

**Study on the dynamics,
evolution and
consequences
of migrations - II**

**Three centuries of spatial
mobility in France**

by Daniel Courgeau

*Institut National d'Études
Démographiques, Paris*

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Preface

Three Centuries of Spatial Mobility in France by Daniel Courgeau⁽¹⁾

This report is one of a series of studies on the dynamics, evolution and consequences of migrations produced as part of the Population Division's programme entitled 'Development and Promotion of Research on Population Dynamics'. Migratory flows are now widely taken into account in development planning forecasts and knowledge of them is thus becoming increasingly important. The main purpose of Unesco's research programme is to study the evolution of migratory flows, as well as their causes and consequences, in a number of countries in various regions of the world. It gives special consideration to the interactions between rural and urban environments in order to bring out the various aspects of population trends in specific countries.

The present report is the second in this series to appear in *Reports and Documents in the Social Sciences*. The previous study published was devoted to Mexico City.

This study, by Daniel Courgeau, examines the history of population mobility in France from the beginning of the eighteenth century to the present day.

It considers migration in its most widely varying forms, both temporary and permanent, with a view to identifying all the changes that occur. This makes it possible, for example, to show the changes in these population movements and in the perception of space brought about by the

transition from an agricultural way of life to an urban and industrial way of life.

The findings of this analysis take into account not only economic changes but also changes in the world of politics, religion and the family (which appears as a refuge within an ever-changing society) as well as in education and leisure activities. This approach provides a means of identifying more clearly the reasons for the highly original trends that have occurred in France throughout the process of demographic change and urbanization. For instance, by drawing attention to the considerable amount of temporary mobility and to its pattern of change during the nineteenth century, fresh light is cast on the, in many respects, similar situation to be found in developing countries today. The conclusions to be drawn thus extend beyond the frontiers of France and provide a more general view of population movements.

This report, which contributes a new point of view to the study of migrations, should prove of great use to all those interested in the historical aspects of migratory flows and their interrelationship with industrialization and development processes. In particular, students of population will find it very helpful to study this report in relation to the theory of demographic transition.

The opinions expressed are those of the author and do not necessarily reflect the views of Unesco.

1. Département de Démographie Générale, Institut National d'Études Démographiques, Paris.

Introduction

This study attempts to present a general account of geographical mobility in France since the end of the seventeenth century. We shall see how the concept of migration, if it is defined as a change of domicile, is inadequate as a means of comprehending the changes concerned, as it is too bound up with a view of geographical mobility that belongs to modern civilization. In the past, mobility also took other forms which we shall be considering.

Moreover, these other forms of mobility should be compared with those to be found in developing countries, where the concept of migration similarly fails to cover all of them. This adds to the interest of the present study, which provides a general account of France's experience in this domain over a long period of time. The solutions adopted to resolve certain problems could give food for thought to the developing countries which have similar difficulties to contend with.

These various forms of mobility, which are interchangeable, are in a general way connected with the French people's perception of space and their opportunities for travel. Some types of movement have replaced others which have ceased to serve their purpose; some which at one time concerned only a minority subsequently became very significant. It is therefore important to describe the transition from one way of perceiving space to another, without forgetting the major changes of a demographic, economic, political or social character which have affected the French population.

To do this we must consider types of movement in all their variety: commuting, temporary seasonal moves, holidays, internal migration, international migration and so on. We shall see that at certain periods each of these forms of mobility emerges, disappears or expands. It will also be interesting in each case to try to determine the range covered by these types of mobility and how this changes with time.

In order to show these changes clearly, the study must cover a long period of time. Although French statistics relating to the past are far from being as satisfactory as those of other countries such as Sweden or Belgium, we shall cross-check various sources in an attempt to provide the most accurate description possible. In this way, we have worked back to the eighteenth century; to go further back would have involved making too many major assumptions for which historical demography in its present state cannot provide confirmation. Indeed, even for more recent periods, there is a shortage of evidence and the findings of this study should be regarded as provisional. A number of long-term research projects based on the information contained in parish registers will eventually provide more accurate answers to some of the questions raised.

Despite these reservations, the information we have gathered provides a fairly accurate picture of trends in mobility. We shall, in particular, try to show how certain more general models in this field apply to the case of France.

The most interesting of these models is, in our view, the one propounded by Wilbur Zelinsky in an article entitled 'The hypothesis of mobility transition', published in April 1971 in *Geographical Review*. By providing a sufficiently general picture of mobility trends in parallel with demographic transition, Zelinsky's model makes it possible to place this study in a more comprehensive framework: the changes often take place in parallel, though at different times in different localities, and carry people from an older civilization to a modern type of society.

We shall now try to describe this process in greater detail before turning to the particular case of France.

Traditional society is marked by a high death rate and a high birth rate which in the long run balance out. Over short periods of time, however, there can be large discrepancies as a result of epidemics or food crises or, alternatively, periods of recovery. Migration is rare in this kind of society and occurs mostly as a consequence of marriage. Certain movements of a temporary nature take place, usually within a particular social milieu, such as visits to the fields, to fairs, to places of worship, visits within the same community and travel because of war. Only a small proportion of the population—traders, students, soldiers, seamen, aristocrats, etc.—make journeys further afield involving contacts with other civilizations or other cultures. Such travel is an embryonic form of some later aspects of mobility but occurs on a very restricted scale in this essentially static society.

When society enters a second phase, this is marked by a rapid decline in the death rate while fertility remains high. The result is a sharp increase in population and a new perception of space. Agricultural society experiences certain changes in land tenure and farming methods. To meet the increased demand for food, farmers have to adopt a more intensive mode of production in order to increase the yield of their land. Others set about cultivating land which is less accessible and less productive so as to increase the area under cultivation.

International emigration provides a second safety-valve for this increase in population. The existence of land occupied by other types of society (hunter-gatherers, for example) offers these emigrant farmers an opportunity to settle (America, Australia, etc.). These settlers, of course, only succeed in establishing themselves after a hard trial of strength but the agricultural type of society usually wins in the end because of its more sophisticated military defences

and the unintentional introduction of diseases against which the indigenous populations have no natural immunity.

The third safety-valve is the industrialization which takes place in such countries. This is a very important change because it encourages the growth of cities whereas, in the previous phase, industry had been spread throughout rural areas. The importance of localization, however, quickly becomes apparent—near coal and ore resources or near the centres of traffic by sea or land. These industrial cities, which greatly expand during this period, are destined to become a powerful attraction to country dwellers. It should be noted, however, that this migration towards the towns takes place after the start of international emigration, which is in fact the quickest response to an increase in population.

During this period there also occur the first signs of growing temporary moves, though the author does not dwell on this point.

The second phase is followed by a third which is characterized by a drop in fertility—slight at first, then very rapid before slowing up again—while the death rate continues to decline, though more slowly after a while. As a result, the population begins to grow less quickly, eventually settling down to a much lower rate of increase than during the second phase.

This new phase also entails changes in mobility: the agricultural world is transformed by the introduction of new techniques (fertilizers, mechanization, etc.) and efforts to bring unproductive land into cultivation cease. On the other hand, the new techniques make labour available for the industrial cities, though the flow of migrants slows down during this period. Lastly, international emigration also falls sharply and may even stop altogether.

The fourth phase is marked by control over fertility, which fluctuates at a much lower level than it did at first. The death rate, too, stabilizes at a very low level and roughly balances the birth rate, with the result that the population grows slowly if at all.

New forms of mobility emerge and old ones disappear. An example of the latter is the bringing into cultivation of unproductive land. Not only does this trend stop but such land is in fact abandoned as no longer worth while because of new farming methods. There is still some international emigration but it too has greatly changed, since it now involves highly-skilled manpower which is required by developing countries.

The direction and the volume of these population flows depend greatly on specific conditions and are strictly controlled by the political authorities.

On the other hand, a new form of international migration develops in the opposite direction to the previous flow. The need for unskilled labour makes it necessary to attract immigrants from less developed countries since the slower rate of population growth means that enough nationals are not available to fill the gap. The drift from country to town, which used to provide the necessary labour, is much smaller during this phase.

New forms of internal mobility develop, such as migration from one city to another, or from one district of a large

metropolis to another. Changes of domicile take place at a high rate. Lastly, there appear new types of temporary moves such as commuting, tourist travel or travel in connection with employment.

The model also includes a fifth phase which is intended as a means of predicting future social trends. We shall not describe it here as it goes beyond currently observable facts.

Besides dealing with trends in mobility as related to time, it is worth saying a few words on the spatial dimension of its various forms at a given moment. This theory also has the merit of showing not only that different countries are at different stages of their transition but also that the various regions within a particular country are not necessarily at the same point either. Looked at in spatial terms, this model of mobility extends from capital cities to the most remote areas and is transmitted by the flow of previously settled migrants and the spread of ideas and innovations.

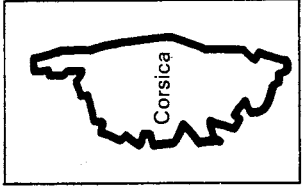
In the course of this study, we shall attempt to follow in time and space the trends of mobility in France, using the thesis that we have just outlined as our point of reference. We shall then identify the ways in which population movements in France depart from this model.

Our study will therefore describe and analyse the history of spatial mobility in France over three centuries, divided into three major periods. The first covers the Ancien Régime prior to the French Revolution in 1789, when France was a mainly agricultural society. The second period comes about 150 years, from the Revolution to the end of the Second World War, and covers the transition from an agricultural society to a society of the modern type in which industrialization and urbanization are predominant. The third period goes from the end of the war to the last few years. Without the benefit of historical perspective it is more difficult to discern the trends which will shape the future but recent changes in patterns of mobility seem sufficiently interesting to be worth describing.

It is obviously impossible here to give a very detailed description of the various forms of mobility. In order not to overburden the present account, the reader will be referred to more detailed works whenever these are available. On the other hand the author has tried to present all the forms of mobility existing at a given point in time so as to show the variety of these forms and to provide a more satisfactory description of changes in the types of mobility over the years.

The appendix sets out the various sources and tools available in France for the study of mobility. This methodological section is divided into four chapters which deal with:

- the various territorial divisions utilized;
- the presentation of data sources on geographical mobility in France;
- methods for the indirect measurement of migratory flows;
- the analytical methods employed.



Map 1.: Historical provinces of France

Chapter I.

Geographical mobility before the French Revolution

Introduction

Before dealing in detail with the spatial approach on which this work is based, a general survey of French population trends in the eighteenth century is needed. This survey will then serve as an essential point of reference for the rest of the chapter. It should be observed, however, that we shall not go further back in time since the data, which are already scarce and open to dispute for the beginning of the eighteenth century, become too unreliable for previous periods. Consequently, it will only be possible to analyse with precision the last spatial and demographic transition; we shall throw no light on previous transitions (e.g. from a society of hunter-gatherers to a farming economy) for which there is too little information.

The French population, after a long period of serious epidemic diseases, murderous wars and famines interspersed with years of calm and recovery, took a new turn at the beginning of the eighteenth century: the population, which had until then hovered around the twenty million mark, now began to grow quickly.

This growth was in the first place due to a decline in the death rate, already noticeable by 1715¹ but particularly evident from 1750 onwards. There were several reasons for this: first of all, attacks of plague died down, in the extreme west to begin with, then in northern and eastern France and finally in southern France, where the last plague struck Marseilles in 1720. Secondly, famines became rarer and no longer affected most regions after 1720 though there were exceptions, such as the food crisis of 1740-41². We shall later look more closely into the causes of this phenomenon which have more to do with better transportation and improved storage facilities than with a real increase in grain yields. Lastly, there was a period of relative peace in comparison with the frequent wars of previous centuries and their accompanying massacres, epidemics and famines. There was also less looting by soldiers as they were better paid than in the previous century.

Despite these improvements, it cannot be denied that the death rate was still very high. In 1789, for instance, average life expectancy for men was 27.5 years as against 23.8 years in 1740 and for women 28.1 and 25.7 years respectively³. Advances in medicine were still very modest: the first anti-smallpox vaccine only became available at the end of the eighteenth century. In fact, there was not to be a big fall in the death rate until after the Revolution.

This slight fall in the death rate was matched by high fertility throughout the century, though there was a marked drop in the years immediately preceding the Revolution. French women had a total fertility rate of 5.44 children each around 1740⁴, corresponding to a gross birth rate of 40 per 1,000. By 1780-1784, however, fertility

had fallen to 5.08 children per woman. This is a small drop which can be explained by three factors:

- First, the marriage rate declined noticeably throughout the century: the proportion of women unmarried at the age of 50 rose from 7.5 per cent for those born at the beginning of the century to 11.7 per cent for those born around 1760.
- Secondly, the age at first marriage rose steadily, that of women from 25 to 26.5 years in the course of the century.
- Thirdly, the generations born after 1750 displayed a lower age-related fertility at marriage, due to the beginnings of contraception.

This combination of late marriage, an increase in celibacy and the beginnings of birth control thus resulted in a slight fall in fertility at the end of the century.⁵ None the less the birth rate remained higher than the death rate throughout the century, a fact which, assuming no emigration, would mean a rise in population.

What has to be ascertained is whether international migration took place on a significant scale. As we shall see, such migration was still rare and only a few thousand emigrants left France for the New World at the end of the eighteenth and the beginning of the nineteenth centuries. It may therefore be regarded as negligible throughout this first period.

We can now make a fairly accurate estimate of French population trends throughout the eighteenth century⁶. The population was around 21.5 million at the beginning of the century, 24.6 million in 1740 and 28.1 million in 1790. In other words, it rose by about 6.5 million people in the course of the eighteenth century. This 30 per cent rise was likely to have a profound impact on the country's social structure and the spatial distribution of its people.

It is to this latter point that we shall now turn.

1. Mobility regarded from various standpoints

Though historical demography is beginning to provide a picture of general population trends in France during the eighteenth century, its account of regional populations is still very incomplete and it has even less to say about their movements. The main reason for this is the magnitude and cost of the task of analysing the records and, in some cases, the fact that they are incomplete. Nevertheless, a number of interim findings now make it possible to clarify certain assumptions and to put forward a tentative account of this population mobility, an account which, even though it may be approximate, is none the less interesting.

In our approach to these movements, we shall concentrate on description and only use the figures obtained to clarify certain points. For this purpose we shall employ

various standpoints chosen so as to make certain types of migration stand out from the others. They consist of the various social structures such as the family, associative relationships, the economy, the political dimension, religion and education. They are sufficiently general to apply to many cultures but the form they take and their impact on mobility are peculiar to each situation. Hence the advantage of considering them here in relation to French population movements.

(a) The family and associative relationships

The family is at once the most universal and the simplest of social units and is found in most societies. First of all let us endeavour to ascertain the boundaries of the space which it defines when it comes into being, bringing together two persons who had previously been separate. The existence of marriage registers which record, because the banns are published, the respective places of residence of the intended spouses, makes it possible to obtain a good idea of this type of mobility.⁷

It emerges that in rural France the proportion of spouses residing in the same parish remained constant and at a high level between 1740 and 1789: 60 per cent of young men married a girl from the same parish, the equivalent of the present-day commune. In other words, they found each other within a radius of less than 3 km. Of the remaining interparish marriages, 41 per cent involved neighbouring parishes from which 86 per cent parishes in the same diocese. Only 14 per cent of these marriages brought together spouses from more distant places. This pattern remained very stable up to 1789, showing that marriages were arranged within a very small geographical area centred on the rural parish.

It is, however, interesting to see whether certain regions show a different behaviour pattern.⁸ France's Atlantic seaboard showed signs of a tendency towards greater mixing of population: between 1740 and 1789, the percentage of spouses residing in the same parish fell from 53 per cent to 51 per cent in Normandy, from 69 per cent to 66 per cent in Brittany and Anjou and from 62 per cent to 59 per cent in Charente and in Berry. By contrast in the north and in the Massif Central the parishes seem to have become increasingly inward-looking, with intraparish marriages rising from 57 per cent to 62 per cent in the north and from 54 per cent to 58 per cent in the Massif Central over the same period. The variations, however, are small and most of the other regions showed no change in the proportion of endogamous marriages. This strong tendency towards geographical endogamy is, moreover, matched by a strong occupational endogamy which will be explained when we come to the economic approach.

What was the situation over the same period, in urban France which at that time was very much in the minority? The first point is that the proportion of endogamous or intraparish marriages is higher than in rural areas, no doubt because the towns were more populous: it is easier to find a husband or wife in a town of 10,000 inhabitants than in a rural parish of 200. Moreover, the increasing population of the towns in the eighteenth century may have contributed towards greater endogamy. This is indeed what we find: 83 per cent of urban marriages were endogamous in 1740 and 86 per cent in 1790. However, even though such marriages were on the increase, the spatial distribution of the marriages other than in towns changed somewhat: marrying outside the diocese became more common (from 39 per cent to 43.5 per cent of such cases). This increase

is probably related to the presence of nobles or rich bourgeois for whom marriage partners were chosen at the national rather than parish level.

The detailed study of the city of Bordeaux⁹ casts more light on these migrations. As for all the towns and cities, there was a slight increase in endogamy but, given the size of Bordeaux, the proportion of endogamous marriages was very high: only 6.2 per cent of marriages celebrated between 1737 and 1791 involved men from outside the city. It should be noted that the population of this city rose from 45,000 in about 1700 to over 110,000 in 1790. This study gives a more detailed picture of the exchanges between urban and rural areas and between different towns or cities as a result of marriage. In the first place these marriages were not mainly of Bordeaux men with countrywomen but the other way round.¹⁰ It may thus be assumed that, after their marriage, these women left Bordeaux to live in a rural community. On the other hand, the examination of a rural parish 33 kilometres from Bordeaux reveals that a certain proportion of the marriages celebrated there were between local girls and young men from Bordeaux, and the couples would presumably move to the city afterwards. Lastly, nearly half of the Bordeaux marriages which involved emigration to the Lot-et-Garonne were between city-dwellers and hence people from the upper social classes who had always had distant contacts.

These examples show the extremely complex pattern of town-country exchanges through marriage which were not one-way but in both directions, and inter-city exchanges involving the upper strata of society. It is therefore necessary to work through not only the city's marriage registers but also those of all neighbouring parishes and towns to obtain a sufficiently clear view of marriage-related mobility. This is obviously an enormous task on which work has only just begun.

Once the family was established through marriage, what movements did it occasion as it developed? French family structures are in fact very varied and for this reason each region tended to have its own perception of space. Once again we cannot offer a detailed account here but can only trace the broad outlines.

There are three broad types of family—the patriarchal family, the clan and the nuclear family.¹¹ The patriarchal family unites under the authority of a head of family his sons and grandsons, their wives and their children. The head of the family owns and administers all the family possessions, which may be considerable. It is easy to see that the amount of mobility engendered by this type of family is limited to exchanges through marriage, which we have already considered, and to a few temporary migrations.

The second type, the 'clan', shares certain features with the patriarchal family but its more flexible organization facilitates adjustment to different economic conditions. As in the patriarchal family, the family property is not divided up and a single heir is chosen for each generation. On the other hand, this person's brothers and sisters have greater freedom of manoeuvre. In particular, they are free to move out and find other means of subsistence if they want to found a family. If they fail in their attempt they can always return to the clan. This type of family therefore encourages much more geographical mobility.

The third type, the nuclear family, contains at the most two generations, the parents and children not yet of age. As soon as the children reach adulthood they leave the family

nucleus either for other farms that have become vacant or for the city. This type of family engenders the most mobility because of its territorial impermanence.

In many countries there exists only one of these types but in France, all types may be found in different regions.¹² It has been observed, for example, that in certain mountain areas such as the Basque Country the family structure is patriarchal, with a very extensive family group living under the same roof. Indeed, these mountain regions were still, in 1861, the areas with the lowest proportion of non-native inhabitants. By contrast, a region such as Normandy illustrates, at the same period of history, the typical nuclear family limited to couples and their as yet unmarried children. In 1861, the population of these regions comprised proportionately two or three times more non-native persons than the mountainous areas. The median type of family, the clan, is naturally to be found in intermediate areas. In Auvergne and Limousin, for example, the passing on of land involved an elaborate system of arrangements in which temporary movements and migrations played a big part.

The fact is that, to avoid dividing up the land, the family property was not shared out. The heir, however, who received all the family property, had to compensate the co-heirs, who received their share in cash and then left. He often had to borrow money and then travel about elsewhere for a time in order to earn the wherewithal to pay his debts. The length of time spent in such temporary migrations depended on the size of his inheritance, the number of heirs and what he earned from these trips.

Another reason for migration was the need to build up a dowry to enable daughters to get married. In many cases the father of the family provided the dowry from his earnings during temporary moves away from home. This again was true for Auvergne and Limousin. We shall look more closely at this type of mobility later since it was, of course, of an economic nature and was stimulated by the need of the towns for temporary labour. It was not until the nineteenth century that we find young rural women themselves rather than their fathers coming to the city to build up their dowry. Lastly, a movement in the opposite direction may be regarded as family-related mobility: many infants from the towns were entrusted to wet-nurses in nearby country areas.

The role of associative structures, though an important source of eighteenth century mobility, is more difficult to demonstrate. The fact that a great many migratory currents remained stable over a long period is evidence that the inhabitants of a feeder zone possessed special information concerning a number of other places. Thus we find teams or groups of individuals from the same village with a very specialized occupation (pit-sawyers, woodcutters, craftsmen, pedlars, etc.) often following specific routes associated with their contacts in a city or region.

(b) The economy

As a matter of fact, most of these moves were undertaken largely for economic reasons. We must now look into this economic structure and consider its spatial implications. The eighteenth century economy was primarily agricultural but trade and even industry were expanding quickly. We shall consider these three aspects in turn before going on to show how they are interrelated and how people moved from one to the other. Let us, however, first glance at the economic changes which took place during the eighteenth century.

Although it would be wrong to speak of economic upheavals during this period, since agriculture and industry had not yet undergone a revolution, there were important changes in transportation, in the development of those 'hubs' of activity, the cities, and in the location of industries.

Transportation was improved in various ways. Firstly, the road system was greatly extended throughout the century. The 'royal corvée', imposed throughout France, mobilized hundreds of thousands of men every year to build the major roads of the eighteenth century. This conscription of labour, which was detested by the peasants, achieved important results at low cost and was not replaced by monetary contributions until 1787. This effort had a big impact on the Frenchman's perception of space: in 1765 it took nearly three days to go from Paris to Orleans and over fifteen days to reach Toulouse, but by 1780 the first trip could be done in a single day and the second in only eight.¹³ This shows how distances were shortened by these roads. Similar improvements were made in other directions, towards the east and west: Strasbourg, formerly eleven days' journey from Paris was by 1780 at less than five days' and the journey to Rennes was cut from eight to three days. Only those roads already built took the same time as before, which was already competitive: Paris-Lyons in five days, Paris-Lille in two, Paris-Rouen in one. France was gradually becoming more homogeneous although it continued to be centred on Paris. A few transverse roads were built, for example from Bordeaux to Narbonne via Toulouse and from Lyons to La Rochelle via Limoges and Clermont. By the end of the Ancien Régime there were 40,000 kilometres of serviceable roads.

Water transport was also expanded. The building of the 'Two-Seas' canal (now called the Canal du Midi) linked the Atlantic to the Mediterranean from 1680 onwards. The Seine was connected to the Loire by the Briare canal in 1642 and the route was completed by the Orleans canal (1692) and the Loing canal (1724). The Crozat canal (1738) linked the Oise and Somme rivers and numerous other projects were started but remained unfinished (the Charolais canal linking the Loire to the Saône for example). It can be claimed that, by 1789, France had 1,000 kilometres of canals and the length of its system of navigable waterways, may be estimated at 8,000 kilometres.

Lastly, sea transport offered new opportunities for international trade. The Mediterranean routes did not change, while trade with the countries of northern Europe was in the hands of foreign countries; the result was that only the ocean routes were open, to the West Indies and to the ports of Africa and Asia. This trade, however, was fairly limited during the eighteenth century: the average of 224 tons of goods shipped to the West Indies in 1750 rose to 291 tons in 1788.¹⁴

This network of communications led to the expansion of urban centres at points of intersection. By the middle of the eighteenth century these cities, which contained less than a fifth of the French population in 1806, had begun to expand. This is clearly seen in the case of a city like Bordeaux, whose population rose from 45,000 inhabitants in about 1700 to over 110,000 in 1790 as a result of increased trade. But it was also true for smaller towns in which, as we shall see, there was a much sharper increase in various demographic indicators such as births, marriages and deaths, than in rural areas. In many cases, this rise in the urban population seems to have owed far more to the development of trade than to the growth of industry, most of which was still rurally based in the eighteenth century.

