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URBAN POPULATION CHANGES IN FRANCE 1962–75

With 6 figures and 6 tables

PHILIP N. JONES

Zusammenfassung: Veränderungen der städtischen Bevölkerung in Frankreich 1962–75

Der Hauptantrieb für die sozialen und wirtschaftlichen Veränderungen im Nachkriegsfrankreich war die städtische Ausdehnung und das städtische Wachstum. Eine Analyse des Bevölkerungswandels zwischen 1968 und 1975 in Agglomerationen über 50 000 Einwohner beweist ein schnelles Wachstum in den Mittelstädten, aber ein langsames in Paris. Es besteht auch eine wichtige regionale Komponente, z. B. in der Konzentration der schnellwachsenden Städte in den auf Paris orientierten Regionen und entlang der Rhein-Rhône-Achse. In den expandierenden Regionen ist die Zuwanderung das bedeutendste Merkmal in der städtischen Bevölkerungsbilanz; aber anderswo hat im allgemeinen der natürliche Zuwachs die führende Rolle übernommen. Obwohl sich das Tempo des städtischen Wachstums im Ver-

gleich zu 1962–68 verlangsamt hat, offenbart eine vergleichende Analyse der Trends in einzelnen Agglomerationen, daß weiteres Wachstum diese Räume charakterisiert.

In common with other countries of Western Europe, the rate of population increase in France has been declining sharply¹). The mean annual increase in 1968–75 was 0.8%, compared with 1.1% p.a. in 1962–68²). However, the differential between high

¹) CHARLES WESTOFF: The population of developed countries. *Scientific American*, Vol. 231, 1974, pp. 108–120.

²) Recensement général de la Population 1975: Resultats provisoires du recensement de la population de 1975. I.N.S.E.E., Paris, 1975, p. 16.

urban growth rates of 1.00% p.a., and low rural growth rates of 0.20% p.a. has been maintained³). This paper is based on the statistical delimitations existing in 1968, at the beginning of the last intercensal period, and although small adjustments can be expected after boundary revision is completed, these are unlikely to distort the analysis in any basic way⁴). Corsica has been excluded throughout.

The 1975 Census results suggest that two significant trends have emerged in the process of urban population expansion. Firstly, the overall rate of urban growth has declined compared with previous periods. Secondly, there has been a fundamental change in the roles of migration and natural increase in the urban "demographic balance sheet". Together they confirm the importance of analysing the spatial components of urban population growth in 1968-75, and making comparisons with the preceding period 1962-68.

France's economic and social transformation has irrevocably been associated with the reinvigoration of a moribund urban network⁵). This inevitably involved breaking the stranglehold imposed by the excessive centralization of secondary and tertiary activities in Paris through the development of an increasingly-powerful regional dimension in France's economic planning in the 1960's⁶). The impact of urban population expansion on the townscape and social structure of the average French town has in turn excited controversy and generated problems of physical and social planning. Cautionary words about the economic base of this expansion have been sounded by French geographers. Thus Cazes and Reynaud state that too often it has been over-dependent on the tertiary sector, and weak in manufacturing; even in towns where manufacturing is well-represented, the tentacles of Parisian decision-making are still unbroken⁷). Nevertheless powerful forces have been at work

to stimulate both a switch to urban-oriented economic activities, and a longer-term reorientation in the regional balance of population. These have been uneven in their impact, with important consequences for spatial patterns of urban change.

The paper focusses primarily on the 1968-75 period. Its data base is the entire set of *unités urbaines* or "agglomerations" with populations over 50,000, as these were delimited in 1968⁸). Some urban population growth will be omitted, due to population increases in communes outside these boundaries. For France as a whole about 400 rural communes will have passed the threshold for incorporation into an urban agglomeration by 1975, containing an estimated population of 400,000⁹). This problem accompanies all statistical series related to such a dynamic phenomenon. However, even if all this "addition" was allocated to agglomerations over 50,000, the vast majority of urban growth between 1968 and 1975 would still be within the agglomerations as defined in 1968¹⁰). Comparisons will however be made between population trends in selected agglomerations and their equivalent *zones de peuplement industriel ou urbain*¹¹) (ZPIU) which are broader if rather amorphous units, in order to make a further assessment of extra-urban population growth.

³) "*Unité urbaine*" is an "urban place" in the terminology of the French Census. It may be either a group of contiguous urban communes, or "*agglomération urbaine multi-communale*", or a "*ville isolée*", consisting of a single urban commune only. The most common type in this paper is the *agglomération multi-communale*, which normally consists of a "*centre-ville*" or "central city" and a surrounding ring of suburban communes of urban status. It is a definition which stresses continuity of urban settlement. In the text the term "agglomeration" refers to all "*unités urbaines*", since this seems to convey the idea of continuity best. For a comprehensive discussion of the problems of measuring urban areas see Peter Hall and co-workers, below footnote 13, Ch. 4, pp. 117-140.

⁹) Recensement général *op. cit.*, footnote 2, p. 15.

¹⁰) The total population growth in urban communes 1968-75 (1968 delimitation) was 2,589,846, *ibid.*, Table 4, p. 16.

¹¹) A ZPIU is a statistical unit which includes both urban and rural communes, and represents an attempt to break away from the rigid habitat continuity constraints of the *unités urbaines* by providing a more functional approach to the delimitation of urban regions. Indices such as the proportion of the occupied population working outside agriculture, daily work-journeys, etc. are taken into account. However ZPIUs have not met with universal approval, and many French geographers (see e.g. Bruyelle, footnote 32) have criticised the arbitrary nature of the criteria adopted, which lack firm theoretical validity. A comprehensive definition running into 2 closely-printed pages can be found in Recensement général de la Population 1968: Les Zones de Peuplement industriel ou urbain-délimitation 1968. I.N.S.E.E., Paris, 1970, pp. ix-x.

³) The French census defines an "urban" commune as one in which the most important settlement has a population of at least 2,000. Recensement général, *op. cit.*, footnote 2, p. 15.

⁴) The French census publishes the initial results of a census in terms of the statistical units existing at the beginning of the intercensal period. At a later stage boundaries are adjusted to allow for intervening population growth, and further volumes are produced which present data for the revised statistical units. The process is a lengthy one, and personal communication from INSEE in February, 1977 confirmed that the volumes relating to revised boundaries had not been published.

⁵) IAN B. THOMPSON: *Modern France, a Social and Economic Geography*. Butterworth, London, 1970, pp. 49-68.

⁶) JACQUELINE BEAUJEU-GARNIER: *Toward a new equilibrium in France?* *Annals. Assn. of Amer. Geogr.*, Vol. 64, 1974, pp. 113-125.

⁷) GEORGES CAZES and ALAIN REYNAUD: *Les Mutations récentes de L'économie française*. Doin, Paris, 1973, Ch. 8, pp. 130-151.

