



**HAL**  
open science

## European planning and the polycentric consensus : wishful thinking ?

Christian Vandermotten, Marcel Georges Roelandts, Pierre Cornut, Ludovic  
Halbert

► **To cite this version:**

Christian Vandermotten, Marcel Georges Roelandts, Pierre Cornut, Ludovic Halbert. European planning and the polycentric consensus : wishful thinking ?. *Regional Studies*, 2008, 42 (08), pp.1205-1217. 10.1080/00343400701874206 . hal-00514707

**HAL Id: hal-00514707**

**<https://hal.science/hal-00514707v1>**

Submitted on 3 Sep 2010

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



**European planning and the polycentric consensus : wishful thinking ?**

Journal:	<i>Regional Studies</i>
Manuscript ID:	CRES-2006-0240.R1
Manuscript Type:	Main Section
JEL codes:	R58 - Regional Development Policy < R5 - Regional Government Analysis < R - Urban, Rural, and Regional Economics
Keywords:	urban networks, polycentrism, polycentricity, ESPON, European planning policies

SCHOLARONE™  
Manuscripts

## European planning and the polycentric consensus : wishful thinking ?

**Deleted:** Une nouvelle passe pour bien vérifier l'usage de polycentricité et polycentrisme (et moncentricité et monocentrisme) me paraît nécessaire, il y a encore des ratés.

Received: October 06

Accepted: July 07

Vandermotten Christian : [cvdmotte@ulb.ac.be](mailto:cvdmotte@ulb.ac.be) , Université Libre de Bruxelles, Laboratoire de Géographie Humaine, CP 246, Boulevard du Triomphe, 1050 Bruxelles, Belgique.

Halbert Ludovic : [ludovic.halbert@enpc.fr](mailto:ludovic.halbert@enpc.fr) , LATTS/Ecole nationale des ponts et chaussées, 6 et 8 avenue Blaise Pascal-Cité Descartes, 77455 Marne-la-Vallée cedex 2, France.

Roelandts Marcel : [mroeland@ulb.ac.be](mailto:mroeland@ulb.ac.be) , Université Libre de Bruxelles, Laboratoire de Géographie Humaine, CP 246, Boulevard du Triomphe, 1050 Bruxelles, Belgique.

Cornut Pierre : [pierre.cornut@umh.ac.be](mailto:pierre.cornut@umh.ac.be) , Université de Mons-Hainaut, 20 Place du Parc, 7000 Mons, Belgique.

ABSTRACT - EU planning documents enhance the values of polycentrism, as a tool to promote a more efficient, equitable and sustainable development. This paper highlights how and suggests why a descriptive approach of the European urban system became progressively a normative concept. It examines how biases in the measurement of polycentricity in the ESPON 1.1.1 report are related to this normative approach. Our empirical findings don't suggest any clear correlation between more polycentricity and more economic efficiency or even more spatial equity. The paper examines the reasons of the EU tenacity to promote polycentrism. This concept seems to be the result of a political compromise and a strange hybrid between two competing approaches for the future of the European space.

1  
2 KEY WORDS : urban networks, polycentrism, polycentricity, ESPON, European planning  
3  
4 policies.  
5  
6

7  
8 JEL Code : R1, R52, R58  
9

10 La planification européenne et le consensus du polycentrisme : un mythe  
11 politique ?  
12

13 RESUME - Les documents de planification de l'Union européenne promeuvent le  
14 polycentrisme, présenté comme un outil au service d'un développement plus efficace, plus  
15 équitable et plus durable. Cet article examine comment et pourquoi une approche descriptive  
16 du système urbain européen est progressivement devenue un concept normatif. Il examine les  
17 liaisons entre les biais dans la mesure de la polycentricité telle qu'elle a été pratiquée par  
18 l'étude ESPON 1.1.1 et cette approche normative. Nos résultats empiriques ne montrent pas  
19 de corrélation significative entre des systèmes urbains plus polycentriques, plus d'efficacité  
20 économique ou plus d'équité spatiale. L'article examine les raisons de la volonté de promotion  
21 du polycentrisme par les autorités européennes. Cette promotion semble résulter d'un  
22 compromis politique et le concept apparaît comme un étrange hybride entre deux conceptions  
23 opposées du futur de la construction spatiale de l'Europe.  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34

35  
36  
37 MOTS CLES : armatures urbaines, polycentrisme, polycentricité, ESPON, politiques de  
38 planification européennes.  
39

40  
41 Europäische Raumplanung und der Polyzentrismuskonsens : politische  
42 Wunschvorstellung ?  
43

44 ZUSAMMENFASSUNG  
45

46 Offizielle europäische Raumplanungsdokumente vertreten die Idee des Polyzentrismus als  
47 Werkzeug für eine effizientere, gerechtere und nachhaltigere Entwicklung. Dieser Artikel  
48 untersucht wie und warum ein ursprünglich beschreibendes Konzept zu einem normativen  
49  
50  
51  
52

1  
2 Konzept geworden ist. Er erforscht die Verbindungen zwischen voreingenommenen  
3  
4 Messungen des Polyzentrismus, so wie in der ESPON 1.1.1-Studie, und dieser normativen  
5  
6 Ausrichtung des Konzepts. Unsere empirischen Ergebnisse zeigen keine signifikante  
7  
8 Korrelation zwischen polyzentrischen Städtesystemen und wirtschaftlicher Effizienz oder  
9  
10 räumlicher Gerechtigkeit. Der Artikel untersucht die Gründe für den Willen der europäischen  
11  
12 Behörden zur Förderung des Polyzentrismus. Diese Förderung scheint das Resultat eines  
13  
14 politischen Kompromisses, und das Konzept wirkt wie eine merkwürdige Hybride zwischen  
15  
16 zwei gegensätzlichen Konzeptionen der Zukunft der räumlichen Konstruktion Europas.  
17

18  
19  
20 SCHLÜSSELWÖRTER : urbane Struktur, Polyzentrismus, ESPON, europäische  
21  
22 Raumplanung  
23

24  
25  
26 Planificación europea y el consenso policéntrico: ¿una ilusión?

27  
28 Vandermotten, Christian, Halbert, Ludovic and Roelandts, Marcel  
29

30 ABSTRACT –

31 Los documentos de planificación de la UE mejoran los valores de policentrismo como  
32 herramienta para fomentar un desarrollo más eficaz, justo y sostenible. En este artículo  
33 destacamos cómo y por qué motivo el planteamiento descriptivo del sistema urbano europeo  
34 se convirtió poco a poco en un concepto normativo. Examinamos qué relación tiene este  
35 planteamiento normativo con los sesgos al medir la policentralidad en el informe ESPON  
36 1.1.1. Nuestros resultados empíricos no sugieren una clara relación entre más policentralidad  
37 y más eficacia económica o incluso más igualdad espacial. Aquí analizamos los motivos de la  
38 tenacidad de la UE por fomentar el policentrismo. Este concepto parece ser el resultado de un  
39 compromiso político y un extraño híbrido entre dos planteamientos competitivos para el  
40 futuro del espacio europeo.

41 KEY WORDS :

42 Redes urbanas  
43 Policentrismo  
44 Policentralidad  
45 ESPON  
46 Políticas europeas de planificación  
47

48  
49 JEL Code : R1, R52, R58  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

INTRODUCTION

Regions and cities play an increasing role in European territorial planning strategies. In this context, the enhancement of polycentrism in terms of regional and urban planning strategies has become a key priority on EU's agenda (ALLAIN, BAUELLE, GUY, 2003). The European Spatial Development Perspective (ESDP) depicts polycentrism as a way to ensure both improved territorial planning and a more balanced development of the European space. As time went polycentrism has been increasingly credited with new virtues. What was at first a planning principle became at Lisbon's Summit in 2000 a major tool to increase economic competitiveness and the development of the 'knowledge economy'. At the European Gothenburg's Council in June 2001, where the emphasis have slightly been shifted toward environmental issues, polycentrism was presented as a key contribution to sustainable development strategies.

This enlargement of the qualities attributed to polycentric spatial planning policies to wide-ranging aspects of the collective well-fare of European citizens has been paralleled with the development of a new narrative insisting on multi-scalar approaches. The ESDP depicts polycentrism as a two-scales process/policy. First, at the European level, polycentrism is seen as a tool to stimulate new or emergent growth poles located outside the so-called 'Pentagon' — Europe's economic core stretching from London to Milan, and from Paris to German cities — and thus to transform the stigmatised EU centre-periphery spatial structure into a more balanced 'bunch of grapes'. Meantime, at the regional level, polycentrism is presented as the panacea for a balanced spatial development: polycentric urban regions (PURs) made of

- Deleted: part
- Deleted: EU
- Deleted:
- Deleted: If such an
- Deleted: that underly
- Deleted: one of the main objectives the policy assigns
- Deleted: those
- Deleted: : the enhancement of polycentrism
- Deleted: documents
- Deleted: a
- Deleted: With the progression of EU
- Deleted: attributed more and more
- Deleted: Since the L
- Deleted: , it has been seen as
- Comment [Ludovic H1]: Je ne comprends pas cette phrase. En quoi l'équité sociale favorise-t-elle la compétitivité économique ?
- Deleted: through
- Deleted: promoting
- Deleted: and social equity
- Deleted: protection
- Deleted: being able
- Deleted: contribute to develop a
- Deleted: y
- Deleted: The
- Deleted: considers
- Deleted: on
- Deleted: ly on
- Deleted: scale
- Deleted: economic core of Europe, nicknamed the
- Deleted: ,
- Deleted: of the EU
- Deleted: better
- Comment [Ludovic H2]: Référence ?
- Deleted: ly
- Deleted: on
- Deleted: considered
- Deleted: of a



several nearby and interacting cities are supposed to be more suitable a spatial structure since  
 i) they limit the supposedly socially and environmentally unsustainable concentrations,  
 typical of large monocentric urban regions and ii) they form a constellation of medium-sized  
 cities able, - if working hands in hands to achieve the highest standards in the international  
 competition (FALUDI, 2004).

Deleted: cap

Deleted: ,

Deleted: when

Deleted: ,

Deleted: competing on the

Deleted: level

Based on a critical study of the concept of polycentrism promoted by EU documents and  
 related scientific studies, and focusing only on the national (and not the intra-metropolitan)  
 level, this paper aims to discuss the conceptualisation and use of the regional and urban level  
 in EU spatial planning policies. We intend:

Deleted: The objectives of t

(i) to highlight how a descriptive approach of the European urban system was  
 progressively replaced by a normative conception which is currently promoted by EU  
 spatial planning authorities;

Deleted: are four:

Deleted: showing

Deleted: , in this issue,

Deleted: view

Deleted: EU

Deleted: such as the one

Deleted: adopted

(ii) to examine possible biases in the measurement of polycentricity developed by EU-  
 related studies, especially by the ESPON 1.1.1 study (NORDREGIO *et al.*, 2005), which  
 seems to waver between a purely scientific exercise and a more policy oriented report.  
Even if this study does not implicate the EU authorities that are responsible for regional  
 planning and economic development policies, one has the feeling that it is a remarkable  
 example of the impact of normative presuppositions that are largely in line with EU  
 spatial planning principles;

Deleted: ing

Deleted: tools

Deleted: linked with those normative  
presuppositions

Deleted: those put forward by

Deleted: analysis

Deleted: basis for the

Deleted: of political objectives

Deleted: And

Deleted: e

Deleted: that

Deleted: issues

(iii) to show how our personal empirical observations contradict the presupposed benefits  
 of polycentrism at European level;

Deleted: some framework largely  
supported by those authorities

Deleted: ing

Deleted: that the results of a first

Deleted: demonstration

Deleted: obviously fail

(iv) to discuss the underlying logics that explain the success of polycentrism as a widely  
 accepted political concept.