Having sketched in the broad lines of the economic dimension, let us now look more closely at its effect on the spatial distribution of the population. To begin with, the agricultural world, the dominant economic force in the eighteenth century, was not as static as the unchanging pattern of cultivation might suggest. The growth of the French population during the course of the century made further demands on agriculture. The problem was not solved, as it was in England at the same period, by an agricultural revolution. There was no sign, at least in France as a whole, of the equivalent of intensive methods of farming, yet gross agricultural production rose between 1700 and 1789 at least as quickly as the population, i.e. by at least 30 per cent.

In the first place we should bear in mind that France was, at the time, one of the most densely populated territories. Land clearance, strongly encouraged as far back as 1760, doubtless brought new land, or land which had been unproductive for twenty to forty years, into cultivation.¹⁵ But this increase in the area under cultivation, amounting to a few hundredths of the cultivated area, is not enough to explain the increase in agricultural production.

Improved means of transport seem to have been a much more important factor and one which brought about major changes in the spatial distribution of crops. In other words, better transport facilitated a regional specialization more in accord with climate and soil. The newly-built roads, for instance, could reduce costs by two-thirds and, in certain regions, the canals cut them even more. This allowed the upper Languedoc to specialize in the monoculture of wheat for markets in the Gulf of Lions, while the Brie and Beauce regions sent their produce to the nearby Paris region. Some regions, such as Normandy, specialized in stock-raising while others, such as around Auxerre, went in for wine; this specialization occasioned two types of movement which we shall describe below in greater detail. On the other hand, such regions came to need extra temporary manpower during very short seasons for harvesting or other work. On the other, the export of their surplus production to regions where it was required stimulated a demand for transport which had previously been very limited.

The first type of movement, towards the cereal-growing areas, varied from region to region. It should be noted in passing that land clearance, even when virgin land was being brought into cultivation, and also sowing, did not usually require an additional outside labour force whereas harvesting which had to be completed quickly but at dates which varied from region to region, entailed a lot of travelling. In France, the use of the sickle, which was preferred to the scythe (in particular because the straw had to be left as common pasture after the crop had been harvested), created enormous manpower needs for harvesting which could not be met by the local populations. The resulting movements of harvest workers were of various types. The first was the two-way exchange, usually at the local level, whereby farmers whose cereal crops ripened at a few weeks interval helped each other. A second type was in a single direction: harvest workers, mostly from mountainous areas where cropping was later, arrived as the crops ripened. For example, those from the middle of the Massif Central went down towards the Mediterranean (Gard, Hérault) then moved on through Lozère and Cantal where harvests were later before finishing in the Puy de Dome. We are not concerned here to give a detailed picture of all these widely varying movements, which affected a population hard to put into figures,¹⁶ but merely to sketch in the broad outline.

The poles of attraction were in all the regions where cereals were grown. The Paris basin attracted workers from Normandy, Champagne and even Lower Burgundy; Alsace got its harvesters from the nearby Vosges and Jura mountains, while the plains of the Saône and Rhone rivers drew them from nearby mountainous regions such as the Jura, the Massif Central or the Alps as the case may be. Mention has already been made of the Languedoc coastal plain which attracted harvest workers not only from the southern Massif Central—who then did several harvests in succession as they worked their way back home—but also from the nearby Pyrenees. Clearly these movements, though usually confined to short distances, could in certain cases (especially for workers from mountainous regions) involve much longer journeys.

The regions which specialized in vine-growing also needed extra labour for the wine harvest. This too was for a short period only but considerable numbers were required. In certain regions, such as the area around Bordeaux, the demand for labour to carry out the major tasks of the winter season, such as forest clearance and planting, was also appreciable.

The major poles of attraction were around Bordeaux, which drew as many workers from the Pyrenees as from the Massif Central, Vendée and even Brittany. The Mediterranean seaboard attracted workers from Auvergne, Rouergue and the southern Alps. These were the two major regions with strong seasonal flows. The other regions attracted their wine-harvest workers from much nearer. One particular case worthy of mention is that of the upland people of the Jura, the Massif Central and the Alps who, as they were unable to produce their own wine at home, acquired a vineyard in the 'lowlands' sometimes thirty or forty kilometres away. In this case the cultivation and harvesting of the vineyards necessitated temporary moves, although it must be admitted that these were of a very special kind.

Other crops needed a certain amount of extra manpower. Hemp, for instance, was introduced into the middle Garonne region after the growing of tobacco had been forbidden in France in 1720, and required a large workforce when it was gathered between August and October. This particular movement did not survive the Ancien Régime because the manufacture of Agen cloth ceased.¹⁷ Similarly, the olive harvest prompted wintertime journeys from the mountains to Provence, as did market gardening around the big cities.

Beside these temporary moves, agriculture also gave rise to permanent removals, as shown by records of dismissal notices and change of domicile.¹⁸ Many of these removals involved labourers who did not possess a farm but only their implements, their livestock and a working capital. They could therefore seek to improve their earnings by changing their place of work. This type of mobility was far from negligible since it affected 1 per cent of families per year in the 'élection' (a former administrative district) of Nantes. It depended however on the type of cultivation practised: there was twice as much movement in areas specializing in cereals. Moreover this mobility, although regarded as local, included a significant amount of migration much farther afield: nearly 25 per cent of the migrants recorded in Mantes, originated from an 'élection' other than that of Mantes, even though the latter was about thirty kilometres in diameter.

Now let us look at the other type of mobility, prompted by easier and cheaper transport. Travel of this type was not unknown even before the period with which we are dealing. Country dwellers, in particular, used their draught

animals and beasts of burden during the dead season, helping the professional carriers who worked the roads and waterways.¹⁹ The role played by mule-drivers in the mountains was an important one especially as in these regions roads suitable for wheeled vehicles were not built until later. Similarly in the Montagne Noire, the share-croppers were, by 1750, already handling the carriage of local produce—wood, coal, furze, hay, wool—towards the plains, and bringing back consumer products from these areas. The people of the Grandvaux region in the Jura had also by the sixteenth century begun to transport their produce to the Saône valley or Lyons. As they owned good quality vehicles they became waggoners for the season or even for a number of years, taking goods to various countries in Europe, even going as far as the Balkans.

These movements, especially road transport by waggon, developed with the construction of new roads and many peasants found it a profitable source of income, particularly during the slack season. In some regions such transportation was organized over long distances and sometimes even competed with local agriculture, especially near the cities. Water transport, on the other hand, required less manpower and attracted few country dwellers, though we should not forget the steersmen of timber rafts on various rivers in the Paris Basin and the Rhône and Garonne valleys.

In order to provide the towns and cities with fuel, wood and charcoal had to be transported from the forests but there were also considerable movements within the forest of woodcutters, barkers, charcoal-burners and so forth. This long-established form of mobility was fed by migratory currents from the Massif Central and to a lesser extent from the Ariège in the central Pyrenees.²⁰ The highly-specialized foresters from these regions migrated to all parts of France and even, as far as those from the Ariège were concerned, to Spain. In the forests of Aquitaine, the Loire Valley and Burgundy there was a considerable movement of foresters, who supplied fuel for the town and cities and also for many workshops and for craftsmen such as smiths and glassmakers.

Pastoral migrations were another type of mobility which already had a long history and followed well-established routes at fixed times. The flocks wintered in the lower Languedoc, Roussillon and Provence and were moved to the nearby mountains in summer. These moves required very detailed arrangements. In particular the tracks followed were very strictly defined (e.g. the 'Carraire' in Provence and the 'Draille' in Languedoc).²¹ A flock needed one shepherd for every 350 or so sheep and these shepherds, from the nearby mountain areas, had to accompany numerous flocks. According to an estimate made in about 1790, the Bouches-du-Rhône département alone had 500,000 sheep. The five or six départements of the overwintering region would therefore have required some 7,000 shepherds. There was also movement in the opposite direction: families living in the mountains during the summer would take their flocks down to milder regions for the winter and, while one member of the family looked after the animals, the others found employment as servants during the bad season, leaving the older generation behind in the mountains to look after the family house.

This is another example of the multiple activities which were such an important feature of eighteenth century life. Farm work left peasants with a great deal of free time.

These multiple activities, however, did not usually entail geographical mobility. Depending on the season the same people could, for example, cultivate their fields near the village or sit at their spinning-wheel or loom. There were,

for instance, an estimated 450,000 textile workers in the wine-growing Languedoc region around 1680.²² It was thus still largely a local cottage industry of a type that was still predominant in the eighteenth century. However, the geographical concentration and mobility which developed in the following century was already noticeable in certain occupations, as we shall now see.

In the first place, certain movements were due to the location of certain raw materials. Hemp which, as we have seen, could be a reason for movements of agricultural workers,²³ also prompted moves connected with its processing into yarn. This plant, which was grown throughout France, entailed a lot of work, too much for the local population alone, to transform the fibre into tow and then into yarn by the use of finer and finer combs.²⁴ Most of these help combers came from a small number of mountain areas and went to work in many different regions. They came from a few cantons in the Puy-de-Dôme and the Jura, and migrated during the winter months.

Silkworm breeding required extra hands for a short period of five weeks or so around May for raising the silkworms. Most cocoons were produced in the Ardèche, Drôme and Gard départements.²⁵ In many cases this was a family move: while the men tended the silkworms, the women and children went out to gather mulberry leaves. Once again these people came from very specific regions, namely, the Cévennes and Dauphiné. Their moves involved quite long distances and were frequently combined with harvesting in June.

Wool production was mostly in the hands of local people but the size of the sheep population, estimated at 20 million in 1789,²⁶ meant that certain regions in the south of France required additional labour for shearing and sometimes for carding the wool.

The mining of ores and coal was necessarily localized. As a general rule there was little to distinguish miners from peasants though there existed two categories which can be differentiated easily.²⁷ There were, to start with, those agricultural workers who sought to make use of their slack periods by finding temporary employment in the mines. Their main work was that of tilling the soil and mining was an additional source of income. The other category consisted of workers who spent nearly nine months a year in the mines but stopped during the peak harvest season in the hope of earning higher wages. The mines were scattered all over France and mainly attracted country people from nearby. People from the Limousin and Auvergne would migrate to the mines of Languedoc around Alès and Carmaux. Foreign miners were also to be found as foremen, particularly Germans and Belgians. During this period the presence of large mines in certain regions began to foster the concentration of certain industries. In Nord département, for example, the Anzin company was established for metalworking (1757) and the Aniche company for glassmaking (1773) and these two industries laid the foundations for the spectacular development of this region which had previously been of secondary importance.

Mention should also be made of the building industry which was mainly centred in the cities and required large amounts of labour, often over a short period. In the eighteenth century, in fact, the building industry was rapidly expanding to cope with both reconstruction and new projects. In Paris, a large number of teams from the Limousin provided the labourers and masons needed and the most skilled could move up the occupational ladder.

By contrast, the other industrial activities, which were strictly regulated under the Ancien Régime, afforded few opportunities for temporary assistance in workshops or urban factories. Most of their workers were recruited from permanent migration to the cities. The working class population of many cities rose very substantially especially during the second half of the eighteenth century. Although little information is available on fluctuations in the number of workers it is possible, on the basis of purely economic calculations, to estimate the increase in industrial workers alone at between 150 per cent and 200 per cent during the century.²⁸ This population appears to have risen from 150,000-200,000 men in the time of Vauban to 400,000-500,000 on the eve of the French Revolution. In addition there were wives and children whose numbers were far from negligible. Recruitment of these workers was still on a very local basis, with most of the migrants coming from the suburbs or nearby countryside within a radius of about fifteen kilometres. However, there was already, in some cases, significant inter-city migration, though the lack of statistics makes it hard to give figures. Similarly there were quite a number of foreigners among these migrants, often highly-skilled technicians but sometimes ordinary workers. In the opposite direction, there was significant outward migration of French labour to foreign countries despite a policy designed to maintain the population. A great many colonies of French workers were to be found in many countries of Europe, sometimes as far afield as Russia or the United States of America.

Thus, far from having given rise to greater concentration, the development of the French economy during the eighteenth century led to industrial activities being scattered over rural areas and a large number of towns and cities. Indeed, we find the opposite of industrial concentration in the growing number and variety of migrations by craftsmen or traders, a tendency easily accounted for in the context of a decentralized pre-industrial society. Transport was made easier, as we have seen, by the construction of new roads and canals and the movements of craftsmen and manual workers, pedlars, etc. became more and more frequent as the century progressed. Most of these migratory movements were temporary and involved agricultural workers seeking to earn cash, the need for which was increasing. Sometimes there were migrations which led to the establishment of a complete network of traders.

Let us take the craftsmen first. Most of them came from the mountains and many specialized in a particular occupation: boiler-makers, smiths, sharpeners of razors, knives or scissiors, shoemakers, cobblers, etc. A large proportion were from Auvergne and Limousin²⁹ and made their way not only to all parts of France but also to Spain. Those from the Auvergne were particularly drawn to working in leather and metals and tended to specialize in boiler-making. Hence the graphic expression 'going to the boiler' by which these temporary moves came to be known. To take another example, this time from the Pyrenées, the smiths from the Foix area crossed the frontier into Spain, even though the king's government had forbidden emigration.

Peddling was another common reason for travel. The peddlers were also from mountainous areas but they tended to come from the Alps and the Pyrenées and less frequently from the Massif Central. For example, the men from Oisans in Upper Dauphiné would go down to the nearby plains to peddle various local products such as woolen goods, linen, wooden tableware etc. Some men from the same region peddled medicinal plants gathered in the mountains while others sold metals as far away as Russia

and America. Other Alpine parishes also sold goods in distant parts, for example the druggists from the village of Saint-Etienne-des-Orgues. The Pyrenean peddlers sold a wide variety of objects such as earthenware pots, glassware, wooden items, etc. Other regions too were involved in peddling but to a lesser extent—Auvergne, certain western regions, the Thiérache (an area in the north of Aisne département which produced a vast amount of linen).³⁰ Somewhat like the peddlers were the junk dealers, who also travelled about a good deal; all of them came from Auvergne and the Limousin.

The merchants were the aristocrats among these migrants. Many of them were former peddlers who had made good. The nature of their occupation necessitated frequent trips not only in France but also abroad. Take, for example, the migration to Spain for trading reasons of people from a few parishes in Cantal, which led to the establishment in the eighteenth century of the 'Société de Chichon'.³¹ This company had twenty-four shops or warehouses in the Provinces of Toledo and La Mancha whence merchants set out with loads of haberdashery and cloth. At sixteen years old apprentices from the Cantal would go to Spain for ten years or so and then, having become 'merchants' could alternately spend two years in Spain and two years in France. Just before the Revolution, this company employed 400 people from the Cantal. Many other companies were established along similar lines in German-speaking Switzerland, Austria, Bavaria, the Baden region and so on.

Important companies, usually established in the cities, required more services. But such services were also likely to be in demand in rural areas, where farm employees were required for a wide variety of tasks. Many teacher-servants from the Alps, for example, played an important role in south-east France long before the foundation of state schools.³² These winter journeys took them to various regions as far as Languedoc, where they were recruited by parish workshops, communes or even families. They taught the alphabet, reading and arithmetic and performed various household and domestic tasks. Another type of movement, sometimes to the countryside and sometimes to the towns, involved the chimney sweeps. Originating from Savoy and Auvergne, these were children supervised by older leaders who travelled over a large part of France. They were particularly numerous in Paris. Lastly, there were a large number of city services which provided jobs for many country people who left home for a limited period: water-carriers (many of those in Paris—estimated at nearly 20,000—were from Auvergne), shoe-blacks, strong men, sedan-bearers and so forth, not to mention beggars and cripples.

This population, referred to as 'floating' by the administration, was estimated by Necker during the reign of Louis XVI at over 40,000 persons.³³ If we add those who only returned home after several years spent in Paris (domestic servants, porters, etc.), this floating population can be put at over a sixth of the capital's inhabitants.

In short, the economic structures of the eighteenth century produced a mobility that is difficult to discern because mostly of a temporary nature, but was none the less on a very large scale.

(c) Politics

Let us now examine the political aspects of the eighteenth century perception of space.

The first point to note is that the frontiers were far from being the barriers that they are today. The strict regulations and severe penalties designed to prevent the

expatriation of labour had hardly any effect on the number of people leaving the country.³⁴ It was not until much later that politicians managed to influence the concept of the national frontier by endowing it with an emotional significance in addition to its administrative one.

Much more important for the perception of space were the movements of soldiers. Though the regular army was composed of volunteers (though there were certain obligations in respect of military service) it meant significant geographical mobility for many Frenchmen.³⁵ There was, to start with, the role of the militia in time of war. Lots were drawn among the young men in every parish; the risk was such that many potential militiamen preferred flight, refusal to serve or desertion. Just after the Seven Years War (1756-1763), 12,000 men are said to have deserted. This geographical mobility led the recalcitrant conscripts to flee to other countries.

On the other hand, those who chose, or at least accepted, to serve in the army also came into contact with other regions or other countries and some eventually settled in an area other than the one where they were born—after getting married, for example. Similarly it has been observed that many soldiers, on their return to civilian life, did not go back to their home region, often because groups of soldiers from a particular regiment and region would settle in parishes close to their original homes.

At all events, the experience of army life, in this period often chosen as an escape from an oppressive community, enabled a good many men to get to know places other than their home parish.

(d) Religion and education

It might at first sight seem surprising to regard religion as a motive for travel but its role was far from negligible.

The religious dimension is revealed by the number of shrines which attracted large crowds of pilgrims. It has been suggested, for example, that the already-mentioned migrations from the Cantal region to Spain³⁶ were due to the fact that this part of Auvergne was on the route between the two important shrines of Le Puy and Santiago de Compostela. The merchants who followed the pilgrims were thus able to take advantage of new opportunities in Spain.

The impact of religion can also be seen in the fact that the Catholics, then in a dominant position, drove other faiths out of France. This in particular caused the departure of many Protestants, who emigrated throughout the century, especially after the Revocation of the Edict of Nantes. It is by no means easy to put this outward flow into figures particularly in view of the difficulty of distinguishing between permanent emigration and temporary exile. Estimates range from 100,000 to 1 million!³⁷ It is possible, however, to put these departures at roughly 200,000 but it should be noted that the people concerned did not necessarily go abroad: many of them moved to some other part of France. An opposite trend was the inflow of Catholics driven out of other countries which were mostly Protestant and seeking refuge in France. A good number of Swiss Catholics, for example, came to settle on territory ruled by the king of France, in particular Alsace, at the end of the seventeenth and beginning of the eighteenth centuries. Sizeable groups of Irish Catholics, too, driven out by the Protestant domination, settled in the Bordeaux region and in Languedoc.

Lastly missionaries were dispatched all over the world and formed a population of migrants who played an important role.

In this section we have not dealt separately with movements motivated by education because they were on a small scale and often depended on the existence of religious schools or universities. However, a few students travelled to university cities and some teachers and scholars travelled across Europe.

2. An attempt to quantify these movements

So far we have concentrated on the kinds of population movements encountered in eighteenth century France as revealed by documentary and other evidence. This approach has brought out the different types of mobility—for temporary movements and permanent migrations are closely connected—and the different types of motivation: economic reasons, family reasons, political reasons and so forth.

It is however worth considering how many people were actually involved by these population movements so that we may assess their importance in French society under the Ancien Régime. Though it is still at present impossible to estimate the migratory flows from the regions and cities, certain data allow us to put forward more precise hypotheses on the subject of geographical mobility in the eighteenth century.

(a) Partial estimates

There are a number of sources which provide more detailed information on past migrations. In the case of Paris, for example, we have mentioned in the appendix the existence of a compulsory identity-card³⁸ which shows in particular the date on which provincials arrived in the city. An analysis of the thirty sections in Paris (out of forty-eight altogether) for which the registers recording the cards issued have survived is in progress. At present, only three of these sections have been analysed, the sections of Popincourt, Place des Fédérés and Faubourg Saint-Germain.³⁹ Migration to these three districts hardly changed throughout the second half of the eighteenth century. If these figures are extrapolated to cover the capital as a whole, they suggest an in-migration of 12,500 persons of both sexes per year. Now it is known that the population of Paris varied very little during these forty years, remaining steady at around 600,000 inhabitants. As a result the high proportion (about 60 per cent) of non-Parisian inhabitants found in these three sections can be accounted for only by assuming that they differ greatly from Paris as a whole or, as is more likely, that there was considerable out-migration of native Parisians. These two possible explanations are not, of course, mutually exclusive. One piece of evidence that supports the second possibility is the fact that, in 1792, 10 per cent of the inhabitants of Versailles were born in Paris.⁴⁰

It is also interesting to see where those migrating to Paris come from. It emerges that Paris was already drawing people from a wide area: for nearly 300 kilometres its power of attraction was as strong as it was to be a century later; beyond, it was much weaker though still significant. The Cantal, for instance, was already sending many migrants to Paris though, as noted in the previous section, it is not clear whether they were moving permanently or temporarily.

It is also worth studying the case of Lyons, the second largest city in France.⁴¹ Unlike Paris, whose population appears to have remained relatively constant during the eighteenth century, Lyons steadily expanded, from an estimated 100,000 inhabitants around 1710 to 150,000 on

the eve of the French Revolution. Conditions were so unhealthy that this increase cannot be ascribed to natural growth but can be accounted for only by the influx of massive numbers of migrants. Whereas around 1730, for example, newly-married citizens born in Lyons were just in the majority (52.3 per cent of men and 60.9 per cent of women), shortly before the Revolution they were a minority (47.2 per cent of men and 47 per cent of women). The trend is particularly marked in that the number of marriages almost doubled over the period in question. The city attracted migrants from a much smaller area than in the case of Paris: 80 per cent of them came from less than 100 kilometres away and more than half these from less than 50 kilometres. Most of those from nearby regions were of rural origin but the number of migrants from other towns increased with the distance from Lyons.

Bordeaux too has been studied in great detail and provides an even clearer picture of the city's force of attraction.⁴² Bordeaux's population increased not by 50 per cent like that of Lyons but by over 100 per cent, from 45,000 in about 1710 to nearly 110,000 in 1790. Here again this growth cannot be put down to natural increase; it is due to migration. It has in fact been possible to study these population movements by examining marriage registers and hospital burials, which also provide information on seasonal or temporary migration. As in Lyons, there was a sharp increase in the number of marriages with a husband or wife not born in Bordeaux, from 22 per cent in 1740 to 35 per cent in 1790. Though the percentages are lower than for Lyons, they indicate a substantial amount of migration to Bordeaux. An examination of hospital deaths gives an idea of temporary and seasonal migration. As early as 1740 nearly 80 per cent of these deaths concerned migrants; the proportion exceeded 85 per cent around 1760 and then declined to just under 65 per cent. It should be observed, however, that in absolute terms the number of such deaths more than doubled over the 50 year period studied.

It is interesting to note the origins of these migrants. Although Bordeaux attracted people from all over France, most of them came from nearby areas. Around 1740, 51.7 per cent of migrants by marriage came from the Gironde département. If one also includes the crescent of départements bordering the Gironde, the proportion was as high as 73.6 per cent at the same date. As time went by, however, migrants came from further afield since by about 1790 the proportions had fallen to 39.8 per cent for the Gironde and 61.2 per cent for the crescent surrounding départements. An interesting point is that this migration, involving more men than women, affected all social classes and the tertiary as well as the secondary sector.

Let us now turn to a smaller town. Caen, whose population rose from 32,000 in 1753 to 35,000 in 1793, is an interesting case.⁴³ It is tempting to regard the natural increase of 2,600 people during this forty years period as corresponding merely to a rise in the population of the town. This oversimplified view overlooks the vast extent of the mixing of the population of this town that occurred during this period: between 1753 and 1774 there were 8,800 new arrivals and 1,500 departures, and between 1775 and 1793, 12,000 arrivals and 17,000 departures! To introduce the factor of migration is to transform completely the simplified view obtained by merely counting the number of births and deaths.

(b) An attempt to estimate mobility at the end of the eighteenth century

In 1970, J.P. Poussou⁴⁴ could do no more than rely on the estimate of P. Goubert, which put the geographical mobility in France at around 400-500,000 movements, most of them temporary; only a small minority involved migration in the strict sense. Subsequent research, however, allows us to be more precise.

Firstly, the INED sample survey has yielded information on mobility through marriage. We have already noted that 40 per cent of 200,000 marriages per year in rural France, i.e. 80,000, involved at least interparish migration. In the towns and cities such cases were rarer: only 16 per cent or 6,000 marriages involved migration.