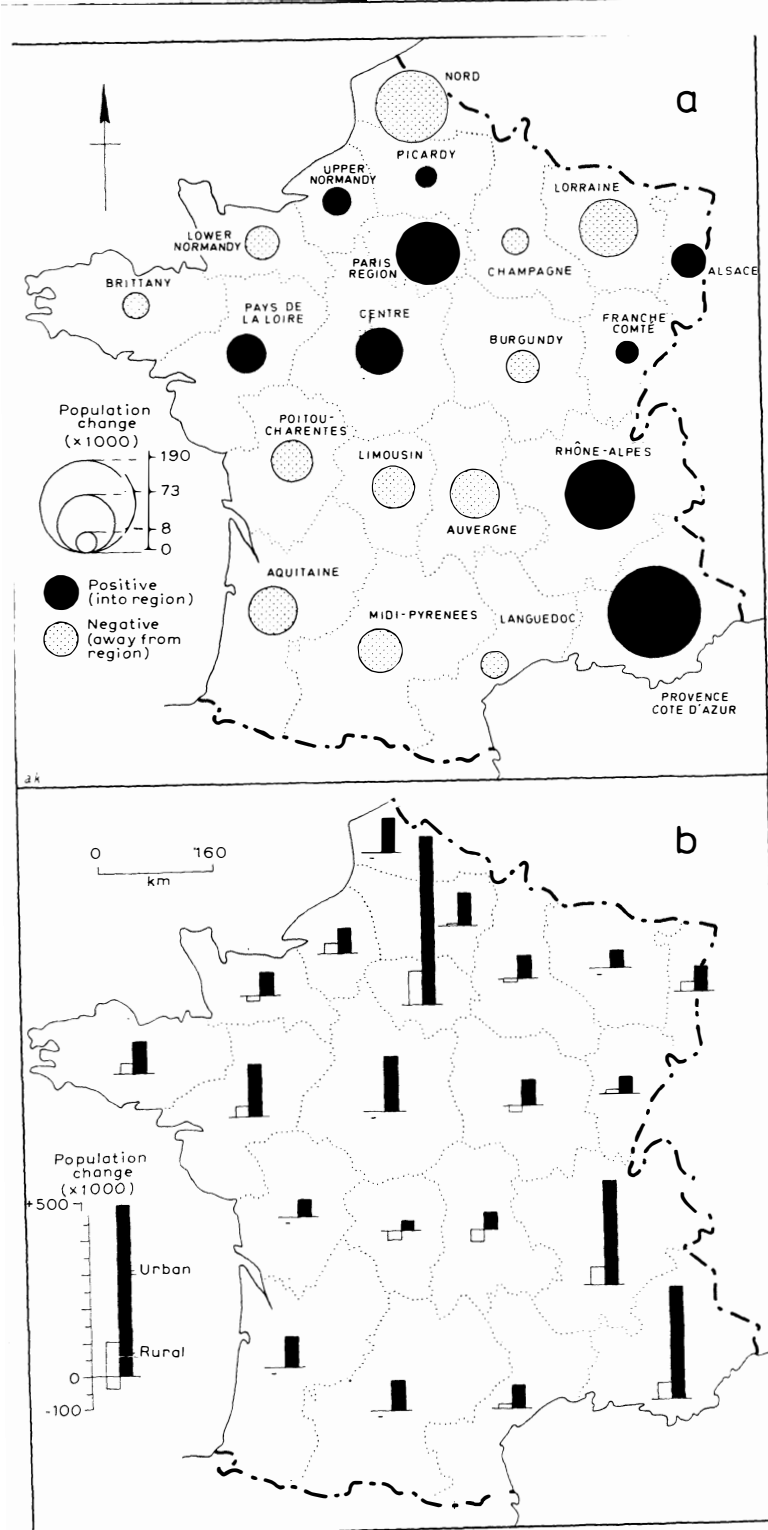


Fig. 1a: Net Shifts of Population by Region 1968-75

1b: Population Changes in Urban and Rural Communes by Region 1968-75

Regional Population Changes 1968–75

The important regional changes which have been underway for some twenty years¹²⁾ form an essential preliminary, and the geographical pattern of net shifts in population between 1968–75 provides evidence of their continuity¹³⁾ (Fig. 1a). The most significant long-term trend is the diminishing importance of the Paris Region, which although the recipient of a positive shift of population in 1968–75, is no longer first in rank. This represents a considerable achievement for French regional planning, and an important corollary is the positive shifts in regions of the Paris Basin such as Picardy, Upper Normandy, and Centre, which have particularly benefited from government-stimulated industrial decentralization¹⁴⁾. The only other regions of positive net shifts of population lie along the emerging Rhine–Rhône axis of eastern France – moderate gains in the north, in Alsace and Franche-Comté, but massive gains in Rhône-Alpes and Provence-Côte d’Azur. The latter regions have been steadily increasing their population “weight” during previous intercensal periods. Negative shifts of population are long-established in west and south-west France. In the industrialized regions of Nord and Lorraine the demographic reversal which first emerged in 1962–68 has continued. At a regional level therefore, two major groups of contiguous regions were absorbing positive shifts of population in 1968–75. For convenience they can be termed a Paris – oriented set, and an Eastern France set, and it is reasonable to expect evidence of faster urban population growth in these regions.

An overview of the urban and rural components of regional population changes reveals that urban populations have increased everywhere, and always in larger numbers than the rural population (Fig. 1b). The map indicates that the urban component of population change is the dominant factor in all regions; in many regions it is the only source of population growth, as in south-west and central France. Moreover, even where

the rural population is growing, there is a pronounced disparity in performance nationally between rural communes outside a ZPIU, and likely to be basically agricultural, which declined by 0.40% p.a., and those inside a ZPIU and thus affected by urban and industrial influences, which increased by 1.60% p.a. To a large extent population losses on a regional scale are occurring in the profoundly rural regions, such as Auvergne and Limousin in the Massif Central¹⁵⁾. We are therefore justified in focussing attention on the urban component of population changes, since it is the dominant process of population growth and a major instigator of regional growth differentials.

Urban Population Changes 1968–75: Inter-Urban Comparisons

The analysis begins with an examination of rates of population growth or decline amongst urban agglomerations over 50,000. Agglomerations have been scaled according to their total population in 1975, and classified into percentile categories according to their rates of population change (Fig. 2).

The upper octile of fastest-growing cities have a regional distribution which accords broadly with the two sets of regions having positive population shifts. One group lies within the Paris metropolitan orbit, such as Mantes, Chartres and Orléans. In the outer Paris Basin two of the major regional centres, Caen and Reims, also belong to this category although their regions record negative shifts of population. In the eastern France set the cluster of sub-Alpine cities (Annecy, Chambéry, Grenoble) are distinctive, whilst Aix-en-Provence, Grasse-Cannes-Antibes (GCA) and Montpellier are representatives from the “Midi”. Châlons-sur-Saône is the remaining city in this group, strategically located on the Rhine–Rhône axis.

Agglomerations within the upper quartile (excluding the above) also have a distribution biased towards these sets of regions, but less-rigidly constrained. Montbéliard and Valence complement the eastern France set and Tours, Troyes, Creil and Châlons-sur-Marne fill gaps in the Paris-oriented set. Poitiers, Pau, Toulouse, and Châteauroux are examples from south-west France, and Dunkerque is a solitary pole of rapid growth in Nord region.

Towns in the lower quartile and lower octile also have regionalized distribution patterns. The outstanding individual example is the Paris agglomeration, and whilst the delimitation of its boundaries adversely affects its true growth rate, it is apparent that the dy-

¹²⁾ For a discussion of the previous intercensal population changes see HUGH D. CLOUT: French population growth 1962–68. *Geography*, Vol. 56, 1971, pp. 119–24; also Ian B. Thompson, *op. cit.*, footnote 5, pp. 17–28.

¹³⁾ The method of calculation follows PETER HALL, HARRY GRACEY, ROY DREWETT, RAY THOMAS: *The Containment of Urban England. Volume One, Urban and Metropolitan Growth Processes*, George Allen & Unwin, London, 1973, p. 179. It involves comparing regional trends with the national average trend over a given period. If the regional performance is superior (as, for example, when it increases more rapidly, or decreases less rapidly) we have a net positive shift; if the regional performance is inferior (as, for example, when the regional trend is downward and the national is upward) we have a net negative shift. HALL *et al.*, calls the former ‘upward’ shifts, and the latter ‘downward’ shifts.

¹⁴⁾ Jacqueline Beaujeu-Garnier, *op. cit.*, footnote 6, pp. 117–121.

¹⁵⁾ Exceptions to this general trend include the rural communes outside ZPIUs in Provence-Côte d’Azur, where “retirement in the sun” creates a constant influx of population; and also Alsace and Upper Normandy. In Alsace the tradition of a more harmonious relationship between town and country on the West German model is longstanding.

