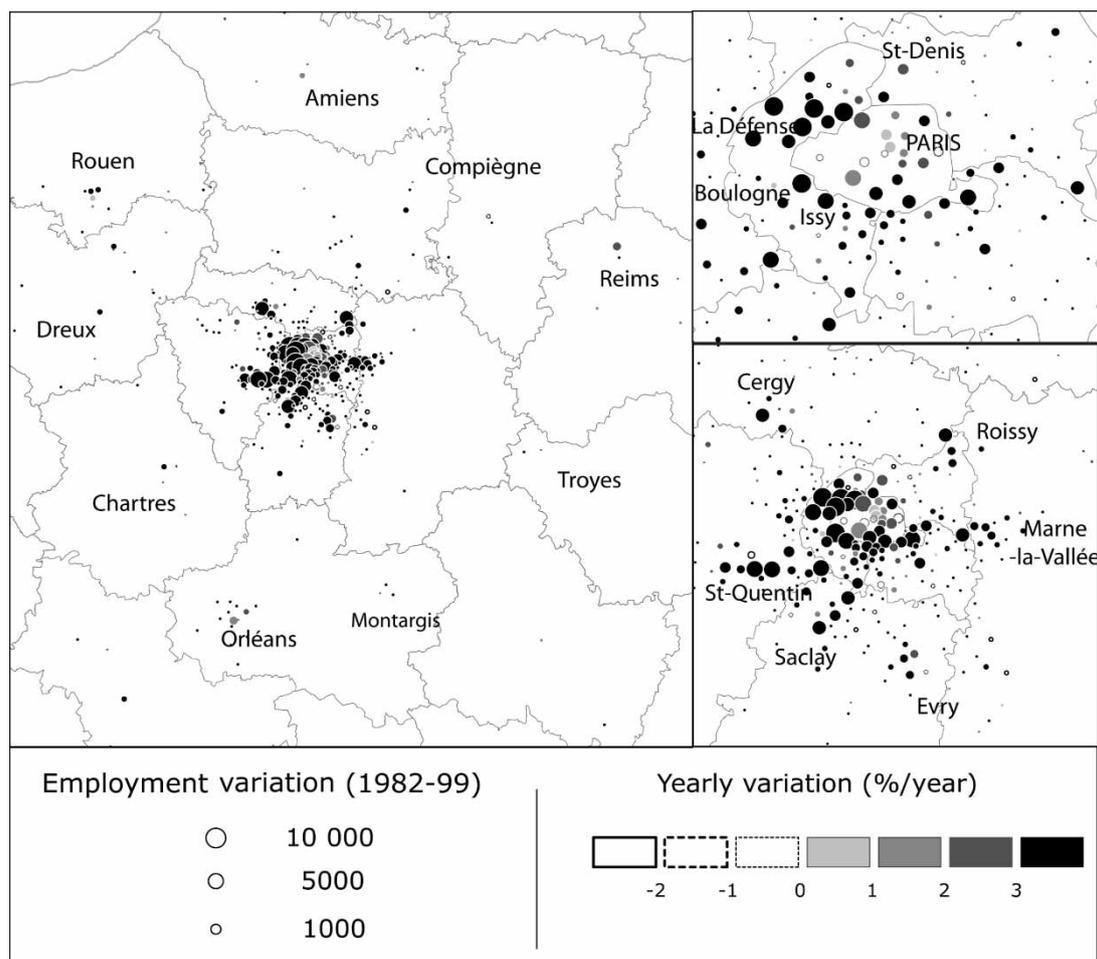


Fig. 5. High-level Abstract Production workers: a dynamic geography in the Paris/Bassin parisien mega-city-region
Sources: INSEE, National Census (1982, 1999). Drawn by L. Halbert (Latts/CNRS), 2006

INFORMATION FLOWS AND THE HIERARCHICAL INTRA-METROPOLITAN POLY-CENTRISM IN THE PARIS FUNCTIONAL URBAN AREA (FUA)

What employment data can reveal is the location of activities within a given regional economy. What it does not show is how the regional productive system works in its day-to-day functioning. To understand urban systems – and not only urban structures – one has to observe the *relational* geography that can be apprehended not so much in terms of flows of commuters going to and from work, but via exchanges happening during a normal working day. As the information and knowledge economy develops, a geography of information flows within and between FUAs becomes urgent (CASTELLS, 1996). However, data are lacking. Authors such as TAYLOR (2003) have proposed indirect indicators to grasp *potential* intra-firms' flows and often at inter-metropolitan rather than intra-regional levels.

