

“European Metropolitan Region Rhein-Ruhr” within the German and European City System: Structures and Hierarchies in Context of Globalization

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As a cultural entity - unity by variety - Europe geographically represents a nearly mosaic-like spatial structure which is reflected on the city level, too (Fig. 1). With regard to European decision making processes the “European Metropolitan Region Rhein-Ruhr” is represented as a new concept of regional policy framework in Germany introduced by the “Ministerkonferenz für Raumordnung” (Inter-Federal States’ Ministers’ Conference) 1995 and used in the “Landesentwicklungsplan” (Federal State Development Plan) of the Bundesland Nordrhein-Westfalen (Federal State of North Rhine-Westphalia) in 1995. This concept reflects the academic discussion on metropolises, large urban centers and “European Metropolitan Regions” - against the background of the German unification, the effects of the continuing European integration, the advancing globalization as well as - vice versa - the processes of regionalization and the crisis of the traditional governance of the state.

In context with these challenges this paper focusses on the significance and possibilities of multicentric agglomeration areas *taken as a whole*. It is argued that in a federalistic country like Germany a multicentric agglomeration area challenged by transnationalization and globalization is not per se handicapped but possibly could have better chances if its specific cities are not understood as single units rather than as a city-region complex characterized by hierarchization, sectoral-functional specialization, and sustainability (Blotevogel 1998).

1. Delimitation, Structure and Recent Development of the “European Metropolitan Region Rhein-Ruhr”

“European Metropolitan Region Rhein-Ruhr” is understood as a nearly contiguous urban agglomeration situated between Bonn in the South, Mönchengladbach in the West, and Hamm in the Northeast (Fig. 2 and 3). The area as a whole includes 11.1 million inhabitants in 20 cities¹⁾ and 10 neighboured counties. Among the five cities which have more than 500,000 inhabitants are Cologne/Köln (966,000), Essen (615,000), Dortmund (599,000), Düsseldorf (571,000), and Duisburg (535,000).

As for the spatial settlement and functional structure, the whole area can be subdivided into three parts:

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1. the Ruhr region (5.4 million inhabitants),
2. the Düsseldorf region (3.0 million inhabitants), and
3. the Cologne-Bonn region (2.7 million inhabitants).

The development of the “European Metropolitan Region Rhein-Ruhr” between 1980 and 1995 was positive (in terms of number of population) or stagnative (number of employees), respectively (Fig. 4). However, within the three parts regions the development proved to be quite different. The Ruhr Region showed relative stagnation (in terms of population) if not decrease (employees) as against positive performance of the Düsseldorf and particularly the Cologne-Bonn region. This is also true with regard to sectoral changes. As for mining and industry in the same period the Ruhr lost around a third, the other two parts regions a quarter of jobs. On the other hand, the service sector, especially producer services, increased remarkably in all parts regions. However, these results could compensate the loss of jobs only in the Düsseldorf and Cologne-Bonn regions, but not in the Ruhr.

A more sensible delimitation of the “European Metropolitan Region Rhein-Ruhr” is based on the concept of the *functional city region* which includes the commuters’ unland, taken together a population of 11.7 million people in an area of 11,500 km². With regard to these figures the Rhein-Ruhr area ranks first not only in Germany but just a little in front even of Paris and London whose metropolitan regions based on a comparable delimitation each cover approximately 11.4 million inhabitants, respectively (Fig. 5 ‘system of conurbations’; however, cf. Fig. 6 ‘system of single cities’). Also in terms of domestic national product, employment and unemployment the Rhein-Ruhr area shows similarly strong outcomes. However, concerning employees’ sectoral performance there are clear differences. Despite of its impressive deindustrialisation, the Rhein-Ruhr area clearly shows a much higher share of people employed in the manufacturing industry (26.5 %, 1993) in relation to comparable figures for London (14.9 %) and Paris (18.3 %) let alone the Randstad Holland (13.7 %) and Brussels (13.4 %). Additionally, the significance of market services in the Rhein-Ruhr area is, though its remarkable increase, clearly low when compared with European top city regions. Though the sheer size of Rhein-Ruhr does not tell much of its metropolitan functions, it has a surprisingly strong significance not only for the city system of Germany, but also of Europe.

2. The Status of the “European Metropolitan Region Rhein-Ruhr” within the Metropolitan System of Germany

Regarding only those services which are most typical for metropolitan functions - like banks and insurances, wholesale trade, producer services, science, research and development, mass media - the “European Metropolitan Region Rhein-Ruhr” proves to be by far the most important agglomeration area in Germany (Fig. 7). Of course, this would not be true when focussing on the cities as single units. Then, Berlin, Hamburg, Cologne (Köln), Munich (München), and Frankfurt would perform most prominently. A quite similar ranking can be found with regard to the head-quarter location of the 100 most important global players in Germany (Fig. 8). However, taking into account the Rhein-Ruhr and other important agglomerations and cities as “metropolitan regions” -

including their functionally connected unland - the metropolitan system in Germany is lead by the two *multicentric* agglomeration areas 1. Rhein-Ruhr and 2. Rhein-Main - the latter including cities like Frankfurt, Mainz, Wiesbaden -, followed by the monocentric metropolitan regions 3. Berlin, 4. Hamburg, 5. Munich. This top group is followed by 6. the metropolitan region Stuttgart, which again ranks quite ahead in front of the agglomeration areas of Hannover, Nuremberg (Nürnberg), Leipzig-Halle, and Rhein-Neckar (Fig. 7).

Both the cities as single units as well as the whole metropolitan regions are characterized by a differentiated job-sharing, i.e. a functional complementarity. For evaluating this functional specialization of the German metropolitan regions it makes sense to focus not only on those services which are typical for metropolitan functions but also on the *quality* of services, i.e. on those services which represent a *surplus of significance* ("Bedeutungsüberschuss" à la Christaller²³). As a result, this surplus of significance can be understood as a good indicator for *higher* central-metropolitan functions. With regard to this qualitative differentiation the functional focal points as well as the functional deficits of each of the city regions become more clear. Fig. 7 shows that Berlin is very weak in terms of wholesale trade, banks, insurances and publishing business, but strong in science and education as well as in arts and media. Similar functional gaps are typical for the two East German city regions Leipzig-Halle and Dresden. On the other hand, one can notice certain functional focal points of the metropolitan region Hamburg (in terms of wholesale trade, publishing), Rhein-Main (banking business), Munich (technical advice, arts and media, publishing). As for the "European Metropolitan Region Rhein-Ruhr" the functional focal points are obvious: wholesale trade (particularly in Düsseldorf), insurance business (especially in Cologne, legal and economic advisory (particularly in Düsseldorf) - as against less represented functions like science and education, technical advisory, and banking business. Despite the latter deficits, the "European Metropolitan Region Rhein-Ruhr" proves to have a leading position among all metropolitan regions in Germany.

3. The Status of the "European Metropolitan Region Rhein-Ruhr" within the Metropolitan System of Europe

With regard to operating in and from Europe headquarters of *international organizations* (Palomäki 1997: 193) the role of the "European Metropolitan Region Rhein-Ruhr" is relatively unimportant. However, as far as the headquarter location of the large *companies* of the *manufacturing* industries is concerned, it ranks third within the European top group after 1. London and 2. Paris (Fig. 9, 10). This is true threefold in terms of number of enterprises, cumulated sales, or number of employees of the respective companies. Consequently, the "European Metropolitan Region Rhein-Ruhr" is, industrial-economically speaking, not only by far the largest focal point of Germany but also one of the most important industrial-economic centers of Europe. However, with regard to *foreign* sales the degree of internationalization of the 'global cities' London and Paris is significantly higher than that of Rhein-Ruhr (Fig. 11).

On the other hand, the distribution of headquarter locations of the largest *trade* companies shows - in terms of cumulated sales - a surprisingly outstanding significance of the Rhein-Ruhr

region not only for Germany, but also for Europe (Fig. 12). Both department-store and supermarket business as well as trade enterprises - the latter partly developed from former mining companies - are represented by large firms such as Aldi, Karstadt, Kaufhof, Metro, Rewe, Tengelmann, Thyssen Handelsunion. It is really astonishing - and not yet enough reflected by the public, the mass media, and even by the academic community - that the Rhein-Ruhr region known for its mining and manufacturing not only has a *low* industrial share which is less than the average of Germany, but is particularly also the most important *trade* center of Europe - as such even exceeding London and Paris.

With regard to *international fairs and exhibitions* (Fig. 13) the hierarchy is not so much clear. In this respect Rhein-Ruhr is the most important city region in Germany, but less so much in Europe when comparing competitors such as Paris, Milano/Mailand, and Randstad Holland.

The *bank business* renders the city region Frankfurt which overtook the historical heritage from Berlin as the clearly leading center in Germany. However, in the European context it ranks by far only second after the leading center London (Fig. 14). As for stock-exchange sales and stock capital, Frankfurt, the absolute number one in Germany, succeeded in ranking only slightly second after London (Fig. 15). Within Germany concentration processes, due to globalization effects, made regional stock-exchange centers loose their significance to Frankfurt.

To sum up, the relationship between bank business and city system can be generalized as trends: the globalization of the economy improves the chances of the development of those city regions which held already before a leading position in a specific functional sector. On the contrary, cities and city regions ranking next profited less or not at all from globalization. Strategically speaking, the cities of the European metropolitan regions are supposed to have a real chance for development in the age of globalization by focussing on intra-urban strong networking rather than by acting exclusively as individuals (Blotevogel 1998: 52).

4. The Hierarchy of the European City System against the Background of the Global City Approach and the Theory of Regulation

According to scholars like Manuel Castells et al., typical for the spatical structure in the post-fordistic era are less and less the industrial agglomerations and the (national-) state related territories rather than (global) cities and agglomerations being strongly interconnected with each other.