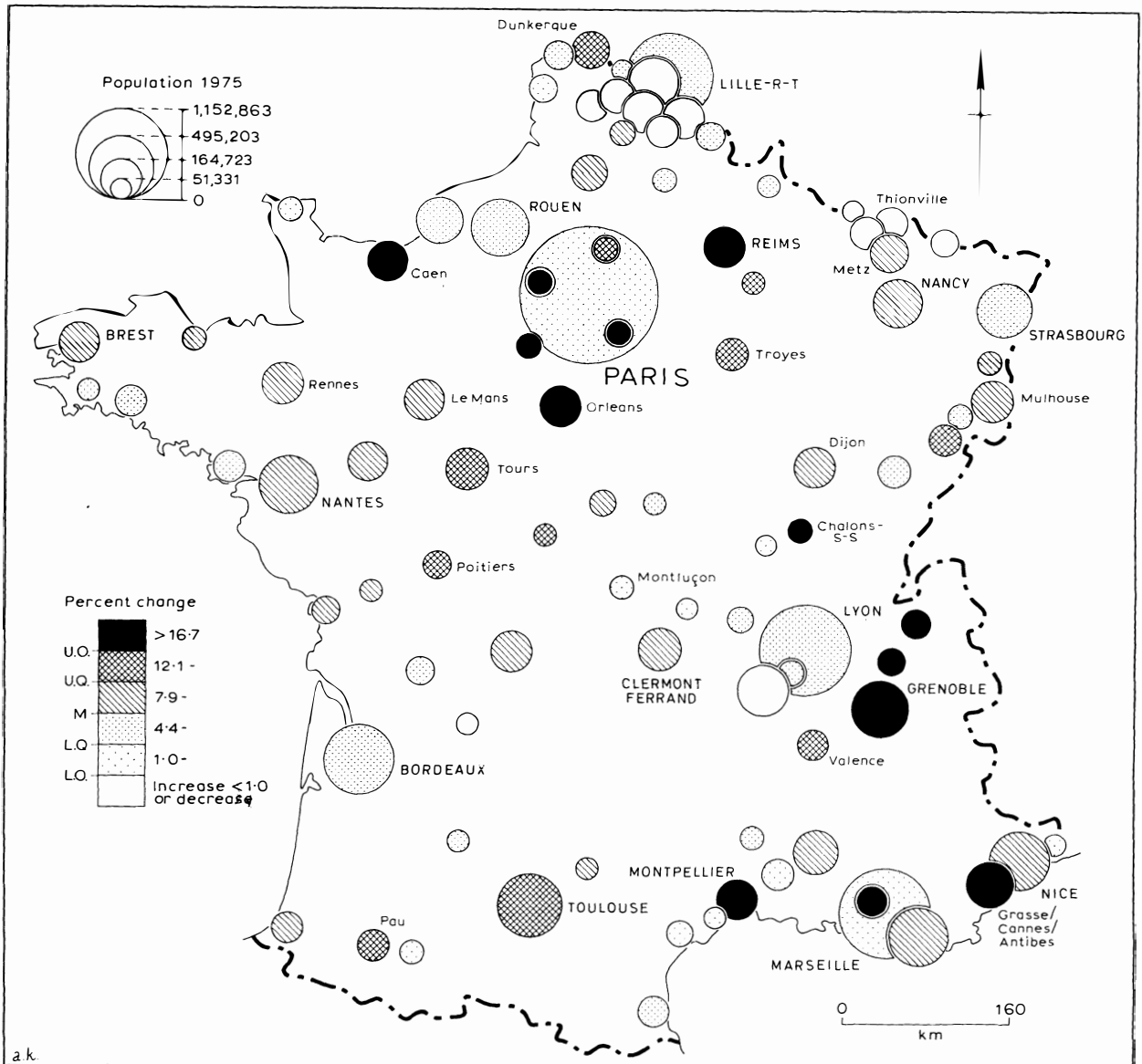


Fig. 2: Population Changes in Agglomerations $\geq 50,000$ population. The names of all agglomerations are presented on Fig. 4. Paris is not drawn to scale; in 1975 its population was 8,424,092.

namism of the giant city has been severely curtailed between 1968–75. This is best seen in its negative migration balance during the period (-0.4% p.a.), and even using the much wider (Paris) ZPIU only lifts the population growth rate from 0.4% to 0.7% p.a., which is well-below the national average¹⁶). The most

¹⁶) Between 1968–75 the population of rural communes in the Paris ZPIU rose by 118,000, or 41.3% , so that approximately one-third of the total population increase of the ZPIU occurred in the rural fringe outside the agglomeration. Recensement général, *op. cit.*, footnote 2, Table 5, p. 20.

remarkable geographical pattern is the clustering of lower-octile agglomerations in the heavy industrial regions of Nord and Lorraine. Six agglomerations in the Nord-Pas-de-Calais coalfield, (Bruay, Béthune, Lens, Douai, Denain and Valenciennes) and four in the Lorraine ironstone field and coalfield (Thionville, Longwy, Hagondange-Briey and Forbach) testify to the severity of the economic crisis affecting these regions since the early 1960s. Elsewhere in France other coalfield-based agglomerations have similarly poor performances, notably St. Étienne, Montceau-les-Mines, and Montluçon. A further distinctive group of lower-quartile agglomerations occurs in Languedoc,

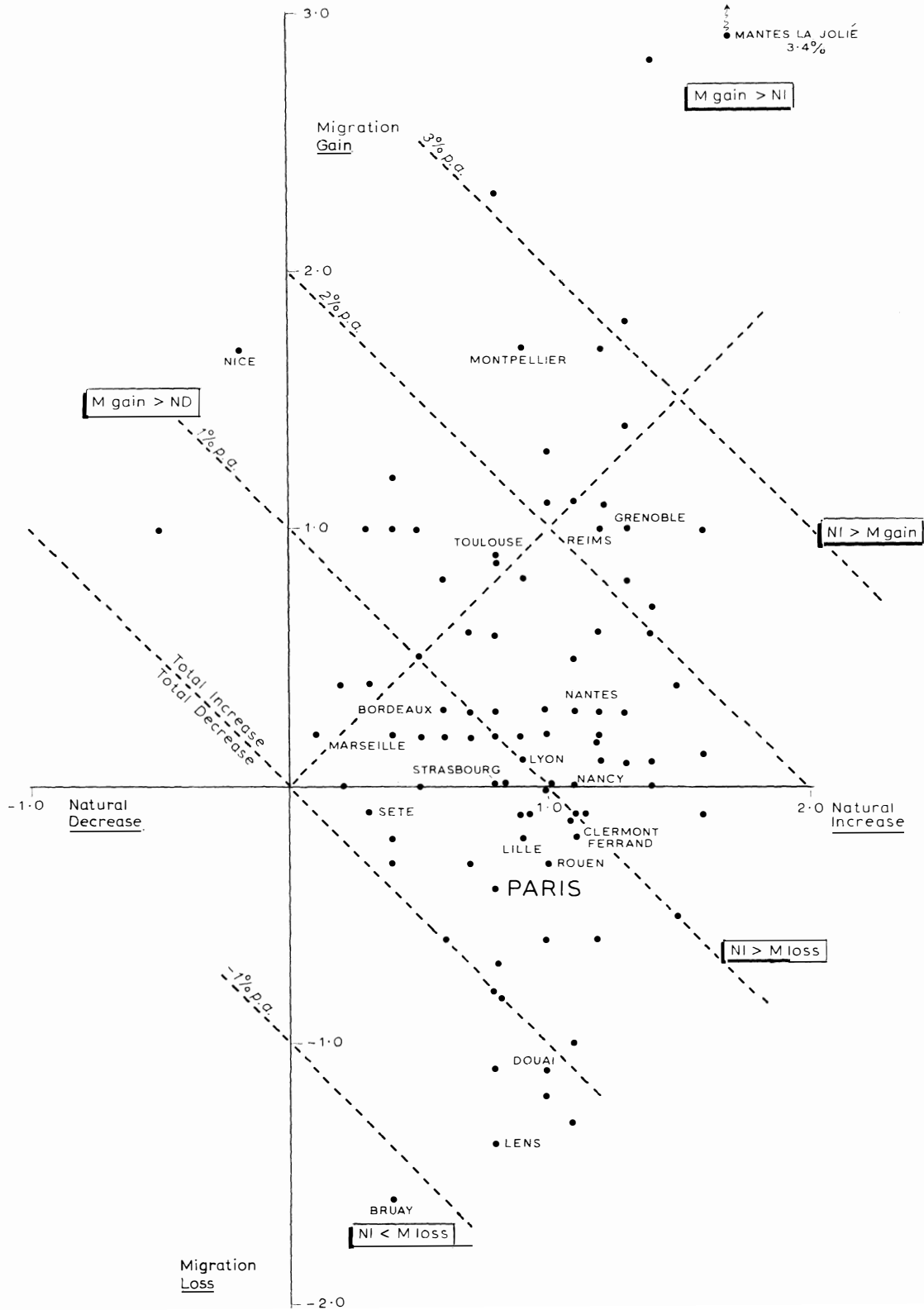


Fig. 3: Graph to show the Migration and Natural change components of population changes 1968-75