Telephone calls exchanged *between firms* are one way to approach more directly the geography of information

flows. Thanks to a research partnership with the national operator France Télécom, the author has been able to create a database collecting at a municipal level all telephone calls emanating from firms located in the Ile-de-France region (1) to other firms in the region and (2) to all types of respondents (both firms and individuals) in the rest of the world (at *départementale* level in France, at country level elsewhere). The data collection that happened for six weeks in March and April 2003 was based on a survey method whose rates varied accordingly to traffic intensity. France Télécom had at the time of the data collection the lion's share in the market of firms' telephone calls (over three-quarters) which makes this data set relatively efficient to grasp voice information exchanges via telecommunications. There are limits to this data set. First, exchanges outside the Ile-de-France region are incompletely informed: there are no telephone calls exchanged between FUAs of the *Bassin parisien*, but only exchanges between Paris municipalities and the surrounding administrative *départements*. Second, the use of these data presuppose that telephone calls are considered as efficient proxies of information exchanges in an economic system. It should be borne in mind at

all times that it is one among many other ways of exchanging information even though empirical surveys have testified its use as a crucial one in business relationships (HALBERT, 2004b). Lastly, the influence of distance on increasing prices is to be taken into account, although empirical surveys tend to confirm that costs have a fairly small impact on the geography of information flows at both global and regional levels (HALBERT, 2004b).

Yet, the results bring insights about how the regional productive system works in its day-to-day exchanges, and why *relational* polycentrism is of very restricted intensity at the MCR level in the Paris/*Bassin parisien* case. *Bassin parisien départements* accounted for 4.2% of all telephone calls emitted by Ile-de-France's firms during the survey period. Compared with the number of workers, it is more than could be expected (an emission index⁷ of 1.37 against the French average of 1.0). At the *département* level, an East–West imbalance appears clearly within the *Bassin parisien*: the Oise valley cities, Chartres, Rouen and Orléans *départements* account for almost two-thirds of the total exchanges from the Ile-de-France to the *Bassin parisien*.

However, these day-to-day interactions between the Paris region and its neighbouring *départements* are quite limited. First, because a large share of telecommunication flows bypasses the *Bassin parisien* cities due to strong exchanges between the Paris Region and other areas in France or abroad. The administrative regions of Rhône-Alpes and PACA – that is to say, Lyon, Grenoble, Marseilles and Nice city-regions – receive, for example, more telephone calls than the entire *Bassin parisien*. At the international level, the Paris/Ile-de-France firms call Africa as much as the *Bassin parisien*, while the Oise *département* receives fewer telephone calls than Germany.

Second, exchanges are polarized within the Paris FUA, and especially within its agglomeration. Two-thirds of all telephone calls remain *within* the Ile-de-France region. Moreover, even inside the Ile-de-France, the geography of telephone calls follows a polycentric but yet hierarchical pattern. The economic core, made here of the western Paris districts and of La Défense municipalities, is information intensive and plays the role of the global gateway. The rest of the metropolitan centre and the south-western quadrant is more intensely specialized in exchanges at national level. Lastly, the rest of the Ile-de-France territories have a local profile (inner suburbs looking inwards, outer suburbs looking outwards to the *Bassin parisien*). In conclusion, the intensity of centripetal information flows within the Paris FUA dominates over the polycentric pattern. Such a concentration of information flows within the Paris agglomeration prevents further relational polycentricity with surrounding FUAs of the *Bassin parisien*. Therefore, there is no evidence of a polycentric MCR functioning (Fig. 6 and Table 3).