According to scholars like Stefan Krätke who did intensive research on the role of the city system in Germany from the point of view of the theory of regulation, in the era of post-fordism new types of hierarchisation in the city system are obvious and can be characterized particularly by two factors (Krätke 1995: 140ff.):

1. the varying "*control capacity*" of cities affiliated with headquarters of companies - such as multi-location industrial enterprises, banks, insurances, high-ranking producer services like legal and economic advisory,
2. the varying "*production structure*" whose inter-sectoral *networking* is, according to Krätke, more important than the sectoral structure itself.

When using the two varying factors as axe of a diagram, the result is a two-dimensional city

system hierarchy (Fig. 16). Within the diagram three arrows mark the change of position of cities in the era of post-fordism:

- the "rise" of city regions characterized by innovative production structures (e.g. München)
- the "descent" of city regions related to fordistic production structures (e.g. Liverpool)
- the "marginalization" of cities affiliated with fordistic production structures - due to the destruction of the former industrial basis (e.g. Bitterfeld, East Germany).

The theory of regulation may be criticized by good arguments. However, it opens new perspectives for overcoming problems based on the traditional system of city and regional planning during the era of fordism.

5. Evaluation of the 'Pros' and 'Contras' of European *Monocentric* Metropolises and *Multicentric* Metropolitan Regions with Regard to Both Functional Effectiveness and Sustainability

'Visions' of the spatial development of Europe were or are the "blue banana" (1980s) and the "European champignon" (1990s), respectively (Fig. 17) - which both can be regarded as representative for a polarization model related to center-periphery disparities - *versus* the "European grape" (Fig. 18) - which is characterized by *city regions* and can be seen as a model for overcoming center-periphery disparities. City regions are by some scholars declared as directive for the future spatial development of Europe both in terms of *monocentric* agglomerations - such as Paris, London, Warszawa - as well as of *multicentric* ones - like Rhein-Ruhr, Rhein-Main, Randstad Holland, Lyon-Grenoble, Milano-Torino, Kopenhagen-Malmö, Wien-Bratislava. These city regions are mutually to be connected by a dense network of airlines and high speed tracks which are supposed to be very important as economic impulses for the regions (Kunzmann and Wegener 1991: 291).

How much these suggestions stimulate the European discussion show the following statements of the European Committee for Spatial Development which favours a leitbild characterized by three parts interwoven with each other:

- a *multicentric* and, as much as possible, a *balanced* system of city regions both for avoiding a too heavy concentration on a few centers as well as for overcoming the marginalization of the periphery,
- a network of sustainable and efficient infrastructure for strengthening the keeping-together of the EU,
- a European open-space system ('Freiraumsystem') related to a variety of protection areas which serve as a shelter for the natural living-base ('Lebensgrundlage').

In this context and with respect to the "European Metropolitan Region Rhein-Ruhr" as a multicentric city region the following question appears to be not yet enough reflected by the scientific community and worthwhile to be discussed:

Is the multicentric structure of a multicentric city region à la "European Metropolitan Region Rhein-Ruhr" a serious handicap or, possibly, a particularly strong potential for development?

With regard to a multicentric structure the following points can be regarded as *disadvantages* (Blotevogel 1998: 85):

- deficits in making full use of urbanization economies - synergy effects - due to the intraregional spread of functions, this is particularly true for
- a lack of top-level political decision-making bodies - in contrary to national capitals which can provide better agglomeration economies related to personal ("face-to-face") relationship in the sphere of business life, banking and other organizations of very varying character,
- deficits affiliated with the perception of a region as a unity - be it a self-perception or a perception from outside,
- deficits with regard to politico-administrative steering - because of politico-administrative splitting and strong inter-community competition,
- deficits related to a regional political public - due to a lack of regional mass media (radio, TV, printing),
- deficits with regard to top achievements - because of splitting of resources (e.g. many middle-class theater rather instead of a large variety of theaters including those offering international top niveau),
- a less strong potential for creating innovative milieus - because the professionals involved are scattered over the whole region.

On the other hand, the following points are supposed to be strong strategic *advantages* for a multicentric structure (Blotevogel 1998: 85):

- less disadvantages with regard to crowding - when compared with monocentric agglomerations of similar size,
- less bottle-necks related to infrastructure - such as traffic,
- a shorter time for commuting as well as a spatially more satisfying commuters' network - instead of a radial pattern being the reason for long distance commuting,
- less bottle-necks with respect to demand for space - like that for industry and housing,
- less high land prices and rents particularly in the center of the cities and, consequently, a less strong pressure related to the displacement of the inner-urban residential population,
- lower costs for living - particularly when compared with cities like London, Paris, or Munich,
- less environmental pollution in comparison with a too strong agglomeration,
- a more favourable intra-regional mix of land use - with special regard to housing and open space,
- a combination of both - the fact that one's own city ('Heimatstadt') is easily comprehensible and, consequently, offers good chances for local identification - as well as the large variety of opportunities provided by the city region as a whole.

When evaluating the 'pros' and 'contras' it is impossible to make a clear conclusion. Taken together - and with regard to the past - the *economic* advantages of a *monocentric* agglomeration appear to be overwhelming. On the other hand, when compared with mega or global cities, with respect to *ecological* advantages, *multicentric* agglomerations seem to provide better opportunities in favour of a more *sustainable* city and regional planning. However, multicentric city regions do not offer better ecological conditions per se. Rather it is important that their politicians make full use of an efficient land policy. Additionally, multicentric city regions must not at any rate have deficits related to less favourable agglomeration and urbanisation economies. This point, too, has to be evaluated according to the problem, if in a concrete situation a strong policy succeeds in making

efficient use even of spatially scattered potentials.

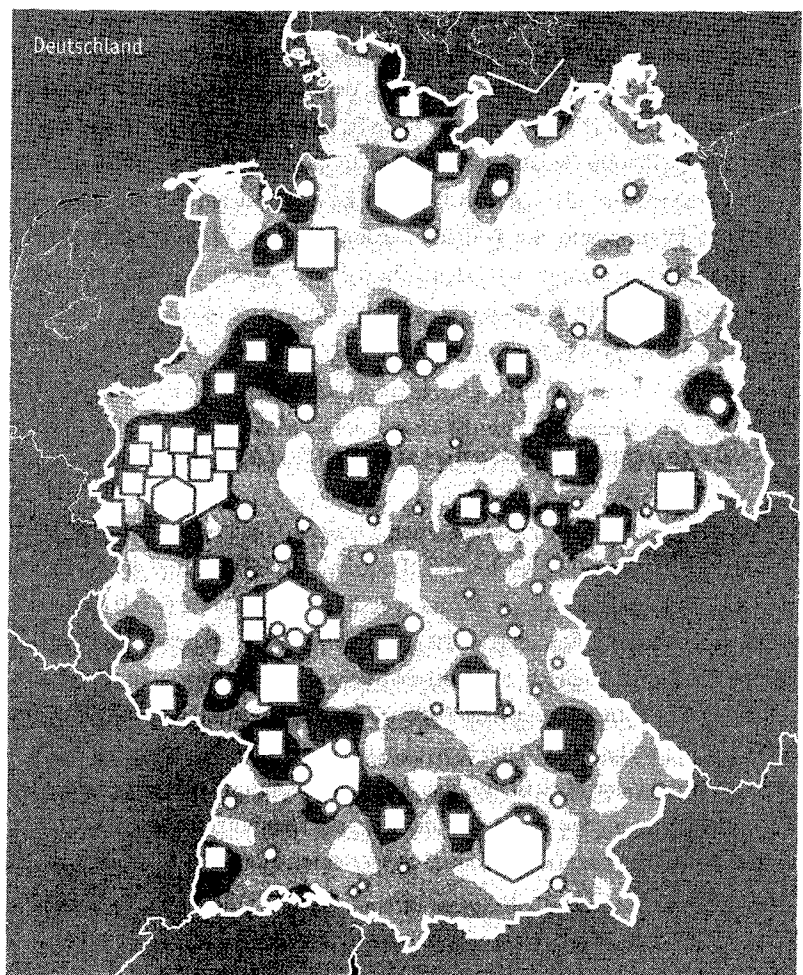
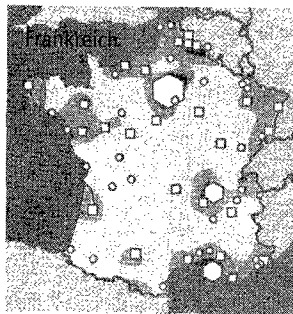
Notes

- 1) 'Kreisfreie' Städte, i.e. cities not attached with a county.
- 2) According to Blotevogel (1998: 73) this surplus is calculated by the multiplication of the total population of the concerned city region with an interregional constant factor which represents the basic endowment of centrality of a middle hierarchy.