Deleted: to offer

Deleted: putting forward a hypothesis

Deleted: could

The methodology of this paper combines analyses based on i) a survey of recent policy and research documents (ESDP and ESPON 1.1.1. especially), ii) two empirical analyses at European level (a statistical analysis of a polycentricity index vs. economic and social indicators and a series of interviews with 'Advanced Producer Services' (APS) professionals in major European city-regions undertaken in the Polynet research programme) and iii) a critical theoretical review of the concepts of polycentricity and polycentrism. From then on, we refer with the term 'polycentricity' to any spatial structure following a polycentric pattern, whereas 'polycentrism' is used to engage with normative/political issues.

**Deleted:** ¶  
Through a critical reading of the polycentrism concept, this paper is thus in line with the discussion about EU spatial planning, especially the conceptualization and use of the regional level in the implementation of planning strategies.

## FROM THE DESCRIPTION OF EUROPEAN URBAN SYSTEMS TO EU SPATIAL PLANNING STRATEGIES

In the first part of the paper, we would like to quickly review the recent history of European studies dealing with urban systems. We observe a dominant shift from scientific descriptions of European urban patterns (of which polycentricity was but one concept among many others) to the promotion of polycentrism - a form of ideology based on the concept of polycentricity - in EU spatial planning policies.

One of the early theoretical analysis on urban structures was Christaller's (CHRISTALLER, 1933). It was based upon the empirical observation of a prevalently agro-industrial economy and society typical of south Germany at that time. In the late 50s and 60s, studies on urban patterns and networks multiplied in various countries, as well in West as in East Europe. Whether it was following a Fordist regulationist perspective or socialist planning objectives, in both parts of Europe large-scale infrastructures were required. The key issue was the provision of services and consumer goods (basic, semi-rare or rare) to all parts of the national

**Deleted:** The  
**Deleted:** first  
**Deleted:** frames  
**Deleted:** 1993  
**Deleted:** is  
**Deleted:** yet  
**Deleted:** situation prevailing  
**Deleted:** in the  
**Deleted:** of  
**Deleted:** this  
**Deleted:** 19  
**Deleted:** the 19  
**Deleted:** networks  
**Deleted:** the national context of European countries  
**Deleted:**  
**Deleted:** In the  
**Deleted:** (as well as  
**Deleted:** )  
**Deleted:** and within the framework of the development of  
**Deleted:** problem  
**Deleted:** to provide  
**Deleted:** all territorial parts with  
**Deleted:** enough  
**Deleted:** proximity, rare or semi-rare



territory to counter an unwanted but still very strong rural exodus. In many cases, rural exodus was seen as a negative trend not only for the new uprooted migrants arriving in large impersonal cities but also for the rural and impoverished rest of the territory (but was it really true?), J.F. Gravier's notorious book 'Paris et le désert français' (*Paris and the French desert*, GRAVIER, 1947) illustrates the raising awareness of the limits of archaic/agrarian structures still characterizing large parts of the French territory at the end of the Second World War. The implementation of Christaller-like spatial organisations by national planning authorities was first supported through the development of major infrastructures, in order both to improve the quantitative and qualitative provision of services all over the national territory, following the different levels of the urban hierarchy, and to achieve Keynesian-type economic growth. Spatial planning in the post-war years was thus considered as a contribution to Fordist development, supporting the development of rural and semi-rural areas which hosted new manufacturing plants employing low-skilled workers on assembly lines and benefited from a more general context of full employment, rising wages, and decreasing dependency on coal mining and rail.

In this context, urban networks were understood in terms of hierarchies and reflected a rather pyramidal spatial organisation, from the biggest metropolises to the smallest towns. The paradox is that the success of this 'development' model led to a strong increase both in people's mobility and in the general quality of infrastructures which, in return, changed the locations of functions that use to traditionally be distributed according to the rankings of cities within the urban hierarchy. Nowadays, these functions are shaped by complex multi-directional mobility networks and are located in places that partly escape classical inherited hierarchies (see for instance the redistribution of centralities emerging from new centres such as tourism-related cities, shopping centres outside city-centres, peripheral outlet centres, etc.), even if fundamental hierarchies subsists for the upper-level functions.

Deleted: The latter

Deleted: indeed

Deleted: process

Deleted: populations it affected (but is it still the case?)

Deleted: (but in fact this was probably true in the rural context of the time, which maintained a strong traditio... [1]

Deleted: The

Deleted: by J.F. Gravier

Deleted: this

Deleted: raising on

Deleted: the

Deleted:

Deleted: features

Deleted: economy

Deleted: operationalization

Deleted: is

Deleted: of all expressed in the ... [2]

Deleted: of infrastructural ... [3]

Deleted: and in the wish to improve

Deleted: allowing the

Deleted: achievement of the

Deleted: and to

Deleted: '

Deleted: planning aimed at hosting

Deleted: that employed

Deleted: a

Deleted: ,

Deleted: in

Deleted: background

Deleted: of

Deleted: release from the inertia of

Deleted: Christaller's theory is t... [4]

Deleted: it is obvious that the ar... [5]

Deleted: view

Deleted: of the urban networks,

Deleted: to

Deleted: central

Deleted: that

Deleted: led to such an

Deleted: in individual

Deleted: in the quality of person... [6]

Deleted: that a growing part of t... [7]

Comment [Ludovic H3]: Je n... [8]

Deleted: t services

Deleted: cities



It is not before the 70s that researches seem to have focused on the European urban system as a whole, even though most of the time under the form of a collection of national descriptions of the upper-levels urban hierarchies (JUILLARD, NONN, 1976; NICOLAÏ, VANDERMOTTEN, 1978). The spatial organisations depicted in these studies reflect differences between various national urban systems, ranging from the most monocentric to the most polycentric ones. They highlight in so to which extent urban systems are the products of long historical processes which have shaped national spaces and can thus be partly explained by inertia and 'permanences' (DAMETTE, SCHEIBLING, 1995; VANDERMOTTEN, 2000; VANDERMOTTEN, ROELANDTS, CORNUT, 2007). The well-known French and British monocentric national patterns for example (the latter being more functional than morphological, due to specific urbanization processes during the industrial revolution) have developed more or less simultaneously with the precocious formation of the central State in these two countries (and, paradoxically, even before the State consolidation in the French case: the strong primacy of Paris was already observed as early as the 14<sup>th</sup> century).

Brunet's works, and the famous 'Blue Banana', can be seen as the first fully pan-European study, rather than a more or less complex addition of national analyses (BRUNET, 1989). He uses the concept of inter-urban polycentricity to describe some urban regions made of a series of cities of equivalent size and with supposed interlinkages. The Randstad Holland (also called now Delta Metropolis), the Flemish Diamond and the Rhine-Ruhr area were key-examples of this category of urban regions. Recent works on the European urban system (ROZENBLAT, CICILLE, 2003) have contributed to the development of more systemic analyses discussing the organisation, hierarchy and functioning of the European urban system.

Deleted: The first analyses of

Deleted: frameworks

Deleted: at the European level are only

Deleted: juxtaposition

Deleted: various set-ups

Deleted: of the national urban frameworks

Deleted: the building of the

Deleted: in a very long-time history

Deleted: show

Deleted: very strong permanences

Deleted: Thus, the

Deleted: the

Deleted: monocentricities

Deleted: still

Deleted: the

Deleted: conditions

Deleted: found fulfilment

Deleted: at the same time as

Deleted: those

Deleted: as

Deleted: is

Deleted: present

Deleted: soon

Deleted: !

Deleted: More recent works on the European urban system (Rozenblat & Cicille 2003) pose the question of how it is organized, hierarchized and how it works. We are here still in the scientific field of urban and regional geography. such a

Deleted: from the 1970s

Deleted: composed

Deleted: of

Deleted: few

Deleted: links between each other

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

These works are still strongly embedded in the scientific field of urban and regional geography.

However, as early as the Leipzig Conference in 1994, that is to say when EU policy-makers became more involved in urban and regional matters, mainstream analyses of European urban systems shifted from the description of spatial configurations to a quest for the 'best' spatial organisation, understood as simultaneously the most efficient, equitable and sustainable. In this renewed normative context (DAVOUDI, 2003), the European regional planning debate soon focused on the monocentrism/polycentrism couple, in which EU authorities' preference clearly went for the latter.

The origin of this normative polycentrism dates back to the late 80s when the French national planning agency, known as the DATAR (*Délégation à l'Aménagement du Territoire et à l'Action Régionale – Delegation to Spatial Planning and Regional Action*), convinced the Commission to produce a spatial plan for the European territory (FALUDI, WATERHOUT, 2002). This opened an avenue for the Member States and the Commission to influence EU spatial policy – and of course the distribution of structural funds – which culminated with the final adoption of the ESDP in 1999. To put it roughly, the Southern States, following Italy's leading role, pleaded for more spatial cohesion within Europe (thus for more investments in the peripheral regions), whereas the States from the 'core' area, the Netherlands in particular, were fervent advocates of the enhancement of the general well being (implicitly including as well and thus favouring the core regions) (WATERHOUT, 2002). Quite amusingly, both policy options were promoted by their respective camps as the necessary prerequisite to improve Europe's competitiveness. According to Waterhout, polycentrism became so the bridging concept between both conceptions because the development of urban networks

- Deleted: Since
- Deleted: when
- Deleted: their EU political actors made
- Deleted: questions
- Deleted: there was a shift in the
- Deleted: the
- Deleted: structure toward an attempt to
- Deleted: define
- Deleted: the
- Deleted: s
- Deleted: of the EU space
- Deleted: that were supposed to promote the
- Deleted: and the most
- Deleted: patterns
- Deleted: simultaneously capable to bring about a
- Deleted: development
- Deleted: consequently
- Deleted: ,
- Deleted: with the EU authorities clearly favouring the latter, around which the wheel of the European regional planning
- Deleted: can be traced
- Deleted: 19
- Deleted: lobbied for the
- Deleted: be allowed to
- Deleted: of
- Deleted: until
- Deleted: with
- Deleted: as the
- Deleted: pleaded
- Comment [Ludovic H4]: C'est-à-dire ?
- Deleted: Both
- Deleted: said
- Deleted: to
- Deleted: be
- Deleted: of a better
- Deleted: of Europe
- Deleted: is
- Deleted: developing



throughout Europe i) 'reduces' the distance between centre and periphery (hence enhancing the competitiveness of the latter), ii) recognizes the importance of urban networks in the centre, and iii) pays equal attention to lagging and prosperous regions. Brunet's 'Blue Banana' was thus replaced by the 'bunch of grapes' political objective, the 'grapes' being urban regions organised as much as possible in a polycentric shape (KUNZMANN, WEGENER, 1991 first used the expression 'bunch of grapes'). From then on, polycentrism has become a key principle in European spatial planning policies. It is in this regard quite symptomatic that the first study credited to the European Spatial Observatory Network (ESPON) focused on 'Potentials for Polycentric Development' to which we now turn.