THE LIMITS TO MEGA-CITY-REGION DECONCENTRATION

The last part of the paper proposes three explanations for the still relatively concentrated economic geography observed within the Paris agglomeration and which are described above as the main factors for the very limited economic deconcentration of Abstract Production jobs in the enlarged Paris/*Bassin parisien* region.

First, even though the understanding of their locational strategy still lacks a deeper analysis, real estate actors (promoters *and* investors) tend to play a growing role in the geography of offices, and indirectly on the locations of Abstract Production activities (MALEZIEUX, 1999; CROUZET, 2003). It is observed that investors are reluctant to develop real estate offices in the *Bassin parisien's* secondary cities where the existing office market is small and assets are more difficult to sell. As most investors now apply financial management techniques that require liquid markets in which buying and selling can be done quickly, they prefer to concentrate their investments on larger markets either in more important provincial metropolises (like Lyon) or in the Paris FUA itself. Over the last twenty years, around 90% of all offices developed in the *Bassin parisien* were thus created in the Ile-de-France region (DIZIAIN and HALBERT, 2006). Moreover, to balance risks and profits, most investors prefer to follow the same locational patterns and, therefore, develop large office districts in already well-established parts of the city (where risk is reduced) or in promising places often closed to the central area (for instance, in industrial districts adjacent to CBDs) or in already important secondary economic centres. In this context, the Paris agglomeration, whether in the new towns located on the outskirts or more likely during the last ten years in peri-central municipalities, has been favoured against more remote second-rank cities of the *Bassin parisien*.

Second, Advanced Producer Services professionals tend to follow a concentrated locational pattern. Around forty interviews achieved in the enlarged Paris region perimeter during the Polynet research have shown that because of the increasing volume of information flows circulating thanks to information and communication technologies, the need for face-to-face contact is higher. Emails and video-conferencing are not sufficient to exchange strategic and often tacit knowledge via formal meetings or thanks to more informal exchanges (over lunch, with friends, etc.). This confirms empirically more theoretical proposals highlighting the importance of extra-economic exchanges that ensure today's economic efficiency (VELTZ, 1996; GRAHAM and MARVIN, 1996). The central Parisian core is the first location where these exchanges occur. It constitutes a dense and dynamic '*city milieu*' where information circulates and is interpreted. One can go as far as to describe the central