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Städtesysteme im Vergleich



Siedlungsstruktur

Bevölkerungsdichte

- dünnbesiedelt
- mittlere Verdichtung
- starkverdichtet

Charakterisierung der Stadtregionen

Metropolregionen von internationaler Bedeutung

- > 10.000
- 5-10.000
- 2-5.000
- 1-2.000

Metropolen und große Städte von nationaler Bedeutung

- 1-2.000
- 500-1.000
- 200-500

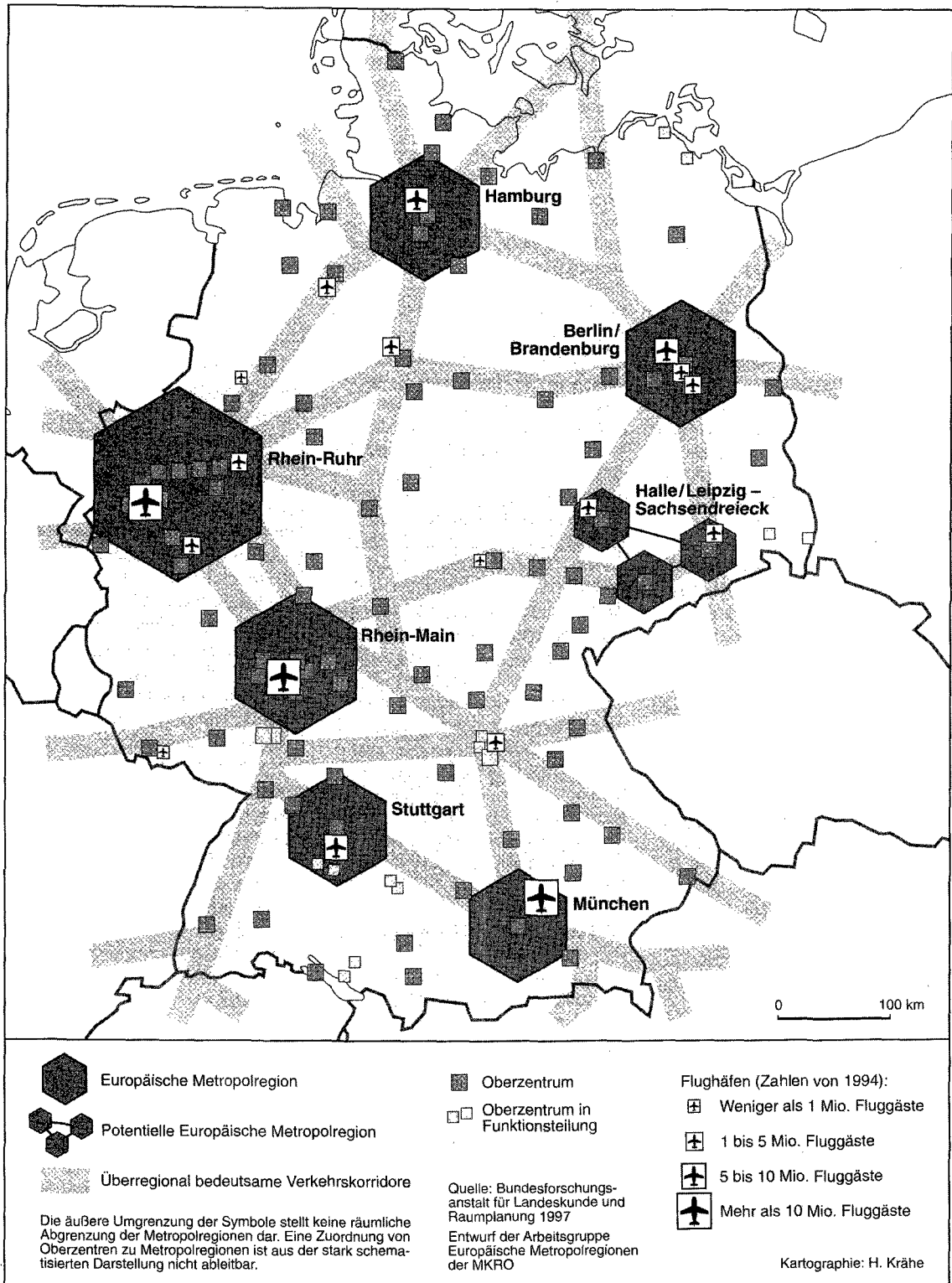
Städte von regionaler Bedeutung

- 100-200
 - 50-100
 - < 50
- 1.000 Einwohner

Quelle: Laufende Raumbeobachtung der BfL

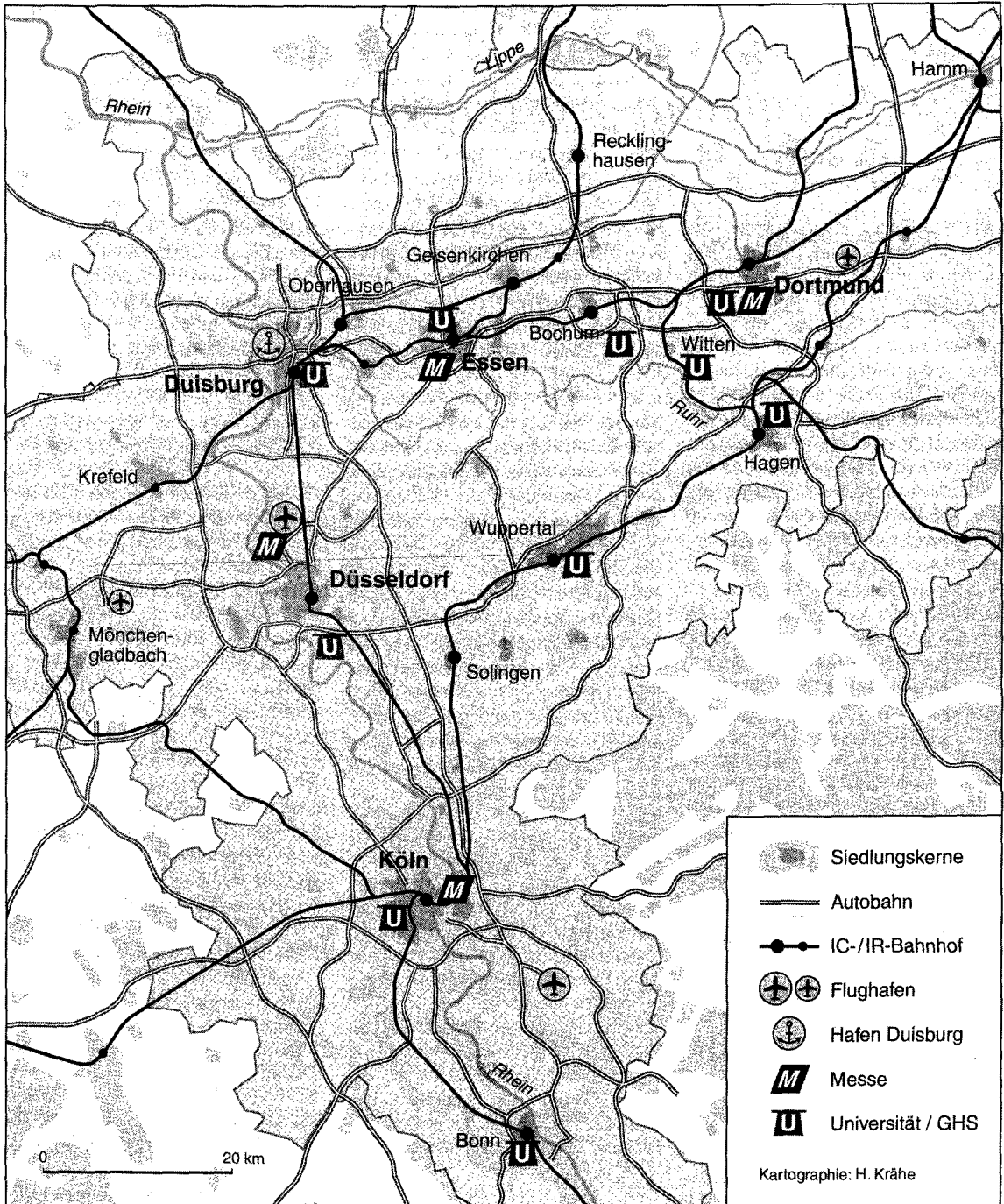
Source: Bundesministerium für Raumordnung, Bauwesen und Städtebau 1996: 14

Fig.1 City Systems in Europe: Germany, France, United Kingdom



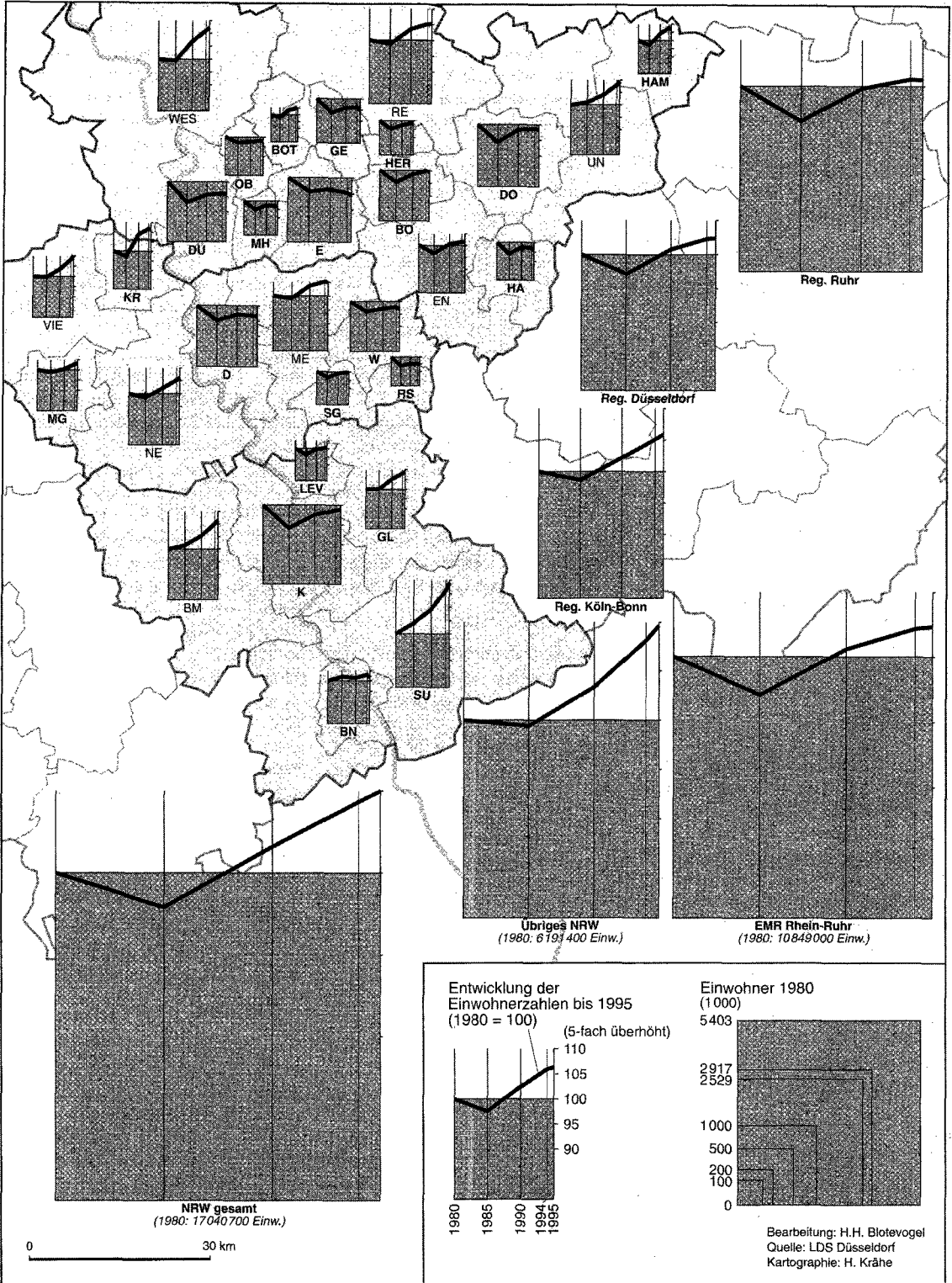
Source: Bundesforschungsstelle für Landeskunde und Raumplanung 1997, taken from Blotevogel 1998: 28