Rural migration other than through marriage can be estimated by utilizing the records of dismissal notices and change of domicile ('congés et translations de domicile'). Since most marriage partners had not previously appeared on a register of tax-payers, this source complements the other one. Note that it does not cover temporary or seasonal moves, since the taxes of the people involved continued to be payable in their home parish; it is therefore a measure of permanent migration. As, however, there has so far been little analysis of the archives, we shall use this evidence for rural mobility only since other sources exist for the cities. The records for the 'élection' of Mantes, reveal that interparish mobility involved about 1 per cent of the population per year. If we assume that this figure is applicable to the French rural population as a whole, i.e. about 23.6 million people on the eve of the Revolution, the total number of changes of parish per year comes to 236,000.

It now remains to estimate urban mobility. This will be done in two stages, by first estimating the net migration as a result of which the towns and cities not only maintained but also increased their population, and then estimating the replacement mobility which, as we have seen, was far from negligible.

The net migration served partly to offset the effects of a negative natural growth and partly to provide the surplus population needed for urban growth. Once again the INED sample survey is a useful pointer. It reveals that natural increase in the cities during the fifty years before the Revolution was very slight. Now we know that although births were accurately registered child deaths were significantly under-recorded. Secondly, the urban habit of entrusting infants to a wet nurse resulted in deaths in rural areas that must also be taken into consideration. On the basis of the INED survey these deaths may be estimated at over 30,000 children per year around 1789.⁴⁵ Moreover, the fact that, for those born in about 1750, 13 per cent of deaths were not registered makes it possible to estimate that, around 1790, the population of towns was declining as a result of negative natural growth at a rate of some 10,000 a year. This means that a net migration of 40,000 persons per year would be needed to keep their populations at the same level. It should be noted that, interestingly enough, this figure is close to the figure of 50,000 deaths obtained by M. Garden using different assumptions.⁴⁶ We must also allow for the factor of the growth of the urban population in France, where applicable.

The INED sample survey again provides some useful data. It emerges that, over a period of forty years, urban births rose by 19 per cent and urban marriages by 20 per

cent. The consistency of these two figures, when it is known that the birth and marriages rates dropped slightly over the same period, suggests a net migration to the cities on about the same scale. Assuming that this migration continued throughout the period in question the annual rate would be 0.5 per cent, indicating a net migration at the end of the period of some 22,500 persons per year. This gives us an overall estimate of net migration to the cities before the Revolution of about 62,500 persons and accounts for the observed population trends in spite of the birth-rate and death-rate factors.

But this net migration conceals much greater migratory flows. As we have seen, migration to the towns was not a one-way flow but went together with an extensive mixing of the population. Once again it is possible to estimate the extent of this mixing. We have already seen that over 12,000 persons, or nearly 2 per cent of its population, migrated to Paris each year even though net migration was much lower. The figures for Caen show an annual immigration of 1.9 per cent and an annual emigration of 2.7 per cent, with the consequent net migration of -0.8 per cent offset by a replacement migration of 1.9 per cent, that is roughly the same as for Paris. If it is assumed that the other French towns and cities followed a similar pattern, with a replacement migration of around 2 per cent per year, this gives 90,000 migrations.

To complete these figures it would be necessary to estimate international migration which, as we have seen, was slight, and the migration of soldiers, a very special form of mobility which we shall not deal with here. If we add up all the above figures we reach a total of nearly 500,000 interparish migrations per year, i.e. a migration rate of 1.8 per cent, at the end of the eighteenth century. This is quite a significant figure when it is remembered that the annual rate of present-day intercommune migration is around 6.4 per cent, especially as we have not yet estimated seasonal and temporary moves.

This is a much more difficult task since these movements were not generally counted, even partially. But the fact

that they followed a tradition which continued up to the end of the nineteenth century allows them to be roughly estimated at a few hundred thousand. J.P. Poussou suggests a figure of 100,000 temporary moves, to which nearly 200,000 seasonal moves must be added,⁴⁴ though it is often difficult to distinguish between the two.

Conclusion

The steady growth of the French population throughout the eighteenth century is matched by changes in the routes and rhythms of the migratory flows during this period. At a time when the family model was still very inward-looking in its perception of space, the main changes were due to economic factors. Though it is not yet possible to speak of either an agricultural or an industrial revolution, the rising population led to a change in economic space. To start with, the beginnings of agricultural specialization lead to an increase in the number of agricultural workers which was disproportionate to that of the total population. On the other hand, seasonal and temporary mobility was thereby increased owing to the heavy demand for labour at certain periods, particularly for the harvest, which still depended on the sickle. The surplus labour available, either temporarily during the winter months or on a more long-term basis, made for the industrial and commercial activities in the towns. Industry did not in most cases stimulate mobility: the loom remained at home, on the farm. Urban commercial activities, however, led to considerable mixing of the population, the scale of which is now becoming apparent.

These migrations were caused by a variety of factors and even though emphasis has rightly been placed on the overpopulation and poverty of the migrant-producing areas, especially the mountains, it is important to realize that much wealthier people were also involved in migration. In their case, travel was a tactical move which enabled individuals to choose the places where they would be most advantageously employed.

1. See D. Rebaudo, 'Le Mouvement annuel de la population française rurale de 1670 à 1740', *Population*, n° 3, 1979, pp. 589-606.
2. Note, however, that for the period with which we are dealing, these deaths are underestimated, particularly in the case of children. See Y. Blayo: 'Mouvement naturel de la population française de 1740 à 1829' *Population*, special issue, November 1975, pp. 15-64.
3. See Y. Blayo: 'La mortalité en France de 1740 à 1829', *Population*, special issue, November 1975, pp. 123-142.
4. This figure represents the average number of children that would have been born to a woman who, throughout her fertile life, reflected the conditions of fertility by age at the time.
5. Estimated by P. Festy: 'La fécondité des pays occidentaux de 1870 à 1970', *Travaux et documents de l'INED*, Cahier n° 85, Paris, 1979, pp. 213-215.
6. For more details about this estimate, see L. Henry and Y. Blayo, 'La population de France de 1740 à 1829', *Population*, special issue, November 1975, pp. 71-122. This study applies to the French territory as it stood in 1861, which is virtually the same as today.
7. The article by J. Houdaille, 'Résidence des époux', to be published in the journal *Population*, will provide more details concerning this cause of mobility.
8. It is not possible to compare endogamous marriages in the various regions without allowing for the size of the communes, which varied greatly from one region to another.
9. For more details, see J.P. Poussou, *L'immigration bordelaise, 1737-1791*.
10. For more details, see J.P. Poussou, 'Les relations villes-campagnes en Aquitaine dans la deuxième moitié du XVIII^e siècle' in *Démographie urbaine XV^e - XX^e siècle*, pp. 185-206.
11. F. Le Play, *L'organisation de la famille*, Marne, Tours, 1875.
12. See in particular certain studies published in P. Laslett (ed.), *'Household and family in past time'*.
13. See G. Arbellot, 'La grande mutation des routes en France au XVIII^e siècle', *Annales*, 1973, p. 790.
14. See *'Histoire économique et sociale de la France'*, Vol. 2, 1660-1789, PUF, 1970, pp. 202 ff.
15. *Idem*, pp. 418-432.
16. See A. Chatelain, *Les migrants temporaires en France de 1800 à 1914*, Vol. 1, pp. 155-246.
17. *Idem*, Vol. 2, pp. 672-674.
18. See M. Lachiver, 'Une source méconnue pour l'étude de la mobilité géographique en France au XVIII^e siècle: les congés et translations de domicile', *Population*, special issue, September 1977, pp. 353-373.
19. See A. Chatelain, *op. cit.* Vol. 1, pp. 403-480.
20. *Idem*, pp. 249-335.
21. *Idem*, pp. 337-376.
22. See F. Braudel, *'Les jeux de l'échange'*, 1979, pp. 266-269.
23. See page 12.
24. See A. Chatelain, *op. cit.* Vol. 1, pp. 386-392.
25. *Idem*, pp. 395-403.
26. See *'Histoire économique et sociale de la France'*, Vol. 2, p. 230.
27. See M. Rouff, *'Les mines de charbon en France au XVIII^e siècle'*, Paris, 1922.
28. See *'Histoire économique et sociale de la France'*, Vol. 2, pp. 656-661.

29. See A. Chatelain, *op. cit.*, Vol. 1, pp. 420-434.
30. *Idem*, pp. 434-458.
31. *Idem*, pp. 459-470.
32. *Idem*, pp. 481-485.
33. *Idem*, p. 565.
34. See '*Histoire économique et sociale de la France*', Vol. 2, p. 661.
35. See A. Corvisier, 'Service militaire et mobilité géographique au XVIII^e siècle', *Annales de démographie historique* 1970, 1, pp. 185-204.
36. See page 14.
37. See J.P. Poussou, 'Les mouvements migratoires en France', *Annales de Démographie Historique* 1970, pp. 56-59.
38. See Appendix, II.
39. See L. Henry and D. Courgeau, 'Deux analyses de l'immigration à Paris au XVIII^e siècle', *Population*, n° 6, 1971, pp. 1073-1092.
40. See J. Combes-Monier, 'L'origine géographique des Versaillais en 1792', *Annales de démographie historique* 1980, pp. 237-250.
41. This city has been analysed with great precision by M. Garden. See in particular his '*Lyon et les Lyonnais au XVIII^e siècle*', Paris, Les belles lettres, 1970; and 'L'attraction de Lyon à la fin de l'Ancien Régime', *Annales de démographie historique* 1970, pp. 205-222.
42. See the thesis of J.P. Poussou.
43. See J.C. Perrot, '*Genèse d'une ville moderne, Caen au XVIII^e siècle*', Paris, Mouton, 1975.
44. See J.P. Poussou, 'Les mouvements migratoires en France', *Annales de démographie historique* 1970, p. 76.
45. This figure was kindly supplied by J. Houdaille. For further details, see L. Henry and C. Lévy, 'Quelques données sur la

région de Paris au XVIII^e siècle', *Population*, n° 7, 1962, pp. 297-326 and J. Houdaille, '*La mortalité des enfants en Europe avant le XIX^e siècle*'.

46. See M. Garden, 'La démographie des villes française du XVIII^e siècle', *Démographie urbaine, Centre d'histoire économique et sociale de la région lyonnaise*, n° 8, pp. 61-63.

Summary

The eighteenth century was marked by a considerable increase in the population of France which led to changes in its geographical distribution. These changes, still on a small scale when regarded from a family and political viewpoint, had a much greater impact on the economy. In this still essentially agricultural world, temporary moves increased owing to increasingly specialized cultivation and better transport. Temporary employment also provided the extra earnings urgently needed by the rural population. But the cities, which were essentially commercial centres, also attracted rural migrants who contributed to their growth and offset the high death rate. As a result there was significant mobility in the eighteenth century though it is difficult to gauge since it was largely of a seasonal or temporary nature.

Geographical mobility from the Revolution to the Second World War

Introduction

As with Chapter I, we shall begin with a general account of French population trends over these 150 years. The first point is that the death rate which, as we have seen, fell slightly before 1790, began to drop considerably, from close to 35 per 1,000 at the beginning of the period in question, to 30 per 1,000 in 1800, 24 per 1,000 in 1850, 20 per 1,000 in 1900 and 13 per 1,000 just after the Second World War. The beginning of this fall preceded the introduction of preventive medicine and occurred in spite of contributory factors such as the massacres and executions during the Revolution, which were not, however, on a sufficiently large scale to have a marked effect on the national death rate, and the much greater casualties of war during the Consulate and the First Empire.

Anti-smallpox vaccination, discovered at the end of the eighteenth century, spread very slowly despite remarkable instances such as the vaccination of the Grande Armée in 1805. It was in fact not until the discoveries of Pasteur in the last quarter of the nineteenth century that decisive progress was made in the fight against contagious diseases.

The fall in the death rate seems related to a reduction in the incidence of food crises, which had replaced famines, but whose effect continued to be felt as late as the Second Empire and to improved hygiene as a result, in particular, of town planning and water purification schemes which continued throughout the nineteenth century. Medical progress and personal hygiene were to have their full impact on the death rate only in the twentieth century.

It should be noted, however, that the death rate did not fall continuously but sometimes levelled off or even rose during epidemics, food crises and wars. The wars of the Revolution and the First Empire, for example, which resulted in 1.3 million deaths between 1790 and 1815,¹ were reflected in a slight rise in the death rate in 1790-1805 and 1810-1814. Deaths due to the cholera epidemic of 1831-1832, a disease previously unknown in Europe, were in excess of 150,000, and there were other epidemics on a more local scale which causes a smaller number of deaths.

Among the wars special mention should be made of the Franco-Prussian War of 1870-1871, which left 140,000 soldiers dead, the First World War (1.35 million dead) and the Second World War (nearly a million French killed). Lastly, the food crises were less deadly: there were serious crises in 1817-1818 and 1846-1847 and the last fairly serious dearth occurred in 1853-1854.

As for life expectancy at birth, the fall in mortality resulted in the following figures for women: 32.1 years for the period 1790-1799, 35.6 years for 1801-1805, 40.2 years for 1851-1855, 49.1 years for 1901-1905 and 67.4 years in 1946. For men, life expectancy was always

lower by 0.6 years at the beginning of the period and by 5.5 years in 1946. In other words, the disparity between men and women as regards life expectancy has grown with time.

We must now look briefly at mortality in various French départements, with particular attention to the major differences between town and country.² Early in this period (1801-1805) there were three regions in which women had a life expectancy at birth of over 45 years,³ that is, more than 10 years higher than the national average: Normandy (Calvados and Manche), the south of the Massif Central (Lozère, but Cantal, Ardèche and Aveyron are close) and the Pyrénées (Ariège, but Pyrénées-Atlantiques and Hautes-Pyrénées are close). At the other extreme are to be found the highly urbanized départements such as Seine, Bouches-du-Rhône and Rhône (Paris, Marseilles and Lyons respectively) where life expectancy was around 30 years. At the very bottom are some départements in central France, especially Loiret and Loir-et-Cher, where life expectancy was just over 20 years. At the beginning of the nineteenth century, therefore, the death rate in France varied greatly from one region to another, with life expectancy ranging from 21.3 to 47.8 years, that is, varying by a factor of more than two. During the nineteenth century the discrepancies narrowed: those départements with a high life expectancy at birth improved slowly throughout the century. Calvados, for example, where life expectancy had been 47.8 years in 1801-1805 reached 49 years in 1901-1905. On the other hand, the most backward départements had high rates by the end of the century: Loir-et-Cher, for instance, where life expectancy was no more than 21.3 years in 1801-1805 had one of the highest rates in 1901-1905, 55.1 years. Regional disparities in the death rate were greatly reduced during this period. At the beginning of the twentieth century, the lowest life expectancy was in south-eastern France but it was also low in Brittany and Normandy, in northern France and throughout the east: we find the formation of a negative image of the so-called 'fertility crescent' of départements having a high fertility rate from the early twentieth century onwards. This view is borne out by the pattern of life expectancy by département in the 1950s.

Let us take a closer look at the situation in the major French cities. As we have said, their life expectancy was well below the national average age at the beginning of the nineteenth century. This is easily explained by the deplorable sanitary conditions which prevailed and by the overcrowding which encouraged the rapid spread of epidemic diseases. In particular the water supply and the discharge of sewage were no doubt among the main reasons for the high mortality. Throughout the first half of the nineteenth century the lack of any concerted policy for putting such

shortcomings right ensured that urban mortality remained at a very high level. Lyons was the first, about 1850, to establish a policy for water purification and hence for improving hygiene, with the result that mortality began to drop in the 1860s. Paris followed this trend throughout the period 1850-1900. In Marseilles, however, whose water was supplied by an open canal, the situation did not improve until the very end of the nineteenth century. Further improvements throughout the present century and advances in medical science, particularly in the big cities, have completely changed the situation: it is the big cities which now have the lowest mortality rate.

Turning to French birth rate trends, we can once again detect the first signs of a decline in the fertility of young Frenchwomen at the end of the eighteenth century. This decline continued throughout the period with which we are now concerned.

Let us begin by comparing variations in the birth rate with variations in mortality. As we have seen, the birth rate, about 40 per 1,000 in 1740 had dropped to 37 per 1,000 by 1790-1794. The fall accelerated until 1850 and then slowed down a little in the second half of the nineteenth century: from 32 per 1,000 in 1800, it fell to 26 per 1,000 in 1850, to 22 per 1,000 in 1900 and to 15 per 1,000 in 1941-1945. Thus France began its 'demographic transition' nearly a century in advance of other European countries, where the birth rate did not drop until the end of the nineteenth century. This fall in the birth rate, in parallel with the fall in the death rate, is much more difficult to explain since the reasons for it are numerous and complex.

We can, to start with, eliminate the effect of the population structure by age, which could distort the results, by calculating, as in Chapter I, a total fertility rate.⁴ The fluctuations of this rate follow closely those already shown: from 4.9 children per woman in 1790-1794 it fell to 4.5 in 1800-1804 and to 3.5 in around 1850; it then remained at this level until 1875 when it fell once again to 2.8 children by 1900-1905 and 2.1 in 1941-1945. The impact of war can, of course, be discerned, especially the First World War, when the rate fell to 1.65 children per woman.

The effect of the marriage rate did not contribute to this drop but acted in the opposite direction. The proportion of women unmarried at the age of 50 years fell from over 13 per cent for those born in 1830 to 8 per cent for those born in the first half of this century, while the woman's average age at marriage fell from 26.1 years for those born in 1820 to 23 years for those born in the first half of this century.

The reasons for the fall in fertility in France must therefore be sought elsewhere. Since the Revolution, increasing recourse to contraception has been accompanied by a number of very important social changes and it is precisely these changes which have also altered the French people's perception of space.

Let us consider whether these changes in fertility occurred simultaneously throughout France or whether, as in the case of the mortality rate, there were major differences between regions. The pattern of fertility levels by département in 1831⁵ reveals that some rates were more than double the level elsewhere. Normandy (Manche, Calvados, Eure and Orne) had the lowest fertility in France. It also had the highest life expectancy at this time. At the other extreme we find Brittany (Finistère, Morbihan, Côtes-du-Nord, Ille-et-Vilaine), northern and eastern France (Nord, Ardennes, Vosges, Haute-Saône, Doubs)⁶

and mountainous regions such as the Massif Central (particularly Corrèze, Haute-Vienne, Creuse, Allier, Loire, Haute-Loire, Lozère and Ardèche) the Alps and the eastern Pyrénées (Ariège and Pyrénées-Orientales).

To see how the major towns fit into this pattern we must look at the départements in which they are located. The pattern of fertility in 1861 was the same as it had been thirty years before. The north-eastern départements (Moselle, Bas-Rhin, Haut-Rhin) confirm the high fertility displayed by Nord in 1831. The cities stand out clearly in this pattern: Paris and Lyons⁷ are seen to have already begun their decline in fertility which will end with their having the lowest rates in France by 1910, but Marseilles was in a département which, in 1860, displayed the highest level in France. Similarly, heavily urbanized and industrialized départements such as Nord, Pas-de-Calais, Seine-Maritime, Gard, Vaucluse, Var and Alpes-Maritimes, all had a fertility well above the national average. Thus, throughout the nineteenth century, provincial towns and cities experienced relatively high fertility in comparison with the rural areas where there had been a big reduction in the number of births much earlier.

The pattern changes at the beginning of the twentieth century. The mountainous regions with high fertility returned to the norm: the Massif Central had only two départements (Cantal and Lozère) with very high fertility and the Alps another two (Savoie, Hautes-Alpes). Fertility in the Pyrénées was now lower than the national average. On the other hand, the so-called 'fertile crescent' took shape: beginning in Brittany, it now ran through Normandy, the north and Lorraine before ending in the Jura. Fertility in highly urbanized areas fell, reversing the situation of the previous century: rural areas now had higher fertility than the towns and cities, whatever their size.

In short, though overall fertility fell steadily over these 150 years or so, the actual path followed varied considerably from place to place. During certain periods, some rural départements with low fertility at the beginning of the nineteenth century run counter to the general trend of France as a whole. Fertility in the départements of Normandy, particularly Calvados and Orne, whose very low 1831 levels have already been noted, began to increase from 1851 and continued to rise until 1946 whereas in other départements it long remained very high and only began to drop in the twentieth century. In the départements of Brittany and Lorraine, for example, fertility only really began to fall after the First World War. Lastly, though in Paris and Lyons fertility started its rapid decline at a very early date, the same occurred only much later in Marseilles and the smaller cities, in fact not before the beginning of the twentieth century.

We shall now turn to the third factor which helps to explain the general population trends in France over these 150 years, namely, international migration. We shall not, at this point, examine this migration in detail but deal only with net migration, which is the complement of natural increase. As some of the data provided by the successive census returns are less precise than others, net migration can only be roughly estimated.⁹ From being very low at the beginning of the nineteenth century (an estimated net immigration of 8,600 persons per year for the period 1801-1821), it grew from 1821 to 1851 to over 20,000 persons per year. There was then a levelling-off between 1851 and 1872 and the flow was reversed with a net emigration of 16,000 persons per year. From 1872 onwards there was a new period of growth, with quite big fluctuations

from one period to the next, until the crisis of the 1930s: it ranged from about 20,000 to 30,000 per year, according to the estimates,¹⁰ until the First World War. It then jumped to 175,000 per year from 1921 to 1931 and, after the Second World War, net immigration resumed, though at a lower level (about 70,000 per year from 1946 to 1954).

The aggregate effect of births, deaths and international migration, calculated on the basis of a constant national territory,¹¹ was a growth in the population of France from 28.1 millions in 1790 to 40.5 millions in 1946. It should be noted that this increase actually took place in the first two-thirds of the period in question since the country's population had already reached 40 million in 1896.

This increase in population was paralleled by major changes in the people's perception of space, which we shall now attempt to describe.

1. Geographical mobility regarded from various standpoints

In Chapter I, we successfully employed a number of 'standpoints' (family, economy, politics, etc.) to bring out the significance of population movements. We shall now use the same distinctions to show how they changed over these 150 years and what new attitudes to the spatial environment they prompted.

(a) The family and associative relationships

Chapter I mentioned that just before the Revolution, the spouses in 60 per cent of rural marriages were from the same commune and that this proportion was 85 per cent for French cities.

This situation continued more or less unchanged until around 1830, when the figures were 61 per cent and 87 per cent respectively. Under the Revolution and the First Empire there was even a slight increase in endogamous marriages in rural areas of southern France where conscription was less intense and desertions more numerous.

By the middle of the nineteenth century, however, the situation had begun to change completely under the combined impact of urbanization on the one hand and the gradual opening up of isolated rural settlements throughout this period on the other. To bring out these various effects clearly we shall first of all examine the situation in rural communes, then look at the more densely populated communes before making an overall estimate.

Let us start with the rural communes of Ardèche, which have been studied over a period of more than a hundred years.¹² In 1830-1840 nearly 60 per cent of marriages were endogamous, that is with both partners from the same commune, but the proportion steadily declined, to 52 per cent in 1865, 35 per cent in 1935 and only 16 per cent at the end of the 1960s. By interpolation we can estimate that about 30 per cent of marriages were endogamous at the end of the Second World War. A closer look at the origins of the marriage partners reveals that this geographical widening of the area of choice of partner was not an extension to other more distant rural communes but came through contact with urban centres all over France. A similar study of rural communes in Loir-et-Cher and Finistère¹³ produces comparable findings: in Loir-et-Cher endogamous marriages in rural communes fell from 38 per cent in 1870-1877 to 27 per cent in 1946-1954, and in Finistère from 45 per cent in 1911-1919 to 23 per cent

in 1951-1953. This study, however, distinguishes the communes by size and thus reveals that endogamy declined in communes of all sizes and especially in the towns of these two départements. Thus the rate of endogamous marriages in Loir-et-Cher towns of over 8,000 inhabitants fell from 68 per cent in 1870-1877, to 57 per cent in 1919-1924 and to under 50 per cent in 1946-1954 whereas their average population grew throughout this time. Another point is that such marriage-induced migrations began to involve greater distances. For example, the proportion of marriages in which one of the partners came from outside the Loir-et-Cher département rose from 13 per cent in 1870-1877 to over 28 per cent in 1946-1954.

Although urbanization, by concentrating the population into a small number of towns, ought to have stimulated endogamous marriages, the percentage of such marriages actually fell considerably throughout this period. Whereas in 1789 both the marriage partners were from the same commune in 65 per cent of cases, this was so in only 52 per cent of marriages in 1946. The proportion can be said to have dropped from 60 per cent to 30 per cent for rural communes and from 85 per cent to about 65 per cent for the towns, figures which match those recorded for France as a whole in 1946. It can therefore be concluded that, at the end of the Second World War, more than 200,000 of the 400,000 registered marriages involved migration.