**Deleted:** gives

**Deleted:** The Pentagon (or Brunet's 'Blue Banana') reality

**Deleted:** has

**Deleted:** been

**Deleted:** ,

**Deleted:** if possible

**Deleted:** ones

**Deleted:** The stake is thus to propose here a critical reading of what appears as a polycentric ideology.

### THE ESPON 1.1.1 STUDY ON POLYCENTRISM IN QUESTION

The European Commission (DG Regio) and the member States launched an ambitious research and decision-aid program, named ESPON (European Spatial Observation Network, [www.espon.eu](http://www.espon.eu)). As its first research project expresses in its final report (NORDREGIO et al., 2005, p. 40), ESPON is firmly rooted into the polycentricism debate and in EU regional spatial planning policies:

**Comment [Ludovic H5]:** Est-ce correct an anglais ?

**Deleted:** In the breath of the ESDP, t

**Deleted:** vast

**Deleted:**

**Deleted:** s

'As a follow-up to the ESDP, polycentricity is one of the core topics of the European Spatial Planning Observatory Network (ESPON) programme (...).'

In this regard, ESPON follows two potentially conflicting objectives: first, to improve the scientific understanding of EU's urban system (research objective); second, to contribute to the enhancement of polycentrism (policy objective) as the ESPON 1.1.1 report admits:

'The ESPON programme stresses the need to enhance polycentricity at all spatial levels.' (NORDREGIO *et al.*, 2005, p. 40)

ESPON 1.1.1 was crucial in the achievement of these two goals for it was given the priority task to tackle the concept of urban polycentricity/polycentrism (NORDREGIO *et al.*, 2005) by proposing theoretical as well as empirical evidences of its reality in EU geography. One is therefore bound to go through a detailed review of ESPON 1.1.1 report to further understand the issue of polycentrism in Europe. This part of our paper would like to briefly point out some concerns raised by the final report.

The ESPON 1.1.1 methodology to measure polycentricity is based on the analysis of the size and distribution of Functional Urban Areas (FUAs) throughout the European space. FUAs are defined in principle by the labour basins corresponding to their urban cores (commuter's catchment area). This conception, inspired by Hall and Hay's works (HALL, HAY, 1980), and further developed by the GEMACA group (GEMACA, 1996), makes sense in a context of suburbanisation and growing commuting distance, even if it appears, as we will develop hereafter, that, when FUAs are comparable in size, systems structured around a single morphological centre, with a strong historical background and identity, often show better performances than less structured conurbations.

A first remark to the ESPON 1.1.1 study is that the population figures of FUAs are sometimes doubtful. What looks like a very consistent methodology based on identical criteria through all the European space was not correctly implemented in each country, sometimes due to a lack of data, sometimes to a bad implementation of the criteria (ANTIKAINEN, 2005; GÖDDECKE-STELLMANN, PORSCHE, SCHMIDT-SEIWERT, 2005). In some cases, so-

**Deleted:** Its objectives are as well spreading of ESDP concepts as developing scientific views on the political decisions relating to regional development and spatial planning in Europe.

**Deleted:** The first study of this program wanted precisely to go more in depth in the

**Deleted:** basis proposed by the study

**Deleted:** is

**Deleted:** functional

**Deleted:** urban

**Deleted:** areas

**Deleted:** as

**Deleted:** the

**Deleted:** , and the latter's population is, always in principle, quantified on that very basis

**Deleted:** Such a

**Deleted:** , based on the

**Deleted:** which was also

**Deleted:** shared

**Deleted:** labour mobility

**Deleted:** it

**Deleted:** urban areas

**Deleted:** core

**Deleted:** strong historical background

**Deleted:** looser,

**Deleted:** It appears that the quantification of the

**Deleted:** s

**Deleted:** in the ESPON study

**Deleted:** The claimed identity

**Deleted:** of

**Deleted:** is

**Deleted:** always between

**Deleted:** the various

**Deleted:** ies

**Deleted:** of these

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

called FUAs are restricted to the morphological urban cores (missing the commuters' basin); in others, the administrative boundaries of the central city or of the corresponding NUTS 3 unit have been used; sometimes secondary cores of large urban areas have been identified as separate FUAs. For instance, suburban cores in Budapest or Desio, a suburb a few kilometres away from Milan, have been considered as separate FUAs whereas the Paris new towns are – quite rightfully according to the original definition – part of the Paris FUA (VANDERMOTTEN, PEETERS, HALBERT, KORCELLI, ILIES *et al.*, 2006).

**Deleted:** appear ...limited ...their ...or the .... In others, the ...: this is ...the case with ...of ...with ...but not – quite rightly indeed – with ...new towns of the ... [9]

Yet, this lack of consistency even though harmful in terms of scientific results might not be the major concern raised by the study, especially when one acknowledges the tremendous difficult challenge that a consistent data collection throughout Europe still remains. We would rather discuss here some potential theoretical deficiencies observed in the ESPON 1.1.1 study, and above all, how these deficiencies might highlight some presuppositions implicitly present in EU's spatial planning policies. As explained above, ESPON 1.1.1 study goes from a scientific description of polycentricity to a more normative discourse pleading in favour of polycentrism. For instance, instead of discussing the reasons for the differences between various national situations, the final report stigmatises some urban systems according to normative presuppositions. In Hungary, for example, rather than linking Budapest primatial position to its historical background - the city was the capital of an agrarian kingdom much larger than today's Hungarian territory -, the ESPON 1.1.1 study points out that Budapest is too large in accordance to the rank-size law (ZIPF, 1949), which is thus supposed by the authors to reflect the best distribution of cities for any national territory, a statement that Zipf himself would probably not have asserted. Quite ironically it is nowhere mentioned that a capital city is too small in countries in which the primateship of the largest city is inferior to what Zipf rank-size law predicts. More fundamentally, the rank-size 'law' concept is diverted

**Deleted:** Meanwhile, ...is ...not question, the more so as ...knows ...how statistics ...the ...in ...its meaning in of the ...political project...swings toward ...in favour ...analyzing ...those different ...according to the ... expressed...showing ...that ...has a very due ... as the ..., much huger than ...the current ...y...twice ...too ...as it should be in ...supposed to ...'right' ...on What is more, the bias in favour of polycentrism is so important that ...said the ...would ...be ...'...the ... (1949) provides ...for...Let's point out ... [10]

from its descriptive nature (a relatively constant relation between size and rank of cities in a given urban structure), towards a normative postulate that favours EU regional planning objectives, i.e. to enhance polycentrism,

Deleted: context

Deleted: postulate with a

Deleted: value

Deleted: , seen as a constraint as far as EU

Deleted: is concerned

Deleted: Beyond those scientific stances which seem influenced by the implicitly normative dimension of the report's commission, s

Deleted: are

Deleted: discutable

Deleted: efficiency

Deleted: is vitiated b

Deleted: y a very discutable

Deleted: normative assessments

On top of 'scientific' postulates that are misleading, some key methods and results of the ESPON 1.1.1 report needs to be taken with great care. The polycentricity index proposed by the ESPON 1.1.1 study, from which many conclusions on the so-called economic, social and environmental benefits of polycentrism are inferred, relies on a questionable methodology (VANDERMOTTEN, ROELANDTS, CORNUT, 2007). This ESPON 1.1.1 index is based on three (normative and implicit) postulates, which found the choice of the indicators:

Deleted: s

(i) a flat linear rank-size distribution is believed to reflect a more suitable urban pattern because no single city is dominant;

Deleted: of

Deleted: t dominated by a

Deleted: big

(ii) an uniform distribution of cities disseminated throughout the national territory is better than urban clusters polarised on certain parts of this territory ;

Deleted: n

Deleted: the

Deleted: a pattern of

(iii) accessibility should be identical for small and big FUAs in a polycentric spatial organisation.

Deleted: in a polycentric pattern,

Deleted: have to

Deleted: ly

Deleted: available

ESPON 1.1.1 builds thus a comprehensive index using various indicators supposed to account for these three postulates : it uses the slope of the regression line of the rank-size distribution of FUAs populations and GDP and primacy rate ; the Gini coefficient of the size of the Thiessen's polygons around each FUA ; a connectivity index, with two sub-indicators, the slope of the regression line between the accessibility and the population of the FUAs and the Gini coefficient of the accessibility of the FUAs. On this basis, it characterises each country by an average synthetic value, notwithstanding its size. Beyond the normative character assigned to the rank-size law, a logical incoherence appears, as this index takes into account both the distribution of FUAs' population and their GDP, where a scientific analysis aiming to

Deleted: as well

Deleted: the population of the

Deleted: as their

Deleted: when

measure the economic efficiency of an urban polycentric system should on the contrary compared polycentricity and GDP indicators.

Deleted: precisely

Deleted: aim at measuring if more or less

Deleted: implies more or less equity in the regional distribution of the

The ESPON 1.1.1 index sometimes leads to results different to the any common knowledge of national geographies and literatures. The study argues for example that the Irish urban system is a polycentric one, what is also criticised by Convery *et al.* (CONVERY *et al.*, 2006). This invalid result is due, among other factors, to the use of Thiessen's rather than Reilly's polygons to measure the equidistribution degree of FUAs through a national territory. Rather than depending on a gravity measurement, Thiessen's polygons are built on the perpendicular bisector of the line that links two neighbouring cities, so that the limits of the spheres of influence of small cities of the Western coast like Galway and Limerick are excessively extended, in comparison to Dublin's : again, following a normative perspective, the use of Thiessen's polygons means that equality of the size of these polygons is an objective *per se*, notwithstanding the pattern of the population on the territory (or to put it otherwise that the even distribution of the population on the national territory is an objective *per se*).

Deleted: much

Deleted: from a

Deleted: , even basic,

Deleted: frame

Deleted: a very

Deleted: one

Deleted: is

Deleted: due

Deleted: more or less strong

Deleted: the

Deleted: the

Deleted: boundaries

Deleted: by

Deleted: , in

Deleted: using

Deleted: that the

Deleted: one

Fig. 1. Level of polycentricity in the European countries. ESPON and own computation.

Source : ESPON 1.1.1 data and own computation.

The surprise arising from our ranking regarding a qualitative knowledge of the European urban pattern is the position of Hungary, which appears a priori to be very monocentric due to the weight of Budapest. This discrepancy is mainly due to the fact (i) that the index is based on population data and not on an appraisal of the level of concentration of the political and economical decision, (ii) that data used by ESPON 1,1,1 improperly separate some suburban "cities" from Budapest and (iii) to the very evenly distribution of the Hungarian cities outside Budapest.