Fig.2 "European Metropolitan Regions" in Germany according to "Ministerkonferenz für Raumordnung" 1997



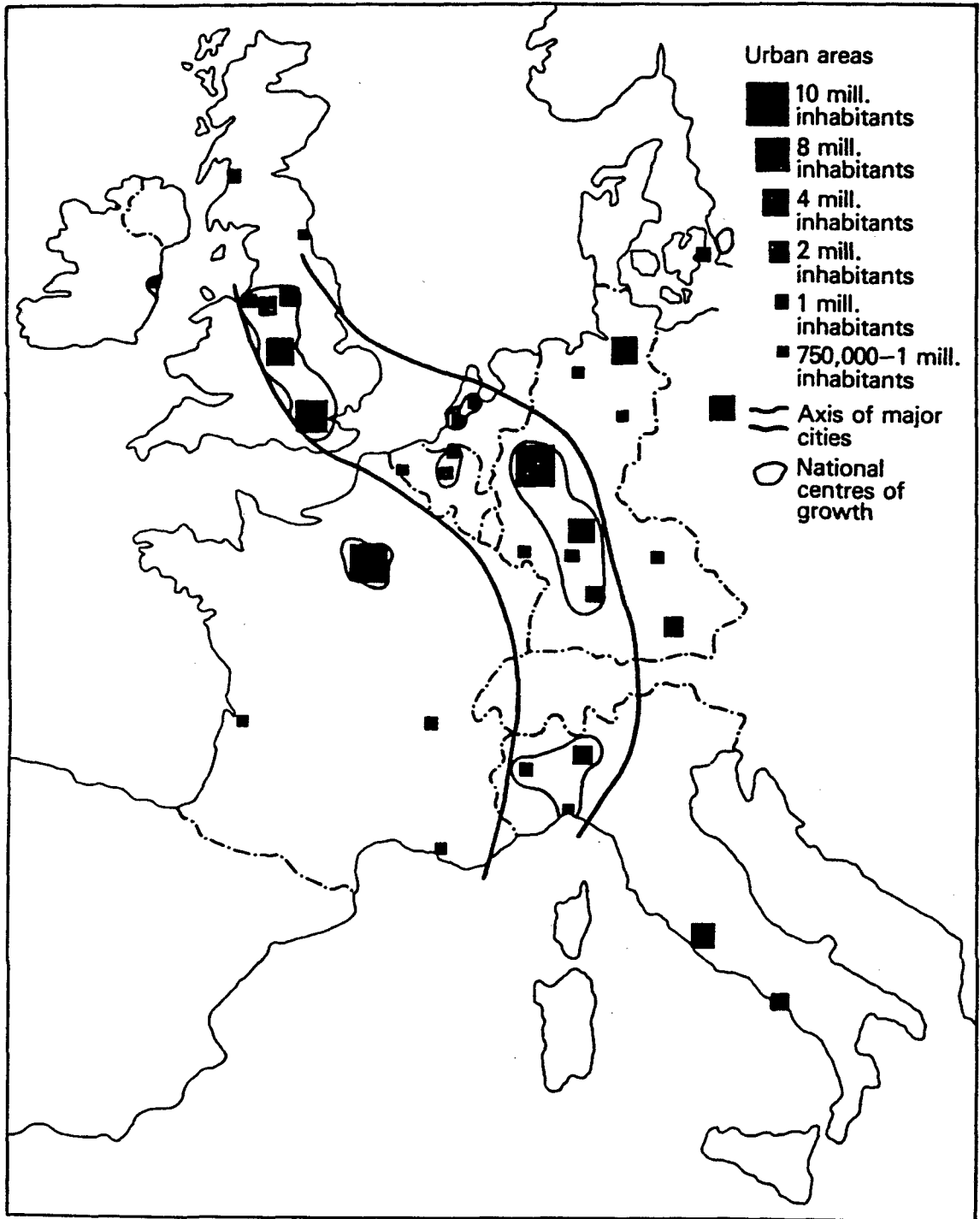
Source: Blotevogel 1998: 58

Fig.3 Overview Map "European Metropolitan Region Rhein-Ruhr"



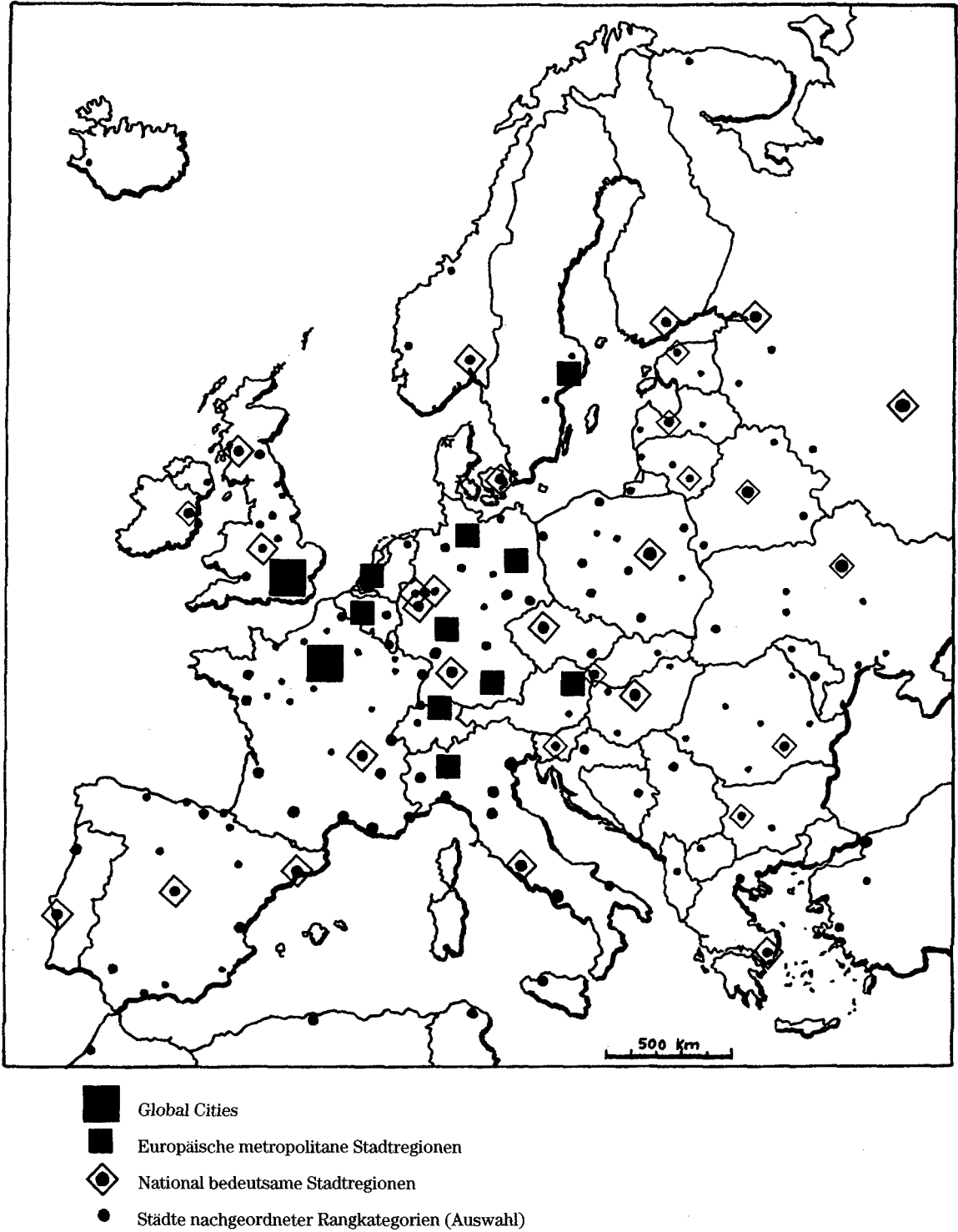
Source: Landesamt für Daten und Statistik Düsseldorf, taken from Blotevogel 1998: 59