Let us now turn, as in Chapter I, to mobility in relation to the predominant type of family. The variety of family types encountered in eighteenth century France tended to narrow and one sees the restricted family gaining ground in regions such as Provence and the Massif Central, where the 'clan' and even the extended family used to predominate.¹⁴ The restricted family spread with nineteenth century industrial and urban development: industry needed a mobile population and this was facilitated by the development of a type of family which fostered mobility.

(b) The perception of space at a time of economic upheaval

These 150 years transformed France from a mainly agricultural country to an industrialized nation with a greatly expanded tertiary sector. We shall begin by examining the main changes likely to have influenced the geographical distribution of the population before describing the population movements they occasioned.

The first point is that the growth in population during the nineteenth century made it necessary to increase agricultural production. there were several possible solutions to this problem.

The first was to bring as much land as possible into cultivation. This is indeed what happened throughout the nineteenth century, until about 1880: from 1840 to 1882 the proportion of uncultivated land fell from 18 per cent of the national territory to almost 12 per cent. This expansion was made possible by reclaiming heathland, scruf and fallow land. In the mountains, the poorer soils were brought into use terracing high up the mountainside. But with the development of other methods during the first half of the twentieth century this land, which was too difficult to farm and gave poor yields, was abandoned once again. Between 1921 and 1938 land under forest increased by 400,000 hectares and land under cultivation fell by 1,700,000 hectares.

Among these other methods was a reduction in the practice of letting fields lie fallow. This change came about only gradually and was largely due to new ways of restoring soil fertility. The first of these techniques was marling,

which consists in feeding the soil with the calcareous components in which it is deficient; although employed in certain regions before 1800 this technique did not become common elsewhere until around 1850. Next came liming, a marked improvement because natural limestone does not readily dissolve. The lime was obtained by straightforward calcination of chalk. Numerous lime kilns were constructed during the nineteenth century, making it possible to cut down fallowing greatly and to increase yields. In Mayenne, for example, over 150,000 hectares lay fallow in 1840 but only 25,000 in 1890. Further progress was made possible by the use of nitrates, phosphates and potash, the production of which began in the second half of the nineteenth century. The use of these chemical fertilizers spread considerably in the twentieth century and they took the place of marling and liming. In spite of these new techniques fallowing, though on a much smaller scale, was still practised at the end of the period we are considering: a 1938 statistic estimated 1,700,000 hectares as lying fallow!

The development of new crops improved yields. The potato, already known in the eighteenth century, was a very nourishing crop which could be grown on poor land. It spread very quickly, covering a million hectares around 1845 and 1.5 million in the first half of the twentieth century. Beet, the use of which for the making of sugar was first proposed by the chemist André Markgraf in 1747, spread rapidly in France from the beginning of the nineteenth century.

Lastly, improved methods of cultivation had a big impact on the farming world and its population movements. To start with, the plough was introduced, an improvement on the swing-plough [araire] as the soil could be tilled to a greater depth. It first appeared in Lorraine in 1820 and in fifty years had spread to most of France. However, until the middle of the twentieth century, most farms were not mechanized: draught animals were still the main means of locomotion. For the harvest the scythe gradually took over from the sickle during the nineteenth century but reaping machines, though introduced in about 1860, were not widely used until the end of the century. Lastly, threshing machines replaced flails from 1850 onwards. These technical improvements gained ground very slowly, with some regions lagging far behind others. They had a big impact on manpower requirements and were in many cases introduced because of the shortage of labour in a particular region.

These changes in agriculture were accompanied by perhaps even more important changes in industry. We have already seen how, in the eighteenth century, industry was scattered all over France without any clear demarcation between industrial and agricultural areas. Steelworks, forges, paperworks, tanneries, textile factories of various kinds (drapery, linen, etc.) were to be found in every region, in thousands of villages and farms. The pattern of territorial dispersion was related to the location of raw materials which were scattered: hemp, flax, silkworms, sheep, etc., were to be found throughout France; the water which provided power for the many workshops was available in many places; fuel, usually wood, could be had from any forest. Lastly, the workforce was composed of worker-peasants who alternated between farming and industrial activity according to the season or even the time of day.

This balance was gradually upset in the course of the nineteenth century. The output of woollen goods, for example, could not keep up with demand in spite of considerable progress and more had to be imported. The same was true for flax, silk and so forth which were increasingly

imported from distant countries. The growing importance of cotton, which had always been imported, was further evidence that the textile industry was managing without the peasant workforce. These industries gradually became concentrated in particular regions, the choice now depending on major traffic routes and the availability of capital. This shift in the supply of the raw materials for textiles is a good illustration of the break in the practice of relying exclusively on French sources of supply which had necessitated the widely scattered location of textile factories.

Another abrupt change involved sources of power. In spite of numerous measures to restore the national forest reserves, the French forests soon proved inadequate to cope with the demand from metal works, whose needs doubled between 1819 and 1937. The small deposits of coal worked in many regions of France developed into a number of major coal basins; in the Massif Central, for example, where the most productive coalfields were at Rive-de-Gier and Saint-Etienne, and in the north where coal had been mined by the Anzin and Aniche companies since the eighteenth century. National coal production rose from less than 1 million tons in 1790 to nearly 20 million tons in 1880, to 40 million in 1913 and levelled off at about 42 million in 1946.

As these major coal basins were developed so was the French steel industry, whose mills were built near these sources of energy, particularly in the north, Lorraine and in the Massif Central (Le Creusot and Saint-Chamond, for instance).

Distinct industrial regions gradually took shape, located either close to major natural resources or near large markets (big cities) or ports, etc. From being scattered throughout the country areas—still the dominant pattern at the beginning of the nineteenth century—industry became concentrated in a few urban centres where the pace of work, the lifestyle and the mental attitudes contrasted sharply with those of the farming community.

This change was made possible by big advances in means of transport throughout the 150 years in question. The great upsurge of road-building in the eighteenth century has already been mentioned; it was continued throughout the nineteenth century and the network was improved by means of technical innovations; the invention of hard surfaces, the study of contouring, curves, gradients and routeing. The network of maintained 'king's highways' rose from 14,000 km in 1824 (out of total of 32,000 km irrespective of condition) to 35,000 km in 1855. The network of local roads [chemins vicinaux], created in 1830, covered 60,000 km in 1841 and 320,000 km in 1870.

The effort to extend the navigable waterways was less intense, especially in comparison with the United Kingdom or Germany. However, in the course of the nineteenth century the canal network grew from some 1,200 km in 1821 to 4,200 km in 1860 and nearly 5,000 km by 1903.

It was, however, without a shadow of doubt, the railways which really broke down the spatial barriers in France. Although railway construction got off to a slow start—the first lines were laid in 1830 and there were still less than 2,000 km in use in 1850—the decisive impetus came after that date. There were about 17,500 km of lines in 1870 and over 40,000 km from 1914 onwards. With faster speeds and greater payloads, the railway became the most efficient and least costly means of transport. At the end of the Second World War the development of the motor car, not to mention that of the aeroplane, had scarcely begun: in 1946 there were only a million private cars on the roads.

Let us now see how these profound changes in the French economy affected mobility and the perception of space.

The mobility of the rural population developed in several stages. At first there was a sharp increase in temporary moves, which then declined again. Then migrations from country to town increased and took on a more and more permanent character and this had an important impact on the geographical distribution of the French population. We shall now look at these stages in detail.

Chapter I mentioned the large amount of temporary move by country dwellers, particularly at harvest time.

Harvest moves already common in the eighteenth century, increased in number with the growing amount of land under cereals, which rose from 4.6 million hectares in 1815 to 6 million in 1850¹⁵ and, so long as the sickle was employed, needed a large temporary labour force. As we have seen, the sickle was always preferred for harvesting up to 1850. For this reason such moves took place on a large scale. The 1852 survey reveals that the harvest in the Paris basin attracted nearly 110,000 workers from nearby regions and even from further afield (Flanders or Belgium, for example). Manpower needs were considerable in Lorraine too: in 1852 nearly 60,000 workers came for the harvest. The more traditional flows in the Rhône valley and in Auvergne continued whereas in Provence harvest workers from Piedmont were employed. From the mid-century technical improvements greatly reduced the scale of harvest moves. During the Second Empire, the scythe began to replace the sickle, reducing the need for labour. At about the same time the first mechanical harvesters appeared but were not in widespread use before 1890. Although more and more land was being used for growing cereals (nearly 7.5 million hectares in 1860) and such crops were becoming increasingly concentrated in the Paris basin, these technical advances went hand-in-hand with a slow decline in seasonal labour. The new machines seem in fact to have been adopted not to cut down jobs but because labour was in short supply. In the Paris basin, for example, harvesters were recruited from farther and farther away because there were not enough locally and large numbers of Bretons, hitherto a very sedentary population, began to move as far as the middle of the Paris basin. Workers also came from Belgium, the Prussian Rhineland and the Duchy of Luxembourg. The increasingly severe manpower crisis made the mechanization of harvesting a necessity from about 1866. The use of machines spread rapidly throughout the Paris basin and gradually did away with the need for temporary manpower which was increasingly difficult to find. In Provence, too, despite the availability of Piedmontese harvest-workers, machines eventually carried the day. There still remained the Massif Central, which until the turn of the century continued to attract the temporary labour force necessary for harvesting. Early in the twentieth century, however, these moves came to an end. The growing of cereals was gradually concentrated in certain regions in the north of France and declined sharply in the south. Seasonal flows towards the Paris basin continued but most of those involved were Belgians. After the First World War as a result of greater mechanization, the move of harvest-workers disappeared altogether. This brief survey has brought out the very rapid increase in harvest-worker moves which reached a peak in the middle of the last century and came to an end at the beginning of the present century.

We have already mentioned the large number of temporary moves for work in the vineyards which needed a big labour force, especially for harvesting the grapes. During the period in question, both the area under vineyards and wine production increased until the phylloxera crisis, which really began in 1872: from 1.6 million hectares yielding 36 million hectolitres of wine at the beginning of the nineteenth century¹⁶ to nearly 2.5 million hectares around 1875 yielding a mean annual production of 52 million hectolitres for the period 1871-1879. The phylloxera crisis dealt a heavy blow to French wine production which in the period 1881-1885 fell to 33 million hectolitres. The treatments used to combat the disease, such as flooding the vines, chemicals and finally the introduction of American vines, were at last successful at the end of the nineteenth century. Although the area under vineyards stabilized at around 1.6 million hectares in 1900, wine production rose to nearly 60 million hectolitres on the eve of the Second World War.

The wine-harvest needed a lot of extra labour for a short period of time. In the course of the nineteenth century, the départements around Bordeaux (Gironde, Charente-Maritime, Charente), for instance, employed increasing numbers of temporary workers from nearby départements such as Vendée, Deux-Sèvres, Vienne, Dordogne, Lot-et-Garonne, Haute-Garonne and Hautes-Pyrénées. Even départements further away, such as Morbihan and Ardèche, sent wine-harvest teams. The second area needing labour was the Mediterranean coastal plain (Hérault, Gard, Var) which employed workers from the neighbouring mountainous départements such as Tarn, Aveyron, Lozère, Basses-Alpes and Hautes-Alpes. A third area was the Saône-Rhône corridor which also got its labour from the nearby mountains.

There were other jobs in the vineyards and plantations which, at the beginning of the nineteenth century, required extra temporary manpower. These needs, however, were more evenly spread over the year and, by the middle of the century, the workers concerned were able to settle in the wine-producing regions.

The phylloxera crisis had a big impact on the movements of wine-harvest workers, who were obliged to seek other work. The building of the railways in the southern Massif Central, for example, made alternative employment available to those living in the mountains. The direct rail link with the capital (from 1889) diverted the traditional migratory flows. Once the phylloxera crisis had passed some of these currents returned to normal while new ones, such as the use of foreign seasonal workers, came into being: more than 20,000 foreign workers were coming for the wine harvest by 1910 and over 40,000 in 1960, the first year in which the influx of workers was monitored.¹⁷ These people made for the Mediterranean regions; Provence was greatly helped by workers from Piedmont. The Bordeaux region had less need of extra labour because the harvest period was extended and because of the emphasis on quality rather than quantity. Thus wine-harvest moves were still needed in the mid-twentieth century, particularly in the Mediterranean wine-producing areas. Although needs had decreased a lot in the other regions, a growing number of Spanish grapepickers were attracted to Languedoc. We shall see later that this intake of labour is still continuing at the present time.

The development of new crops brought other needs. Thus sugarbeet, the growing of which steadily increased

in certain regions throughout the nineteenth century, requires a lot of manpower for intensive cultivation and harvesting. The production of beet sugar rose from 1,500 tons in 1826 to nearly 50,000 tons in 1836 and over 200,000 tons in 1852. At this date distiller's beet began to be cultivated in addition to sugar-beet. The area under industrial beet steadily increased during the nineteenth and twentieth centuries, from under 60,000 hectares in 1840 to over 110,000 hectares in 1852, 240,000 hectares in 1882, over 300,000 in 1910 and 400,000 in 1950. Though originally grown in all low-lying regions it was gradually concentrated as early as 1837 in the northern half of France where it could be cultivated intensively near the fuel needed to turn it into sugar. In these regions the presence of seasonal workers who had come for the harvest contributed to the expansion of sugar-beet cultivation. Workers from the west and north of France and from Belgium worked for the harvest and also for the hoeing, weeding and uprooting of the beet. During the second half of the nineteenth century when, as we shall see, the cities and industry attracted many people from rural areas, the expansion of sugar-beet cultivation established regular flows of seasonal workers who set out from the north of France, Belgium, Brittany, Burgundy and Nivernais (the Nevers region) for the départements of the Paris basin, Artois and Picardy. At the beginning of the twentieth century the flow of French seasonal workers dried up and they were replaced at first by Belgians and later by Italians and Poles. From the mid-nineteenth century Belgians had come to seek work in rural France as a result of competition from power-looms and the decline of cottage industries. They were at their most numerous, cultivating and harvesting the sugar-beet, at the turn of the century: their number may be estimated at over 50,000 in 1900. Their place was taken early in the twentieth century by Poles, at first in Lorraine from 1907, and then in Champagne, Burgundy and the Paris region. Their migrations were no longer seasonal but on a more long-term basis, and these country dwellers would later settle down in employment of a more industrial and urban nature. Up to 1950 in fact it could be said that Belgian seasonal workers did most of the hoeing and uprooting of the sugar-beet crop.

Other industrial crops attracted a few seasonal workers but on nothing like the same scale. Flax, hops, plants for the perfumeries, fruit and vegetables were among the crops which needed extra labour for harvesting. Similarly, the moves of shepherds and their flocks, which had required many seasonal workers in the eighteenth century, steadily declined during the nineteenth. The loss of common pasture and the fencing of open grazing made such migrations increasingly difficult. As early as 1878 the railways offered facilities for the transportation of flocks and this too had its effect so that, by the beginning of the twentieth century, such movements were on a very limited scale.

Country dwellers, particularly agricultural workers, continued to migrate. We have seen how, before the Revolution, the number concerned could be estimated—through records of dismissal notices and changes of domicile. As these records ceased to be kept at the time of the Revolution, it is more difficult to gauge the number migrating during subsequent periods. Though research workers have taken little interest in this replacement mobility, it has played a far from insignificant role in French migratory flows. There has as yet been no detailed study on the effect of land allocation, the apportionment of common land and share-cropping, etc. on trends in this form of mobility.

On the other hand, there is much more information available for studying the movements of country people to the cities and the process of urbanization which took place throughout this period. These movements were of two types:

- temporary moves at their maximum in the nineteenth century;
- subsequent permanent migrations which, though not a new phenomenon, attained their maximum impact during the twentieth century.

It is this twofold movement which we shall now examine.

The movements of foresters are the closest to purely agricultural moves. It should be noted, however, that they were already related to industry, since they provided an important source of energy at the beginning of the nineteenth century, and to urbanization since they supplied the towns and cities with firewood. We have already seen their function in the eighteenth century. Most of these flows originated in the Massif Central and made for all the French regions and in particular the well-wooded départements, such as Landes, Gironde, Charente-Maritime, Seine-et-Marne. The moves were on a weekly basis in the case of workers from neighbouring regions, or seasonal when they came from further afield. Paris's enormous demand for firewood, for example, provided a livelihood for a host of woodcutters, charcoal-burners, etc., most working on a seasonal basis in the forests of Nivernais and Morvan, but by the first half of the nineteenth century competition from coal began to affect these occupations in much the same way as the mechanical saws had begun to compete with pit-sawyers during the First Empire. From the middle of the nineteenth century the changes in forestry occupations rendered such work less attractive for French workers, with the result that foresters began to be recruited from abroad in rapidly increasing numbers. Italians appeared in the Alps and in Provence and by the end of the nineteenth century were working in the Jura and Burgundy while foresters from Belgium and Luxembourg appeared in the forests of Lorraine, Normandy and the Paris region. By the beginning of the twentieth century almost all the French foresters had been replaced by foreigners, but their number steadily decreased as time went by: by 1955 there were less than 2,000 of them, mostly of Italian origin.

Among other activities closely related to agriculture, we have already mentioned the eighteenth century moves of hemp combers. These flows continued into the nineteenth century, still fed by Puy-de-Dôme département. Numbers fell rapidly after 1850 and, by 1870, were negligible. This decline was due to the existence of other sources of income in their home regions and to improved machinery in the textile industry.

Similarly the breeding of silkworms, which in the early nineteenth century attracted many seasonal workers from the Alps and Massif Central towards the Rhône valley and Provence, declined rapidly after the epidemic of *pébrine* in 1853. These moves were brought to a complete halt by competition from imported silks.

Before the building of the railways—that is, mainly in the first half of the nineteenth century—a great many country dwellers were occupied in transportation. At the same time more passable roads were being built and this required a considerable influx of short-term labour. Later, the building of the railway network made continuing demands on the same workforce, largely from Limousin and Auvergne but also from Piedmont. The number of

years spent on this task, from 1850 to 1914, the 40,000 km of railway lines to be built, and the number of civic engineering projects involved give an idea of the scale on which manpower was required. However, these needs came to an end with the First World War by which time the French railway network was virtually complete.

The moves of craftsmen, a feature of eighteenth century life, involved persons from mountainous regions (Auvergne, Alps, Pyrénées) or from regions away from central France such as Lorraine or lower Normandy. There were many trades affected—boilermakers, tinsmiths, knife-grinders, smelters, repairers of leather or copperwork, lantern-makers, pewterers, cobblers, shoemakers and so forth. Numbers remained steady during the first half of the nineteenth century but then declined rapidly from mid-century as seasonal moves became permanent migrations and industrialization developed in the towns.

The movements of hawkers and pedlars, also common in the eighteenth century, followed a similar pattern. They came from the same mountainous regions or regions away from the centre, and sold textiles and vegetables, but their number declined from the middle of the nineteenth century onwards. As a result of the development of cheap transport, especially by rail, and new rural attitudes they had almost completely disappeared by the end of the century. The same can be said of the junk dealers, who travelled around buying various used articles from people which they then sold in bulk to paper factories, furriers, hat-makers, foundries and so forth.

The journeys undertaken by dealers in livestock, cloth, wine, etc., were more complex and followed specific routes from the place of manufacture or rearing to particular fairs or selling places, etc. These international trading ventures were characterized by a high degree of organization. We have already mentioned the eighteenth century migrations to Spain of people from Cantal belonging to the 'Société de Chinchon'. Other similar companies were established in the nineteenth century with even more distant ramifications: the 'Barcelonnettes', for example, began to go to Mexico in 1821 and this increased in scope throughout the nineteenth century. This remarkably successful trading company attracted about fifty traders from the Alps to Mexico at the end of the nineteenth century. But the First World War put a stop to the further spread of such contacts. Another instance was that of people from Queyras in the Hautes-Alpes who journeyed to Brazil and later to various other Latin American countries.

All these temporary moves, which began to decline from the mid-nineteenth century onwards can be contrasted with another type of move—to the cities—which were also temporary at the outset but quickly became permanent. We have already spoken of the important changes produced by the industrialization process in France throughout the nineteenth century. The various occupations and factories were at first widely scattered throughout France but the requirements of industry gradually concentrated them in a small number of existing towns or future urban centres located either near large sources of power (the coal basins of the north, Lorraine and the Saint-Etienne region) or at important commercial centres (ports or cities situated on major trading crossroads). These cities needed migrants for their expansion because their fertility was very low. As early as the first half of the nineteenth century, this migration was intermingled with short-term movements of people already described in the previous chapter (chimney-sweeps, water-carriers, shoeblacks, beggars, etc.), which increased

in number during the first half of the nineteenth century and then slowly decreased.

The main flow of moves now began to make for jobs in the building trade and industrial occupations. We shall briefly describe them before turning to permanent migration from rural to urban areas.

In the first place, the fact that the urban population grew more quickly than the rural population during the first half of the nineteenth century increased the need for navvies, labourers, bricklayers, etc., for construction work in the towns and cities. These construction workers were recruited from a few specific regions, the most important being certain départements in central France, especially in Limousin (Haute-Vienne, Creuse, Corrèze) but also in Auvergne (Puy-de-Dôme, Cantal, Haute-Loire), and from certain outlying départements (Charente, Dordogne, Deux-Sèvres, Vienne, Indre, Cher). A second source of recruitment was to be found in some of the départements in the west (in Brittany, Normandy and Maine), a third one being those in the northern Alps. This labour force already included a number of foreigners in the eighteenth century, particularly from Piedmont, Switzerland, Belgium and even from German-speaking countries, who came to France to work in the building industry. Most of these people were attracted to the big cities and especially to Paris. The Prefect of Police recorded nearly 25,000 construction workers in Paris in 1807. But the other big cities were also attracting these workers and many builders were active in Lyons, Le Havre, Bordeaux, Dijon, etc. In short, these migratory flows went in a great many directions, depending on the needs of each city.

By the middle of the nineteenth century the pattern began to change. The scale of the demand and the new materials employed created a need for builders all the year round and the migrations which had originally been seasonal or temporary moves as the need arose increasingly became permanent. At the same time, advances in farming methods began to cut down labour needs on the land. The recruitment areas, however, did not change and the flows towards the cities followed much the same routes as those taken by the seasonal workers. The Massif Central supplied the Limousin stonemasons and masons, and the labourers. Normandy, and later Brittany, provided stonemasons and labourers. The foreigners still came from Italy (mainly Piedmont), Belgium, Switzerland and Germany.

Moves connected with trade, industry and services were to follow the same pattern, with more and more of them becoming permanent, or at least involving settlement in the cities, during the second half of the nineteenth century.

The water-carriers from Auvergne, for example, whose presence—especially in Paris—has already been mentioned, gradually became wine-and-coal dealers during the course of the nineteenth century. They were in fact obliged to find other employment as more and more water-cisterns were built and running water became available in the upper storeys of buildings. The change took place rapidly during the Second Empire when the wine-and-coal shops appeared. Migrants who had set up in business in this way were also induced to settle in the cities and, though they still kept in touch with their home communities, would only return there fact on retirement.

In the same way the itinerant craftsmen and dealers began to settle down in the towns and cities from the second half of the nineteenth century onwards. The quickly rising urban population provided them with enough work

to permit their setting up on a permanent basis. We find 'colonies' of migrants from the same region coming into being, with new migrants being recruited through the network of contacts developed by those already established.

However, it was above all industry, the siting of which underwent profound changes in the course of the nineteenth century, which attracted the biggest flows of rural labour to the industrial cities. At the same time, the disappearance of rural cottage industry contributed to this trend. Lastly, owing to the need for a regular industrial workforce temporary migrations gradually gave way to permanent settlement. Although there still existed a few dormitory-factories in which young country dwellers worked during the week and from which they returned home on Sundays (especially around Lyons, where these factories survived until the beginning of the twentieth century), most of industry's labour needs were filled by permanent or long-term migration. At the same time, the towns and cities attracted other types of migrant for their expanding trade and growing administrative needs. Thus the urban population rose from 9 million in 1846 to nearly 22 million in 1946 whereas the rural population, which reached a peak of about 27 million in 1846, had fallen to under 19 million by 1946.¹⁸ As a matter of fact, the fall in the farming population was even steeper than that since, between 1846 and 1946 it fell from 53 per cent of the total population to 25 per cent. It should be observed however that the decline was slow until 1900 and that it did not really gather speed until after the First World War.

We shall now attempt to depict the broad outlines of this cityward migration, often called 'rural exodus' even though this term seems somewhat exaggerated as people were leaving rural areas continuously throughout the nineteenth and twentieth centuries. There was no sudden massive emigration—as the term 'exodus' would suggest—but a steady drift over a very long period of time and even a certain amount of movement in the opposite direction, from town to country.