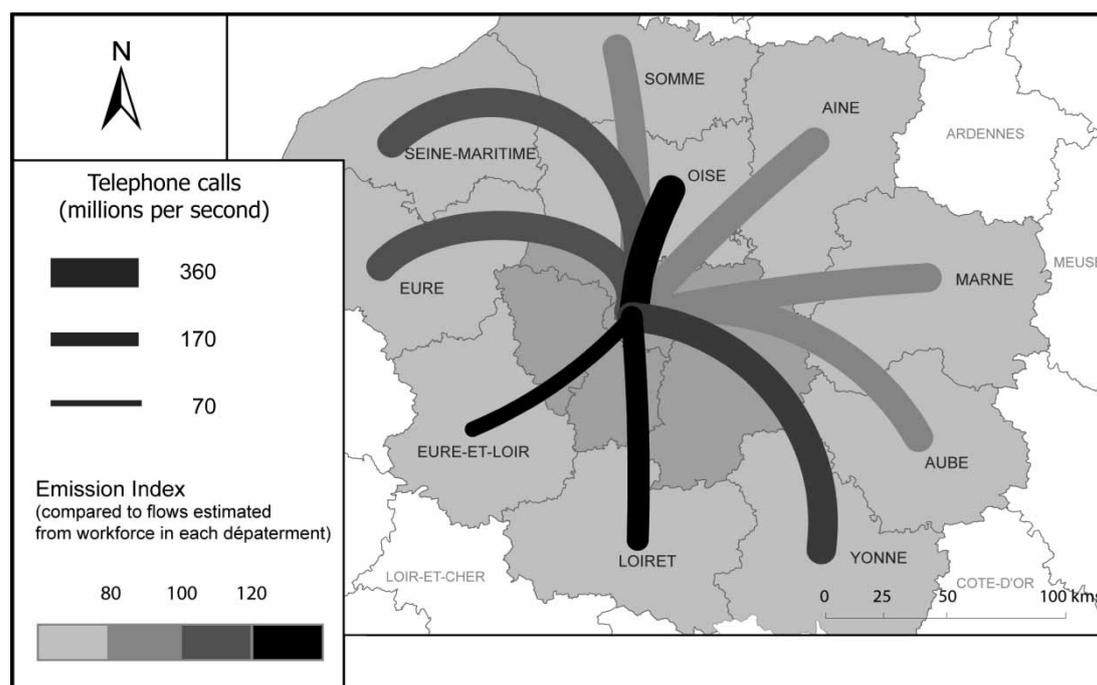


Fig. 6. Telephone calls flows from Ile-de-France firms to Bassin parisien départements
Sources: France Télécom, Obad, 2003, INSEE, laurif, RGP, 1/4, 1999. Author: L. Halbert

metropolitan triangle of Paris, La Défense and Boulogne/Issy-les Moulineaux as one example of the neo-Marshallian information districts described by GRAHAM and MARVIN (1996) in which the 'buzz' is essential (STORPER and VENABLES, 2004).

Third, the lack of more polycentric development between the Paris city-region and other secondary cities of the *Bassin parisien* is linked to spatial planning policies. Since the 1960s, at least, two competing strategies have been observed in the national spatial planning strategy (WELLHOFF, 1995; HALL, 1995; HALBERT, 2006a).

Table 3. Telephone call exchanges emanating from Ile-de-France firms in volume

Main destination	Départements	Volume (million of seconds)
<i>Bassin parisien</i>		1861
	Oise	360
	Seine-Maritime	330
	Loiret	267
	Eure-et-Loir	185
	Eure-et-Loir	169
	Marne	142
	Aisne	116
	Somme	112
	Yonne	107
	Aube	73
Rest of France		8819
Ile-de-France		28 700
International		4931
Total		44 311

First, the central State has developed a strong reluctance to supporting demographic and economic development in the Paris region because of what has been perceived since the 1940s as the excessive weight of Paris in the French territory. In his famous book, GRAVIER (1947) summarized the national geography in a short and impressive title: 'Paris and the French Desert'. In this context, a policy to support 'equilibrium metropolises' was favoured by central government in the 1960s at the national level, which because of the attraction of Paris, very soon ended in supporting secondary cities in the *Bassin parisien*. In the 1990s, this planning strategy was still a priority: the central spatial planning agency (the Datar, created in the 1960s by Charles de Gaulle, and which has been one of the most vigorous promoters of decentralization policies) and the different administrative regions of the *Bassin parisien* agreed to favour demographic and economic development around the Ile-de-France region to prevent more concentration in the Paris FUA. Among the different scenarios proposed at that time, two were opposed: the first was one of strong integration between Paris and its surrounding secondary cities (evolving towards what would be an MCR under Polynet's terminology); the second opposed the Paris agglomeration to emergent polycentric metropolises in the peripheries of the *Bassin parisien*, the latter scenario being favoured by most regions and the Datar. This led to the development of a strategic cooperation between the national government and the eight administrative regions (1994–99 *Contrat de Plan Interrégional du Bassin parisien*), probably the only formal attempt to develop an MCR-scale governance (what at the outset

of this paper is referred to as 'political polycentricity'). Since then, no more trans-regional – that is to say, at the MCR level – strategies and partnerships have been proposed, probably because of the successfully competing spatial planning strategies developed within the Ile-de-France region at the same time.