We have developed our own methodology to confront ESPON 1.1.1 results. Figure 1

compares ESPON's polycentricity index with our own computation of a very simple index,

based on a purely *descriptive*, morphological approach (using yet ESPON 1.1.1 FUAs

population data, even when they are debatable proxys). Our polycentricity index is a

synthetical measure of various cardinal rankings of FUAs on the following indicators :

(i) share of the main FUA in the total population of the country ;

(iia and iib) weight of the main FUA in the total population of the whole set of FUAs with more than 200,000 and more than 50,000 inhabitants (for further discussion of (i) and (ii), see VANDERMOTTEN, ROELANDTS, CORNUT, 2007) ;

(iiia and iiib) average of the differences of population between a FUA and the following

one in a decreasing ranking from the most populated FUA to the one *respectively*

immediately beneath the threshold of 200,000 inhabitants and of 50,000 inhabitants,

considering so the whole distribution of the sizes in the set of cities ;

(iva and ivb) standard deviation of the population of the set of FUAs with *respectively*

more than 200,000 and more than 50,000 inhabitants.

The value of each of these seven indicators has been distributed on a scale ranging from 100

to 0, and the arithmetic average of these seven indicators computed. It gives a global

polycentricity index which is exclusively based on a descriptive, morphological approach –

the pattern of the distribution of the FUAs, according to their population -. Surely, more

refined statistical indexes could be computed, but we wanted to remain near the logics of the

ESPON 1.1.1 indicator, only avoiding to insert any normative presupposition in the building

of the index and to introduce any confusion between the size of the FUAs (their population)

and their economic efficiency (their GDP). Thus, the index *does not* intend to reflect

Deleted:

Deleted: (as approached by the arguable ies

Deleted: of the FUAs

Deleted: We have used

Deleted: the

Deleted: the

Deleted: until the threshold

Deleted: with

**Comment [Ludovic H6]:** Trop elliptique à mon avis, un lecteur ne peut pas comprendre pourquoi retenir ces différents indicateurs. Quelles informations qualifient-ils ? En quoi reflètent-ils une polycentricité, même morphologique, dans une armature urbaine donnée ? Il est nécessaire de développer un peu la méthodologie pour offrir ue alternative crédible à ESPON 1.1.1.

Deleted: bounded

Deleted: (the highest value for the indicator) and

Deleted: (the lowest one)

Deleted: the cardinal

Deleted: . We stress that this

Deleted: index of polycentrism imperfectly

Deleted: s

functional polycentricity, understood either as the level of symmetry of the interlinkages existing between urban areas, or defined in function of the distribution of the command functions, which are known to have a much more selective spatial pattern than population (VANDERMOTTEN *et al.*, 1999). In this regard, apparently morphological polycentric regions may hide for instance a strong functional monocentricity as would reflect the concentration of headquarters and APS, considered in the global economy literature as key indicators of the command function (SASSEN, 1991). This result is one of the most significant outcome of the POLYNET study, which confirms that even in morphological polycentric metropolitan regions, like Delta Metropolis in the Netherlands and South-East England, functions related to the APS sector remain concentrated in traditional central economic cores ('First cities'), like Amsterdam and London (HALL, PAIN, 2006). Functional polycentricity is much more significant at a European or worldwide level - the network of global cities - (VELTZ, 1996; BEAVERSTOCK, SMITH, TAYLOR *et al.*, 2000) than within enlarged metropolitan areas, the so-called Megacity Regions (HALL, PAIN, 2006).

In this context, one of the underlying scientific issues is to detail as rigorously as possible the definition of both the descriptive patterns (monocentricity vs. polycentricity) and the normative dimensions (monocentrism vs. polycentrism), but also to further develop EU policy-makers' objectives (what do hackneyed terms such as 'economic efficiency', 'social equity', 'environmental sustainability' or 'territorial cohesion' really mean?).

THE NORMATIVE PRESUPPOSITIONS OF POLYCENTRISM

- Deleted: the
- Deleted: polycentrism
- Deleted: , decisional
- Deleted: appearing
- Deleted: to be much more concentrated than the urban populations
- Deleted:
- Deleted: An
- Deleted: polycentrism
- Deleted: at
- Deleted: level
- Deleted: of the location of the command of the economy
- Deleted: : this is one of the most
- Deleted: results
- Deleted: shows
- Deleted: how even inside apparently
- Deleted: very
- Deleted: the main
- Deleted: the
- Deleted: In fact, the f
- Deleted: does not exist inside
- Deleted: the
- Deleted: but between their cores at the European or worldwide level
- Comment [Ludovic H7]: Il y a un gap dans la démonstration ici que je ne m'explique pas bien. On attend après la description de la méthodologie de l'indice de polycentrisme de l'IGEAT une discussion sur les résultats provenant de cet indice. Or on passe cependant à une réflexion sur polycentrisme morpho et fonctionnel qui arrive trop tôt à mon sens. Deux possibilités : enlever la partie sur l'indice de l'IGEAT ou développer les principaux résultats et les différences avec celui de ESPON 1.1.1.
- Deleted: The
- Deleted: stake
- Deleted: seems to be, in such a context, to define very
- Deleted: sense
- Deleted: , as well as
- Deleted: the
- Deleted: ones
- Deleted:

Beyond the question of measurement, we would like to engage here in a theoretical criticism of the normative presuppositions and supposed advantages of polycentrism, implicitly or explicitly expressed both in the ESPON [1.1.1](#) study and in official policy-oriented EU documents, such as the ESDP.

- First criticism: proposals in favour of polycentrism do not clarify the issue of scales and consider urban systems in an undifferentiated space continuum. Polycentricism is often promoted from the intra-urban level up to the European scale without consideration for what appear like very different processes. The evolution of the post-fordist economy no longer allows to consider simultaneously and with the same methodology i) the structuring role of cities as basic services providers for households and as execution centres of lower value-added production activities (following more or less Christallerian and fordist patterns), and ii) large metropolitan city-regions that act as nodes of a globalising world-economy. These 'upper-level' city-regions share generally a same significant population number, but this condition is far from being sufficient and is even not always present. Most of the larger national metropolises and megacities, but also some smaller gateways or internationally specialized cities (Luxembourg for ex.), locate the driving forces of the current transformations of the production system. It is them that are most involved in the so-called information revolution and that face an increasing specialisation in APS and in abstract production functions, such as R&D, management or marketing (HALBERT, 2005, 2006). In terms of monocentricity or polycentricity, it is thus interesting to compare the concentration of decision centres of international level between two global monocentric metropolitan regions such as Paris and London, and the polycentric Rhin-Ruhr area. Although almost equal in size the latter cannot sustain the comparison

Deleted: the

Deleted: problem

Deleted: We will not insist here on the fact that

Comment [Ludovic H8]: Ceci est-il clair pour le lecteur ?

Deleted: they even extend the notion to the analysis of the inner structure of megacities

Deleted: if we limit ourselves to the sole analysis of urban systems, they promote polycentrism as a continuum. We nevertheless think that the

Deleted: within the

Deleted: may no longer mix up the framing purposes of territories as providers of personal

Deleted: , or the mere execution

Deleted: from a

Deleted: point of view

Deleted: with

Deleted: the issue of insertion nodes in

Deleted: the

Deleted: zed

Deleted: nt

Deleted: is not

Deleted: big

Deleted: or possibly some

Deleted: design

Deleted: , practically

with the former in terms of international level command functions, despite Germany's economic weight (Fig. 2). Note that this result should not be taken as evidence for the promotion of monocentrism.

- Deleted: , but finally clearly
- Deleted: as far as the concentration of
- Deleted: international
- Deleted: is concerned
- Deleted: These comments may nevertheless in no way be interpreted as the promotion on
- Deleted: our part of some alternative project such as

Fig. 2. Location of headquarters of the European biggest transnational companies (European firms among the 2000 most important worldwide transnational firms).

Source : FORBES, 2000.

- Second criticism: proposals in favour of polycentrism make no clear distinction between morphological and functional polycentricity. The definition of large polycentric metropolitan areas is based on the juxtaposition of their functional urban areas. We argue that a coalescence of functional urban areas does not automatically lead to the reinforcement of a single labour market, nor to a more balanced distribution of functions between its constituent nodes. For instance, if the Rhine-Ruhr area appears like a set of closely located centres of equivalent size (but for Düsseldorf and Cologne) and consequently can be classified as morphologically polycentric, each urban centre has its own small and quite self-contained labour pool: the metropolitan area is relatively fragmented. On the contrary, the morphologically polycentric area of Central Belgium is in fact strongly polarised by Brussels which attracts huge commuting flows (GEMACA, 1996). Polycentrism is thus here more morphological than functional, and goes with a strong hierarchy of urban centres.

- Deleted: observation of the
- Deleted: defined as
- Deleted: Meanwhile
- Deleted: , such
- Deleted: situation of
- Deleted: between
- Deleted: the
- Deleted: as a whole of
- Deleted: cores
- Deleted: except
- Deleted: appear
- Deleted: as
- Deleted: of the nodes
- Comment [Ludovic H9]: Est-ce une traduction efficace pour fragmentation ?
- Deleted: split up
- Deleted: appears as
- Deleted: dominated
- Deleted: in terms of urban hierarchy,
- Deleted: and
- Deleted: extends around the city
- Deleted: hierarchization
- Deleted: cores
- Deleted: itself recalls how interesting it is to
- Deleted: ,
- Deleted: as much
- Deleted: as

Yet quite ironically the ESPON 1.1.1 report underlines how, both in scientific analyses and in the definition of public policies, the difference between morphological and functional polycentricity needs to be stressed. Whereas morphological

polycentricity refers to a static description of the urban organisation of a territory according to a rank-size 'law' or to a more or less homogenous spatial distribution of cities, functional polycentricity suggests another dimension of urban and regional systems, that can be theorised in two ways (see introduction of Paris article in this [Regional Studies Special Issue](#)).

Deleted: reading

Deleted: envisaged

Deleted: Halbert's

In a first definition, based on the widespread use of the term "functional" in urban geography, functional polycentricity can be used to describe cities and regions according to their particular specialisation in a set of functions, i.e. metropolises are often specialised in global command functions (APS, financial services, etc.), medium-sized cities in services to households, coast or mountain cities in tourism, small cities of rural regions in the industrial development of local productions, etc. In this first definition, functional polycentricity is thus closely related to the notion of functional specialisation, suggesting potential cooperations between complementary cities.