Fig.4 Population Change in the "European Metropolitan Region Rhein-Ruhr" 1980-95



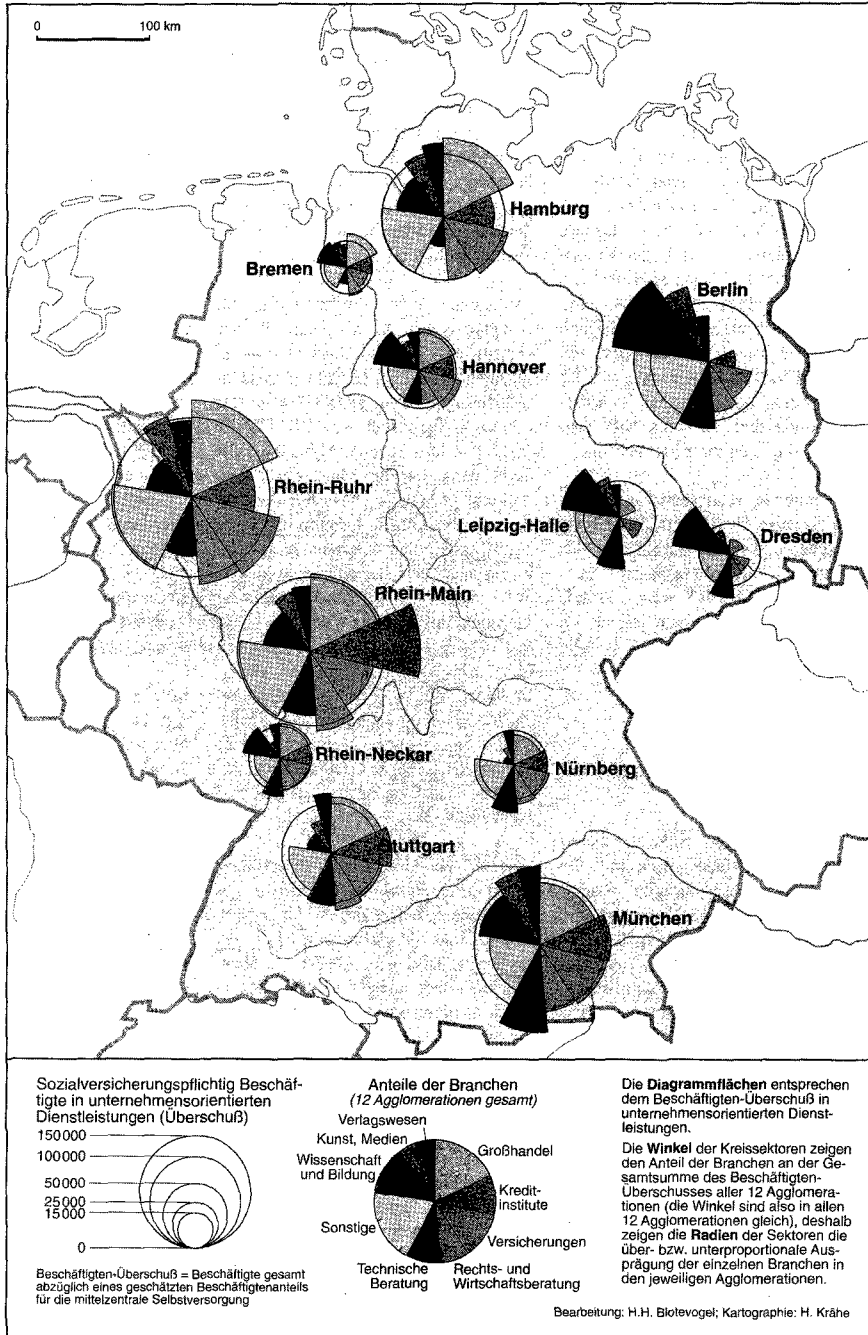
Source: Williams, T.R. 1984: 210

Fig.5 Conurbations and Growth Regions in the European Union



Source: Krätke 1995: 143

Fig.6 The City System in Europe

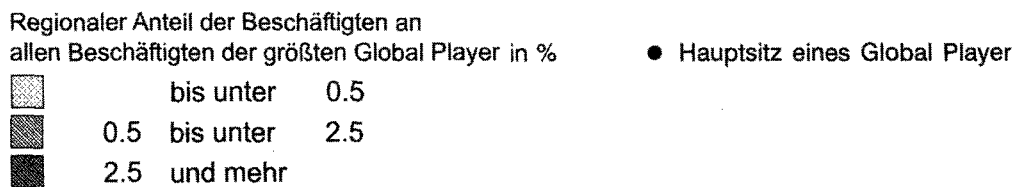
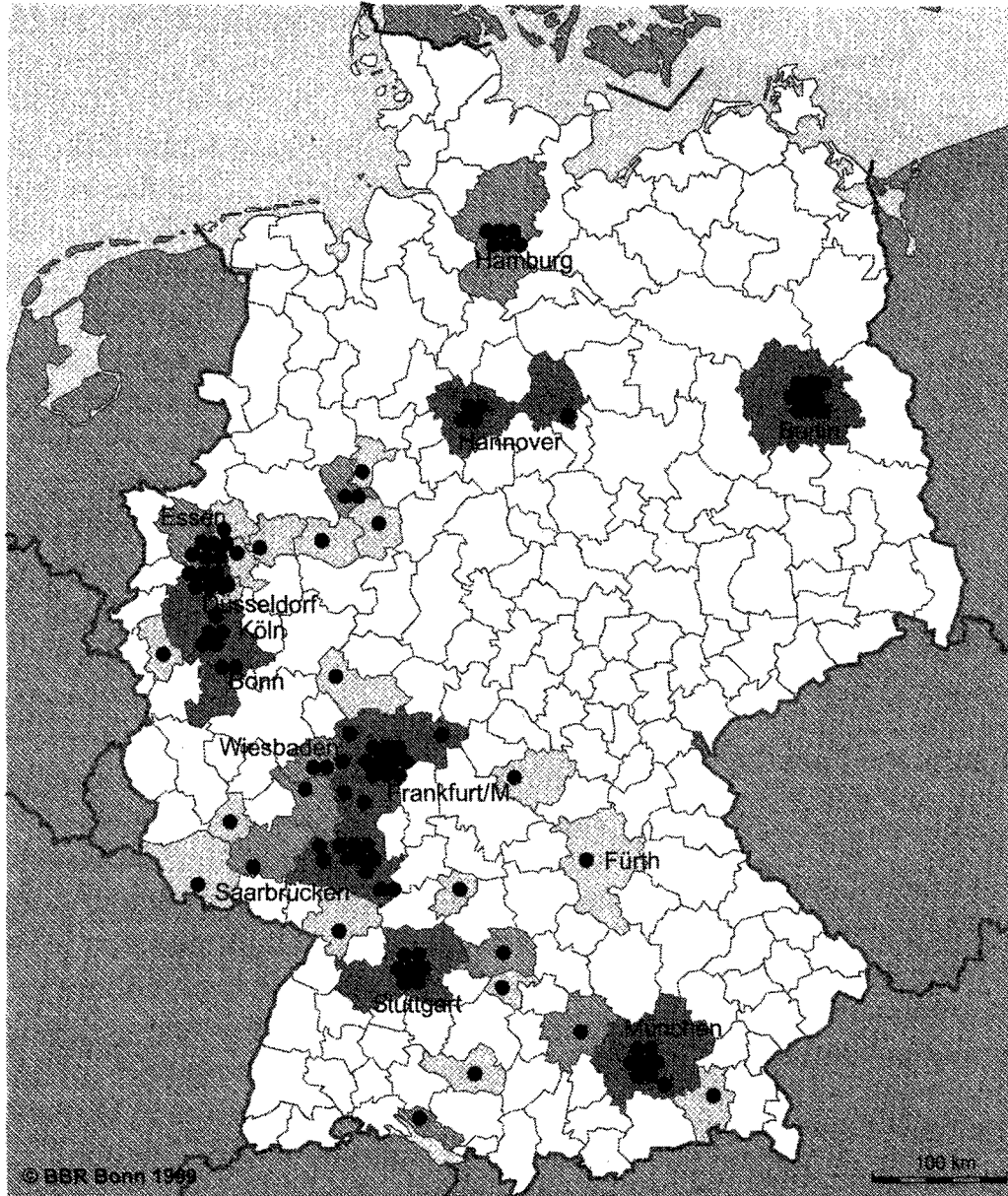


Share of selected economic sectors:

Großhandel=wholesale trade, Kreditinstitute=banks, Versicherungen=insurances, Rechts- und Wirtschaftsberatung=legal and economic advisory, Technische Beratung=technical advice, Sonstige=other, Wissenschaft und Bildung=Science and education, Kunst, Medien=fine arts, media, Verlagswesen=publishing