It has already been pointed out that a significant number of people migrated to the towns during the eighteenth century, offsetting the high mortality rate and contributing to the expansion of many urban centres. These migrations continued throughout the nineteenth century; although health conditions in the cities were deplorable, as we have seen, the urban population began to grow rapidly. From 5.5 million in 1800 it grew to nearly 9 million in 1846 and, as stated above, to about 22 million in 1946.

The rural areas most affected by these migrations were the one providing temporary labour: the poor mountain areas of the Massif Central, Pyrénées, Alps and Vosges head the list, while other cityward migrants during the first half of the nineteenth century came from Normandy, the départements of Oise, Somme and Pas-de-Calais and parts of Brittany. There were many reasons for this drift but lack of specific information on the subject¹⁹ prevents us from drawing conclusions. It can however be said that, during this period, the rural population continued to grow but more slowly than the urban population. Doubtless rural overpopulation had something to do with it, as did early technological advances, but the beginnings of industrialization in France and industrial concentration also modified the spatial distribution of workers: around 1850 a construction worker earned at least twice as much as an agricultural day labourer.²⁰

In the second half of the nineteenth century, the drift towards the cities gathered momentum. People came not

only from the same regions as before but also from certain other départements in the Massif Central, the Landes and Normandy. This emigration zone which covered thirty départements in 1830, covered fifty-seven in 1850 and sixty-five between 1851 and 1866. It affected the poorer agricultural départements at different dates, Brittany's Finistère and Morbihan being the last ones to be affected (their rural population did not start to decline until the beginning of the twentieth century). A detailed examination of certain rural cantons in the second half of the nineteenth century sheds light on the mechanisms of these cityward migrations.²¹ In these cantons, most of the inhabitants who left were employed in non-agricultural occupations—home-based textile workers, craftsmen, the destitute, marginal groups. However, few agricultural workers were affected. If this example holds for the rest of France, it reveals clearly the impact on the rural population: the successive departure of social categories whose presence made it possible for an authentic rural community to exist, leaving behind in the countryside only the purely agricultural communities. Naturally, the diversity of economic situations in the different regions produced very varied patterns of emigration as time went by. All the départements, however, after their rural population had reached a peak between 1840 and 1906, experienced a rapid decline in numbers. This happened before 1860 throughout the south-west except for Gironde, in the southern Alps, Normandy, Picardy and the southern Massif Central. Between 1860 and 1880 the same occurred in the northern Alps, Alsace and Lorraine and after 1880 in the départements of the northern Massif Central, followed by Vendée, Deux-Sèvres, Seine-et-Oise and lastly the tip of Brittany (Finistère and Morbihan), Gironde and Corsica.

At the opposite extreme, Paris and the other large cities began a period of hectic growth. Paris quickly overspilt its boundaries and became a city of many communes whose development within given boundaries can only be fully understood by studying the whole Paris region, which had 1.35 million inhabitants in 1801, 2.8 million in 1861, 4.7 million in 1901 and 6.6 million in 1946. In other words, the population increased fivefold between 1801 and 1946 whereas the population of France as a whole rose by only 40 per cent over the same period. Migration was the principal factor in this growth since, though the population was young, the mortality rate was much higher in Paris than in the rest of France until the turn of the twentieth century. There was a rather low, albeit positive, natural growth and a very positive net in-migration throughout the period considered. Thus the proportion of inhabitants of the département of Seine born outside that département reached 63 per cent in 1881 and then slowly declined to 58 per cent in 1946. It was this heavy concentration of the French population in the capital (in 1946, the population of Paris was about 16 per cent of the total population of France) which led to J.F. Gravier's cry of alarm in *Paris et le désert français* (Paris and the French desert). The political, administrative and even industrial life of France was then concentrated in this region, which dominated the economy of the entire country.

Parisians came from all over France but particularly from certain regions from which temporary migrants had formerly set out for the capital.

The Massif Central was the biggest single source of newcomers: we have already mentioned the coal-and-wine dealers from Auvergne and the masons from Limousin; there now appeared taxi-drivers, many of them from

Corrèze, maidservants and caretakers from Cantal, and so on. What had started in the early nineteenth century as temporary changes of residence, traditionally involving men only, became a migration not only of men but also of increasing numbers of women who eventually outnumbered men (shop assistants, restaurant and hotel workers, cooks, servants).

Until the beginning of the twentieth century, Savoy was the second most important recruitment area for Paris, at first of seasonal workers and later of migrants. Its place was then taken by Brittany from which large contingents of migrants were to come to Paris in the present century, most of them women. They were largely employed as domestics, caretakers or cooks. There was also a growing colony of migrants from Corsica, though of a quite different type, for the Corsicans largely found employment in the administrative or public services.

All the other départements in France were represented in Paris but in much smaller numbers. There was also a foreign contingent—5 per cent in 1861, 8 per cent in 1901, 13.5 per cent in 1931 with a slight reduction to 10.2 per cent in 1946.

The other two big poles of attraction were Lyons and Marseilles, whose populations grew in much the same way. That of Lyons rose from 110,000 inhabitants in 1801 to 171,000 in 1851, 472,000 in 1906 and 461,000 in 1946, and that of Marseilles from 110,000 in 1801 to 195,000 in 1851, 517,000 in 1906 and 636,000 in 1946. Migrants came to each of these two cities from areas that were much smaller than in the case of the Paris conurbation and were quite distinct from each other.

We have already noted where the eighteenth century migrants to Lyons came from and there was little change in the next 150 years: one feeder region was the Massif Central together with the nearby départements of Loire and Saône-et-Loire, the more distant Limousin (Haute-Vienne, Corrèze, Creuse) for construction workers, Auvergne (Puy-de-Dôme, Cantal) and at a later date the Cévennes (Ardèche, Lozère and Gard). The other one, more or less on the same scale as the Massif Central, was made up of the Jura and northern Alps. Savoy was the main recruitment area for a much poorer and less well-paid labour force than that of the Massif Central—mainly apprentices for the Lyons silk factories, domestic staff, waiters, etc. Migrants did not come from the Jura until later.

Marseilles attracted only a proportion of its migrants from France, primarily from the southern Alps, the south-east of the Massif Central and the départements bordering the Bouches-du-Rhône. There were also many Corsicans who, in Marseilles as in Paris, worked as public employees (customs officers, policemen, clerks in various administrative services, etc.). However, what distinguishes Marseilles was the large number of migrants from abroad. The 1911 census, for instance, revealed that besides the 205,000 immigrants born in France but outside the Bouches-du-Rhône, there were over 150,000 foreigners (including naturalized persons), most of them from Italy.

Many other cities, and particularly industrial ones, expanded greatly from the mid-nineteenth century onwards. Some already began to industrialize in the first half of that century. Owing to its expanding coal industry, the population of Saint-Etienne, for example, rose from 19,000 inhabitants in 1821 to 56,000 in 1851 and that of Roubaix from 13,000 to 35,000 inhabitants. But it was not until well after 1851 that the centralization of industry made its real impact: Saint-Etienne had nearly 120,000 inhabitants

in 1886 and 178,000 in 1946 while the population of Roubaix reached 100,000 by 1886 and then stabilized. Once again, such growth could not have taken place without considerable immigration but the recruitment zones in both cases were restricted to the immediate surrounding area.

From the early twentieth century, the development of means of transport such as the railways and the bicycle modified the pattern of migration in certain cases, though the full impact of such changes was not felt until after the Second World War with the development of the motor car. However, the basic effect was the same: it became feasible to work in the town and live in the country by travelling back and forth between workplace and home. Already in the eighteenth century and especially in the nineteenth, worker-peasants worked down the mine from six in the morning until two in the afternoon and then spent the rest of their day on their smallholdings. This arrangement was possible because mining and industry were dispersed throughout France. From the middle of the nineteenth century, however, the concentration of industries in the urban centres made such journeys to work more difficult and only peasants owning land near these industrial centres could commute in this way. But from the beginning of the twentieth century by which time the railway network provided very full coverage of the national territory and the newly-introduced bicycle provided a rapid means of travel further afield, such commuting became increasingly common in certain regions. In the north, for instance, the number of worker-peasants increased since the availability of rapid transport enabled them to help their wives and children who remained at home on their smallholdings. The railways also fostered the growth of commuting in the Paris region and in various other industrial centres. Lastly, bicycles, and later motor cycles, considerably increased the scope for such journeys in many regions of France.

The movement from the countryside to the town which has just been described is often regarded as a one-way flow. We must now show how wrong this view is. What we have already seen of temporary moves has shown that there was a continuous to-and-fro movement between town and country. When country-born people settled down in the towns, this constant interchange, far from ceasing, in fact became even more significant. It must be appreciated that these earlier migrants established the channels which people from the same communes or the same cantons would use to make their way in the city environment. Some of these cityward migrations ended in failure and a quick return home while others were regarded from the outset as being temporary—for the purpose of building up a dowry, buying land and so forth—and the person concerned would subsequently return to his or her rural commune. Unfortunately very little work has been done on these return flows because researchers have given all their attention to the movement from country to town.

We must also return to international immigration and emigration, the main reasons for which were economic. The appeal of the major cities (particularly Paris and Marseilles) to foreigners has already been mentioned. It should be noted here that France's population trends have differed sharply from those of other European countries which maintained high fertility until the end of the nineteenth century and were thus in a position to send many migrants to new lands. In spite of its slow population growth, France had many exchanges with foreign countries which, at the end of the eighteenth century and the beginning of the nineteenth,

would appear to amount to a net emigration. Unlike some of its neighbours, France was not a country of high emigration but the numbers of French people in some foreign countries, especially during the colonial period, are far from insignificant. Conversely, the slackening of the growth rate of the French population brought about an increasing need for immigrants from neighbouring countries, who, as we shall see later, became more and more important. The characteristic features of this immigration had developed by the middle of the nineteenth century: foreigners were employed on rudimentary tasks requiring physical strength rather than specialized training. Many of these foreigners were therefore labourers, navvies or factory workers and so forth, who were essential because of the shortage of French workers. Again, the nature and scope of emigration abroad are hard to ascertain because the lack of data on such flows prevents us from coming to any conclusion on the matter.

In considering this period of 150 years during which major economic changes took place, we have looked briefly at the impact of these changes on the French perception of space. Later we shall attempt to quantify the changes in mobility: what we are witnessing is a transition from a world of temporary migrations to an urbanized environment which gradually became the habitat of the majority of the population.

(c) The emergence of a sense of political space

There can be no doubt that the Revolution made French people conscious of a political dimension extending beyond the parish to which they were accustomed. At the same time, the development of military service was to make the younger generation aware of a completely new perception of space.

Firstly, the Revolution caused many people to emigrate from France for political or religious reasons. The fact that these migrations were of refugees and were usually followed by a return to France when political conditions improved, makes them awkward to quantify. These people were mainly clergy and members of the nobility but other social groups, such as peasants and bourgeois who had been members of the Constituent Assembly, were also affected. The wars of the Revolution and the First Empire sent soldiers not only all over France but all over Europe too. Moreover, the introduction of conscription in 1793 which was by lottery and provided the army with regular contingents of men for armed service, prompted a good many young men to escape the draft by migrating. Those afraid of being called up to the army dispersed all over France and even abroad. This happened especially before the end of the First Empire in 1815 but continued throughout the nineteenth century in certain regions. In 1818 a new law, which differed little from its predecessor, freed those who drew 'a good number' or could provide a substitute whom they of course paid. At this period, the term of military service was a long one (six years after 1818, eight years after 1824, seven years between 1855 and 1868, and five years until 1889), with the result that less than 10 per cent of those eligible for the draft were actually called up. In 1889 the term of military service was reduced to three years but extended to all those eligible for conscription. This general conscription brought about an extensive mixing of the population, which was continued by the two world wars, and at the same time fostered a sense of belonging to a national political entity, a feeling which was barely perceptible in the first half of the nineteenth century.

The army, by opening up new horizons for its recruits, played an important part in nineteenth century migrations. A high proportion of soldiers did not return to their original rural commune but found work in the towns, in the administration, the police force, the railways, postal services, etc. Between 1887 and 1896, in fact, only half the conscripts of a village in the département of Doubs returned after completing their military service.²²

Another political measure—the reintroduction of the workman's employment book, was used in an attempt to control the flow of migrants, in particular towards Paris. But though the use of this document was compulsory a great many migrants got round it. It ceased to be compulsory in 1890.

Political measures concerning international migrations were taken immediately after the First World War. In 1916 the State took responsibility for organizing the recruitment of foreign workers. There were also political immigrants (Russians, Spanish, Armenians). However the employers' organizations quickly took over much of the State's function in this respect: 'the Administration was to remain responsible for the preparation and management of standard contracts, diplomatic and administrative relations with foreign countries and frontiers controls regarding health and occupational calling. Industrialists and farmers, through their associations, were responsible for all recruitment activities, medical and occupational selection, transport and distribution'.²³ It was not until after the Second World War that international migration came under government control.

(d) The other dimensions of mobility

The first of these is the educational dimension. In 1789, less than 50 per cent of men and 25 per cent of women were able to sign their marriage certificates, though there existed wide variations in different parts of France. The départements with the highest proportion of spouses unable to write their name were in the north of France: Alsace, Lorraine, Ile-de-France, Orléanais and, to a lesser extent, Picardy, Artois, Flanders and Hainault. In 1863 a survey of public education revealed that nearly half the children of school age (7 to 13 years) were unable to write French and that over 10 per cent of them could neither speak nor write French.²⁴ It was not until 1881 that education, which was now free of charge, could spread to all classes of French society. It goes without saying that the provision of education broke down the bonds of the commune, which had replaced that of the parish, and afforded to a majority of children a completely new spatial dimension. The spatial concept of France, now presented as an entity, found a place in their awareness and this was reinforced by military service. In 1884 Bruno's *Tour de France* taught thousands of children about the lifestyles, history and people of the various regions of France. Later they learnt about the world at large. This education, though concentrating on the French people, gave children a new spatial perception.

Secondly, there was the religious dimension in which, during the nineteenth century, pilgrimages were of prime importance. Numerous shrines and places imbued with religious significance were visited by crowds of pilgrims who sometimes came from very distant parts. These pilgrimages were an opportunity to leave one's native village to visit holy places where trade, festivities and religion were often mingled. The most popular of these spots was undoubtedly Lourdes where, in February 1858, Bernadette Soubirous had her vision of the Virgin Mary. In March of

the same year, over 20,000 pilgrims came to this commune of less than 5,000 inhabitants. In 1867, the railway reached Lourdes and in 1871 the town became an international place of pilgrimage. In 1876 the Basilica was consecrated in the presence of 100,000 pilgrims! Since then the number of pilgrims has steadily increased and today Lourdes remains as busy as it was at the end of the nineteenth century. Numerous other places of pilgrimage are to be found all over France.

Thirdly, another dimension of mobility which developed during this period was connected with associations and recreation. The bounds of this informal space, which in the eighteenth century had been confined to the parish, were to be shattered throughout the nineteenth century and more especially in the twentieth. In the rural world the space implied by traditional feast-days, wakes, markets and fairs was transmuted, in an industrial and urban environment, into a space of recreation, holidays and tourism. Once again there can be no question of our tracing in detail the passage from one lifestyle to the other; all we can do is to sketch in the broad outlines. The traditional movements, occasioned by market-days and fairs, were also connected with feast-days which were celebrated on a scale which had begun to decrease by the turn of the present century. At about this time, too, the wakes which brought together the population of a commune during the long winter evenings, began to lose much of their importance. The ease of travel, by railway or bicycle, completely transformed the vital space of individuals; the opening of inns and cafés in small villages changed interpersonal relationships: a new space which had broken the bonds of the old was emerging. It was sustained by growing urbanization and new forms of recreation. The advent of holidays with pay meant that more and more French people visited resorts where sun, sea, countryside or snow took the place of relatives, existing relationships or the native environment. The development of the motor car after the Second World War put the finishing touches to this new form of recreational mobility.

Thus all the various dimensions of the French people's perception of space underwent profound changes in the course of these 150 years. We must now attempt to take a more quantitative view of this process.

2. The quantification of these population movements

We have already endeavoured to quantify eighteenth century population movements. To bring out those of the next 150 years we shall concentrate on two points in time: the middle of the nineteenth century when, as we have seen, temporary migrations took place on a large scale, and the middle of the twentieth century by which time most of these migrations had become permanent.

(a) Moves and migration in the mid-nineteenth century

The sources for this period are still far from perfect and our estimates will therefore be very approximate. Nevertheless we shall attempt to quantify this mobility.

For temporary moves there exist three surveys which deal with this period. One in 1848 asked how many workers there were in each canton who came from the locality and how many were only temporarily staying there. Another in 1852 focused on temporary moves of agricultural workers in each arrondissement while the third,

in 1866, sought to discover 'the number of itinerant workers [ouvriers nomades] who offer their services to farmers for the major operations of the grain and wine harvests'. Use of the term 'nomades' unfortunately reduced the value of this survey. Aisne département, for example, made a significant reply to the investigators: 'There are no "nomadic" workers; the Belgians who come here every year to do particular jobs cannot be so termed'.²⁵

Despite these reservations, the statistics of 1852 make it possible to estimate the temporary moves for the harvest at nearly 900,000. Outside this busy period of the year, there were fewer than 100,000 temporary moves related to agriculture. These figures are of course open to criticism on the grounds that the same individual moving from place to place could have been counted several times over. However, the fact that the survey was based on arrondissements would have kept such multiple counting within quite small limits. One must also add in the temporary moves of craftsmen or industrial workers. It should be noted that at this time some of these temporary moves lasted longer and could be detected in the census returns. But temporary move was still common and more difficult to quantify. Limousin is one region which produced many temporary migrants, especially masons. Certain surveys suggest the number of people concerned—an estimated 34,000 from Creuse, 8,000-10,000 from Haute-Vienne, and 3,000-4,000 from Corrèze.²⁶ Thus, in 1846, a total of nearly 50,000 men left Limousin on temporary moves. Most of them were building workers—masons, carpenters, stone-cutters, pavers, labourers, roofers, painters—but there were other trades too, such as boiler-makers, sawyers, umbrella sellers, street-porters, hemp-workers, shoemakers, coachmen, shoeblacks, etc. The numbers must have been close to the maximum as they began to fall rapidly from 1880. Most of these people headed for the cities, nine-tenths of them for Paris or Lyons.

These strong flows of temporary moves were naturally fed by other regions too but not enough information is at present available to offer a reliable overall figure. We shall attempt to make a rough estimate.

As we have seen, the number of non-agricultural temporary moves from Limousin can be estimated at 50,000. Surveys in Cantal and Puy-de-Dôme indicate some 30,000 moves of the same type from these départements. Accordingly, the number of temporary moves to the cities from the Massif Central may be put at over 100,000.²⁷ For the Alps we have the statistics of the government of Sardinia which record 44,000 outward temporary moves from Savoy in 1848. Some of these movements were naturally for agricultural reasons. Extrapolating the results to cover the whole Alpine region we arrive at over 50,000 non-agricultural temporary migrates.²⁸ The task is even harder for the Pyrénées because there exist no special surveys relating to non-agricultural migrations. The plains were also affected by these movements but for these areas there is little material on which estimates can be based. Assuming a minimum of 50,000 temporary moves to the cities from the Pyrénées and the various lowland regions, we reach a total for the whole of France of over 200,000 temporary non-agricultural moves. This gives close to 1,200,000 temporary moves all told or over 3 per cent of the total population at the time.

In the case of permanent migrations, there exist several ways of estimating numbers from data concerning place of

birth, published from 1861 onwards, or by calculating the net migration.

Map 2 ranks the départements of France according to the percentage of their 1861 population born elsewhere and brings out clearly the role of migration in France's urban development. It emerges that 57 per cent of the population of Seine was born elsewhere: this figure is close to the maximum rate achieved in 1881 when 62.9 per cent of the population was non-native. Next comes Rhône, the département which includes Lyons, with 28 per cent: its maximum of 41.8 per cent was reached in 1921. Next come Seine-et-Oise (the outer suburbs of Paris) with 24 per cent and Bouches-du-Rhône (Marseilles) with 18 per cent. After these come those major regions where the proportion is over 10 per cent: the Paris basin, the Rhône corridor and départements containing a major city such as Gironde (Bordeaux), Loire-Atlantique (Nantes), Loire (Saint-Etienne). At the other end of the scale are the manpower-supplying départements with under 5 per cent of in-migrants which again are located in very specific regions: the centre and south of the Massif Central, the Alps, Pyrénées and Landes, and Finistère. Most of these regions are mountainous and attract no influx from the more wealthy lowlands.

Map 3 is the negative image of Map 2. It gives the net migration rates for the various French départements calculated for the period 1831-1851. Those with the highest net out-migration are in the centre and south of the Massif Central (particularly Lozère, Cantal, Haute-Loire), the Pyrénées and Alsace. Then came the Alps and the wooded areas of Normandy and Maine. Ranking the départements by proportion of out-migrants in relation to native-born population would have produced similar results.

By adding up all the net migrations for départements where the figure is negative, one can gauge indirectly the rate of emigration from rural to urban départements. Although it is very approximate, this measurement gives a rough idea of the scale of such out-migration. It involved about 36,000 persons per year between 1831 and 1841 and rose to over 43,000 departures per year in the following decade. From 1851 to 1856 the figure increased steeply to over 115,000 persons per year and then fell back slightly in subsequent periods. The number of migrants, of course, must have been much higher: for one thing we are dealing with a breakdown by département which therefore takes no account of movements within a given département, and for another the figures given are the difference between out-migration and in-migration, but they shed no light on these two components of net migration which is all that is being measured.

From data on birthplace, classified by age, it is possible to estimate the number of persons at forty-five years of age residing outside the département of their birth.²⁹ For those born between 1816 and 1820, who therefore attained this age in the 1860s, the proportion of men and women residing outside their native département was 20.7 per cent and 18.6 per cent respectively. In other words, interdepartmental migration was already considerable. For those born a hundred years later, however, the proportions were 37.5 per cent for men and 39.8 per cent for women, evidence of a steady increase in mobility throughout the period in question. It is also interesting to note that, for those born before 1870, the maximum migration is achieved at around forty-five years of age, after which a large number return to their native départements. This points to the non-permanent nature of migrations in the nineteenth century. This maximum no longer applies to later generations of

migrants who tend to return far less frequently than in the past, particularly after having migrated to cities.

On the basis of figures for the proportion of persons living outside the commune of their birth, provided by a number of censuses made between 1881 and 1896, a rough estimate can be made of the percentage of persons who, at forty-five years of age, were living outside their native commune and the percentage of individuals residing outside their native département does not change during this period. Assuming that this ratio holds for each generation, we can estimate that, for those born between 1816 and 1820, 50 per cent of individuals were not living in their native commune at forty-five years of age.

It remains for us to assess exchanges with foreign countries. Emigration is hard to gauge since we would need data for most of the countries in the world. A study by H. Bunle,³⁰ which compares data from host countries with data compiled by the French authorities allows a rough estimate of this emigration to be made. About 25,000 persons per year emigrated during the period 1850-1860, 6,000 to the French colonies, 6,000 to other European countries and most of the rest to America. Indeed, emigration stayed at about this level until the Second World War, though there were big fluctuations.

In order to make an estimate of foreign immigration one can refer to the questions on birthplace and nationality. The 1851 census, for example, counted 380,000 foreigners and 14,000 naturalized persons. This foreign-born population also grew until 1886 and then remained more or less stable until the First World War. Naturalization, on the other hand, became more common after 1889 with the passing of more liberal laws in favour of naturalization and the granting of French nationality. As a result of a sharp increase in the foreign population between 1921 and 1931 there were 2,715,000 foreigners and 361,000 naturalized persons in 1931. The subsequent economic crisis, followed later by the Second World War, reduced this population.