Deleted: its

Deleted: sense

Deleted: this

Deleted: word is used to

Deleted: which differ

Deleted: from each other as to their

Deleted: z

Deleted: such or such

Deleted: linked

Deleted: specialization

Deleted: possible

A second definition of functional polycentricity adopts a more dynamic approach of urban and regional systems. Functional polycentricity is no longer grasped through the study of the economic specialisations of cities, but can be understood as a description of the *functioning* of the urban system. The emphasis is thus shifted here from economic complementarity to exchanges between cities and regions or, statistically speaking, from location quotients to intra- and inter-regional flow matrices. In this latter definition, polycentricity refers to the intensity and the symmetry of relations between the different urban centres considered (exchanges of workers, capital, products, services, ideas, etc.). Here also, the relation between

Deleted: can

Deleted: start from a

Deleted: then

Deleted: limited to

Deleted: the

Deleted: z

Deleted: in such or such function

Deleted: x

Deleted: P

Deleted: is measured

Deleted: in terms of

Deleted: spaces

morphological and functional polycentricity is not a mechanical one: it is quite possible that nearby cities ignore each other and give priority to exchanges with other, more remote, regions. In other words, if the gravity models applied to urban systems can still partly explain the persistence of Christallerian patterns for some low-level production functions or for basic-level services, they account only very imperfectly for the exchanges happening in more globalised and upper-level functions. The network-type organisation of some global economic functions disconnects morphological and functional polycentricity (VELTZ, 1996). Two more criticisms result from these semantic distinctions with regard to European documents.

- Third and fourth criticism: proposals in favour of polycentrism presuppose first an identity between urban networks and firm networks, and second that spatial proximity favours cooperation. A recent study conducted in the Flemish Region (CABUS, 2006) demonstrates that, if firms increasingly follow network-type organisations and develop inter-firm relations because of the growing externalisation of many functions, these networks do not mechanically follow the existing urban hierarchy and the topological proximity in morphologically polycentric regions. On the contrary, apparently polycentric structures can lead to exclusive or competitive rather than complementary patterns. Even when regional cooperation is proclaimed in political discourses, like in the cross-border Euregio Maastricht – Hasselt – Liège – Aachen (MAHL), policies are often much more competition-oriented than the rosy cooperation expressed in official documents would induce. Even at intra-metropolitan level, it seems that firms located in the periphery of the Brussels-Capital Region, for example around the dynamic centre of the Brussels-National (Zaventem) airport in the Flemish Region, do not have

Deleted: organizations

Deleted: <sup>1</sup>

Deleted: globalized

Deleted: ing

Deleted: z

Deleted: the main new

Deleted: dissociates

**Comment [Ludovic H10]:** Toute cette partie sur le polycentrisme fonctionnel comme spécialisation économique et comme géographie des flux est un peu trop théorique je m'en rends compte un peu tardivement. Comme le papier est un peu long et que j'en parle dans l'article sur Paris, je pense que l'on peut sans hésiter le sabrer partiellement ou complètement. N'hésitez pas à jeter tout cela à la poubelle !

Deleted: as well as the fact

Deleted: by Cabus

Deleted: (

Deleted: clearly shows

Deleted: networks

Deleted: sustained

Deleted: according

Deleted: to the increasing

Deleted: externalization

Deleted: a range of

Deleted: do correspond to

Deleted: cities, possibly in

**Comment [Ludovic H11]:** Attention tout ce paragraphe alterne sans expliquer le lien une description du réseau des entreprises d'un côté et des stratégies de compétition entre les organisations politiques de l'autre. Il faut mieux préciser cela car on mélange des champs sémantiques distincts.

Deleted: reality

Deleted: often resembles

Deleted: rather

Deleted: the

Deleted: statements of intent

Deleted: the

Deleted: core

Deleted: most of the time

1  
2 other locations in the city itself (VANDERMOTTEN, ROELANDTS, AUJEAN,  
3  
4 CASTIAU, 2006). In addition, the polycentric development inside the large Belgian  
5  
6 central metropolitan area is set in a context of direct political competition between  
7  
8 three different Regions of a federal State, without links of organic cooperation with  
9  
10 each other, rather than as a mutually profitable planning strategy. The situation seems  
11  
12 quite different in Paris, where some firms with downtown headquarters develop back-  
13  
14 office cores in the periphery, especially in the new towns, as some banking institutions  
15  
16 do (HALBERT, 2004). In South-East England, the development of offices in the  
17  
18 periphery (in Reading for ex.) also affects high value-added APS functions that  
19  
20 complements London-based headquarters (PAIN, HALL, POTTS, WALKER, 2006).

Deleted: cities

Deleted: the British Great

Deleted: e

Deleted: added

Deleted: enterprise

- 21  
22  
23  
24 - Fifth criticism: proposals favouring polycentrism states that it is in nearby cities'  
25  
26 interest to specialize and to cooperate. Such a presupposition refers mainly to medium-  
27  
28 or small-sized cities, that are supposed to succeed better within the international  
29  
30 competition by developing specialised economic profiles. We argue that at least three  
31  
32 situations have to be distinguished:

Deleted: establish themselves

Deleted: context

Deleted: here

Deleted: whose

33  
34 (i) the case of well-performing small- and medium-cities, which strength lies in their  
35  
36 advanced specialisations. These cities (or more precisely their firms or institutions) are  
37  
38 often inserted into cooperation networks, but at a European if not worldwide level,  
39  
40 thus by-passing proximity-based networks. Small- or medium-sized university cities  
41  
42 belong to this category.

Deleted: specializations

Deleted: with

Deleted: dimension

Deleted: not

Deleted: at all

43  
44 (ii) the case of closely located small- and medium-sized cities, in which firms actually  
45  
46 operate in clusters (see for instance, the Belgian Courtrai area or the northern Italian  
47  
48 Brescia area or the Silicon Valley for variations in this category). In the present case,  
49  
50 it is not the specialisation of cities, but their insertion into a very specific chain and

Deleted: in the

Deleted: of Italy

Deleted: in the B

Deleted: a vein

Deleted: well

into proximity networks enabling cross-individual relationships that explains their economic success;

(iii) the case of polycentric urban structures, often found in mining and early heavy industrial regions, where neighbouring cities suffer from the legacy of obsolete structures and from a lagging development of their tertiary market sector, especially in business services. These cities often have weak functional linkages, while mistrust is common as they are forced to compete in order to attract the same kinds of limited investments and public aids. These cities would draw more benefits from developing economic niches in direct connection with nearby metropolises and consequently reducing their lack of higher level services, as might do for instance in France the cities of the Nord-Pas-de-Calais former coal basin with Lille metropolis, or Charleroi with Brussels city-region.

- Sixth criticism: proposals favouring polycentrism presuppose that remetropolisation and economic globalisation should lead cities to specialise. In fact, the most performing metropolises tend to have an economic structure that is predominantly diversified and follow a general convergence dynamic between large city-regions (CABUS, SAEY, 1997). To a certain extent, functional linkages between major cities follow what has already been observed with international trade: the share of complementary goods is decreasing (KRUGMAN, 1991). The convergence of global city-regions economic structures is also verified in terms of the very image they wish to market to the rest of the world. Benchmarking practices conducted by international offices probably encourage a homogenization of cities' urban and development policies.

- Deleted: prosperity
- Deleted: frames
- Deleted: in areas of
- Deleted: industrialisation or in mining areas
- Deleted: or their repercussions
- Deleted: gap in
- Deleted: to the enterprises
- Deleted: with each other
- Deleted: . It is hard to see on which bases they could build up links
- Deleted: they d
- Deleted: one another
- Deleted: in the
- Deleted: ion
- Deleted: of aids or
- Deleted: Those
- Deleted: and would consequently make up for their
- Deleted: and
- Deleted: and
- Deleted: in Belgium
- Deleted: the
- Deleted: of the economy
- Deleted: large
- Deleted: appear to
- Deleted: their dominant structure both
- Deleted: similar
- Deleted: A
- Deleted: similarity can be established between inter-city relationships and the
- Comment [Ludovic H12]: Y a-t-il un rapport entre ces deux tendances. Si oui, il faudrait l'expliquer, sinon, il vaudrait mieux retirer cette phrase.
- Deleted: which decreasingly concerns
- Deleted: exchanges
- Deleted: is is not only true of the economic
- Deleted: of those metropolises
- Deleted: , but even of
- Deleted: the
- Deleted: give of themselves and of their achievements
- Deleted: Besides, the b
- Deleted: studies



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

DOES MORE POLYCENTRICITY BRING ANY ADVANTAGES?



**Comment [Ludovic H13]:** Cette partie ne devrait-elle pas venir plus tôt, juste après la définition de la méthodologie décrivant l'indicateur de polycentrisme de l'IGEAT ?

**Deleted:** pose the

**Deleted:** from a point of view of

**Deleted:** performing

We address this question regarding the role cities and regions play in the development of an efficient and sustainable economy, and not from the point of view of the provision of

administrative or households-oriented services throughout a territory. The question can be

answered in three complementary ways:

**Deleted:** posed

**Deleted:** from

**Deleted:** points of view

(i) does more polycentricity lead to more economic efficiency?

(ii) does more polycentricity lead to more spatial equity?

(iii) does more polycentricity lead to a more sustainable development?

Economic efficiency. According to our computations (VANDERMOTTEN, ROELANDTS,

CORNUT, 2006), the correlation between the level of polycentricity and the level of

development, as measured by the GDP/inhab. is not significant at all ( $r$  near 0), as well at the

scale of the States as a whole as at the scale of macro-regions, dividing the big States in units

of more or less 10 millions inhabitants. However, a small advantage is registered to the most

monocentric countries and macro-regions in terms of economic rates of growth on the long

term:  $r = -0.52$  for the period 1980-2002 at the scale of the States and  $-0.42$  at the scale of the

macro-regions. This results not only i) from economic globalisation processes reinforcing the

most accessible and well-integrated economic cores of world economic networks (SASSEN,

1991; VELTZ, 1996; TAYLOR, 2003), but also ii) from changes in firms' organisations

(outsourcing, just-in-time practices, team working, higher skills level requirements) that

increase the interest for more central locations (face-to-face requirements are often

acknowledged as crucial in interviews with APS professionals). However, economic success

is dependent on so many factors that the weak statistical correlation between economic

**Comment [Ludovic H14]:** Serait mieux en note de bas de page pour éviter de rompre la progression du raisonnement.

**Deleted:** ¶  
As regards

**Deleted:** e

**Deleted:** ,

**Deleted:** a

**Deleted:** detected

**Deleted:** assessment is not

**Deleted:** due to the

**Deleted:** of the economy, which favours

**Deleted:** the best

**Deleted:** in

**Deleted:** the

**Comment [Ludovic H15]:** Je ne trouve pas de terme mais ça sonne trop français il me semble

**Deleted:** to the fact that a rise in subcontracting

**Deleted:** and advanced services increases

**Deleted:** of

**Deleted:**

**Deleted:** But the factors of

**Deleted:** are so numerous that the

**Deleted:** more



growth and monocentricity should not be taken as evidence to promote monocentrism by EU policy-makers and spatial planners.