Fig. 4: Migration and Natural change components of total population change 1968-75: The spatial distribution

still over-dependent on a crisisridden viticulture; Nîmes, Sète and Béziers have poor growth records. Marseille, France's second city, is also in the lower quartile, having seen an increasing proportion of its port and industrial activities, and its population, gravitate westwards to Fos and Étang de Berre.

Towns within the interquartile range, with increases between 4.4% and 11.5%, are generally above the national average population increase for the period (5.7%), since the median is 7.9%. Most of the larger cities record below-median growth rates including Strasbourg, Bordeaux, Lille-Roubaix-Tour-

coing (LRT), Le Havre and Rouen, but the greater difficulties of urban delimitation are an important factor in depressing these rates. Certainly the smaller cities with claims to important regional functions have growth rates above the median, such as Nancy, Metz, Nantes, Rennes, Brest, Clermont Ferrand, Dijon and Mulhouse¹⁷). Otherwise it is difficult to detect any regional trend amongst this class, which represents the 'average' situation. Exceptions can be made for the towns of southern Brittany, which are consistently in the below-median category, and for many industrial towns in northern France, such as Calais, St. Quentin, Maubeuge and Charleville-Mézières, which are affected by the economic lassitude of their regional industrial structures.

*Urban Population Changes 1968-75:
The Demographic Processes*

The relationship between migration balances and natural population movements determines the amount and characteristics of population change. Figs. 3 and 4 are complementary, in that the latter represents the spatial expression of the graphical relationship. Sectors of the graph have been isolated to emphasize the relative importance of migrational and natural components of population change, and, following Charlet¹⁸), symbols have been selected to highlight the geographical occurrence of towns in these sectors (Fig. 4).

For French urban communes as a whole, the contribution of natural increase to population growth was four times as great as migration gain. This is reflected in graph and map; natural increase makes the major contribution in most agglomerations, either reinforcing a migration gain or compensating a migration loss. Across France the predominant geographical pattern is one in which natural population increase is reinforced by migration gains, the former playing by far the dominant role. Consequently we are justified in looking more closely at exceptional cases, of which the most significant are agglomerations in which migration gains exceeded natural increase, a demographic situation more characteristic of previous intercensal periods of very rapid urbanization. In the agglomerations of the metropolitan "ring" around Paris, and in Annecy and Chambéry, strong migration gains are allied with natural increase rates at or above the national average. In southern France in contrast, very low or low natural increases in the 0.30/0-0.50/0 range are easily outweighed by migration gains of quite modest dimensions¹⁹). Exceptions occur, such as Pau, Montpel-

lier and Aix-en-Provence, in which natural increase rates are about "normal". However, many Provençal agglomerations such as Nice and GCA, where there is a high retired element, record natural decreases in population. These decreases are compensated by migration gains, giving an uniquely unbalanced pattern of population growth.

Agglomerations with migratory deficits are mainly associated with economic crises, whether on a regional scale as in the northern coalfields, or on a localized scale in towns around the margins of the Massif Central, or isolated ports such as Cherbourg. The special case of Paris has been mentioned above. In many agglomerations of the northern industrial regions migration losses outstrip natural increase, resulting in a declining total population. In previous periods the buoyant natural increase associated with most European coalfield areas was sufficient to stave-off this eventuality, but by 1968-75 natural increases rates were only 'average' in these former demographic "powerhouses"²⁰).

*Urban Population Changes 1968-75:
An Explanatory Framework*

The facts of urban population change in France suggest that two elements are of particular importance - location and size. These potential associations will now be investigated.

For all agglomerations in France there is an inverse relationship between size and rate of population increase (Table 1). The outstanding feature is the very

Table 1: Size of agglomeration) and rate of population increase 1968-75*

Size category	Percentage population increase per annum	Increase as % of 1962-68
Paris Agglomeration	0.4	30.8
200,000 - 2 Million	1.0	50.0
100,000 -	1.4	60.9
50,000 -	1.3	59.9
20,000 -	1.5	68.2
10,000 -	1.2	66.7
5,000 -	1.2	80.0
Under 5,000	1.2	92.3

Source: Recensement général de la population 1975: Résultats provisoires du recensement de la population de 1975 (I.N.S.E.E., Paris, 1975), Table 4, p. 16.

*) Classed by population in 1968.

¹⁷) See also below on the "medium-sized cities".

¹⁸) J. CHARLET: Les agglomérations françaises de plus de 100,000 habitants. Hommes et Terres du Nord, 1967, pp. 49-65 (No volume numbers for this journal).

¹⁹) The pronounced demographic contrasts between northern and southern France are discussed in HUGH CLOUT: The Geography of Postwar France. Pergamon, Oxford, 1977, pp. 15-19.

²⁰) A comprehensive assessment of the demographic role of the coalfields of western Europe in the nineteenth and early twentieth centuries is provided by E. A. WRIGLEY: Industrial Growth and Population Change: a regional study of the coalfield areas of north-west Europe in the nineteenth century. Cambridge Univ. Press, Cambridge, 1961.

low growth rate of the Paris agglomeration. The larger cities over 200,000 record the next lowest rates of 1% p.a., although this is equal to the national urban commune average. However, this category includes wide variations in individual performance; Grenoble, Nice and GCA record very fast rates to counter-balance the low increases of cities such as Strasbourg or LRT. The category also includes the main constituent cities of the *Métropoles d'équilibres*, most of which have modest growth rates in comparison with other agglomerations²¹). In contrast, the growth rate of the "medium-sized cities"²²), approximately between 100–200,000, has been much higher, and constitutes the second-fastest growth performance. Although there has been a decline from the level of 1962–68, it is less marked than in the larger size categories (Table I). The fastest growth rates are within the small-medium towns of 20–50,000, which are not specifically studied in this paper, whilst the classes of small agglomerations below 20,000 have above-average increases. Both are less affected by the lower intercensal rate of urban population growth. The enormous number of towns involved makes generalization very difficult, although many are found in the outer orbits of major cities.

There is also a regional component in the pattern of urban growth, but its isolation poses certain difficulties. The twenty-one official Regions of France (excluding Corsica) form a mesh which is too "fine" for this purpose; more suitable are the *Zones d'Etudes et d'aménagement du territoire* (ZEATs)²³). An analysis

²¹) The eight "*métropoles d'équilibres*" were created in 1964 under the 5th Plan. The goal of creating powerful provincial counterweights to Paris was to be achieved through government assistance designed to build up their functional strength. Whilst some major cities presented no problems of selection (e.g. Bordeaux, Toulouse, Strasbourg) in other cases irreconcilable local rivalries and political machinations resulted in the nomination of two or sometimes three cities in tandem (e.g. Nancy–Metz–Thionville, Lyon–Grenoble–St. Étienne). See NILES N. HANSEN: French Regional Planning. Edinburgh Univ. Press, Edinburgh, 1968, pp. 228–249. Growth rates p.a. 1968–75 in the métropoles, or in the major city of multi-nodal métropoles, were: Toulouse 1.7%/; Nantes 1.4%/; Lyon 1.0%/; Bordeaux and Strasbourg 0.9%/; LRT 0.7%/; Marseille 0.6%/.