Source: Blotvogel 1998: 75

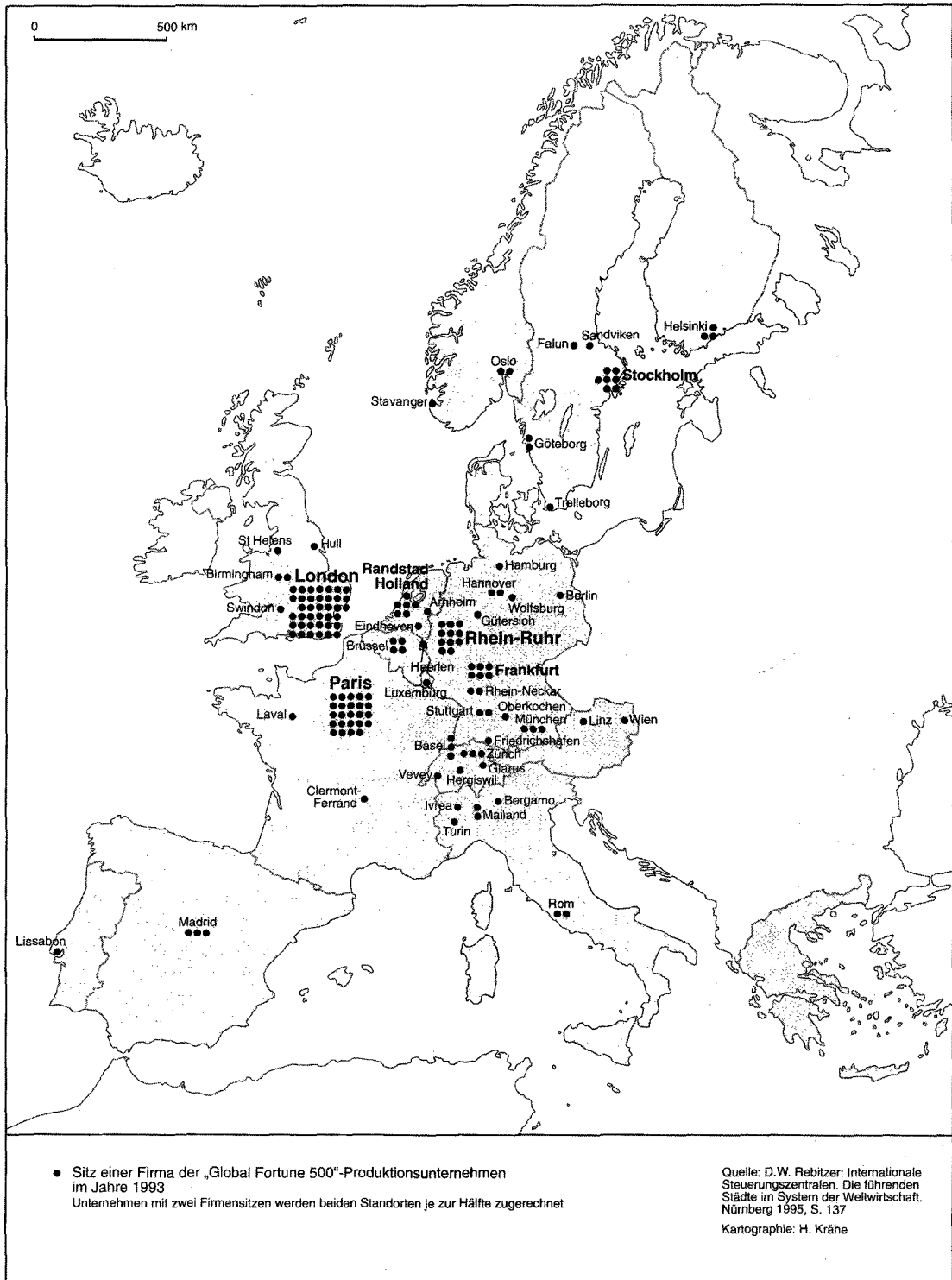
Fig.7 City/Metropolitan Regions in Germany 1995: Employees in Selected Economic Sectors as an Indicator for higher-central Metropolitan Functions



Quelle: Veröffentlichung aus 'Die Zeit'

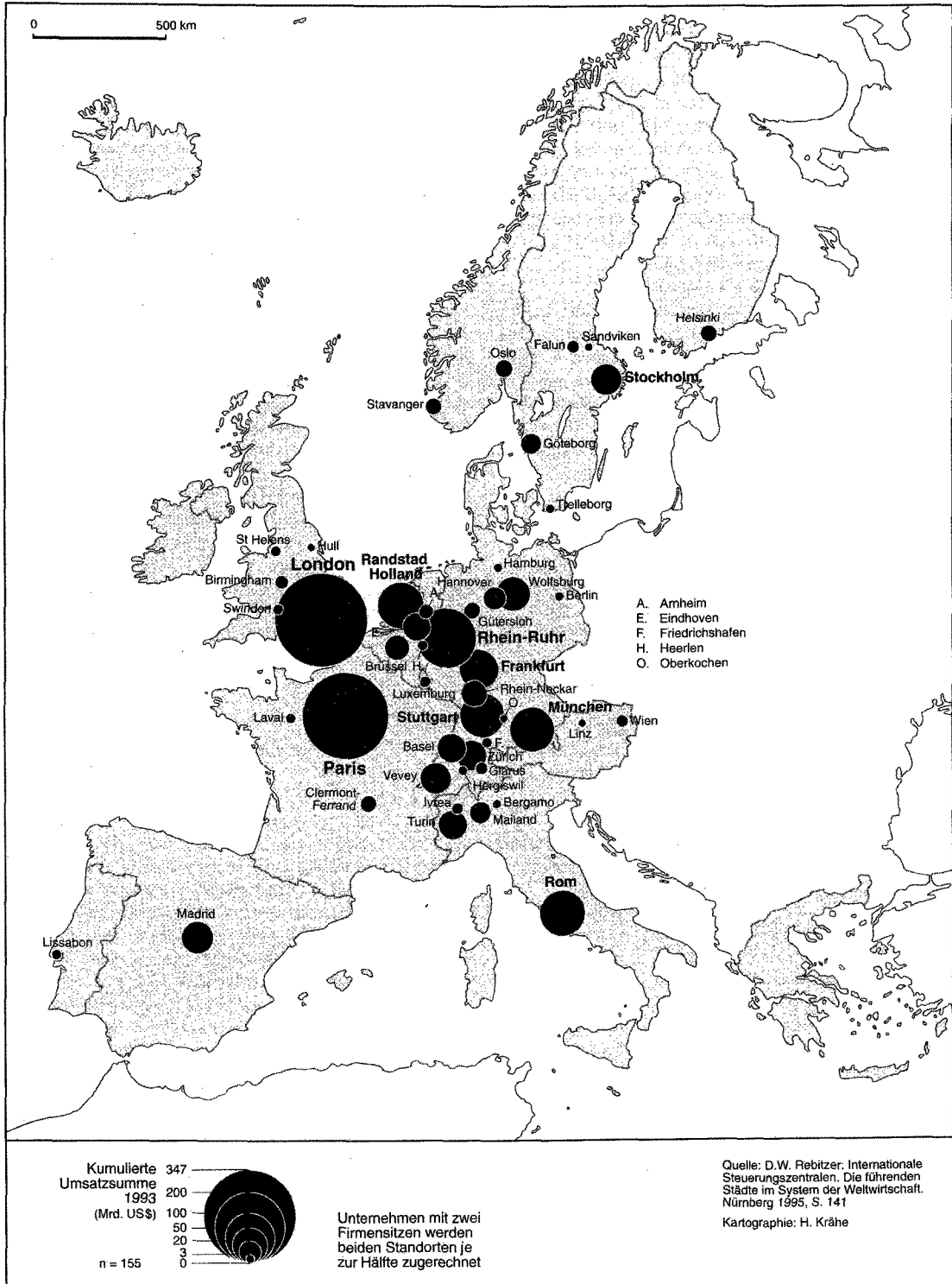
Source: Bundesamt für Bauwesen und Raumordnung: Informationen aus der Forschung des BBR, Nr. 3/Juli 1999: 5

Fig.8 Headquarter Locations of the 100 Most Important Global Players in Germany



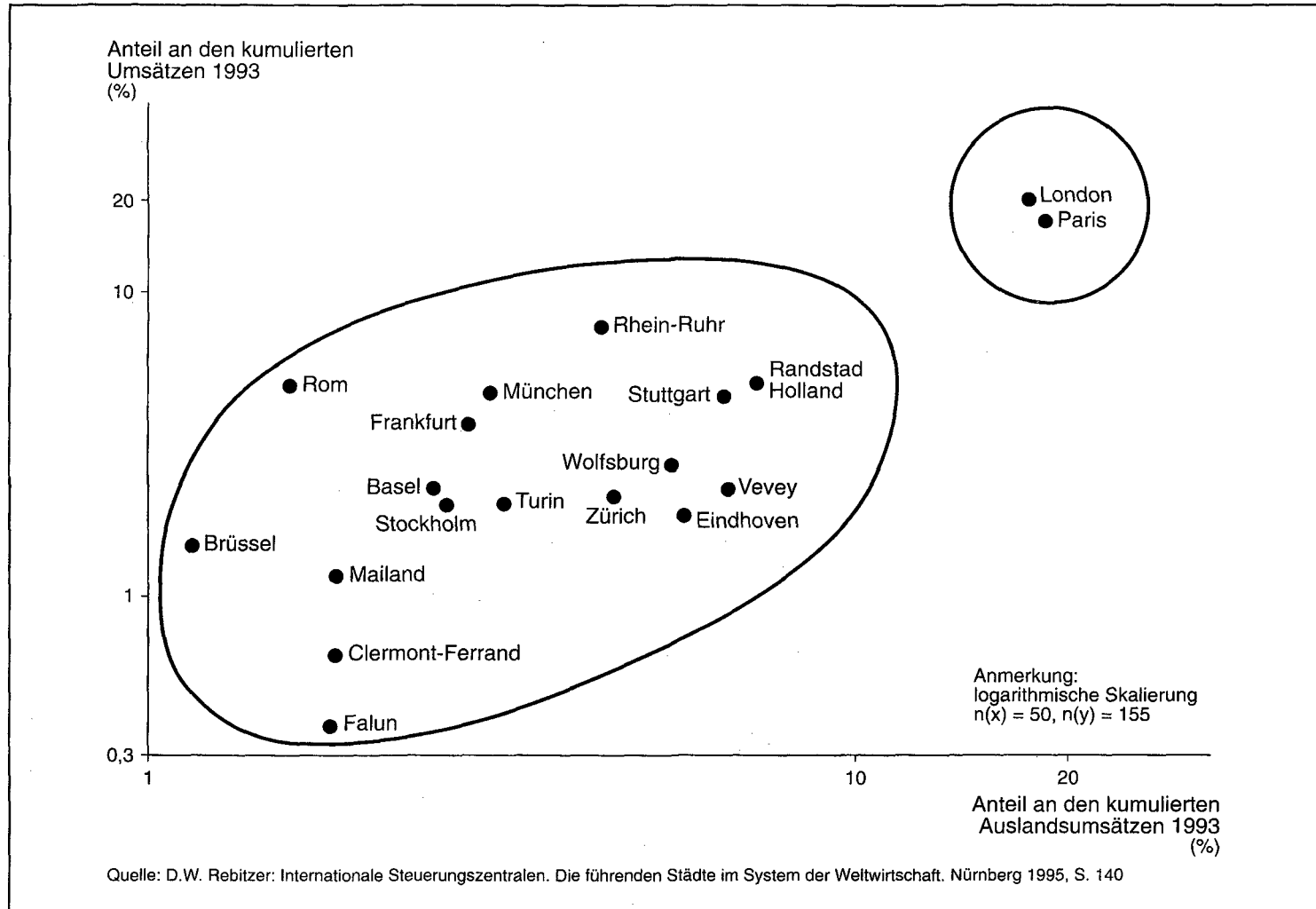
Source: Rebitzer 1995: 137, taken from Blotvogel 1998: 77