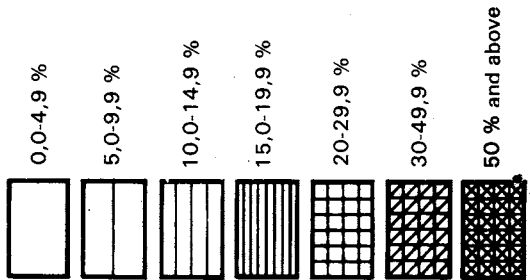
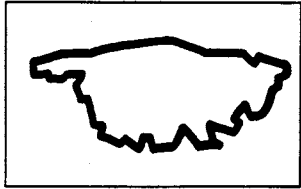
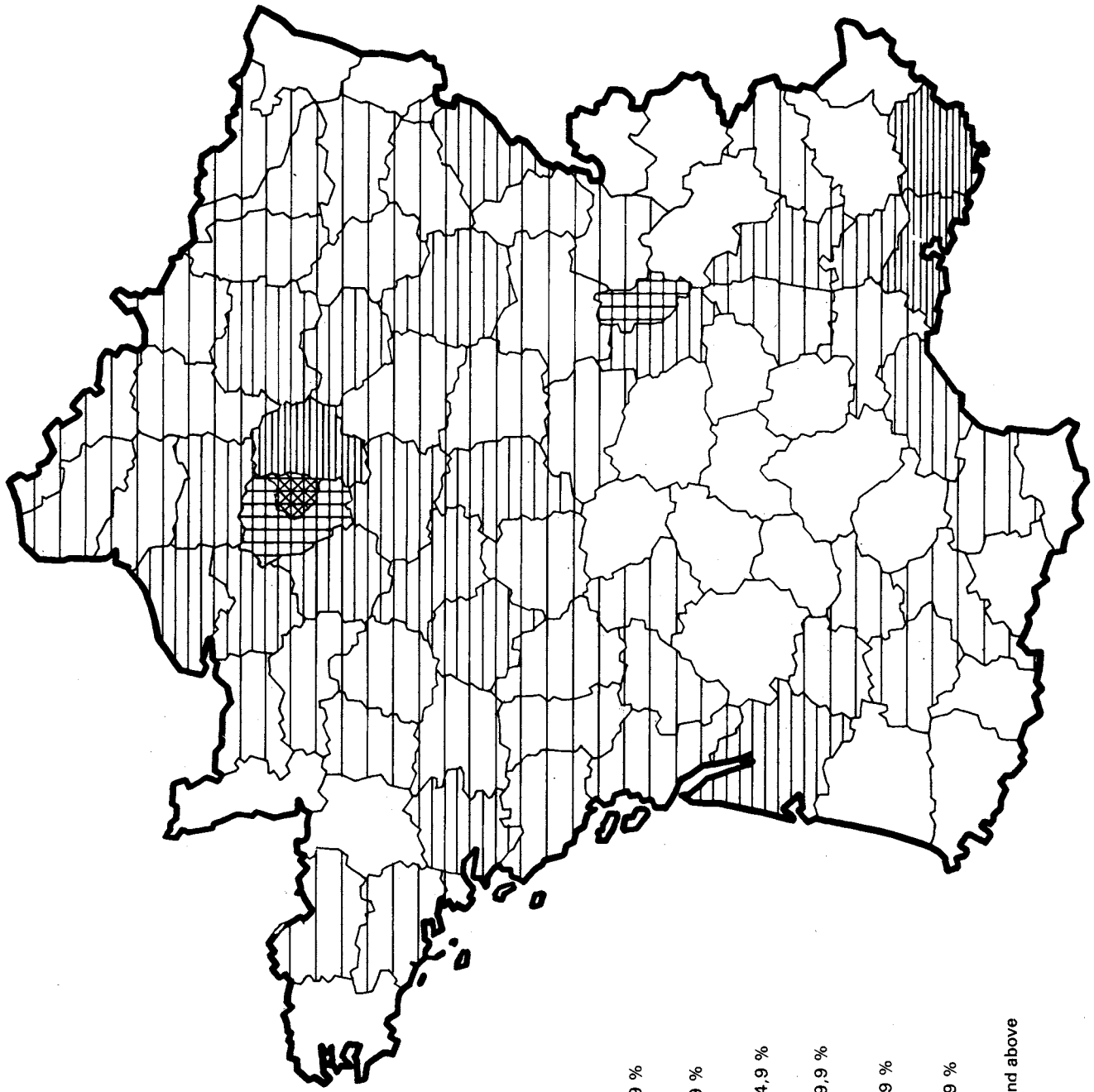
The net annual migration of these foreign nationals can be estimated by comparing the numbers of foreigners recorded at various dates, gauging the natural increase of this population and discovering how many took French nationality. This calculation, carried out for 1851-1861, produces a net intake of 11,000 foreigners per year. Later this annual intake steadied at an average of about double this figure (around 24,000) for the period 1861-1911.³¹ It then increased sharply from 1921 to 1931 before becoming negative during the period from 1931 to 1946.

It has therefore proved possible to provide some indications on the extent of geographical mobility in France in the mid-nineteenth century. As current research stands, however, it is not yet possible to give the annual number of temporary moves and permanent migrations between French communes or départements. Owing both to the complexity of these migrations, which requires one to allow for individuals who migrate and return more than once, and to the interplay of short-term travel and migration proper, it is not possible to make such an overall estimate.

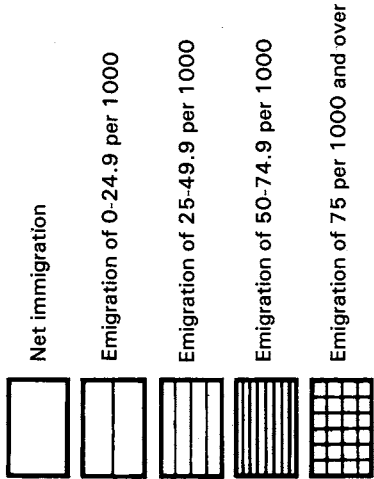
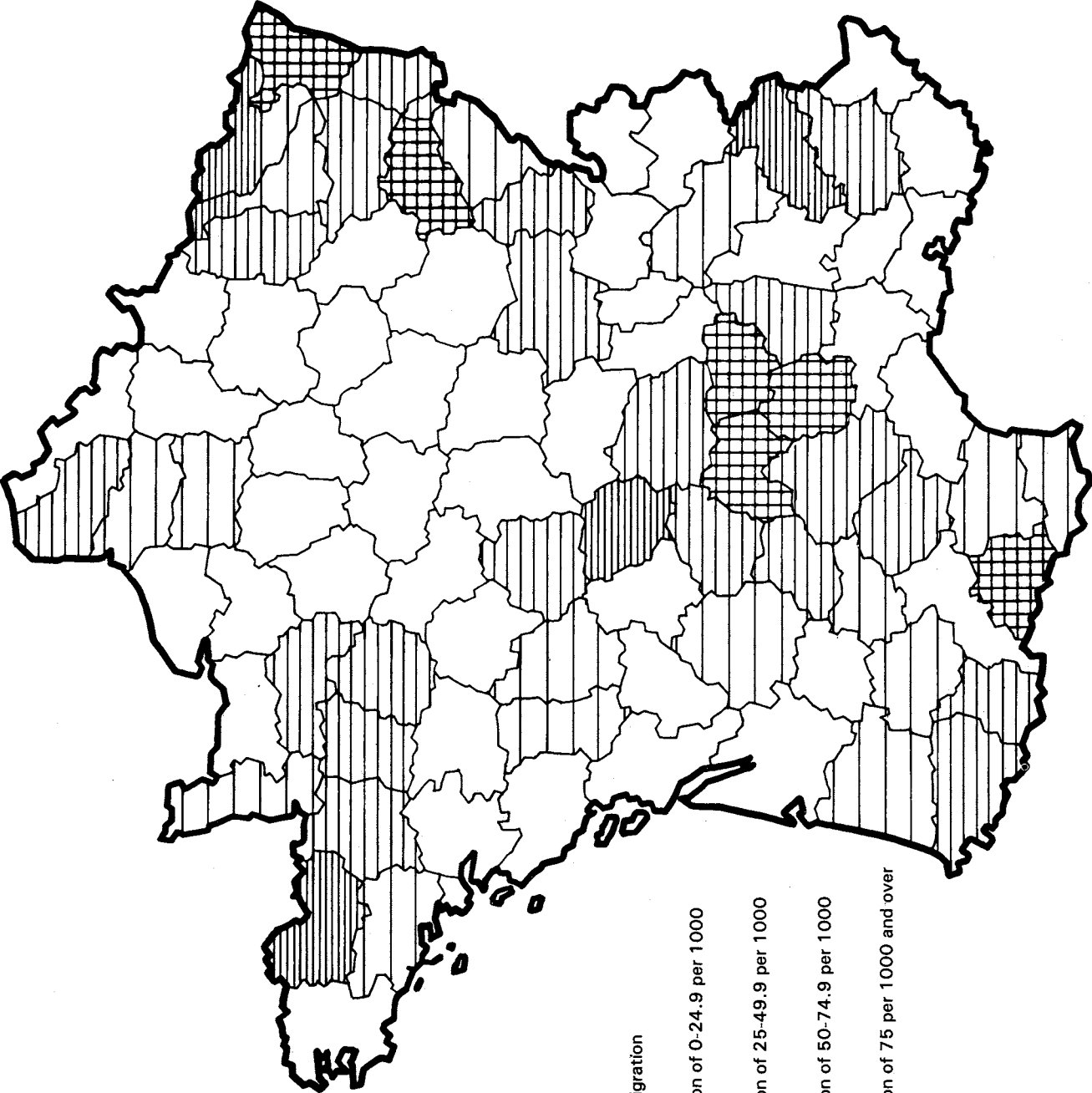
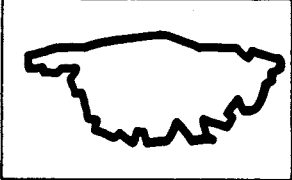
(b) Moves and migrations in the mid-twentieth century

To give a clear picture of changes that occurred in the French people's perception of space, we shall now look at mobility a hundred years later.

The first point to be noted is the small number of temporary moves. Most of those related to agriculture



Map 2.: Proportion of non-native population in each department in 1861.



Map 3.: Net migration rates for the period 1831-1851

involve foreigners; though French people still travelled to perform certain jobs such as fruit-picking or grape-harvesting, this work was being increasingly carried out by temporary workers from abroad. After the Second World War, for example, the wine harvest involved not only the entire rural population, including women and children, but also wage-earners from nearby towns and even from neighbouring départements. In 1952, 50,000 French workers came from these areas to gather the grapes in Hérault département. From 1955 onwards the situation changed and many Spaniards came for the wine harvest to work alongside the French labour force. Similarly, in Brittany, young women were still migrating for the strawberry or asparagus picking seasons and men for the sugarbeet crop (hoeing and uprooting). But the French increasingly left such jobs to temporary foreign workers. Though 18,000 Spanish seasonal workers a year were recorded before 1950,³² by 1952 their number had already exceeded 30,000. Here, then, was a new form of seasonal mobility of foreign workers which was becoming established.

Other forms of temporary mobility also developed. Firstly, as work became increasingly urban it involved more and more commuting, mostly on a daily basis, between home and work. Similarly the introduction in 1936 of holidays with pay stimulated tourism and the number of second homes in rural communes rose very quickly. In 1954 there were already 330,000 of them. Statistics on the extent of holiday travel are available only from 1964, when 43.6 per cent of French people went away on holiday. The proportion, however, varied greatly with socio-professional status: it was only 11.9 per cent for farmers and agricultural workers but as high as 86.6 per cent for senior management and the liberal professions.

For permanent migrations there was a census question in 1954 on the last change of address which enables the annual number of changes of commune to be estimated at 5 per cent in 1954.

So as to have a point of comparison with the mid-nineteenth century we shall, however, use the question regarding place of birth.

Map 4 ranks the départements by the proportion of their non-native population in 1946. Comparison with the map for 1861 brings out a clear trend: in almost all départements, the amount of in-migration greatly increased. Only Seine showed a slight drop though it still had one of the highest rates in France. Seine-et-Oise scored higher than the capital, with over 65 per cent of its population not born in the département. The rate was over 30 per cent in heavily urbanized départements such as Bouches-du-Rhône (Marseilles), Rhône (Lyons), Gironde (Bordeaux) and most of the départements of the Paris basin. The Côte d'Azur also rated over 30 per cent, clearly a big change when one remembers that in 1861 only 4.5 per cent of the Alpes-Maritimes population was born outside the département! The major French river valleys also stand out clearly—the Garonne Valley, the Rhone Valley and the Loire Valley. The areas with the least in-migration remained the Massif Central, particularly Lozère, Aveyron and Tarn, the départements in Brittany and Vendée, the north, Alsace and Lorraine. Thus, though migrations had increased, the 1946 map displays a fairly similar pattern to that of 1861.

Map 5 shows the proportion of out-migrants away from their place of birth in 1946 in relation to the population born in each département.³³ This map is only in part the negative image of Map 4. It emerges clearly that the départements of the southern and western Massif Central (Lozère,

Ardèche, Haute-Loire, Corrèze, Creuse) were zones of high out-migration and very low in-migration, like certain départements of the Alps (Hautes-Alpes, Basses-Alpes) and Pyrenees (Ariège). Most of the heavily urbanized départements except, as we shall see, the Paris region, also received a high proportion of in-migrants but provided few out-migrants: Bouches-du-Rhône (Marseilles), Gironde (Bordeaux), Loire-Atlantique (Nantes), Haute-Garonne (Toulouse) and, to a lesser extent, Rhône (Lyons). In contrast, the Paris basin, with its already-noted high level of in-migration, was at the same time an area of high out-migration; it can thus be seen that there was considerable mixing of the population in this region. Seine-et-Oise, for instance, whose population included 65.7 per cent of in-migrants, lost nearly 40 per cent of its native population to other départements. Lastly, certain départements which attracted few in-migrants remained cut off since they sent few local-born out-migrants elsewhere: the Alsace départements, Nord, Pas-de-Calais and the départements of Brittany, Vendée and the south-west.

We have already indicated that the longitudinal study of the data on place of birth revealed a sharp increase in the number of persons in départements other than that of their birth throughout the period considered: nearly 40 per cent of French people born in 1927-1931 were, at forty-five years of age, living outside their native département and it may be taken that about 90 per cent of the same generation of French people were, again at forty-five years of age, living outside the commune of their birth.³⁴

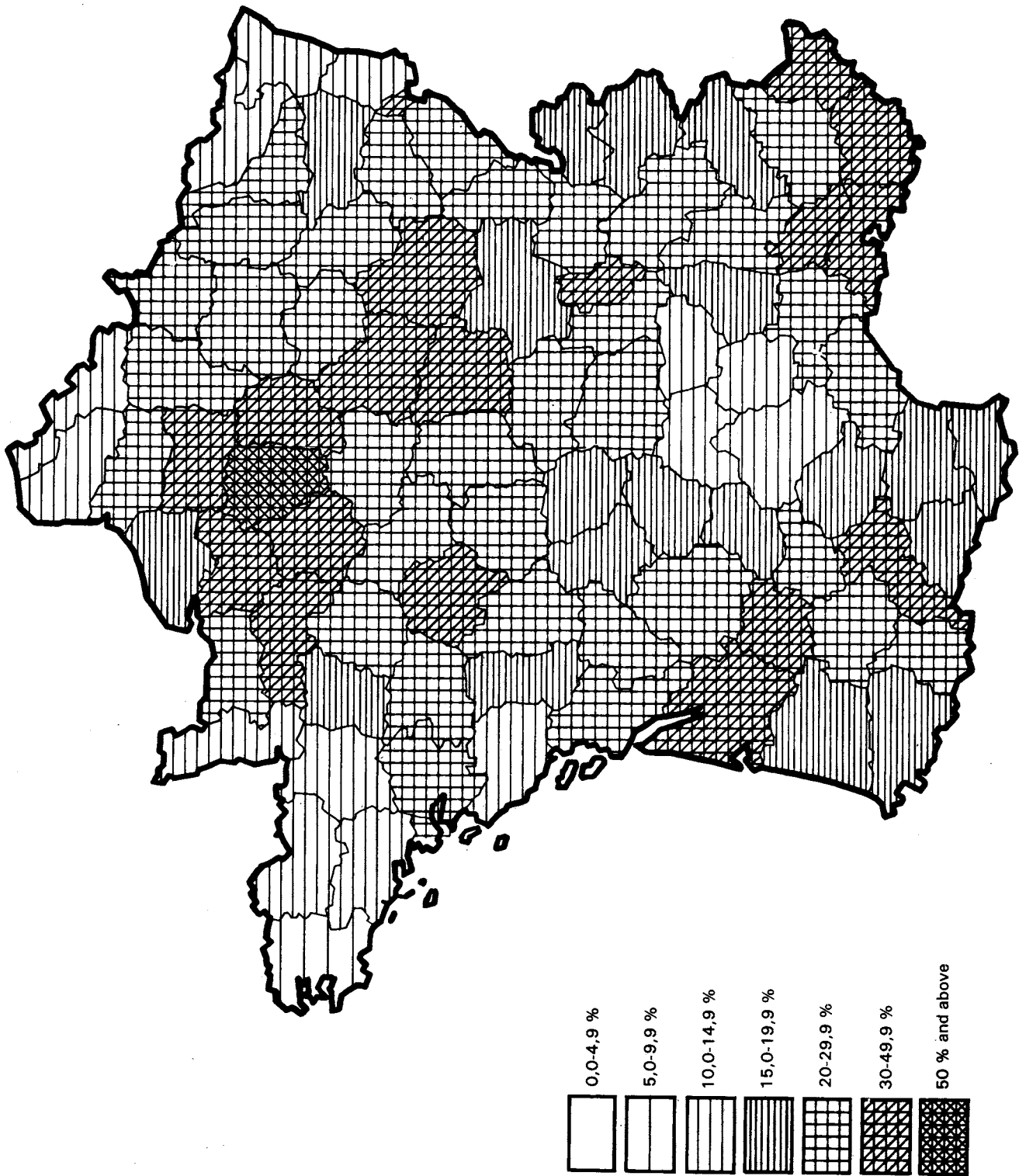
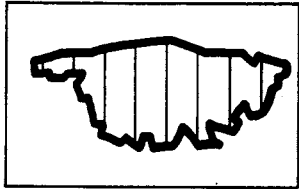
It remains for us to consider international migrations during the period from 1946 to 1954 since once again the period 1936-1946 is too abnormal. After a peak of 2,715,000 foreigners in France in 1931 (over 361,000 naturalized persons), the foreign population fell to 1,744,000 in 1946 but the number of naturalized persons rose sharply to 853,000. In 1954, there were 1,765,000 foreigners³⁵ and 1,068,000 naturalized persons. This growth in the number of naturalized persons was due to another amendment to the regulations, which came into force in 1945.

As immigration was organized by the public authorities from 1946 on, statistics are available on the number of aliens entering France throughout this period. As, however, the families of officially admitted workers were not yet counted, the figure is estimated indirectly. For 1946-1954, the records show nearly 300,000 aliens and nearly 920,000 Algerians (not including women and children) entering France. These figures, low in comparison to subsequent ones, reveal that this migration included an increasing number of return journeys to the home country. The estimated balance of arrivals and departures of Algerians was about 200,000 as against 920,000 arrivals. The trend then is increasingly towards a short-term immigration.

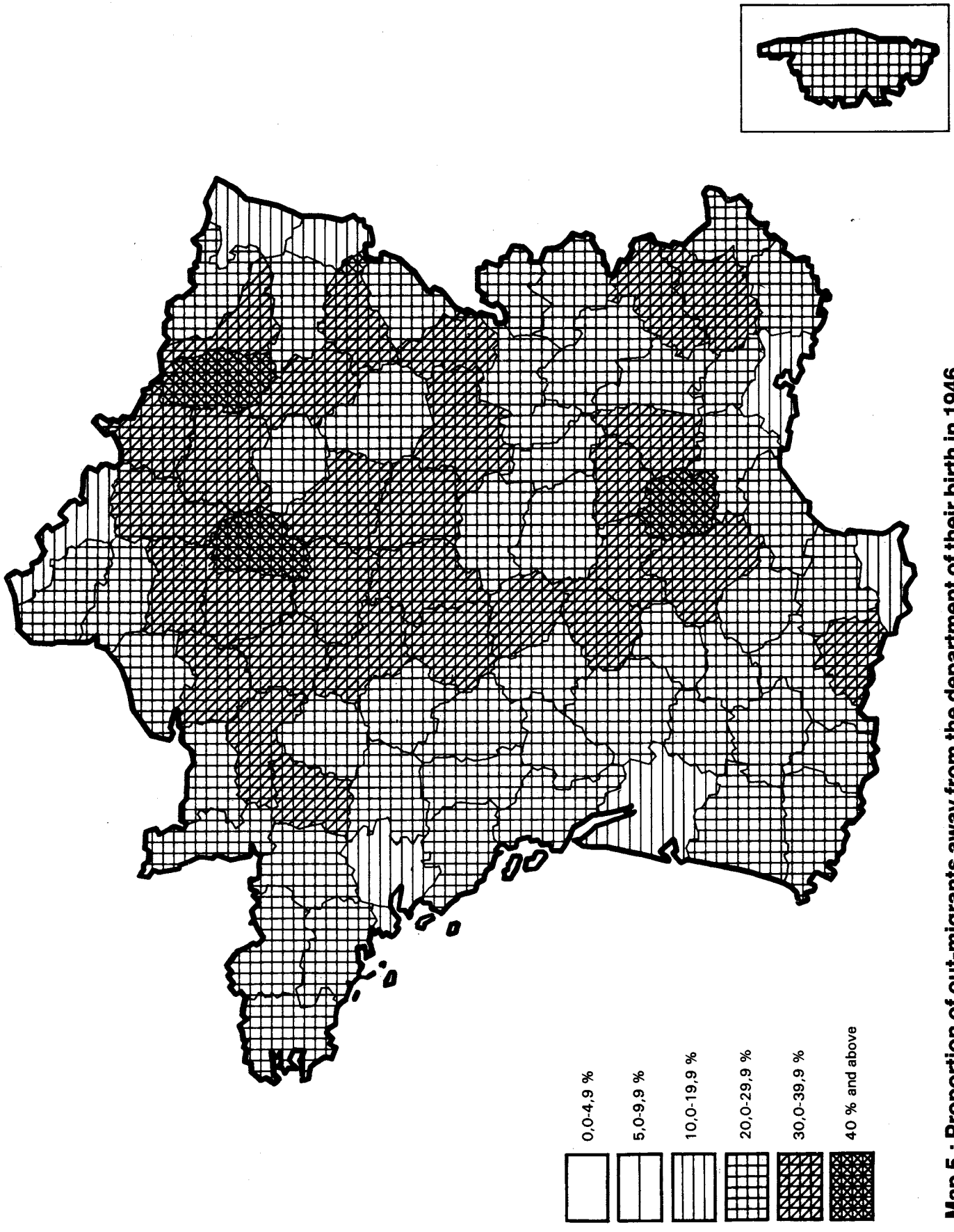
Estimates of French emigration to foreign countries are very poor. The official source—registration at consulates—put the number of French people abroad at 275,000 in 1950. However, a more accurate study by the Ministry of Foreign Affairs³⁶ gave the number as 420,000. Clearly, then, the number of French people abroad is far from negligible.

(c) Evaluation of urbanization in France from 1806 to 1946

We have seen how the industrialization of France was paralleled by the concentration of the population in a number of urban areas. By employing the conventional definition of an urban area (a concentration of over 2,000 inhabitants living in the administrative centre [chef lieu])



Map 4.: Proportion of non-native population in each department in 1946



Map 5.: Proportion of out-migrants away from the department of their birth in 1946

the concentration can be described in quantitative terms.

Whereas in 1806 about 5,455,000 French people—or less than 19 per cent of the total population—lived in an urban commune, in 1851 the figure was 9,135,000 or 25.5 of the total population, in 1901 about 16,000,000 or about 41 per cent and in 1946 21,200,000 or over 53 per cent of the total population. The urban and rural populations were roughly equal in around 1930.

The rural population reached its maximum level in about 1850: from 23,650,000 in 1806 it rose to 26,700,000 in the censuses of 1846 and 1851 before decreasing to 23,000,000 in 1901 and 18,645,000 in 1946. It should be noted, however, that this population was by no means entirely agricultural. As we have already pointed out, in the early nineteenth century, the village formed an economic unit in which most trades were actively pursued and that in the middle of the twentieth century, despite the demise of these occupations, many urban workers kept a place of residence in the country because of easier transportation. As for the strictly agricultural population,³⁷ it had become a minority long before 1930, around 1880 in fact. From about 53 per cent in 1856 it had fallen to no more than 25.3 per cent of the French population by 1946.

It is possible to give a more accurate idea of the number leaving the land since 1896³⁸ by comparing the generations at successive censuses. This yields the estimated number of men actively employed in agriculture who left for other employment and of sons of agricultural workers who chose a different occupation. Between 1896 and 1931 such departures remained very steady at 35,000 per year, with a maximum of 51,000 a year between 1906 and 1911 and a minimum of 22,000 a year between 1901 and 1906. The number leaving fell sharply with the crisis of the thirties and the Second World War to an estimated 13,000 per year. As we shall see, the number of departures rose considerably after 1946.

Let us now look briefly at how the major French cities evolved.