- Deleted: more
- Deleted: is very weak
- Deleted: . Therefore, this small statistical obviousness may by no means be interpreted,
- Deleted: in the field of spatial planning and economic development policy, as a wish to promote monocentrism

Spatial equity. The spatial distribution of GDP per inhabitant is more homogeneous in the most polycentric countries and macro-regions (VANDERMOTTEN, ROELANDTS, CORNUT, 2007). However, the statistical correlation is here again weak, even if statistically significant ( $r = 0.42$ ), and depends on the size of the statistical spatial units that we used to appreciate spatial (un)equity (NUTS 3), which tend to arbitrarily isolate major city-centres from their suburban peripheries. One has also to take into account that European statistics doesn't weight regional GDP values by an internal parity of purchase power correction, which should imply reducing the real GDP in the most central monocentric regions, where real estate and retail prices are higher. Moreover, the weak statistical correlation vanishes when available income per inhabitant is preferred to GDP data. Income per inhabitant is more efficient to grasp effective social equity as it takes into account wealth transfers happening between cities and regions either through public expenditure and social revenues, or via expenses made by commuters and during temporary migrations (secondary residences, family, business, leisure, week-end or longer duration tourism) outside the cities and regions where the product is first created (BEHRENS, 2003a, 2003b; DAVEZIES, 2005).

- Deleted: From the point of view
- Deleted: of spatial equity, it appears of course
- Deleted: that there is a small trend toward homogeneity
- Deleted: in the
- Deleted: .
- Deleted: too
- Deleted: divisions,
- Deleted: the
- Deleted: core-cities
- Deleted: and
- Deleted: arbitrarily

Deleted: link disappears

- Deleted: while taking into
- Deleted: the GDP
- Deleted: transfer

- Deleted: through commuting
- Deleted: and
- Deleted: movements
- Deleted:

Sustainable development. Even though we still need more detailed examination of this issue, which is not examined in-depth in the literature, it is not a priori clear how the environmental burden is higher in a more concentrated system than in a more scattered one: the densification and the large size of cities favour for instance public transport against the use of individual transport modes and reduce the risks of ecological fragmentation.

- Deleted: As regards s
- Deleted: , w
- Deleted: e have not conducted any study up to now. Meanwhile, i
- Deleted: does
- Deleted: seem
- Deleted: big
- Deleted: to the detriment

In conclusion, nothing allows us to significantly confirm that 'a more polycentric urban structure will contribute to a more balanced regional development, to reducing regional disparities, to increasing European competitiveness, to the fuller integration of European regions into global economy, and to sustainable development' (NORDREGIO *et al.*, 2005) (and more, *a fortiori*, to establish causality relationships). One can even go further by wondering how so many objectives could be combined without raising any contradictions ?

Deleted: any case

Deleted: It would besides be surprising if there was no contradiction between those different

POLYCENTRISM : A CONCEPT FOR EUROPEAN-WIDE COOPERATION ?

If theoretical presuppositions in favour of polycentrism seem hardly justifiable and if empirical observations do not confirm its interest in terms of planning objectives, why is it so widely accepted at EU level ?

Deleted: few

Deleted: justified

Deleted: seem to

Deleted: the evidence of the interest of such a project

Deleted: the question is raised to know why it is so successful

Deleted: the

One of the main initial concerns of EU regional development and spatial planning policies (even if the latter does not fall in the formal Community competence) has been territorial cohesion. It was therefore tempting, in order to achieve this purpose, to imagine that the development of transports, and above all ICTs would result in 'the end of the space', as implicitly suggested by Castells (CASTELLS, 1989), just like the disappearance of the Soviet system was considered by some as the 'end of history' (FUKUYAMA, 1992). Following the already old 'global village' theory (McLUHAN, 1964), there was a diffuse feeling that everything might be done from almost anywhere thanks to the integration into information networks enabled by ICTs. In reality, the development of new telecommunication technologies and the globalisation of the economy have deepened spatial disparities and the comparative advantages or disadvantages of spaces at different scales (this had already been

Deleted: get closer

Deleted: to that

Deleted: , to rely on the theories worked out by Castells from 1989, and

Deleted: , was going to mean

Comment [Ludovic H16]: Je ne suis toujours pas d'accord sur ce point. Avant de soumettre cet article à proposition je souhaiterai si vous souhaitez continuer à citer Castells que vous me précisez où il fait référence à la fin de l'espace. Les travaux que j'ai lu de lui ne disent pas ceci.

Deleted: would mean the

Deleted: E

Deleted: would

Deleted: possible

Deleted: through an insertion

Deleted: the

Deleted: circulation

Deleted: it seems that

Deleted: ICTs

Deleted: the

Deleted: the

the case previously with other major progresses in transport and communication: railway networks enabled the integration of national markets in the 19<sup>th</sup> century and consequently increased inter-regional disparities by comparison with the pre-industrial and largely self-sufficient rural economies). Today, access to ICTs and globalised communication networks is considered in the literature to contribute to increasing spatial differentiations. This is true between peripheral and central countries, but also within 'central' countries where the economy and its command functions are always more concentrated in major centres where accessibility is highest, thanks to telecommunications infrastructures, air transport, high speed trains and, a little paradoxically, because easier face-to-face contacts. The increased efficiency of transports accentuates 'tunnel effects', to the detriment of intermediate cities and regions, particularly those located in scarcely populated areas or plagued by early industrialisation's negative effects. At an intra-regional scale, this is also true within metropolitan areas, between the connected spaces and those which are not (see GRAHAM, MARVIN, 2001 at 'splintering urbanism' hypothesis and COUTARD, 2002 for an answer and a discussion).

Today, the discourse on national cohesion, which was in line with a context of Keynesian regulation and pro-active State spatial planning policies has lost ground in front of a dominant discourse on territorial competitiveness, following a more neo-liberal political rationale of economic deregulation which incidentally tends to value the credit given to the supra- and infra-national levels (the 'State rescaling', according to BRENNER, 2004). This shift did not alter the political opportunity to promote polycentrism at EU scale: indeed, such spatial planning policies ensure that in spite of decreasing public aids, each city still has a chance to benefit from EU regional/urban policies as long as aggressive promotional urban policies are implemented. The 'winners' will be living proofs of the advantages that can be drawn from a dynamic urban strategy while losers will have to incriminate their own insufficient efforts.

- Deleted: as for
- Deleted: the
- Deleted: the
- Deleted: had, in the 19<sup>th</sup> century,
- Comment [Ludovic H17]: En note de bas de page ?
- Deleted: the differentiated
- Deleted: s
- Deleted: increase
- Deleted: , with the growing concentration of
- Deleted: the location of the decisional
- Deleted: of that economy, more and more concentrated in
- Deleted: cores
- Deleted: where
- Deleted: face-to-face contacts are easy, and
- Deleted: strongly increased with
- Deleted: .
- Comment [Ludovic H18]: Trop français ? ou trop elliptique ?
- Deleted: T
- Deleted: in
- Deleted: The increased efficiency of transports also accentuates tunnel effects, to the detriment of intermediate cities and regions, particularly those located in scarcely populated areas or marked by the repercussions of an early industrialisation.
- Deleted: , loses
- Deleted: the
- Deleted: in
- Deleted: line with a
- Deleted: context of
- Deleted: and
- Deleted: strengthens
- Deleted: importance
- Deleted: called in 2004
- Deleted: Such a
- Deleted: preserves the political interest of the promotion of
- Deleted: it means that every city
- Deleted: can have the feeling i (... [11])
- Deleted: while public aid is reduced
- Deleted: cities
- Deleted: the
- Deleted: an
- Deleted: policy
- Deleted: ; as to the 'losers', they



One might argue that if polycentrism is so seldom questioned as a legitimate EU political project, it may not be so much because of its supposed efficiency in the pursuit of European objectives - which we have shown is not demonstrated -, but because it is a tool that can favour the participation in and support for a common European project by local, regional and national actors. 'Political polycentrism' thus results from the long quest for a relative consensus, or at least the illusion of a possible consensus in which the interests of each particular territory, be it nations, regions or cities, could be taken into account. It refers to what could be defined as a 'polycentrism of support', which is defined as the possibility that different decision levels can support a project for the European space, in which they think they can find their place, both within the horizontal relations they have established throughout the European territory, and within vertical relations between the different levels of power, from local to national. Beyond scientific talks on the virtues of polycentricism, the underlying logic might have much less to do with morphological or functional polycentricity and much more with politics.

**Comment [Ludovic H19]:** Il faudrait je pense argumenter ce point.

**Deleted:** Against such a background, one can build the hypothesis that p

**Deleted:** seldom

**Deleted:** controversial,

**Deleted:**

**Deleted:** not

**Deleted:** at all

**Deleted:** and

**Deleted:** as well as

**Deleted:** finally

**Deleted:**

**Deleted:** to be taken in

**Deleted:** the political sense

**Deleted:** could

**Deleted:** organizing

**Deleted:** pseudo-

**Deleted:** refers any kind of

**Deleted:** than to a true

## CONCLUSION

The present reflection does not intend to vainly oppose the virtues of monocentrism against the failures of polycentrism, or inversely. Urban systems are first of all products of a long history in which current dynamics are but one of already many superimposed layers. Empirical observations show that small territories, sometimes lacking any big city, can be highly innovative and remarkably succeed in the global networked economy. If externalities bound to territorial specialisation can favour innovation, it appears nonetheless that, overall, it is the largest metropolises that are most efficient in today's economy, because of i) their

**Deleted:** is

**Deleted:** not aimed at

**Deleted:** to

**Deleted:** As we said, u

**Deleted:** produced

**Deleted:** by

**Deleted:** the

**Deleted:** times of

**Deleted:** . Moreover

**Deleted:** ,

**Deleted:** a

**Deleted:** insert properly in networking economies


**Deleted:** Meanwhile, i

**Deleted:** statistically

**Deleted:** promote

**Deleted:** it

**Deleted:** ly

diversified productive system, ii) the variety, depth and skills of their human capital, and iii)  
the concentration of technological research (GREUNZ, ).

Deleted: through the

Deleted: diversity of their production



Deleted: their

Deleted: rich

Comment [Ludovic H20]: ???

Monocentricity and polycentricity do not seem to have much to do in this regard. The Irish  
monocentricity does not rule out a very competitive economy, thanks among other factors to a  
high level of labour education, and does not prevent the simultaneous economic development  
of smaller cities in the country. Inversely, the Walloon polycentricity has not prevented the  
region's decline. Neither should polycentricity be mixed up with territorial networking, since  
the scales of the latter are multiple, up to world level.

Comment [Ludovic H21]: Je ne comprends pas le lien avec la phrase précédente. Est-il nécessaire de garder cette phrase ?

We must therefore wonder about the foundations of what is presented – in our opinion  
 excessively – as a major benefit and a crucial condition to the achievement of the 'most  
competitive economy' in Europe. As a political project, we see polycentrism as a strange  
hybrid between two competing approaches for the future European space, i.e. regulationist  
vs. neo-liberal. This synthesis is used by the EU to plead in favour of a common planning  
policy. The main thing is thus perhaps not so much the content of the policy than the possible  
partnership that might come out of it. This is maybe the reason why polycentrism is so rarely  
questioned, insofar as it keeps the advocates of the two views  of Europe's future satisfied,  
while pretending to give pledges to the peripheral areas with a political weight.