Fig.9 Headquarter Locations of the “Global Fortune 500” Companies of the Manufacturing Industries in Western Europe 1993 - Number of Enterprises



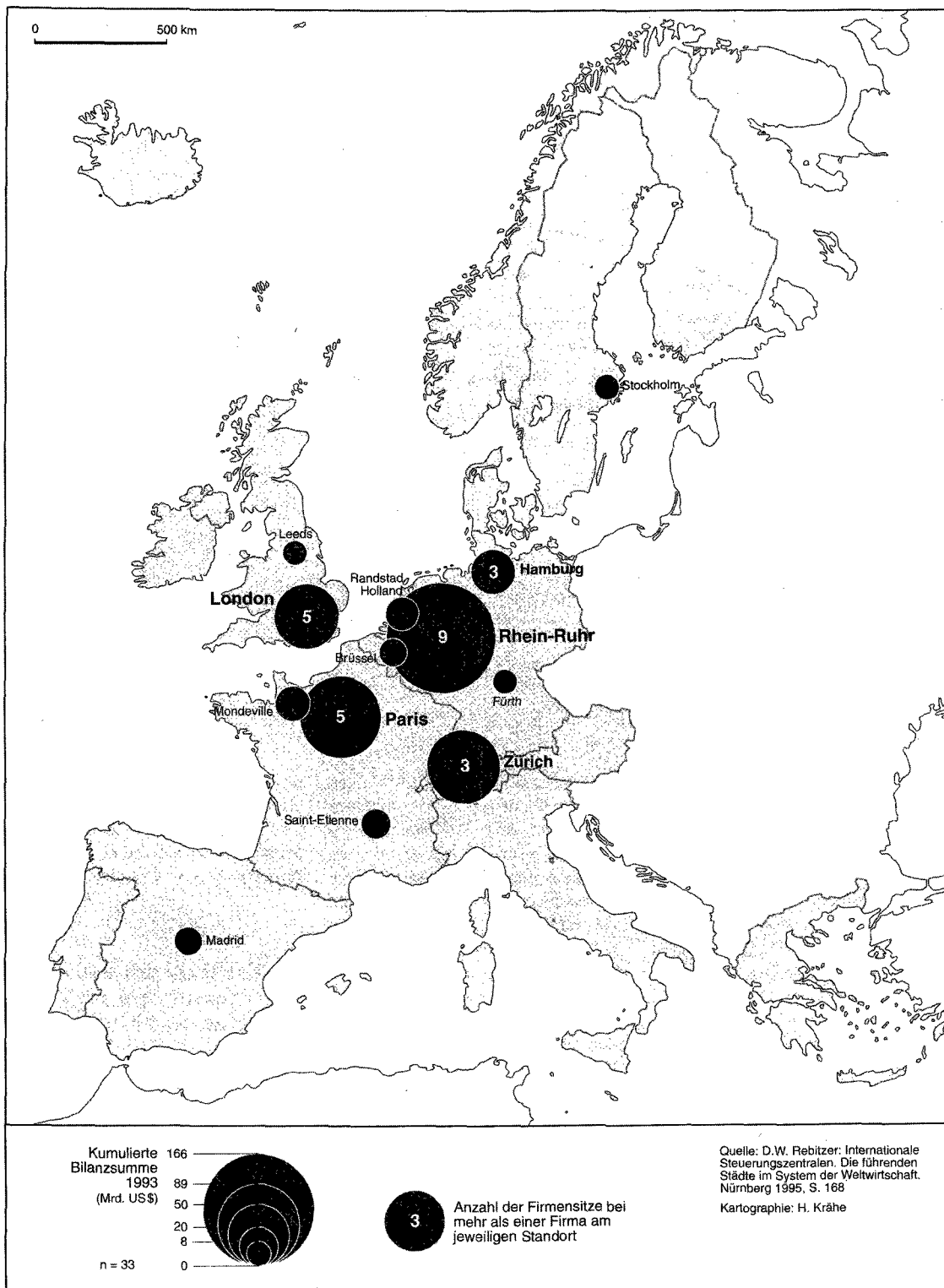
Source: Rebitzer 1995: 141, taken from Blotvogel 1998: 78

Fig.10 Headquarter Locations of the "Global Fortune 500" Companies of the Manufacturing Industries in Western Europe 1993 - Cumulated Sales



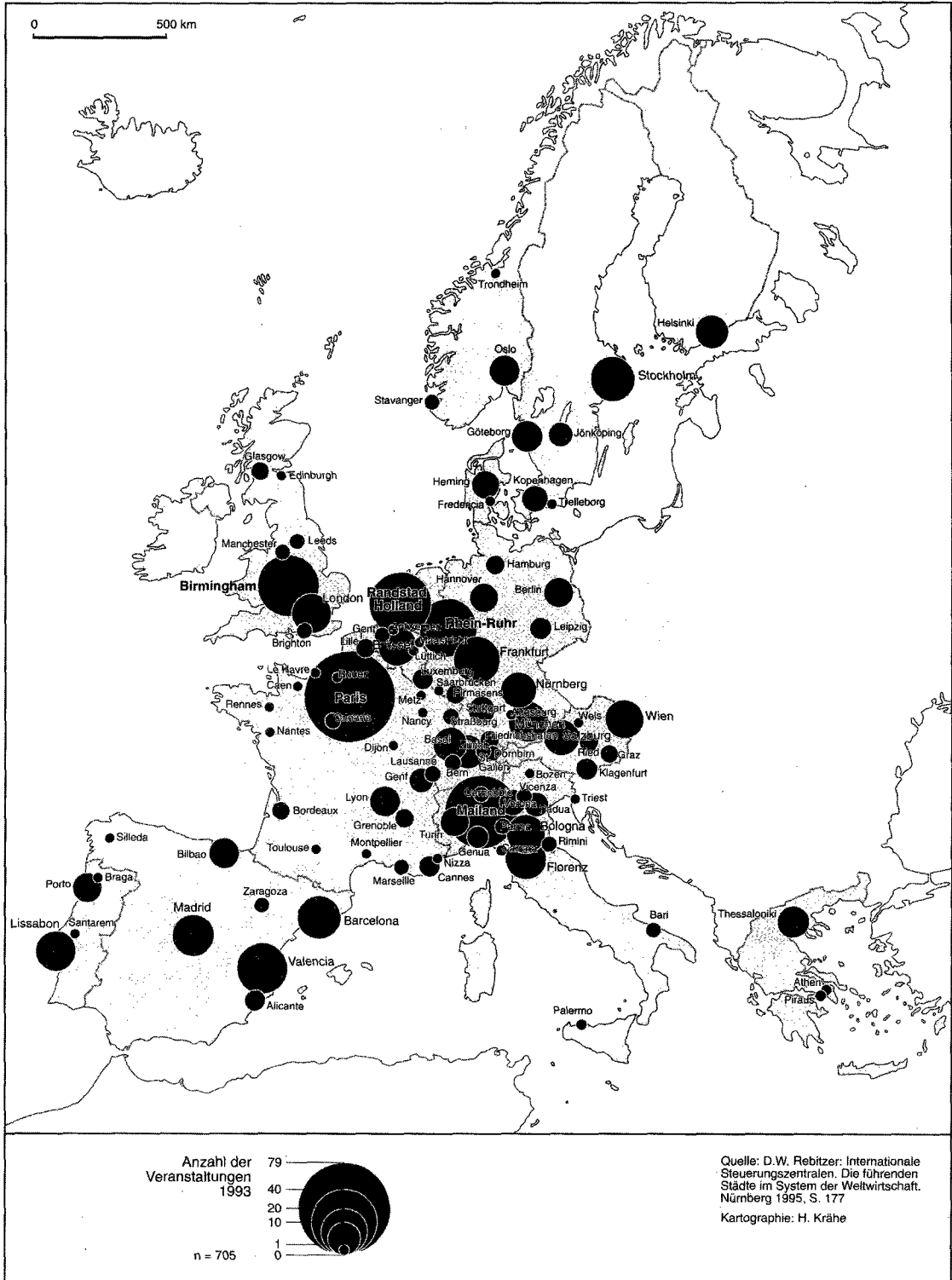
Source: Rebitzer 1995: 140, taken from Blotevogel 1998: 79

Fig.11 Share of Cumulated Sales (y-axis) and of Cumulated Foreign Sales (x-axis) of the "Global Fortune 500" Manufacturing Companies in the City Regions in Western Europe 1993