In 1801, Paris covered an area of 3,438 hectares and had a population of some 550,000 inhabitants. The Law of 16 July 1859 extended the city area to over 8,500 hectares after which, in 1861, its population was nearly 1,700,000. The city quickly burst its inner boundaries and overflowed not only into the département of Seine but also into Seine-et-Oise. By 1901 Paris itself had 2,714,000 inhabitants but a further 956,000 people (as against only 258,000 in 1861) were living in the Seine suburbs. From the beginning of the twentieth century one has to add the population of Seine-et-Oise which gives, in 1946, 2,725,000 inhabitants for the city of Paris, 2,050,000 for the Seine suburbs and 1,414,000

for Seine-et-Oise, or over 6,000,000 inhabitants in all. This brings out clearly the magnitude of the migratory flows to the capital and its suburbs.

In 1946, Marseilles ranked second among the cities of France. From 111,000 inhabitants in 1801 it reached nearly 200,000 in 1851, 550,000 in 1911 and 636,000 in 1946. One should add the population living in the suburban communes which were beginning to stretch beyond the Marseilles boundaries, but the numbers involved can be said to be fairly small. In short, the population of Marseilles increased sixfold in 150 years.

The third largest city is Lyons, which began with roughly the same population as Marseilles in 1801 (109,000 inhabitants) but grew more slowly, reaching 177,000 in 1851 and 460,000 in 1946. It should be noted however that, in 1946, one has to add the commune of Villeurbanne with over 80,000 inhabitants, which gave Lyons a total population of 540,000 in 1946.

Toulouse and Bordeaux come next. From a population of 50,000 and 90,000 inhabitants respectively in 1801, they reached about 260,000 in 1946. They are followed by Nice and Nantes, the only other cities to exceed 200,000 inhabitants in 1946, by which date only twenty-two towns had a population of over 100,000 inhabitants, their combined total population being about a quarter of the population of France. This shows clearly the extent to which the population became concentrated in a few cities over these 150 years.

Conclusion

At the end of this period of 150 years, one can appreciate the importance of the changes in the economic space which accompany the demographic changes in birth and death rates. This period represents the transition from a decentralized world of agriculture to an industrial world concentrated on a few regional capitals and large towns. This transition took place through changes in the types of migration encountered: at first most moves were mainly temporary but they gradually became much more permanent, more like what is usually meant by the term 'migration'. The family and community dimension 'played a decreasing role as time went on, with the restricted family eventually predominating. The political dimension, on the other hand, gained in importance and was strengthened by the two world wars which, at those critical stages, crystallized political feelings. The following period will show how important the political dimension was to become.

1. On this subject, see J. Houdaille, 'Pertes de l'armée de terre sous le Premier Empire, d'après les registres matricules', *Population*, n° 1, 1972, pp. 27-50 and L. Henry and Y. Blayo: La population de la France de 1740 à 1860', *Population*, special issue, 1975, pp. 104-107.

2. On this subject, see E. Van de Walle, 'The female population of France in the nineteenth century', Princeton University Press, 1974, and S. Preston and E. Van de Walle, 'Urban French mortality in the nineteenth century', *Population Studies*, n° 2, 1978, pp. 275-297.

3. The rest of this paragraph considers only the life expectancy of women, for whom more data are available.

4. See Chapter I, note 4.

5. See E. Van de Walle, *op. cit.* (2).

6. Note that no information is available for the départements of Meurthe-et-Moselle, Moselle, Haut-Rhin, Bas-Rhin, which, because they were annexed by Germany or divided up in the course of the nineteenth century, do not lend themselves to the reconstruction carried out by E. Van de Walle.

7. The massive immigration experienced by these cities rules out the reconstruction of Van de Walle. For this period, therefore, we have to fall back on the calculations of P. Depoid. See P. Depoid, 'Reproduction nette en Europe depuis l'origine des statistiques d'état civil', *Etudes démographiques*, n° 1, 1941.

8. These levels of fertility are in fact approached by the départements of Seine and Rhône.

9. These estimates are taken from Adolphe Landry's *Traité de démographie*, 1949, p. 445.

10. For more details see Y. Tugault, 'L'immigration étrangère en France : une nouvelle méthode de mesure', *Population*, n° 4, 1971, pp. 691-705.
11. The territory concerned is that of present-day France.
12. On this subject, see P. Ogden, 'Migration, marriage and the collapse of traditional peasant society in France' in *The Geographical Impact of Migration*, P. White and R. Woods (eds), 1980, pp. 153-179.
13. On this subject, see J. Sutter, 'Evolution de la distance séparant le domicile des futurs époux (Loir-et-Cher 1870-1954, Finistère 1911-1953)', *Population*, n° 2, 1958 pp. 227-258.
The findings presented here derive from the present author's treatment of the data compiled by Sutter.
14. On this subject, see H. Le Bras and E. Todd, *L'invention de la France*, Le Livre de Poche, 1981, pp. 23-66.
15. See A. Chatelain, *Les migrants temporaires en France de 1800 à 1914*, pp. 180-236.
16. Estimated by Chaptal, *De l'industrie française*, Paris, 1819, Vol. 1, p. 174 ff.
17. See R. Herin, 'Les travailleurs saisonniers d'origine étrangère en France' in 'L'exode rural', *Travaux et documents de l'INED*, Cahier n° 59, 1971.
18. This concerns all persons belonging to a household whose head is or was previously employed in agriculture (self-employed or wage-earner).
19. For the beginning of the nineteenth century, in fact, one can calculate only one net migration by indirect methods, that is, by noting the difference between the number of immigrations and the number of emigrations. Clearly the particular characteristics of this 'notional population' cannot be ascertained.
20. See *Histoire de la France rurale*, 3, under the direction of E. Juillard, p. 85.
21. On this subject, see P. Pinchemel, *Structures sociales et dépopulation rurale dans les campagnes picardes de 1836 à 1936*, Armand Colin, 1957.
22. See E. Weber, *Peasants into Frenchmen*, Chatto and Windus, London, 1977, pp. 301-302.
23. See G. Mauco, *Les étrangers en France. Leur rôle dans l'activité économique*, Armand Colin, Paris, 1932, p. 116.
24. See E. Weber, *op. cit.*, pp. 303-338.
25. Quoted by A. Chatelain, *Les migrants temporaires en France de 1800 à 1914*, Publication de l'Université de Lille, p. 27 and 28.
26. For this estimate see A. Corbin, *Archaïsme et modernité en Limousin au XIX^e siècle*, Vol. 1, Marcel Rivière et Cie, pp. 180-225.
27. These estimates are close to those of A. Chatelain, *op. cit.*, pp. 44-50.
28. The 1852 agricultural survey gave more than 20,000 temporary migrations for agricultural purposes from the Alps (excluding Savoie and Haute-Savoie, and the Comté of Nice).
29. For this estimate, see Y. Tugault, 'La mesure de la mobilité', *Travaux et documents de l'INED*, Cahier n° 67, 1973.
30. See H. Bunle, 'Mouvements migratoires entre la France et l'étranger', *Etudes démographiques*, n° 4, 1943.
31. Another estimate, by Y. Tugault, produces an annual intake of 31,000 or 35,000 foreigners, depending on the assumptions made, for the period 1881-1911.
32. This estimate is on the low side because, until 1960, certain arrivals were not recorded.
33. It was decided not to consider net migration for the period 1936-1946 because the effect of the Second World War considerably altered the results obtained for the periods immediately before and immediately after it.
34. This figure was obtained by means of INED retrospective surveys.
35. Muslim Algerians, although at the time legally of French nationality, are here counted as foreigners so as to facilitate statistical comparison.
36. See 'Français et institutions françaises à l'étranger en 1950. Résultats de l'enquête du ministère des Affaires étrangères', INSEE, 1950.
37. All persons belonging to households whose head is or was previously employed in agriculture.
38. See J.F. Royer, 'L'exode agricole va-t-il tarir?' *Economie et statistique*, n° 79, 1976, pp. 64-68.

Summary

In the course of these 150 years we examine trends in the national distribution of population occasioned by a further increase in population and the industrial revolution which, beginning in an essentially agricultural economy, ushered in an economy at first dominated by industry and later by the tertiary sector. These changes took shape through the concentration of industries, previously scattered throughout the country, into a number of urban centres and through the growing specialization of agricultural regions. In consequence, the early nineteenth century saw a sharp increase in temporary moves on the part of both agricultural workers and urban workers. In the second half of the nineteenth century and the early twentieth century, however, the mechanization of agriculture put an end to temporary agricultural migrations while the concentration of people in urban areas indicates more and more permanent migrations to the towns and cities. This movement was accompanied by increasing international migration, which provided labour for those jobs at the bottom of the social ladder which French people no longer wanted. At the same time, the model of the restricted family, the type which is the most conducive to mobility, became the normal pattern throughout France and the political dimension of the perception of space emerged, one particular consequence being a start to the control of international migrations.

Contemporary mobility and migration

Introduction

As in the previous chapters we shall describe the main changes in French population trends from 1946 to 1975¹ before turning to those affecting geographical mobility. As much more accurate data are available for this period than for the earlier ones we shall be able to expand the quantitative section. Here we shall merely sketch in the changes, which have been described in sufficient detail elsewhere.²

First, mortality continued to fall throughout this period, from 13 per 1,000 in 1946 to around 10.6 per 1,000 in the 1970s. The success achieved in the effort to defer death comes out even more clearly when the effect of the age structure is eliminated by calculating life expectancy at birth. For men, the latter rose from 59.9 years in 1946 to 69 years in 1975 and for women, from 65.1 to 76.9 years. In other words, life expectancy has increased by about ten years in a very short period of time and the gap between men and women is getting wider.

Differences in mortality between départements remain considerable although they have narrowed slightly, and their territorial distribution is roughly speaking the converse of the pattern of fertility: a low life expectancy in Brittany, Normandy, the north of France, Lorraine and Alsace as against a high fertility in these regions. These differences in mortality are no longer connected with urbanization but are more likely to depend on the hospital facilities of the regions concerned and on the incidence of alcoholism in some of them. At present, the towns and country areas of each region form part of the same medical and social structure with the result that differences between them are minimal in comparison with interregional differences.

Secondly, the birth rate, whose steady downward trend over the previous 150 years has already been described, showed two sudden rises which had a profound effect on the structure of the French population. A glance at the figures brings them out clearly: after the war the birth rates were over 21 per 1,000, equalling those observed after the First World War; they subsequently fell quite sharply down to around 18 per 1,000 by the early nineteen sixties and then continued to decline, reaching 14 per 1,000 in 1975, a rate that is close to the minimum. Since then the birth rate has not fallen very much.

Once again, these birth rates reflect the age structure and this effect must be eliminated in order to clarify the picture. The situation changes when a total fertility rate is calculated: there is still an initial post-war peak of three children per woman but the rate then drops until a minimum of 2.7 children per woman is reached between 1953 and 1958; it then rises to a new peak of 2.9 children per woman in 1964 before dropping sharply right down to 1.8 children per woman in 1976.³ In 1975 this rate

registered 1.9 children per woman, very close to the minimum.

The rates for each département again varied greatly, though the differences narrowed somewhat over the period in question. However, the pattern that was observed at the beginning of the twentieth century changes little over the period: it displays the same 'crescent of fertility' stretching over the various regions of the west, north and east of France.

International migrations, on the other hand, rose sharply during this time. As before, we shall consider only trends in net migration, which increased from an annual average intake of 42,000 between 1946 and 1954 to one of 180,000 between 1954 and 1968 and 117,000 between 1968 and 1975. Since 1974, strictly enforced political measures have kept this immigration very low and the net balance with foreign countries can be regarded as zero since 1975. In short, a net intake of nearly 3,700,000 foreign persons has contributed to the growth of the population in France. The population census figures, which distinguish between aliens and naturalized persons, show a rise from 1,744,000 aliens and 853,000 naturalized persons in 1946 to 3,442,000 aliens and 1,392,000 naturalized persons in 1975.

The combined effect of these three phenomena has brought about a further increase in the French population. After remaining stable for half a century at around 40 million inhabitants, it rose to 40,500,000 in 1946, 46,520,000 in 1962⁴ and 52,656,000 in 1975.

We must now look at the effect of this new rise on the spatial distribution of the French population.

1. Mobility regarded from various standpoints

As in the previous chapters, we shall observe spatial changes from various standpoints.

(a) The family

We began with a diversified range of family types though, even in the eighteenth century, certain regions had already adopted the restricted family model which later became the general pattern as a result of urbanization and industrial development. Though in the agricultural world of the past the family sphere had been very extensive, it has become smaller and smaller in modern society. Its functions are tending to become more limited and the family of today implies a quite different spatial dimension.

The changes observed in the rural communes of Ardèche have already been mentioned. The proportion of marriages between partners from the same commune fell from 35 per cent in 1933-1937 to 16 per cent in 1966-1970. This change,

however, was due above all to the depopulation of such communes. On the other hand, the growing number of marriages between partners from regions widely separated in space indicates very clearly that the bounds of the rural commune have been broken down. Examination of the non-agricultural population produces even more striking figures: whereas the partners in 90 per cent of marriages among the agricultural population came from a radius of less than 20 km, fewer than 50 per cent of marriages among the non-agricultural population followed this pattern.

However, it emerges that in spite of the mixing of the population as a result of urban and industrial development, and in spite of the great amount of travel connected with holidays or recreation, most marriages are still contracted between persons from the same geographical area. A 1959 survey⁵ showed that in 86 per cent of recent marriages both partners were living in the same département before marriage. Geographical affinity is therefore still a powerful force, as are occupational, social or cultural affinities.

We have already stressed the fact that the nuclear family was the best model to facilitate the considerable geographical mobility required by the present-day economy. Accordingly, we shall now look at the matter from this standpoint.

(b) The economy

In order to describe the economic changes of the last thirty years in simple terms we shall break down the working population into three broad sectors of economic activity:

- the primary sector:
 - fishing
 - agriculture
 - forestry
- the secondary sector:
 - extractive industries
 - construction
 - public works
 - other manufacturing industries
- the tertiary sector:
 - transport
 - business
 - banking
 - insurance
 - services
 - administration
 - armed forces and police.

It is easy to see that the primary sector corresponds to the agricultural world, the changes in which were discussed in the Chapter II, while the secondary sector corresponds to industry and the tertiary sector to services.

In 1946, 37.2 per cent of the economically active population was employed in the primary sector but only 19.9 per cent in 1962 and 9.5 per cent in 1975. This is a measure of the important changes that have affected rural communities during this period. In the first place, agriculture has gone through a period of unprecedented mechanization: the number of tractors rose tenfold between 1950 and 1973, from 137,000 to 1,330,000. The number of combine harvesters rose from a few thousand to 185,000 in 1973 and of pick-up balers from zero in 1950 to over 300,000 in 1973. Secondly, the rapid spread of mineral fertilizers also revolutionized earlier methods of cultivation: the practice of fallowing receded once and for all, from 1,600,000 hectares in 1949 to only 200,000 hectares in 1974. There was then an unprecedented increase in yields: between 1949 and 1971, wheat yields rose from 29 to 39 quintals per hectare and maize yields from 6 to 55 quintals per

hectare. Another consequence was a redistribution of the land, which was gradually concentrated into large farms. Later we shall see how these factors affected the mobility of agricultural workers.

The secondary sector employed 30.5 per cent of the working population in 1946, 38.2 per cent in 1962 and 39.2 per cent in 1975. It was therefore mainly between 1946 and 1962 that industrial growth was strongest, with a noteworthy expansion in metallurgy, construction and public works. The localization of most major industries still followed a pattern close to the one that had become established in the nineteenth and early twentieth centuries. During this period there was a concentration of large firms, marked by a decrease in their number (especially between 1965 and 1969), but at the same time other smaller businesses were decentralized into areas which had never had much industry. This dual trend is not contradictory since it was the larger industrial enterprises which tended to concentrate and smaller businesses which decentralized. It is therefore important to gauge the impact of this decentralization, which should in theory avoid the need for migration, since these smaller businesses were set up in areas with a potential workforce.

The number of people engaged in the tertiary sector rose steadily, from 32.3 per cent in 1946 to 41.9 per cent in 1962 and 51.3 per cent in 1975. From this date the tertiary sector occupied over half the economically active population. There is reason to believe that we are now entering a new phase in the spatial distribution of the population since tertiary establishments are much less dependent on geographical constraints (ports, major road or rail junctions, readily available raw materials, etc.) than industrial enterprises of the secondary sector.

Having completed this general picture of trends in the three sectors of the French economy, we shall now turn to their impact on population movements and migrations.

Let us begin with the agricultural community and its internal mobility. Firstly the seasonal movements, whose growth during the nineteenth century and sharp fall in the early twentieth century have already been described, developed once again. The seasonal moves of foreigners expanded greatly from the early 1950s onwards, a trend which was intensified by the shortage of French agricultural workers and the short duration of the harvest season. The annual number involved, small in 1946 (a little over 10,000,⁶ reached 30,000 by 1952, 100,000 in 1960 and steadied at around 130,000 in 1975. These seasonal workers were wanted for specific tasks. Some were for hoeing and gathering the beet crop; these movements were long established since there were already some 10,000 Belgian beet workers in the period between 1920 and 1937. They were replaced after 1950 by Italians, whose numbers reached 30,000 in 1958 and then fell sharply. They were replaced by a Spanish workforce which numbered about 30,000 in 1965—but their numbers then declined considerably to only about 10,000 seasonal workers for the 1973 beet crop. This decline was due to new techniques of cultivation which reduced the need for seasonal workers. The second activity of seasonal workers was the wine harvest, which calls for a large work-force for a short period of time. Once again the drift of French people away from the countryside quickly made foreign workers necessary. These foreigners have only been recorded since 1960 but there is reason to believe that they were already coming in considerable numbers before that date. In 1960 they numbered over 40,000, and 80,000 by 1970. Mostly Spanish, they generally made for

Languedoc and Gironde. Next came the rice-workers, whose number reached a peak at around 7,000 in 1960-1962 and then fell sharply until by 1973 there were almost none. This decline is to be accounted for largely by the use of mechanical transplanters. Once again, these seasonal workers were all from Spain. To complete the list, various other agricultural activities occupied an increasing number of seasonal workers—about 8,000 in 1960 and nearly 45,000 in 1975.

The question concerning place of residence at the previous census gives a clearer indication of the migrations of agricultural workers. Although the estimate is made by indirect means, it yields valuable information. In 1962, for example, it emerges that where as the proportion of intercommunal migrants in the economically active population as a whole was 24.9 per cent, the figure was 13.7 per cent among agricultural workers. The degree of mobility was thus far from negligible, as it had been in the past, and may be said to reflect an annual migration rate of around 3 per cent.⁷

The third migratory movement involving the agricultural population was the departure to industrial and urban employment. The scale of this movement is much more difficult to gauge as the censuses only identify occupational status at the date of the census and not before. Moreover, it is interesting to know how many sons of agricultural workers did not take up farming but preferred to find employment outside the farming sector. Comparison of the census returns with other sources such as the survey on 'occupational training and qualifications' [FQP—formation-qualification professionnelles] and the INSEE employment survey fills this gap and clarifies the pattern of migratory flows from agriculture towards other activities.⁸ For men, these flows amounted to 67,000 departures per year between 1946 and 1954, 79,000 from 1954 to 1962, 71,000 from 1962 to 1968 and 70,000 from 1968 to 1975. For women (from 1962) there were 46,000 departures per year between 1962 and 1968 and 43,000 between 1968 and 1975. The fact that departures of males before the Second World War were running at an annual rate of 13,000 per year is an indication of how much these flows have increased.

Turning now to the rural community in general and not just those engaged in agriculture, other movements can be discerned. We shall deal later, when we turn to recreation, with travel to second homes or holidays in the country. There exist, however, other migrations more closely linked to the economic dimension. We can attempt to estimate them in various ways. Let us first take total population. Between 1954 and 1962, there were over 2,400,000 departures from rural areas and only 1,350,000 arrivals, equivalent to an annual out-migration rate of 24.3 per 1,000 as against an in-migration rate of 16.8 per 1,000. Clearly, rural areas were losing a lot of people during this first period; by 1968-1975, however, this outflow had all but stopped and we find that, although the number of departures was much the same (2,276,000) there were nearly 2,100,000 new arrivals. This represents an annual out-migration rate of 33.8 per 1,000 and an in-migration rate of 32 per 1,000: as many people were thus being attracted to rural areas as were being driven away. However, not all rural areas had the same pull. If we distinguish between rural areas in the vicinity of industrial and urban centres and more remote rural areas it turns out that much of this pull is towards rural areas close to the towns where urban workers are enabled to settle by improved means of transport. Indeed, these rural areas colonized by an urban population show an

out-migration rate of 47 per 1,000 and an in-migration rate of 56 per 1,000 whereas for more remote areas the ratio is the other way round: out-migration 37.2 per 1,000 and in-migration 29 per 1,000.

When we consider the working population, we find that certain socio-professional categories (industrial and business management, the liberal professions and senior executives) have moved to rural areas, even deep in the countryside, since the previous census. We should also note the effect of industrial decentralization policies and of policies to attract industry to rural areas which obviate the need for the local inhabitants to migrate to the towns but on the other hand make it possible to pay these workers lower wages.

When we examine the various age-groups, we find that rural areas—both those near the towns and those further away—are now attracting many retired people. There is reason to believe that many of those involved are returning to their native regions or settling in rural areas offering a favourable climate or opportunities for recreation.

Let us now turn to the towns where we shall distinguish, when necessary, between industry and services. We shall, in particular, be looking at the temporary movements fostered by this new 'space'.

It has already been pointed out that, as early as the beginning of the century, the family space was becoming increasingly separated from the economic space. The practice of commuting between home and workplace provided a link between these two spaces. This separation became more marked with time and an INSEE survey carried out in 1967 enables us to describe these movements more accurately.⁹ The first point is that they chiefly concern the non-agricultural population since only 5.4 per cent of self-employed agricultural workers have a regular place of work away from home. Although the proportion rises when we turn to agricultural wage-earners, who in fact constitute a very small fraction of the population (fewer than 600,000 persons in 1968), we find the exactly opposite situation when we examine non-agricultural occupations: nearly 90 per cent of office workers have a regular place of work away from home. Their average journey is around 5 km for towns other than the Paris conurbation, where it can be as much as 17 km for those living in the outer suburbs. Similarly, the average journey time is under twenty minutes except in the case of Paris, where it ranges from twenty-seven to forty-four minutes. These figures suggest the importance of these journeys which have a big place in people's lives. The means of transport used vary greatly: 26 per cent go on foot, about 25 per cent go by two wheeled vehicle, (bicycle, moped, etc.), about 24 per cent go by car, 21 per cent use public transport and the rest go by other means (transport provided by the employer, taxi, etc.).

It should be observed that this survey took place at a particular time (1967) and that the rapid expansion of certain means of transport is quickly modifying some of these figures. Present-day society has also created other reasons for making journeys.

To bring out these changes and these other types of journey we shall use a more recent survey (1976) carried out by INSEE and the Direction régionale de l'équipement de l'Ile-de-France.¹⁰ Some 60 per cent of the 18 million journeys per day in the Ile-de-France are connected with employment or school (of these, 31 per cent are 'commuting' in the strict sense, 13 per cent are journeys connected with employment and 10 per cent are journeys related to school or university). On the other hand, 39 per cent of the journeys are for personal reasons (shopping, recreation,

visits and so forth). About 54 per cent of the journeys are by private car and 31 per cent by public transport. The distance covered and time spent on these journeys naturally vary considerably.

Other means of transport such as trains, cars, and, for long journeys, planes and even ships, are used for professional reasons. Unfortunately it is not possible to distinguish, among these movements, between journeys connected with employment and those connected with recreation, family visits and so on. We shall therefore consider them together with leisure travel.

Certain means of communication, such as postal services, the telephone and other types of telecommunication, obviate the need for travel by individuals. The number of letters posted, for example, rose in the ten years between 1969 and 1978 from 5,782 million to 7,574 million items while use of the telephone, expressed in basic call charges, rose from 11,708 million units in 1968 to 45,579 million in 1978. These new means of communication are destined largely to replace travel by individuals.

Let us close this list of temporary movements by noting the small number of seasonal workers coming from other countries in industry and business, which increased from less than 5,000 in 1960 to about 8,000 in 1975.

Turning now to migrations for essentially economic reasons, the first point to note is that these reasons are hard to distinguish from others more closely connected with the family (marriage, increase in family size, etc.) or with other factors. For one thing, the censuses include no questions on these reasons and, for another, the reasons themselves are often interconnected, so much so that the surveys which identify them do not readily differentiate between them. It must be recognized that the divisions used in this study need to be supplemented by a more comprehensive view but they are nevertheless useful as a first approach. We shall therefore consider migrations by the economically active population, without forgetting the above criticism.