Indeed, the development of spatial planning in the *Bassin parisien* has been challenged by a parallel policy emanating from the central government in order to support – in a quite schizophrenic way – the Paris city-region. As early as de Gaulle's government, the '*grandeur de la France*' policy required that regardless of the numerous attempts to reduce the weight of Paris in the national territory, it was equally important to keep the French economic engine of that time roaring. Investments in infrastructures proposed in the three successive Regional Master Plans (1965, 1976 and 1994 *Schémas directeurs*) aimed to reinforce the international attractiveness and the economic efficiency of the first French FUA. From La Défense business district to the *Villes Nouvelles* policy, from Roissy airport to the RER network (*regional express railway system*) and expressways, all these investments proved to be crucial to the development of the agglomeration as is known today. In this context, the leading principle was the enhancement of polycentricity, *but* within a very small radius. Even though inspired by the British New Towns, the Ile-de-France *villes nouvelles* were located no further than 30 km away from Notre-Dame Cathedral while English New Towns are often found at 100 km from St Paul's. This is crucial in understanding the limited deconcentration processes happening in the *Bassin parisien* as firms have found secondary cities in the *vicinity* of the Paris central area without having to move further outside the Ile-de-France region. The success of regional planning infrastructures might be the most important reason for the lack of an MCR in the Paris case study (HALBERT, 2006a).

The forty-year-long opposition between these two policies (the limitation of Paris development versus reinforcement of its attractiveness) has prevented the development of an MCR-level governance. The current focus given to the regional level in terms of spatial planning strategies will probably reduce any potential developments of an MCR-level political polycentricity, both in terms of a common strategy and of formal/informal partnerships. The revision of the Ile-de-France master plan has eagerly forgotten the surrounding cities and *départements* which, however, are functionally linked to the Paris city-region, not so much in terms of Advanced Producer Services, but in more basic production and services activities (HALBERT, 2006b).

CONCLUSION

This paper highlights some limitations of the global polycentric MCR formation hypothesis when applied to the

Paris city-region/*Bassin parisien*. If a network of secondary cities exists around the dominant Paris FUA, thus slightly counterbalancing a predominantly monocentric morphological pattern, specialization in Advanced Producer Services and in Abstract Production functions is still restricted to Paris FUA's central area and to some secondary economic centres *within* the Paris agglomeration. The deconcentration of business services follows a hierarchical functional division of labour between Paris FUA and the *Bassin parisien*, the latter concentrating basic production and 'basic' services to firms and households rather than highly skilled 'global' workers. In this context, relational polycentricity measured by firms' telephone calls exchanges is strictly polarized by the Parisian FUA, thus strongly limiting the hypothesis of a fully polycentric MCR.

The intensity of global functions' polarization by the Paris FUA, and more specifically within its agglomeration, is the result of at least three processes: (1) the concentration of real estate developments in large central poles to reduce investors' risks, especially since the mid-1990s; (2) the need for many knowledge and information economy-related firms to share spatial proximity in order to favour face-to-face contact; and (3) the spatial planning policies that supported the development of well-connected urban centres within the Paris agglomeration and thus limited the opportunities of relocation in further secondary cities at *Bassin parisien* level unlike in the London/South-East England case.

Lastly, maybe because of the spatially limited deconcentration process, political polycentrism at the MCR level, that is to say the ability to develop a strategy and partnerships at the enlarged metropolitan scale, has been unsuccessful but maybe for a very short and controversial period of time in the mid-1990s.

In conclusion, it should be asked whether the lack of polycentricity in the Paris city-region/*Bassin parisien* is a positive or negative outcome according to the four main policy objectives prevalent in contemporary urban and regional planning (i.e. economic efficiency, social equity, environmental sustainability, and territorial cohesion) and this at the various spatial levels (from local to European).

First at the Ile-de-France scale, in spite of recent difficulties in terms of economic development and job creations, the Paris city-region is still one of the two leading global cities in the European system. It still contributes importantly to the national wealth, and remains its major economic engine. Moreover, its relatively compact geography might prove to be a key asset in satisfying firms that are always more eager to access highly skilled workers in a global and knowledge-demanding economy. However, because of (1) important public and social transfers at the national level, (2) a decreasing perceived quality of life leading to a negative migration balance, (3) increasing long-distance commuters living outside the Ile-de-France region, and (4) a higher proportion of highly paid workers who