²²) The "medium-sized cities", or "*villes moyennes*" are cities within the approximate size-range 100,000 to 250,000. Their expansion was more rapid than the métropoles in the 1960s, and this fact, coupled with the fewer physical and social problems which this growth appeared to create, attracted official attention. Consequently they have become increasingly favoured by government measures in the 1970s, although the rapidity of their growth is beginning to generate severe stresses: See e.g. J. and E. SOPPELSA: L'évolution récente d'Angers. Annales de Géographie, Vol. 80, 1971, pp. 554–575.

²³) Eight ZEATs or "study regions" for pre-Plan research and preparation were established in connection with the Sixth Plan 1971–75. This is an indictment of the small size

Table II: The regional component of urban population change 1968–75

Zeats	% change in agglomerations > 50,000	absolute change	% of total	No. of agglomerations in:			
				M–UQ	M–UQ	M–LQ	M–LQ
Paris Basin	11.81	217,778	15.36	8	2	4	–
Ouest	10.56	173,822	11.41	1	6	3	1
Méditerranée	9.18	256,589	16.84	3	3	2	5
Sud-Ouest	9.05	159,960	10.50	3	4	3	2
Centre-Est	9.05	224,584	14.74	5	1	4	2
Massif Central	7.98	38,377	2.52	–	2	–	2
Est	6.26	109,529	7.19	1	4	3	4
Paris Region	3.28	272,821	17.91	2	–	–	1
Nord	2.68	69,160	4.54	1	1	4	7
TOTAL	6.44	1,523,620	100.00	24	23	23	24

Source: Based on calculations from Recensement général de la population 1975: Résultats provisoires du Recensement de la population de 1975 (I.N.S.E.E., Paris, 1975) Table 8, p. 34–37.

of population changes within the framework of the ZEATs reinforces many points identified previously, and also reveals some unexpected features (Table II). The highest percentage growth rates in agglomerations over 50,000 occur in the Paris Basin, which excludes the Paris Region itself²⁴). It contains one-third of agglomerations in the upper quartile (UQ), and with no representative in the LQ, is clearly the ZEAT of most rapid urban expansion, deriving from its spatial proximity to the Paris agglomeration. The Centre-Est and Méditerranée ZEATs are ousted from second place by Ouest. The breakdown by quartile categories demonstrates that the former tend to have bimodal distributions, with many representatives in both UQ and LQ, and this has lowered the average performance. Thus Méditerranée contains the Languedocienne cities, and Centre-Est has the stagnant coalfield-based agglomerations in the Massif Central margins. In contrast Ouest has a statistical distribution in the IQ range and weighted above the median, with only one agglomeration in the LQ. It therefore enjoys a vigorous urban growth, at least in terms of agglomerations over 50,000. There is also buoyant growth in Sud-Ouest, with some agglomerations in the UQ, although a higher representation below the median than in Ouest. On this

of most the official regions used for programming purposes. See DAVID LIGGINS: National Economic Planning in France. Saxon House, London, 1975, pp. 231–267.

²⁴) With the exceptions of the Paris Region and the Paris Basin, French names for the Study Regions are retained in Fig. 4 and in the text.

evidence urban expansion in the larger cities in "western" France has certainly been satisfactory, and ranks with the best. The underlying problem remains the paucity of such cities in relation to the huge territorial extent²⁵). Growth rates in the Paris Region, Nord and Est are low. In the former, the efficiency of controls on industrial location and selective taxes on various forms of economic activity, coupled with dramatically reduced net migration gains have stabilized growth to a remarkable degree. Growth rates in Nord and Est are depressed by the presence of agglomerations with declining economic bases. The malaise appears more concentrated in Nord, where only two agglomerations are above the median; its meagre 4.5% share of population growth in these agglomerations indicates its loss of impetus and influence. Est is a more extensive ZEAT; and contains a spectrum of individual performances from the above-average of Nancy and industrial-commercial centres in Franche-Comté and Alsace, to the moribund agglomerations of the heavy industrial belt in the north.

In many ZEATs, and by extension broader regional units, the regional economic performance is clearly an influence for expansion or contraction, as in Nord or the Paris Basin. In others, the growth of agglomerations appears to operate independently of indifferent regional performances, as in Ouest or Sud-Ouest; here higher-order centres are obviously benefiting from economic and other stimuli emanating from outside the immediate regional aegis.

Urban Population Change 1968-75: The Intra-Urban Scale

No data exists which is directly comparable to that used by Peter Hall and his co-workers in their study of English post-war urban growth²⁶). In particular there is no equivalent of the outer "Ring" of the SMLA; the *unité urbaine* is a restricted concept similar to the "conurbation", or physically built-up area. Nevertheless, accepting the inevitable data limitations it is possible to examine trends for the central city and suburban "remainders" of most agglomerations²⁷), which throws some light on the internal dynamics of French urban growth. In order to achieve approximate

²⁵) This paucity has led the distinguished French geographer Pierre George to draw a fundamental distinction between the "polarized regions" of eastern France and the "inorganic areas" of western France. PIERRE GEORGE: France - a Geographical Survey. Martin Robertson, London, 1973, pp. 145-195. Translated by I. B. THOMPSON.

²⁶) PETER HALL and co-workers, *op. cit.*, footnote 13.

²⁷) The analysis can only give a broad impression, because it is affected by the degree to which the central city has tightly-drawn boundaries. For agglomerations over 70,000, (but excluding Paris, industrial agglomerations with no dominant focus, and single-commune *unités urbaines*) the average percentage of the total agglomeration population found within the central city was 69.1%.

Table III: Urban agglomerations $\geq 70,000$: dynamics of population change 1968-75

Category	Population change - summary characteristics	Number of agglomerations
Relative Decentralization	Central city increase, slower than rest of agglomeration	42
Absolute Decentralization	Central city decrease, rest of agglomeration increase	11
Relative Centralization	Central city increase, faster than rest of agglomeration	1
Absolute Centralization	Central city increase, rest of agglomeration decrease	0
No data*) or not applicable+)		19

Source: As Table II.

*) Agglomerations with no dominant central city, found in Northern industrial zones.

+) Single commune *unités urbaines*.

comparability with Hall and his co-workers the analysis was restricted to agglomerations over 70,000.

Within the restricted definitions at our disposal, the dominant internal dynamic process is decentralization (Table III). Absolute decentralization, which implies a declining central city population, is much less common than relative decentralization, where the population of the "centre-ville" or central city is still increasing, albeit at a lower rate than the suburban areas. 42 out of 54 decentralizing agglomerations were in the early "relative" stage, and only 12 in the advanced "absolute" stage²⁸). Three-quarters of the agglomerations experiencing absolute decentralization were in the largest size-classes, with populations over 250,000 in 1968. St. Nazaire is an anomaly, being the only agglomeration experiencing centralization. Nevertheless the dominant process is decentralization of varying degrees, and this is associated with important and controversial social processes. The most visible is the decanting of working class populations from heterogeneous inner city "quartiers" to vast but soul-less peripheral estates of high-density apartments.