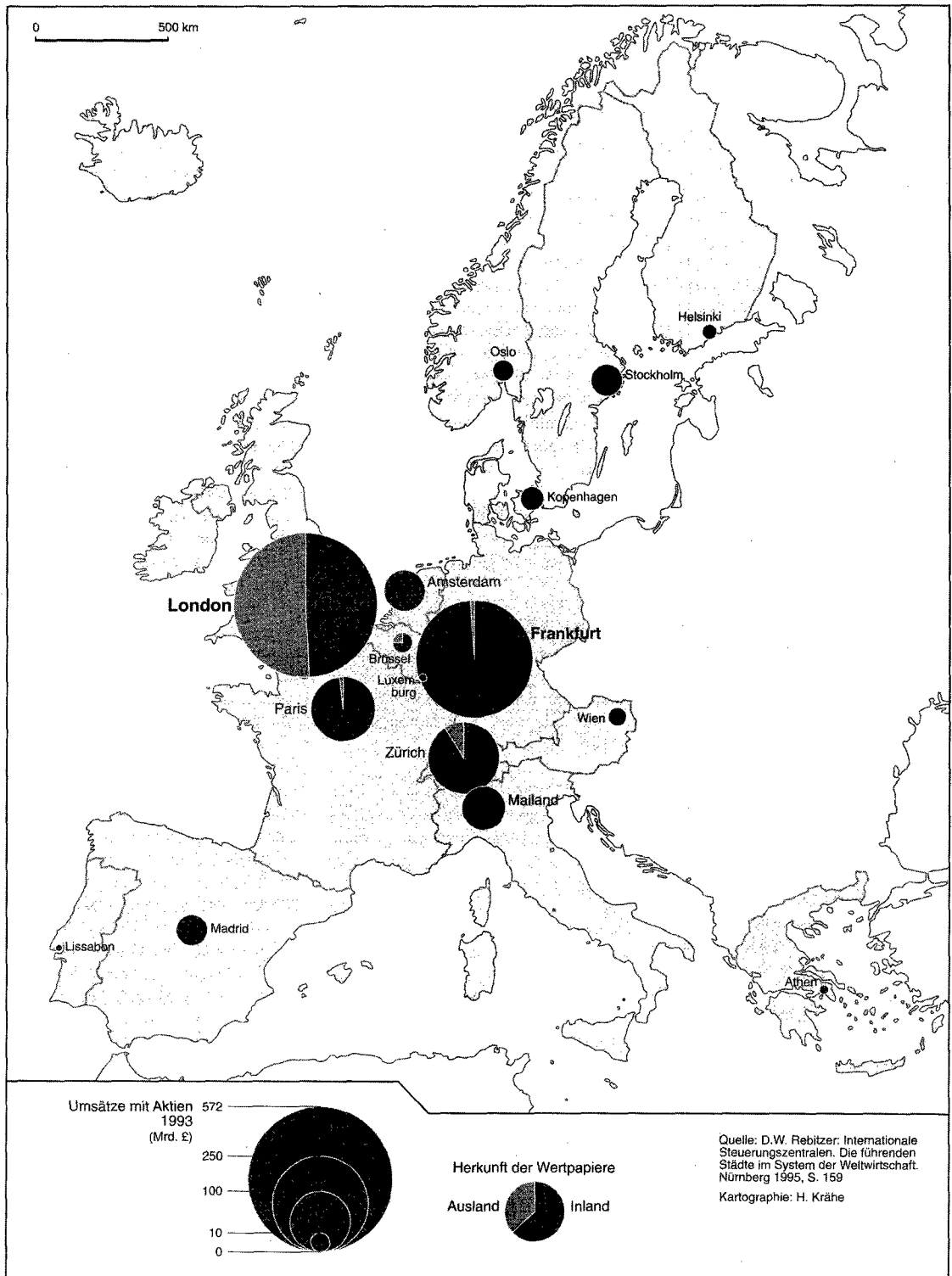
Source: Rebitzer 1995: 168, taken from Blotvogel 1998: 80

Fig.12 Headquarter Locations of the Largest Trade Companies - Cumulated Sales



Source: Rebitzer 1995: 177, taken from Blotevogel 1998: 81

Fig.13 International Fairs and Exhibitions in the City/Metropolitan Regions in Western Europe 1993



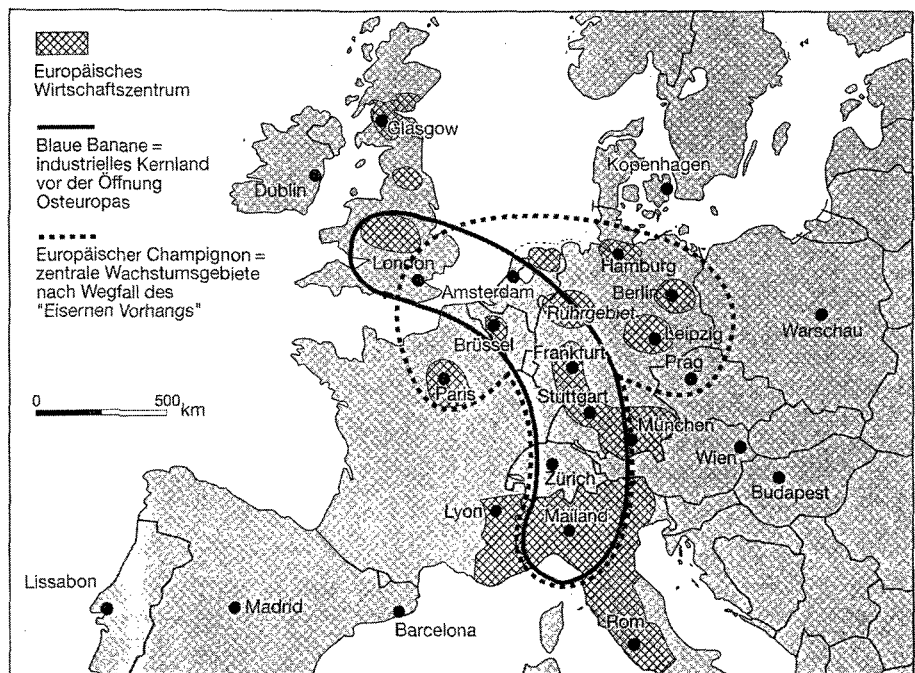
Source: Rebitzer 1995: 159, taken from Blotevogel 1998: 83

Fig.15 Stock-exchange Sales and Origin of Securities at Leading Stock Exchanges

Production structure / Control capacity	Concentration of innovative production structures	Concentration of traditional production structures	Lack of industrial capacities
Concentration of international control and finance capacities	Type 1 »global cities«		
Concentration of Europe-wide control and finance capacities	Type 2a European metropolitan city regions	Type 2b European metropolitan city regions	
Concentration of control and finance capacities of national importance	Type 3a Cities of national importance	Type 3b Cities of national importance	Metropolises in developing countries
Lack of concentration of important control and finance capacities	Type 4 Cities with innovative production structures	Type 5 Cities with Fordist production structures	Type 6 Marginalized cities

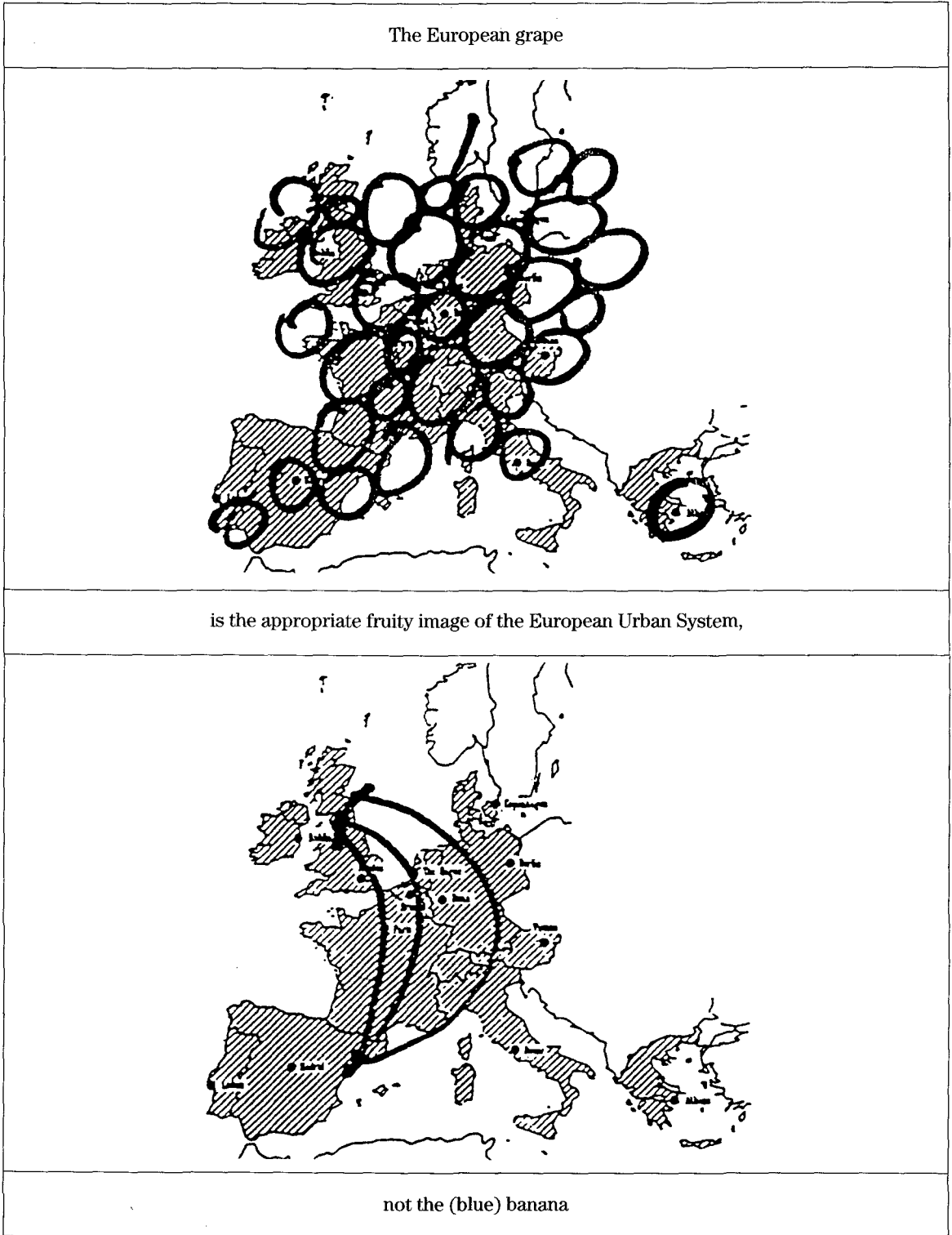
Source: Krätke 1995: 141, revised by and taken from Blotevogel 1998: 47

Fig.16 Two-dimensional Hierarchy of City Systems



Source: Hauff and Kreft-Kettermann 1996

Fig.17 Visions' of the Spatial Structure and Spatial Development in Europe: the "Blue Banana" (1980s) and the "European Champignon" (1990s)



Source: Kunzmann and Wegener 1991, taken from Ehlers 1997: 165

Fig.18 The "European grape": City Regions as a Vision for the Spatial Development of the Future of Europe