tend to spend their money outside the region (week-ends, holidays, business tourism), a part of the wealth created in the Paris city-region is not reinvested locally, thus strongly limiting job creation (DAVEZIES, 2004). In other words, if agglomeration and urban economies favour an extremely high productivity for firms, the economic outcomes are counterbalanced by external and more societal trends that limit the overall economic success of the region measured, for instance, in revenues per inhabitants or in job creations. Second, globalization trends seem to sharpen social inequities in the Paris Ile-de-France region as it does in many other cities, especially as land prices are peaking in the central part of the agglomeration, forcing out lower-income households, which in consequence see their potential employment basin reduced (ORFEUIL and WENGLANSKY, 2004). Lastly, the efficiency of the public transport system and the limited extent of the agglomeration is seen by many as a valuable asset to limit unsustainable development. If the *Villes nouvelles* have not managed to polarize all deconcentration processes and are soon to be swept by a wave of urban sprawl, density remains a key element to reduce car dependency and limit long-distance commuting. In this context, it seems that for economic, social and environmental reasons, concentration should prove more beneficial to the overall Paris city-region than a further deconcentrated polycentricity at the MCR scale, if only the redistribution of wealth within the region was to be improved.

Yet, this does not mean that functional and/or political integration or complementarities should not be pursued to address issues that link the Paris city-region and the rest of the *Bassin parisien*. Spillovers from the Paris city-region can affect positively secondary cities that benefit from new revenues spent locally, develop local service economies and host deconcentrated functions (basic manufacturing, logistics and services). Some cities have been more successful than others, like Orléans or Chartres, which have found sectoral and functional specializations that complement the economic profile of the Paris city-region. Their strategies to strengthen niche specializations may seem unacceptably risky if too narrowly defined in one sub-segment of a particular sector, but can be very effective if correctly positioned in complementarity with the Ile-de-France market where customers and investors are numerous. There is no evidence in this context of an insurmountable 'shadow effect' where Paris would be the sole city to get all the benefits of globalization processes.

At the national level, contrasting with the now old policy aiming at limiting the growth of the Paris city-region – and which has still numerous supporters – studies demonstrate that the Ile-de-France success benefits probably more the rest of the national territory because of the important redistribution of wealth (DAVEZIES, 2008).

Lastly, at the European level, the Paris city-region, and more largely the different First Cities of the Pentagon, are the key gateways that link the European Union to the globalizing economy and probably should not be downplayed by European Union policy-makers (HALL and PAIN, 2006).

The Paris case study not only shows that in spite of deconcentration trends affecting business services (third-wave hypothesis), the polycentric MCR formation process is not such a universal trend among European cities. It also demonstrates that less polycentric development can be at least as efficient according to the different objectives followed by policy-makers. But most of all, it underlines the importance of *specific histories*, both regional and national, in the shaping of city-regions, no matter how intensely integrated they are in the globalization of the economy.

NOTES

1. It is in direct reference to their paper 'Examining the CBD decline hypothesis: evidence from Montreal metropolitan area' that the present paper was so titled.
2. There are many non-knowledge-related workers affected by globalization (blue collar workers in the low-cost manufacturing regions, workers serving middle-class tourists in low-cost destinations, migrants in charge of underpaid jobs in European cities, ethnic or family-related import/export activities contributing to the circulation of low-technology goods). All these jobs are directly linked to the global economy and ensure crucial financial flows (remittances, for instance) that sustain economic development in many parts of the world. In this context, the 'knowledge economy' is but one dimension of globalization.
3. It is a term that will also be used in this paper, but in a critical approach for it will be demonstrated how the Paris case study differs from the Polynet Polycentric Global MCR hypothesis.
4. Note that employment data used in this paper do not give a direct evaluation of firms' location and move, for example, from the Paris municipality to the rest of the FUA or to the enlarged functional region. What is observed is rather the result of job creation versus job destruction over a given period of time (1982–99) in the different parts of the region and for a given sector (i.e. business services), thus indicating potential deconcentration trends and relative differences in growth rates.
5. To exclude jobs servicing households and individuals which are not of concern to the present paper.
6. Needless to say, this definition needs to be used with extreme care for it is based on very strong postulates such as the central role credited to *some* forms of knowledge in the economy.
7. This index is the ratio of the share of a given territory of the total number of telephone calls divided by the share of this territory's workforce of the total national workforce. A value above 1.0 indicates that a territory receives more telephone calls than could be expected if all workers were receiving the same number of telephone calls in France.

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