The growth of population in the contiguous communes of the agglomerations does not fully express the decentralization process. The ZPIUs constitute a wider, if conceptually amorphous, zone around many agglomerations, which statistically they include. At a

²⁸) In comparison, absolute decentralization had proceeded much further in England and Wales even by 1966. 36 out of 100 SMLAs were in this category in 1961-66. PETER HALL and co-workers, *op. cit.*, footnote 13, p. 205.

national level statistical evidence suggests that the rate of "peri-urban" growth outside the agglomerations accelerated between 1962-68 and 1968-75²⁹). For many mono-nuclear agglomerations we can identify, from maps produced by the Institut National de la Statistique et des Études Économiques (INSEE)³⁰), a central city surrounded by the remainder of its agglomeration, with both in turn contained within the wider-flung ZPIU boundaries. A process of subtraction enables us to isolate population changes in this rural fringe of the ZPIU, beyond the agglomeration, and twenty seven cities were investigated³¹). During the period 1968-75 in the sample cities, 23.8% of the total population increase on average occurred in the rural fringe (Table IV). It is also possible to estimate and compare rates of change within and beyond the agglomeration limits. For the sample, the mean rate of population growth within the agglomeration was 12.0%, and 26.2% for the rural fringe (Table IV). The latter conceals a considerable range of values, but only four fell below 10%. Particularly high rates of increase were recorded in the rural fringes of Rennes, Nantes, Dijon, Le Mans and Toulouse, already identified as agglomerations of exceptional dynamism. Nevertheless existing French census definitions are ill-adapted to the increasingly fluid urban systems of contemporary western Europe. The most thorough criticisms have been made by the French geographer Bruyelle, who has been engaged on research into urban delimitations for the Institut National d'Études Démographiques. Taking the highly complex Nord region as his laboratory, his investigation has proceeded from the basic assumptions that realistic urban delimitations should recognize the enormous mobility of the urban population and the heterogeneity of modern urban regions³²). The adoption of a new system

Table IV: A comparison of population growth rates within agglomerations and rural fringes for selected agglomerations 1968-75

Zone	Mean percentage growth rate 1968-75	Percentage share of combined total increase
Agglomeration	12.0%	76.2%
Rural fringe within ZPIU	26.2%	23.8%

Source: As Table II, with addition of Table 9, p. 38-39.

is overdue, as work in related fields consistently points to the "loosening" of the urban organism, and the wider diffusion of urban growth processes³³).

Continuity of Urban growth Trends 1962-68 to 1968-75

What are the elements of continuity or discontinuity between patterns in 1968-75, and the preceding period 1962-68? In view of the slackening pace of urban growth a straight-forward comparison of rates of population increase in the two periods would reflect this in a fairly uniform manner. Consequently the analysis focusses on the performance of the agglomerations in the successive periods, relative to the average growth for each period. Agglomerations were ranked and classified into quartile categories for both periods, and their performance compared geographically (Fig. 5). This method emphasizes the broader comparative aspects of performance rather than the numerical quantities involved, but it enables important geographical regularities to be identified.

A three-fold major grouping of agglomerations was established, with subdivisions within two (Fig. 5). This is not the only way in which the graphical evidence can be synthesized, but it places more weight on performance in the later period, and this was felt to be an important advantage.

Agglomerations classed as "Good or Accelerating" are either found in the UQ in both periods (Good), or have moved into a higher quartile in the later period. In the latter case, those agglomerations which have moved into the UQ are particularly important, and, in combination with the Good sub-category, act as critical foci of French urban growth in the two periods. Regionally, the Paris Basin dominates the mapped distribution (Fig. 6), with many agglomerations in the Good sub-category, ranging from Caen in the western margins to Reims in the east; within its confines the only decelerating performance in that of Paris. The Mediterranean regions are less uniform in per-

²⁹) Recensement général *op. cit.*, footnote 2, p. 18 shows that the rate of population increase in the rural communes of ZPIUs rose from 1.2% p.a. between 1962-68 to 1.6% p.a. between 1968-75.

³⁰) I.N.S.E.E.: Zones de Peuplement Industriel ou Urbain au 1:500,000 avec indication des Unités Urbaines delimitation 1968, I.G.N., Paris, 1969, 6 sheets.

³¹) The sample consisted of: Angers, Annecy, Angoulême, Bescançon, Boulogne, Calais, Châteauroux, Cherbourg, Dijon, La Rochelle, Le Havre, Le Mans, Limoges, Lorient, Metz, Nantes, Niort, Orléans, Pau, Poitiers, Reims, Rennes, St. Nazaire, Tarbes, Toulon, Toulouse, Tours.

³²) PIERRE BRUYELLE: Délimitation et structure des principales zones urbaines de la région du Nord. Hommes et Terres du Nord, 1976, pp. 49-96. BRUYELLE has developed a four-fold classification which is now being "tested" in other parts of France; the scheme in summary, with approximate English equivalents, is: -

I *Centre-Ville* (central city).
 II *Faubourgs et banlieues* (inner suburbs).
 III *Frange suburbaine* (outer suburbs and urban fringe).
 IV *Zone d'Attraction* (dormitory villages, satellite towns, etc. of the outer metropolitan area).

³³) ANDRE FEL: Types d'évolution démographique de la France rural. Geographia Polonica, Vol. 29, 1974, pp. 55-62.

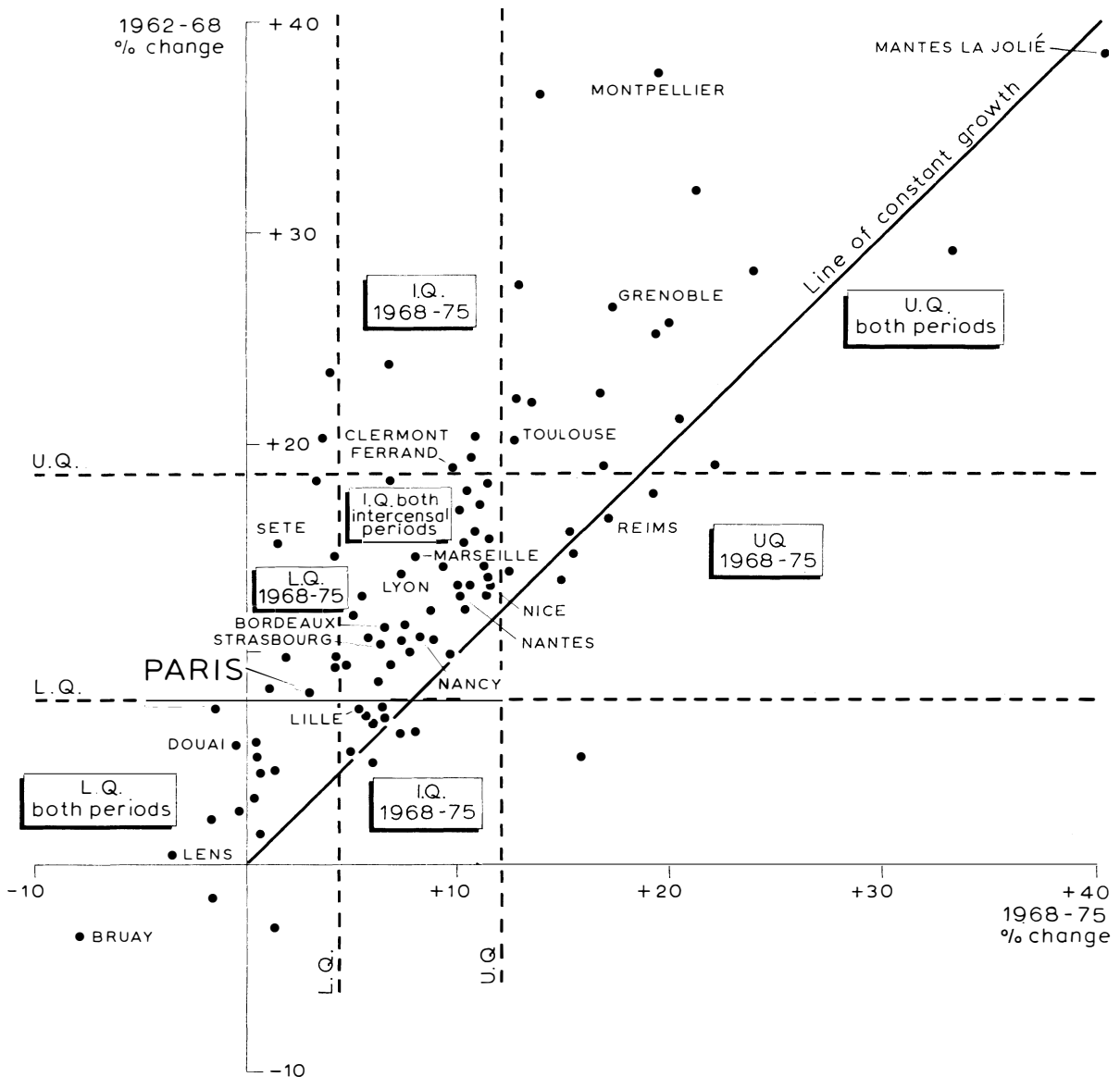


Fig. 5: Graph of population change 1962-68 and 1968-75

formance³⁴), and only Montpellier, Aix-en-Provence, and GCA are found in the Good category. The Rhône corridor and Alpine towns of east and south-east France are however prominent, including Valence, Grenoble and Annecy. Continuity of rapid urban growth has therefore largely been restricted to the critical areas of postwar economic advance in France, and few such agglomerations are found elsewhere. The