Deleted: condition essential

Deleted: territorial

Deleted: a

Comment [Ludovic H22]: Qui est l'UE dans ce cas ? La commission, les Etats-Membres ?

Deleted: view

Deleted: and a

Deleted: view of the future European space, used by

Deleted: encourage

Deleted: the acceptance of

Deleted: as

Deleted: form in which it results

Deleted: seldom

Comment [Ludovic H23]: Cette phrase est-elle juste en anglais ? Rend-elle bien compte de ce que nous voulons dire ? est-il par ailleurs stratégique de finir avec l'idée que l'ESDP trompe les régions périphériques ?

## References

ALLAIN R., BAUDELLE G. and GUY C. (Eds) (2003) *Le polycentrisme, un projet pour l'Europe*, Presses Universitaires de Rennes, Rennes.

- 1  
2 ANTIKAINEN J. (2005) The concept of Functional Urban Area. Findings on the ESPON  
3 project 1.1.1, *Informationen zur Raumentwicklung*, 7, 447-456.
- 4  
5  
6 BEAVERSTOCK J.V., SMITH R.G., TAYLOR P.J., WALKER D.R.F. and LORIMER H.  
7  
8 (2000) Globalization and World Cities : Some Measurement Methodologies, *Applied*  
9 *geography*, 20, 43-63 (for further publications of this team see [www.lboro.ac.uk/gawc](http://www.lboro.ac.uk/gawc)).
- 10  
11  
12 BEHRENS A. (2003a) How rich are Europe's regions. Experimental calculations, *Statistics in*  
13 *focus. General statistics. Theme 1, Eurostat*, 6, 1-7.
- 14  
15  
16 BEHRENS A. (2003b) Income of private households and gross domestic product in Europe's  
17 regions, *Statistics in focus. General statistics. Theme 1, Eurostat*, 7, 1-7.
- 18  
19  
20 BRENNER N. (2004) *New State Spaces – Urban Governance and the rescaling of Statehood*,  
21 Oxford University Press, Oxford.
- 22  
23  
24 BRUNET R. (1989) *Les villes européennes*, DATAR, Paris.
- 25  
26 CABUS P. (2006) The territoriality of the network economy and urban networks: evidence  
27 from Flanders, *Entrepreneurship & Regional Development*, 18, 25-53.
- 28  
29  
30 CABUS P. and SAEY P. (1997) *Consistentie en coherentie van het Ruimtelijk Structuurplan*  
31 *Vlaanderen in het licht van de actuele stedelijke en regionaal-economische ontwikkeling*,  
32 unpublished report for E. Baldewijns, Flemish Minister for Public Works, Transport and  
33 Regional Planning.
- 34  
35  
36  
37 CASTELLS M. (1989) *The Informational City: Information Technology, Economic*  
38 *Restructuring and the Urban-Regional Process*, Blackwell, Oxford.
- 39  
40  
41 CHRISTALLER W. (1933, trad. BASKIN C.W. 1966) *Central Places in Southern Germany*,  
42 Prentice Hall, New Jersey, Englewood Cliffs.
- 43  
44  
45 CONVERY F., MCINERNEY D., SOKOL M. and STAFFORD P. (2006 ) Organising space  
46 in a dynamic economy – insights for policy from the Irish experience', *Built Environment*, 32,  
47 172-182.  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

COUTARD O. (2002) Premium network spaces: a comment, *International Journal of Urban and Regional Research*, 26, 166-174.

Deleted: IJURR,

DAMETTE F. and SCHEIBLING J. (1995) *La France, permanences et mutations*, Hachette, Paris.

DAVEZIES L. (2005) *Vers une macro-économie locale. Le développement local entre économie productive et présentielle*, DATAR, Paris.

DAVOUDI S. (2003) Polycentricity in European Spatial planning: from an analytical tool to a normative agenda, *European Planning Studies*, 11, 979-999.

ESDP (1999) *European Spatial Development Perspective. Towards Balanced and Sustainable Development of the Territory of the EU*, CEC, Luxembourg.

FALUDI A. (2004) The European Spatial Development Perspective and North-West Europe: Application and the future, *European Planning Studies*, 12, 391-408.

FALUDI A. and WATERHOUT B. (2002) *The making of the European Spatial Development Perspective*, Routledge, London.

FUKUYAMA F. (1992) *The End of History and the Last Man*, Penguin.

GEMACA (1996) *Les régions métropoles de l'Europe du nord-ouest. Limites géographiques et structures économiques*, IAURIF, Paris; IGEAT, Bruxelles; Umlandverband Frankfurt; London Research Center; Agence de développement et d'urbanisme de la métropole lilloise; Regio Randstad; Institut für Landes- und Stadtentwicklungsforschung des Landes Nordrhein-Westfalen.

GÖDDECKE-STELLMANN J., PORSCHE L., SCHMIDT-SEIWERT V. (2005) Den Blick schärfen. Eine kritische Bestandsaufnahme des Konzepts funktionaler Stadtregionen im ESPON-Programm, *Informationen zur Raumentwicklung*, 7, 457-464.

GRAHAM S. (2002) On technology, Infrastructure and the Contemporary Urban Condition: A response to Coutard, *International Journal of Urban and Regional Research*, 26, 175-182.



1  
2 GRAHAM S. and MARVIN S. (2001) *Splintering Urbanism: Networked Infrastructures,*  
3 *Technological Mobilities, and the Urban Condition*, Routledge, New York.

4  
5  
6 GRAVIER J.F. (1947) *Paris et le désert français*, Le Portulan, Paris.

7  
8 GREUNZ L. (2004) Industrial structure and innovation – evidence from European regions,  
9 *Journal of Evolutionary Economics*, 14, 563-592.

10  
11 HALBERT L. (2004) *Densité, desserrement, polycentrisme et transformation économique des*  
12 *aires métropolitaines. Interpréter la concentration des activités d'intermédiation dans la zone*  
13 *centrale de la région francilienne*, Thèse de doctorat, Université Paris-I.

14  
15  
16 HALBERT L. (2005) *Les métropoles, moteurs de la dématérialisation du système productif*  
17 *urbain français : une lecture sectorielle et fonctionnelle (1982-1999)*, *Bulletin de l'Association*  
18 *des Géographes Français*, 3, 279-297.

19  
20  
21 HALBERT L. (2006, forthcoming) *Paris metropolitan region's place in the French Urban*  
22 *system: global economic change, functional specialisation and the selective dissociation of*  
23 *labour*, *GeoJournal*.

24  
25  
26 HALBERT L, PAIN K. and THIERSTEIN A. (2006) European Polycentricity and Emerging  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Mega-City Regions: 'One Size Fits All' Policy?', *Built Environment*, 32, 206-218.

HALL P. and HAY D. (1980) *Growth Centres in the European Urban System*, Heinemann  
Educational, London.

HALL P. and PAIN K. (Eds) (2006) *The Polycentric Metropolis*, Earthscan, London.

JUILLARD E. and NONN H. (1976) *Espaces et régions en Europe occidentale*, Editions du  
CNRS, Paris.

KLOOSTERMAN R.C. and MUSTERD S. (2001) The Polycentric Urban Region : Towards  
a Research Agenda, *Urban Studies*, 38, 623-633.

KRUGMAN P. (1991) *Geography and Trade*, MIT Press.

1  
2 KUNZMANN K. and WEGENER M. (1991) *The Pattern of Urbanisation in Western*  
3  
4 *Europe. 1960-1990*, Report for the DG XVI of the Commission of the European  
5  
6 Communities, Dortmund, IRPUD.

7  
8 MCLUHAN M. (1964) *Understanding media*, Mentor, New York.

9  
10 NICOLAÏ H. and VANDERMOTTEN C. (1978) Aspects géographiques de la mégalopole  
11  
12 européenne, in INSTITUT D'ETUDES EUROPEENNES DE L'UNIVERSITE LIBRE DE  
13  
14 BRUXELLES *Les mégalopoles dans l'Europe du nord-ouest*, 27-35, Het Noordnederlands  
15  
16 Boekbedrijf, Antwerpen.

17  
18 NORDREGIO *et al.* (2005) *The role, specific situation and potentials of urban areas as nodes*  
19  
20 *in a polycentric development*, ESPON report 1.1.1, www.espon.eu.

21  
22 PAIN K., HALL P., POTTS G. and WALKER D. (2006) South East England: Global  
23  
24 Constellation, in HALL P. and PAIN K. (Eds) *The Polycentric Metropolis*, 125-136,  
25  
26 Earthscan, London.

27  
28 PARR J. (2004), The Polycentric Urban Region : A Closer Inspection, *Regional Studies*, 38,  
29  
30 231-240.

31  
32 ROZENBLAT C. and CICILLE P. (2003) *Les villes européennes. Analyse comparative*, La  
33  
34 Documentation française, Paris.

35  
36 SASSEN S. (1991) *The Global City: New York, London, Tokyo*, Princeton University Press,  
37  
38 New York.

39  
40 TAYLOR P.J. (2003) *World City networks: a global urban analysis*, Routledge, London.

41  
42 VANDERMOTTEN C. (2000) Building a continental area: identities, differences and urban  
43  
44 developments in Europe, *Belgeo*, 1, 115-141.

45  
46 VANDERMOTTEN C. (2003) Le polycentrisme dans une perspective historique, in ALLAIN  
47  
48 R., BAUDELLE G. and GUY C. (Eds) *Le polycentrisme, un projet pour l'Europe*, 17-28,  
49  
50 Presses Universitaires de Rennes, Rennes.

1  
2 VANDERMOTTEN C., PEETERS D., HALBERT L., KORCELLI P., ILIES A. *et al.* (2006)  
3  
4 *ESPON project 1.4.3. Study on Urban Functions. First Interim Report. 31 May 2006,*  
5  
6 [www.espon.eu](http://www.espon.eu).

7  
8 VANDERMOTTEN C., ROELANDTS M., AUJEAN L. and CASTIAU E. (2006) Central  
9  
10 Belgium: Polycentrism in a Federal Context, in Hall P. & Pain K. (eds.) (2006), *op. cit.*, 146-  
11  
12 153.

13  
14 VANDERMOTTEN C., ROELANDTS M. & CORNUT P. (2007) European polycentrism :  
15  
16 towards a more efficient and/or a more equitable development ? , in CATTAN N. (Ed.) *Cities*  
17  
18 *and networks in Europe. A critical approach of polycentrism*, John Libbey Eurotext, Paris.

19  
20 VANDERMOTTEN C., VERMOESEN F., DE CORTE S., DE LANNOY W. *et al.* (1999)  
21  
22 Villes d'Europe. Atlas comparatif, *Bulletin trimestriel du Crédit Communal de Belgique*, 207-  
23  
24 208, 1-408.

25  
26 VELTZ P. (1996) *Mondialisation, villes et territoires. L'économie d'archipel*, Presses  
27  
28 Universitaires de France, Paris.

29  
30 WATERHOUT B. (2002), Polycentric development: what is behind it? in FALUDI A. (Ed.)  
31  
32 *European spatial planning*, 83-104, Lincoln Institute of Land Policy, Canada.