most prominent "outsiders" are Toulouse and Pau in south-west France, the former being heavily dependent on direct state stimulus, particularly through the firm *Aérospatiale* (Concorde, etc.). However the prevailing pattern in much of west, south-west, central, and eastern France outside the heavy industrial belt, represents continuity of moderate growth.

In northern France the concentration of agglomerations in the "Poor or Decelerating" category is outstanding, including the Nord-Pas-de-Calais coalfield agglomerations and the heavy industrial belt of Lorraine. This continuity of poor performance is directly associated with the severity and longevity of the economic difficulties of basic industries such as coalmin-

³⁴ The population increase in the rural communes of Provence-Côte d'Azur 1968-75 (11.2%) was only slightly below that recorded in urban communes (11.5%). Recensement général, *op. cit.*, footnote 2, pp. 28-30.

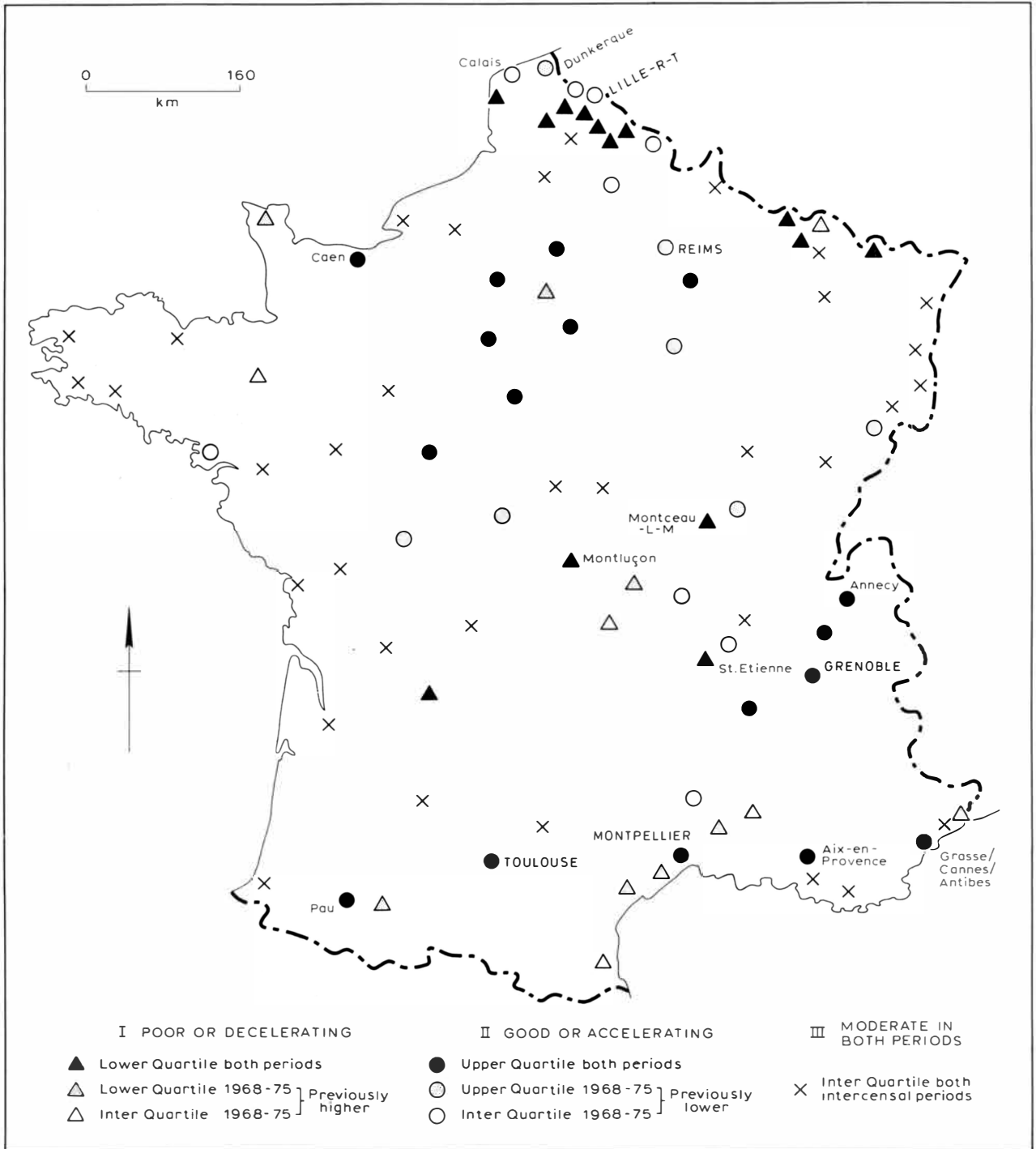


Fig. 6: Spatial distribution of continuity of population change categories 1962-68 and 1968-75. For names of all agglomerations see Fig. 4

ing and iron and steel³⁵). A similar pattern occurs in the smaller coalfield-based agglomerations of central France. The greater economic diversity found outside

25,000 in Lorraine. HUGH CLOUT: *The Franco-Belgian Border Region*, Oxford Univ. Press, London, 1975, p. 14. Lorraine was also affected by the contraction in iron-ore mining employment from 26,000 in the early 1960s to 9,000 in 1973. DAVID BURTENSHAW: *Saar-Lorraine*. Oxford Univ. Press, London, 1976, pp. 16-17.

³⁵) Employment in coalmining in Nord declined from 220,000 in 1947 to 63,000 in 1971; and from 46,000 to

the coalfield in Nord is reflected in the better trend in agglomerations such as LRT, Calais, or Armentières, which have moved upwards into the IQ range, although only because they have maintained their previous increase rate. Another exception is undoubtedly Dunkerque, which has accelerated into the UQ, and continues to benefit from the massive investments in port and industrial facilities initiated in the early 1960s³⁶).

The region of maximum discontinuity and instability is Languedoc, whose agglomerations, with the exception of Montpellier and Alès, have dropped to lower categories. This situation owes much to the inflated increases of 1962-68, when most towns of southern France experienced a huge influx of repatriates (or "pied noirs") from Algeria³⁷). Urban economic expansion in Languedoc has been insufficient to maintain the momentum of this demographic expansion, and although tourism has expanded along the Mediterranean littoral, the continuing economic difficulties of the region's viticulture has been a depressing factor.

With the exception of Languedoc, the dominant trend at the regional level is continuity, whether of health or decay. This can, in the longer term, initiate changes in the national urban hierarchy through its impact on the rank-size distributions of cities. Obvi-

Table V: Changes of rank in the urban hierarchy by size class 1968-75

Size class in 1968	No. of agglomerations 1968	Changes in rank			
		All changes	% of class	3 or more places	% of class
250,000 and above	15	5	33.3	-	-
100,000 -	34	29	85.3	9	26.5
50,000 -	45	43	95.6	21	46.7
TOTAL	94	76	-	30	-

Source: As Table II.

³⁶) The port-industrial zone of Dunkirk is a principal element in the long-term growth strategy for the Nord Region developed by O.R.E.A.M. - Nord. Summaries are presented in HUGH CLOUT, *op. cit.*, footnote 35, pp. 35-36; CHARLES GACHELIN: *Vers une nouvelle géographie de l'industrie dans la région du Nord*. Hommes et Terres du Nord, 1971, pp. 23-28.

³⁷) 57% of repatriates from former French Algeria were recorded as resident in the five "southern" regions of Provence-Côte d'Azur, Languedoc, Midi-Pyrenees, Aquitaine and Rhône-Alpes. Almost one-third were in the "Mediterranean" regions of Languedoc and Provence-Côte d'Azur. See: *Annuaire Statistique de la France 1970-71*, I.N.S.E.E., Paris, 1971, Vol. 76, Resultats de 1969, Table 3-II, pp. 52-53.

Table VI: Agglomerations increasing or decreasing in rank by 3 or more Places 1968-75

Increase in rank (in order of size 1968)	Decrease in rank (in order of size 1968)
Tours	Valenciennes
Montbéliard	Douai
Troyes	Béthune
Pau	Denain
Aix-en-Provence	Bruay
Annecy	Calais
Chambéry	Boulogne
Creil	Forbach
Mantes	Cherbourg
Melun	St. Chamond
Châteauroux	Tarbes
Albi	Montluçon
Quimper	Charleville-Mézières
	Alès
	Vichy
	Perigueux
	Sète

Source: As Table II.

ously these changes will be dependent on size itself, since it is more difficult to change rank in the upper levels of the hierarchy. Of the 15 agglomerations over 250,000 in 1968, only 5 changed rank, and then generally by only one place (Table V). On the other hand, changes in rank have been common-place in the medium sized cities, and 85% of agglomerations in this size class were involved. In the lower size classes changes of rank are almost universal, and at this level quite small numerical changes can disturb the equilibrium of the rank-size distribution. Consequently rank changes of 3 or more places is perhaps a better indicator of longer-term trends in the urban hierarchy. These show that there have been far fewer rank changes of this magnitude in the important medium-sized cities (Table V). Nevertheless, one-quarter of such cities were involved, indicating that the French urban hierarchy in this critical size range is still undergoing considerable transformation. No cities above 250,000 were involved, but Grenoble moved up 2 places, and its upward surge has probably not ended. Of the 50,000-100,000 agglomerations, almost one half were involved in rank changes of 3 or more places, confirming the pattern of the medium-sized towns and suggesting that the impact of long-term redistribution trends of economic activities and population in France is feeding back into the urban system. An inspection of the actual towns involved in major changes of rank (Table VI), again demonstrates the regional component of this refashioning. 6 out of 13 upward-moving agglomerations are in the Paris Basin, 4 in the eastern axial zone. 8 out of 17 downward-moving agglomerations are located in the older industrial zones of northern France, and 3 are in equally old and tradi-

tionally-based industrial areas in central and southern France (Alès, Montluçon, St. Chamond).

Conclusion

Urban growth continues to play a vital role in the social and economic transformation of modern France, although its spatial incidence is far from uniform. Geographically the most rapid and consistent growth is limited to the regions of the Paris Basin, eastern and south-eastern France. The largest cities continue to increase in population more rapidly than the population as a whole, and no major disturbances in the

upper levels of the urban hierarchy have occurred. The "medium-sized cities" have grown particularly rapidly, continuing an established tendency to "spread" urban growth stimuli more equitably across the national territory. It is encouraging that the performance of the larger agglomerations in western and south-western France has at least kept pace with the national average. Paris remains unique, although its weight in population terms has diminished even more rapidly between 1968 and 1975, to a position where it is, in net terms anyway, "one among many" rather than "one above all".

ERSCHLIESSUNG UND ENTWICKLUNG DER ÄGYPTISCHEN NEULANDGEBIETE

Mit 10 Abbildungen und 2 Tabellen

GÜNTER MEYER¹⁾

Summary: Reclamation and development of the new lands in Egypt

After the revolution of 1952 land reclamation was declared to be one of the most important aims of the Egyptian government. Until 1975 about 411 000 hectares were reclaimed, of which 259 000 hectares are actually cultivated. A considerable proportion of this area is affected by salinity as a result of insufficient drainage. The cultivation of the new lands is mainly done by agricultural state companies and by settlers who own or rent some 1.7 hectares each. Land use pattern, problems of agricultural production and marketing, and the economic situation of the two groups of cultivators are examined in this paper.

In order to increase the productivity of the state farms joint ventures with foreign companies have been established. Recently some newly reclaimed areas were distributed to agricultural engineers in plots of 8.4 or 12.6 hectares, while

other new lands were sold by auction in plots of up to 42 hectares. So far the agricultural engineers have turned out to be very efficient cultivators whereas the sale of land to mainly urban capitalists is regarded as being anything but favourable for the future development of these newly reclaimed areas.

Die Erschließung von Neuland und die Besiedlung der hinzukommenden Agrarflächen zählt seit Jahren zu den wichtigsten wirtschaftspolitischen Zielen Ägyptens, um so die Versorgung der rasch wachsenden Bevölkerung sicherzustellen (H. SCHAMP 1966; E. EHLERS 1977). Nach der Revolution von 1952 hat die ägyptische Regierung die Neulandgewinnung zu einer vorrangigen nationalen Aufgabe erklärt, deren Realisierung mit hohem finanziellen Einsatz energisch vorangetrieben wurde. Bis 1960²⁾ konnten bereits rund 34 000 ha erschlossen werden (J. G. F. WÖRZ 1967, S. 55). Der größte Teil des Neulandes mit rund 275 000 ha wurde jedoch in dem anschließenden Zeitraum bis 1966 gewonnen (CAPMAS 1976), um das Mehrangebot an Wasser zu nutzen, das durch die Errichtung des Hochdamms bei Assuan bereits mit der Vollendung des ersten Bauabschnitts 1964 zur Verfügung stand.

Der Krieg von 1967 und die nachfolgenden Jahre wirtschaftlicher Rezession führten zwar zu einer erheblichen Verlangsamung der Neulandgewinnung; dennoch konnten bis 1975 insgesamt rund 411 000 ha Wüste und Ödland erschlossen werden (Tab. 1). Die Flächen, die von den Staatsfarmen und Siedlerbetrieben tatsächlich kultiviert werden, sind allerdings erheblich kleiner: Mit 259 000 ha entsprechen sie etwa 11% der LNF des alten Kulturlandes; außerdem wird

¹⁾ Nach einer ersten Informationsreise im Frühjahr 1975 hielt sich der Verfasser von Ende Februar bis Ende April 1977 in Ägypten auf, um einen Überblick über die agrargeographischen Probleme der Neulandgebiete zu erhalten. Der vorliegende Bericht basiert auf den Informationen, die bei zahlreichen Besuchen der Projekte im gesamten Delta-bereich, im oberägyptischen Niltal und in den westlichen Oasen gewonnen wurden, ergänzt durch die Auswertung sämtlicher zugänglicher Literatur sowie von Unterlagen der Ministerien in Kairo, des Social Research Centers der dortigen Amerikanischen Universität, der verschiedenen FAO-Dienststellen, des International Center for Rural Development in Mariut und der sechs staatlichen Agrargesellschaften in Unterägypten.

Für eine Reisebeihilfe der Busch-Zantner-Stiftung sei auch an dieser Stelle herzlich gedankt. Ebenso gilt mein Dank den Herren Dr. H. SCHAMP und Prof. Dr. E. EHLERS für wertvolle Hinweise bei der Vorbereitung der Reise sowie den Herren Prof. Dr. G. HEINRITZ, Dr. H. POPP und Prof. Dr. E. WIRTH für die kritische Durchsicht des vorliegenden Berichtes.

²⁾ Zur Anfangsphase der Neulanderschließung vor allem in Unterägypten vgl. W. HETZEL 1959.