33  
34 ZIPF G.K. (1949) *Human Behavior and the Principle of Least Effort*, Addison-Wesley,  
35  
36 Reading, Ma.

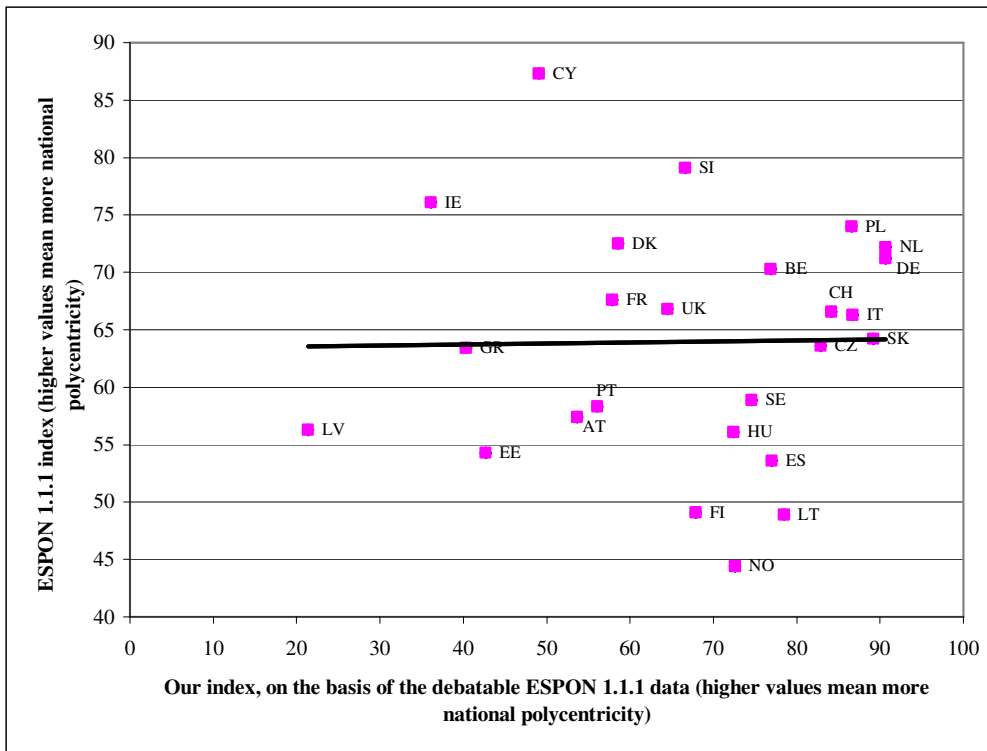


Fig 1

er Review Only

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Forbes 2000 firms . Added value  
2005

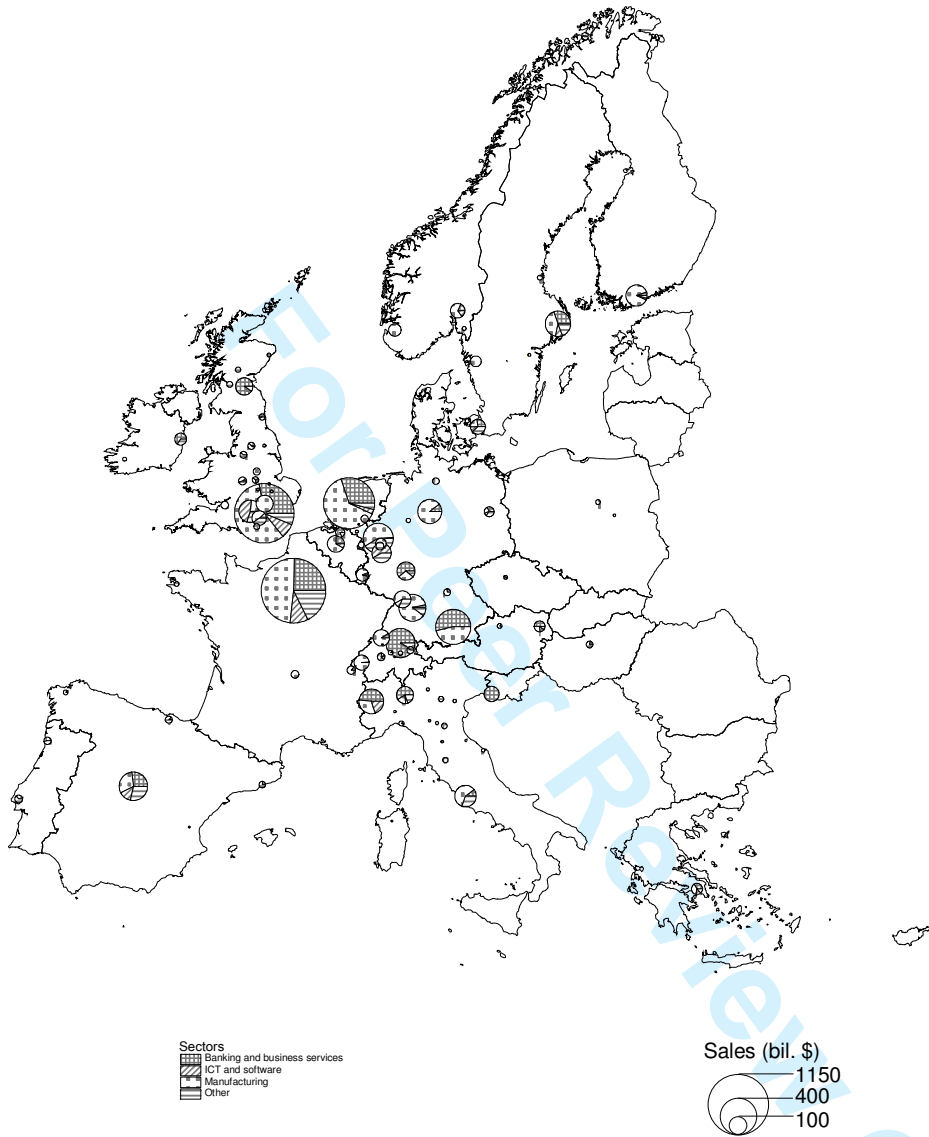


Fig 2

**Page 7: [1] Deleted** Ludovic HALBERT 5/31/2006 3:38:00 PM  
 (but in fact this was probably true in the rural context of the time, which maintained a strong traditional component)

**Page 7: [2] Deleted** Ludovic HALBERT 5/31/2006 8:54:00 AM  
 of all expressed in the implementation

**Page 7: [3] Deleted** Ludovic HALBERT 5/31/2006 8:55:00 AM  
 of infrastructural developments

**Page 7: [4] Deleted** Ludovic HALBERT 5/31/2006 3:43:00 PM  
 Christaller's theory is to spatial planning what Keynes's is to Fordism.

From that point of view

**Page 7: [5] Deleted** Ludovic HALBERT 5/31/2006 9:02:00 AM  
 it is obvious that the analysis only applied to a hierarchical and

**Page 7: [6] Deleted** Ludovic HALBERT 5/31/2006 9:03:00 AM  
 in the quality of personal services and

**Page 7: [7] Deleted** Ludovic HALBERT 5/31/2006 9:06:00 AM  
 that a growing part of the spatial framing functions yesterday devolved to cities currently comes out in much more complex mobility networks and in locations that escape the classic urban hierarchies

**Page 7: [8] Comment [Ludovic H3]** Ludovic HALBERT  
 Je ne sais pas ce que c'est.

**Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:12:00 AM  
 appear

**Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:13:00 AM  
 limited

**Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:13:00 AM  
 their

**Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:13:00 AM

1  
2  
3 or  
4  
5  
6

7 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:13:00 AM

8 the

9  
10 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:14:00 AM

11 . In others, the

12  
13 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:14:00 AM

14 : this is

15  
16 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 4:12:00 PM

17 the case with

18  
19 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 4:12:00 PM

20 of

21  
22 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 4:12:00 PM

23 with

24  
25 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:14:00 AM

26 but not – quite rightly indeed – with

27  
28 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 4:13:00 PM

29 new towns of the

30  
31 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 4:13:00 PM

32 area

33  
34 **Page 12: [9] Deleted** Ludovic HALBERT 5/31/2006 10:15:00 AM

35 .

36  
37 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:15:00 AM

38 Meanwhile,

39  
40 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:16:00 AM

41 is

42  
43 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:15:00 AM

1  
2  
3 not  
4  
5

6 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:15:00 AM

7 question, the more so as  
8  
9

10 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:14:00 PM

11 knows  
12  
13

14 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:14:00 PM

15 how  
16  
17

18 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:14:00 PM

19 statistics  
20  
21

22 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:15:00 PM

23 the  
24  
25

26 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:15:00 PM

27 in  
28  
29

30 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:16:00 AM

31 its meaning in  
32  
33

34 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:15:00 PM

35 of the  
36  
37

38 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:16:00 PM

39 political project  
40  
41

42 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:19:00 PM

43 swings  
44  
45

46 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:19:00 PM

47 toward  
48  
49

50 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:17:00 PM

51 in favour  
52  
53

54 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:20:00 PM  
55  
56  
57  
58  
59  
60



1  
2  
3 analyzing  
4  
5

6 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:20:00 PM  
7 those  
8  
9

10 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:20:00 PM  
11 different  
12

13 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:21:00 PM  
14 according to the  
15  
16

17 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:21:00 PM  
18 expressed  
19  
20

21 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:26:00 PM  
22 showing  
23  
24

25 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:26:00 PM  
26 that  
27  
28

29 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:26:00 PM  
30 has a very  
31  
32

33 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:26:00 PM  
34 due  
35  
36

37 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:18:00 AM  
38 as the  
39  
40

41 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:18:00 AM  
42 , much huger than  
43  
44

45 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:18:00 AM  
46 the current  
47  
48

49 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:18:00 AM  
50 y  
51  
52

53 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:26:00 PM  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 twice  
4  
5

6 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:22:00 PM  
7 too  
8  
9

10 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:26:00 PM  
11 as it should be in  
12

13 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:18:00 AM  
14 supposed to  
15

16 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:22:00 PM  
17 'right'  
18

19 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:18:00 AM  
20 on  
21

22 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:19:00 AM  
23 What is more, the bias in favour of polycentrism is so important that  
24

25 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:19:00 AM  
26 said  
27

28 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:19:00 AM  
29 the  
30

31 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:20:00 AM  
32 would  
33

34 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:20:00 AM  
35 be '  
36

37 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:27:00 PM  
38 ,  
39

40 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:21:00 AM  
41 the  
42

43 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:21:00 AM  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 (1949) provides  
4  
5

6 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:20:00 AM  
7 for  
8  
9

10 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 10:21:00 AM  
11 Let's point out that the  
12  
13

14 **Page 12: [10] Deleted** Ludovic HALBERT 5/31/2006 4:27:00 PM  
15 here  
16  
17

18 **Page 26: [11] Deleted** Ludovic HALBERT 5/31/2006 2:41:00 PM  
19 can have the feeling it 'stands a good chance', if  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60