An examination of changes of commune by the economically active population (except people in agriculture) between 1954 and 1962 produces an annual migration rate of around 7 per cent. This is higher than for the farming community where the figure is only 3 per cent. Taking industry and the tertiary sector separately, this rate was, in 1962, about 6 per cent for the former and 8 per cent for the latter. Clearly, there has been considerable mixing of the economically active population, particularly in the tertiary sector. Although there can be no question in this study of going into details, we can characterize these migrations by providing some information on their composition and direction in the section below which is devoted more to quantitative considerations.

We now come to the last aspect of the economic approach which concerns international migrations. Having already mentioned the scale of net migration, we shall now examine its composition. The ONI statistics allow us to estimate the flow of arrivals but, unfortunately, those returning to their native country or leaving for other countries are not recorded. Since the time these foreigners spend in France can vary greatly, the net effect of this immigration varies widely depending on whether the period of residence is short or very long. With this reservation let us now consider the arrivals of foreign workers.

During the immediate post-war period, large numbers of immigrants seemed necessary to revitalize the economy but shortcomings in the reception arrangements, lack of housing and inadequate co-ordination with the countries that were

potential suppliers of labour kept this immigration very low: from around 50,000 workers per year prior to 1950 it fell to under 20,000 per year between 1950 and 1955.¹¹ It should be noted that these figures do not include Algerian workers who, over the period 1946-1955, made up the majority of arrivals and entered France at an average rate of over 110,000 per year. But the recorded departures of these workers were almost as numerous as the arrivals, averaging nearly 90,000 per year. The net annual intake of Algerians was therefore low, in the region of 20,000. The scale on which they returned home, which it has been possible to ascertain in the case of Algerian workers, shows clearly that statistics concerning arrivals alone are insufficient.

Most of the foreigners entering France between 1946 and 1955 were Italian and 30 per cent of them sought employment in agriculture. By 1950-1955, however, as many foreigners made for the construction industry which was later to become a key sector.

A new period began in 1956. For one thing the Algerian War cut down immigration from that country while at the same time longer military service deprived industry of the young men who would otherwise have been entering the labour market. On the other hand, the economic revival, which gathered momentum from 1956, required a larger workforce. The Italians were the first to respond and were followed in 1960 by Spaniards. Between 1956 and 1961 more than 70,000 foreign workers entered France each year. The year 1962 marked an important turning point in French economic development: the end of the Algerian War produced a massive exodus of Europeans and Harkis living in Algeria, more than 900,000 altogether including at least 300,000 economically active, and the return to the labour market of nearly 130,000 conscripted soldiers. This sudden change in population sharply increased overall demand and foreign immigration, far from decreasing or stabilizing, rose to a high level until the crisis of 1974. From 1962 to 1974, an average of 130,000 foreign workers entered France each year in addition to 260,000 Algerian workers.¹² Among the European workers, Spaniards were the most numerous at the beginning of the period but had been overtaken by the Portuguese by 1966. There were also an increasing number of Moroccans, Tunisians and Turks. A large majority of these foreigners made for the construction industry, which employed 41 per cent of the total foreign labour force in 1969. Since then the proportion fell to under 30 per cent.

Throughout this last period, the State extended its control, as we shall see in more detail when we come to the political dimension of space, until the government finally decided in July 1974 to halt international immigration altogether. This measure, introduced for economic reasons, marked a new phase in the history of these migrations.

(c) The growing importance of politics

We have shown in previous chapters how the political dimension of space emerged and began to develop. Largely dominated by wars, military service and so forth, it had little influence on the peacetime movements of French people or on international migrations.

The military aspect naturally continued throughout the current period, marked in particular by the Algerian war, as we have seen. But other types of political space were evolving.

In the first place, just after the Second World War, the public authorities rapidly became aware of regional disparities in development. We have already called attention to J.F. Gravier's 1947 word of warning in his book *Paris et le désert français*. France's ageing system of production, the over-development of the Paris region and the disparities between regions brought the politicians face to face with this enormous problem. The public authorities therefore attempted to control this trend, which had many deep-rooted causes, some of them contradictory. However, the DATAR (Délégation à l'Aménagement du Territoire et à l'Action Régionale—Commission on development planning and regional action) was not set up until 1963 though the way for it had been prepared by various organizations and plans, such as the National Territorial Development Plan (Plan national d'aménagement du territoire) in 1950, the Committees on Economic Expansion at region or département level (established in 1954), the 1955 Programme of Regional Action (Programme d'action régionale) and the 1962 Territorial Development Plan (Plan d'aménagement du territoire). This growing State intervention in decisions concerning the location of new factories or new housing schemes paved the way for the DATAR. This body was charged with co-ordinating the action of the various ministries and with harmonizing the measures to encourage decentralization. It was also given financial resources to implement a coherent policy of territorial development for which provision had not been made in the budgets of the various ministries. The DATAR was closely associated with drawing up the Plan, which focused on the long term and undertook forward studies on the technical, economic and social aspects of national development in conjunction with regional development.

It became evident that this two-pronged intervention led the political authorities to encourage a spatial development that seemed to them most likely to contribute to certain goals. It is therefore worth attempting to bring out the more specific objectives regarding the spatial distribution of the population.

The first of these objectives was to slow down the growth of the Paris region which, if the trends observed at the beginning of this period were to continue, would attract an ever-larger fraction of the French population. Development subsidies were therefore offered to industrial undertakings or business concerns which established, decentralized, converted or expanded job-creating activities in certain regions of the west, the south-west, the Massif Central, Languedoc, the north, the east and Corsica. These subsidies could be supplemented by decentralization grants, tax incentives and special long-term loans. Assistance could also be sought from the local regional authorities.

The 1968 and 1975 censuses confirmed not only that the pull of the Paris region had become less but also, in the case of the 1975 one, that departures for the provinces were more numerous than arrivals. Although this trend developed slowly, since investors took time to respond to the new opportunities offered, it was none the less real. During the 1950s two-thirds of firms were in fact located within 200 km of the capital and it was not until later that movements towards more distant regions were observed. Certain regions—Brittany, Pays de la Loire, Languedoc-Roussillon and Aquitaine, for example—which had earlier had a net emigration on a large scale now had a net inward migration.

In spite of this success, it is important to take our analysis further and examine the effectiveness of the measures taken by comparing trends in regions where

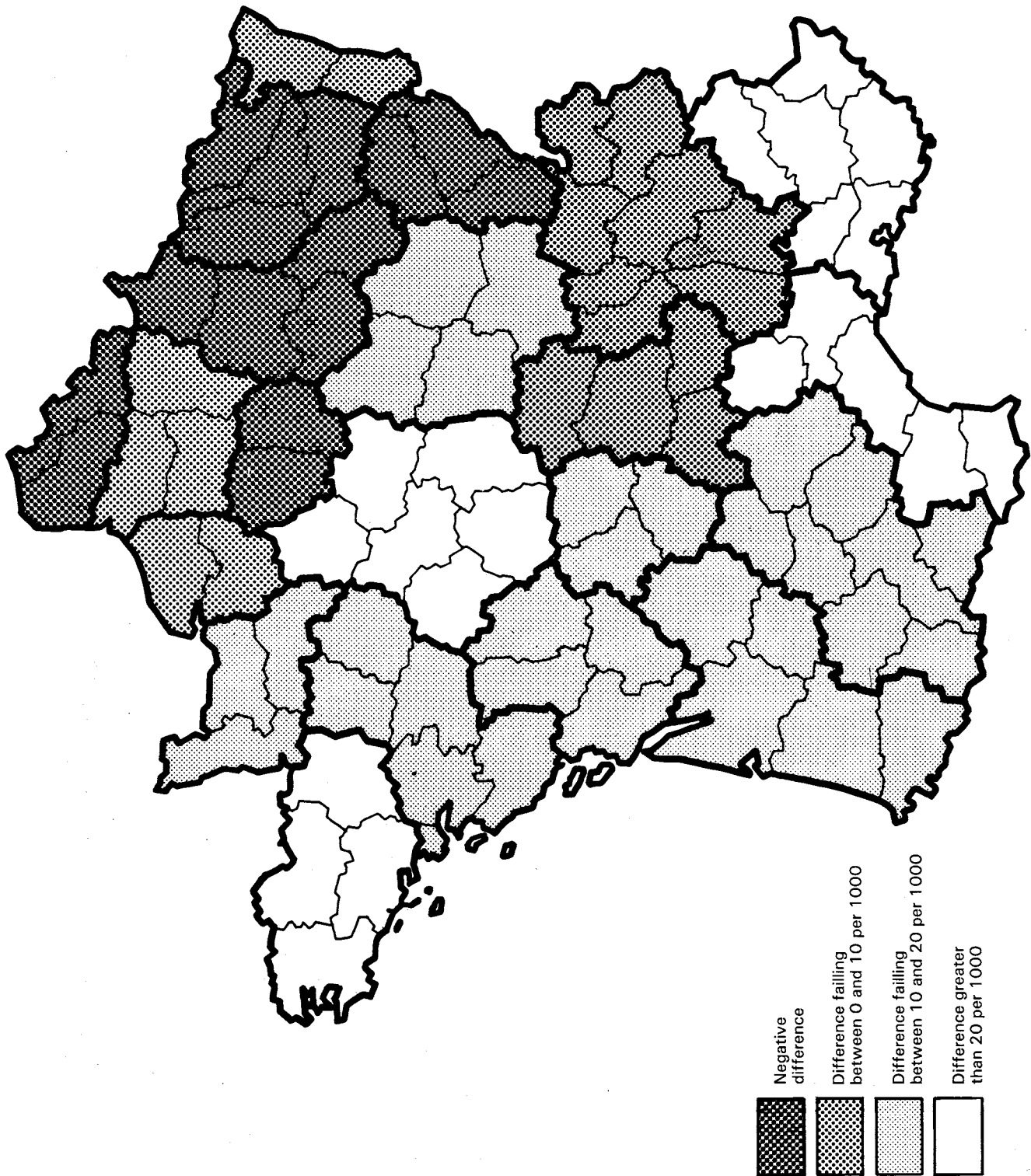
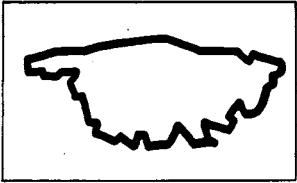
incentives were available with trends in other nearby regions without incentives. This analysis has been conducted for the Pays de la Loire, four of whose five départements received State aid to industry while the fifth (Sarthe) did not. The first point is that the proportion of subsidized jobs in the overall growth of the wage-earning sector was between 40 per cent and 60 per cent, in other words fairly low, and suggests that firms were not well informed. In the non-subsidized département, the number of wage-earners grew at the same rate as in the others. In short, State aid, at least in this case, seems to have been a concomitant of development rather than the instigating factor.

If one takes the total population rather than the economically active population the results also seem less clear. Thus the Paris region, still attracts more economically active people than leave Paris for other parts of France, which is a trend opposite to the one observed in its population as a whole. On the other hand, those regions—Brittany, Pays de la Loire, Languedoc-Roussillon, Aquitaine, etc., where a net inward migration had become established do not exhibit this trend in respect of the economically active population. The figures therefore point to the return of retired people or of households many of whom members are not economically active rather than to a reversal of migratory flows concerning the economically active population.

Lastly, there are still big regional disparities in income a fact which runs counter to another DATAR objective. Although the gaps have narrowed a little, per capita income was, in 1975, a third higher in the Ile-de-France than in the Rhône-Alpes region and over half as much again as in the most disadvantaged region, Brittany.

Thus, despite some undeniable successes, political action is far from having brought about a transformation of economic space in France.

Let us now look at the situation in regard to international migrations. In 1946, as we have said, the public authorities set up a National Immigration Office (ONI), a public body responsible for the recruitment and for the selection on medical and professional grounds of foreign workers. It issued residence permits, in theory dependent on possession of a contract stamped by the Ministry of Labour before they entered France. Those immigrants who wished to be joined by their families were required to have accommodation, a measure designed to avoid the creation of more urban or rural slums. From 1948 the function of the ONI was extended to cover the entry of families. Here we see the public authorities taking over responsibility for the directing immigration services and the monitoring of incoming workers. The immigration of such workers was dependent on demand by industry for jobs which could not be performed by the French labour force. This State intervention was effective during the first few years of low immigration but there were soon signs that the State was increasingly losing control of the situation. The ONI's lack of flexibility in admitting workers quickly created bottlenecks: it could not meet the employers' labour needs. Indeed, as far back as 1948, industry had managed to get around this drawback by importing foreign labour illegally and then regularizing the situation of these workers: between 1950 and 1955, 30 per cent to 40 per cent of entries were handled in this way, and the proportion rose to over 50 per cent between 1957 and 1961 and to 80 per cent by 1965. By 1968, the authorities concerned exercised no control over the migratory flows. From 1968 onwards the State attempted to take things in hand and reduce these regularizations, especially in the case of non-skilled workers.



Map 6.: Regions classified according to the size of the difference between the net migration rates for 1968-1975 and 1954-1968

In 1972 a new circular, known as the Fontanet circular, gave effective control of this immigration back to the State. It made recruitment subject to the labour market situation by reasserting that priority must be given to workers already on the national employment market. This circular did have its full impact until 1974 when the slowdown in economic activity and rising unemployment led the public authorities to call a halt to immigration while continuing to allow freedom of entry to the currently negligible flow of workers from EEC countries.

Thus State control of foreign immigration was relaxed for a time but is now effective and very strict.

(d) The other spatial dimensions

It remains for us to look briefly at religion, associative relationships and recreation.

As regards religion, few spatial changes have occurred apart from the people's gradual loss of interest. As for educational space, it has been marked in particular by the steadily increasing numbers studying at ever-higher levels.

Recreational space, on the other hand, has acquired major importance. The introduction of holidays with pay in 1936 opened up new travel opportunities for a growing number of people. In 1964, some 44 per cent of the French population went away on holiday, most of them to the seaside. This holiday travel brought into being a new sector of the economy: the hotel trade, travel agents, and so forth.

Let us begin by examining the development of transport in France, on which this recreational dimension depends. Some journeys of course have economic causes but, as they cannot be distinguished from those connected with recreation, we shall take them together here. For the railways, although the total length of lines in use had fallen slightly—from 41,700 km in 1959 to 34,500 km in 1979—as other means of transport developed, the number of passengers has continued to grow, from 543 million in 1952 to 686 million in 1979. It should be noted, however, that much of this growth is due to the spread of the Paris suburbs. The growth of transport by private car has been much more spectacular: from only a few immediately after the war, the number of private cars grew to over 10 million in 1967 and to 20 million in 1978. France has a dense road network with over 800,000 km of highways and 4,000 km of motorways. Since 1960, air transport too has expanded considerably, especially on scheduled domestic routes. In 1968, some 13 million arrivals and departures were recorded at French airports, and nearly 37 million in 1978. Lastly, sea transport has also increased steadily: 2,800,000 passengers embarked from French ports in 1968 and 6,800,000 in 1978.

Tourism has greatly expanded in parallel with means of transport. In 1978, nearly 52 per cent of the population went on summer holidays and nearly 21 per cent on winter holidays. The corresponding rates for the Paris region were 76 per cent and 37 per cent respectively.¹⁴ Most holiday-makers stayed with relations or friends but many used tents or caravans, rented houses or stayed in second homes. This brings out the close relation between the recreational and associative dimensions.

2. Some quantitative information on the number of internal migrants

In this section we shall look at migrations in France from a more quantitative standpoint.

Firstly, taking the division of France into communes, the annual rate of intercommunal migration rose from an estimated 50 per 1,000 in 1954 to 52 per 1,000 in 1958,

56 per 1,000 in 1965 and 64 per 1,000 in 1971. In other words, mobility has steadily increased throughout France. All the other administrative divisions show the same trend: the annual interregional migration rate rose from 14 per 1,000 in 1958 to 19 per 1,000 in 1971.

The 1975 census included a question on the previous dwelling-place which makes it possible to estimate the annual rate of change of dwelling at over 100 per 1,000. This high mobility is of the same magnitude as observed in the United Kingdom and Japan (120 per 1,000) but lower than the United States and Canada (190 per 1,000).

By calculating annual net internal migration rates we can then compare trends in the various French regions between 1954-1962 and 1968-1975. Map 6 shows that the north, Lorraine, Champagne, France-Comté and the Paris region have less interchange than before with the rest of France; in contrast, the more favoured regions are Provence-Côte d'Azur, Centre and, to a lesser extent, Languedoc-Roussillon and Brittany. It can thus be seen that a change is taking place in the distribution of the population of France.

Let us now see how the towns and rural areas developed over the same period. All towns, irrespective of size, started with a positive net migration but by the end of the period in question the situation was quite different: net migration in the Paris conurbation had become negative and, in towns and cities of over 20,000 inhabitants had been reduced by half. In other words, urbanization is decreasing: most of the growth in the urban population is accounted for by natural increase which remains high because of the age structure of this population.

Rural communes of over 1,000 inhabitants, on the other hand, have seen their net migration, negative at the beginning of the period, become positive towards the end. The least heavily populated rural communes have kept their negative net migration but their losses diminished considerably between 1954 and 1975. If we distinguish between rural communes on the basis of whether or not they form part of an industrial and urban settlement zone, the transition from a negative to a positive net migration is observed in communes of over 200 inhabitants where industrialized rural areas are concerned whereas this transition is observed only in communes of over 2,000 inhabitants in the remote countryside. It can therefore be seen that to a large extent the new migrations of town dwellers to rural areas are migrations to rural areas which are in the vicinity of towns.

Conclusion

The major upheavals experienced by France since the end of the Second World War have led to a new perception of space. On the one hand, the political dimension has taken a much firmer hold with the result that the frontiers were closed to foreign immigration by the end of the period. Economic changes—from the predominance of industry to that of the tertiary sector—have also had a profound impact on the perception of space. From an industrial space concentrated on a few regional capitals or very large cities, the current trend is towards a new space in which centralization is no longer essential and in which new aspirations can take root. The development of ever-quicker means of transport and of telecommunications has also had a big impact not only on recreation-induced mobility but also on the other types of space mentioned above. Lastly, the family space has become smaller and smaller and has become a kind of refuge into which the individual can withdraw in the hope of escaping from the pressures of the outside world.

1. The last population census took place in 1975, which explains why this date was chosen as the limit, though some of the information presented may be more recent.
2. See the annual reports on the demographic situation in France, published by INED.
3. It should be noted that the eventual offspring born to each generation of women ranged from a minimum of two children per woman for women born in 1896 to a maximum of 2.64 per woman for those born in 1931; the rate has since declined, probably to under two children per woman.
4. Mention should be made of a change in the definition of the legal population of France at this date. Soldiers born in metropolitan France but stationed outside France are included in this population from 1962 onwards. If they are excluded, the population here would be only 46,243,000.
5. See A. Girard, 'Le choix du conjoint', *Travaux et documents de l'INED*, Cahier n° 70, 1974; this is the second edition.
6. It should be recalled that until 1960 the arrivals of certain seasonal workers were not recorded.
7. This calculation is made on the assumption that the model described in the article 'Migrants et migrations' applies to this subgroup.
8. On this subject, see M. Gombert, 'De moins en moins d'agriculteurs', *Economie et statistique*, n° 100, 1978, pp. 19-34.
9. See the article by A. Villeneuve, 'Les déplacements domicile-travail', *Economie et statistique*, n° 17, 1970, pp. 3-16.
10. See '18 millions de déplacements quotidiens', Préfecture of the Ile-de-France region, INSEE, June 1978.
11. See G. Tapinos, 'L'immigration étrangère en France', *Travaux et documents de l'INED*, Cahier n° 71, 1975.
12. This figure is for Algerian men; there are also many female immigrants among the working population.
13. See J.L. Grelet and C. Thélot, 'La prime de développement : un rôle incitatif discutable'.
14. For a more detailed picture of these periods of residence, see the surveys carried out by INSEE, especially P. Le Roux, 'Les vacances d'été des Français en 1968', *Economie et statistique*, n° 2, 1969; P. Debreu, 'Les vacances de l'été 1971', *Economie et statistique*, n° 33, 1972; J. Anfré and J.M. Rempp, 'Les vacances des Français', *Economie et statistique*, n° 101, 1978.

Summary

The second half of the twentieth century saw the beginning of a new phase of mobility. Greater control by the political authorities led to stricter controls on foreign immigration, which was brought to a stop in 1974. The impact of the State on spatial mobility in France was also strengthened by the increasing role of national development policies. A high proportion of mobility was still prompted by economic reasons but the growing influence of the tertiary sector introduced changes in economic space, which became less centred on the sources of raw materials, the major junctions in the network of communications and the ports. The expansion of new means of transport (motor car, plane, etc.) modified this space by making it possible to commute over steadily increasing distances and by giving more importance to recreation-induced mobility, tourism and holidays. Lastly, the introduction of telecommunications removed the necessity for travel in many cases.

Conclusions

In the introduction we described a theoretical model which has served as our point of reference in describing the evolution of mobility in France. However, in order to give a more precise account of its various stages, we have had to employ more complex analytical grids. Although each individual represents a particular combination of these grids—a subject with which we must now deal—their various facets are sufficiently different and distinct to offer a very fruitful first approach to the problem. It will be recalled that these systems of relations are: the family, the economy, the political dimension, religion, education, associative and informal relations.

When it is regarded from these diverse standpoints the evolution outlined in this theoretical model, although only partly confirmed, is profoundly modified and enriched. Geographical mobility emerges as the projection on the territorial space of these systems of relations. A system may predominate at a particular time and at other times be of secondary importance.

It is now time to attempt a general synthesis and comparison of the findings of this study.

The first period that was considered, up to the French Revolution, corresponds only in part to the first phase of demographic transition. Although the death and birth rates remained more or less constant, they were already at different levels: the birth rate was higher than the death rate. There was in consequence a steep rise in the French population of nearly 6.5 million persons during the eighteenth century.

How did these systems respond to this growth? How did they make it possible? We have noted the importance at this time of the family structures, which varied considerably from region to region and changed little in the course of the century. The economic structures, on the other hand, although still based essentially on agriculture, began to change: certain regions tended to specialize in certain crops, transport improved, grain was more efficiently stored, and so forth. Indeed, these changes were encouraged by the political authorities who, by establishing an extensive network of roads and canals, fostered such movements. Another point worth noting is that this network of roads, centred on the capital, would serve as the basic pattern for all subsequent transport systems such as railways, motorways and air routes.

The towns, especially those situated on the road network, developed considerably during the eighteenth century, but they were essentially commercial centres or political capitals: industry was still for the most part scattered throughout the rural areas which produced the raw materials needed, such as flax, hemp, timber, water and so on.

The main economic changes, together with the changes due to political factors, increased the mobility of the population. Most of this mobility was seasonal or temporary and

is very difficult to demonstrate because the periods of residence involved were so short, but there can be no doubt that it existed: harvest workers for cereals and wine, people coming from the mountainous areas to various other regions and temporary trades (boilermakers, builders etc.). Many country-dwellers were employed in transport, especially during the winter.

There were also other more permanent forms of mobility: to the cities, where insanitary conditions were responsible for a very high death rate, to newly cleared land and, in the case of some regions, to foreign countries (national frontiers were not regarded as barriers in the eighteenth century).

It would therefore be incorrect to regard eighteenth century society as immobile; its mobility was simply different from the kind observed today: it was of a temporary or seasonal nature, involving a large measure of replacement migration whether in town or country, and international migrations which were not viewed as such.

From a demographic standpoint, the 150 years following the Revolution saw a fall in the death rate exactly parallel to that of the birth rate. In the case of France, therefore, the next two phases of demographic transition took place together, though they were of course punctuated by periods of economic crisis and above all by wars (especially the two world wars). However, if these exceptional phenomena are discounted, the regularity of the demographic trend is striking: the population of France grew by 12.4 million between 1789 and 1896 and then remained steady at about 40 million until after the Second World War.

On the other hand, the changes in mobility observed during these 150 years follow a less linear pattern: two main phases can be distinguished, both related to the industrialization of France. During these two phases, the family structures lost much of their importance in adapting to economic constraints: in consequence the varied range of family types to be found in France gradually narrowed until the nuclear family, which is the only type of family to permit great spatial mobility, became the general rule. Thus the family tended to become a refuge for the individual who was increasingly cut off from the world of economic activities. In spite of this isolation, however, the links which remained could still provide a framework to guide the mobility prompted by economic and political factors.

The first of these two phases of industrialization in France lasted until at least the middle of the nineteenth century and continued the trends of the previous century. Most raw materials were of French origin with the result that industry was widely scattered and mostly of the cottage type with the result that there was little mobility of industrial workers. On the other hand, the need to raise agricultural production, the bringing of more land into cultivation, the introduction of fertilizers, new ploughing

techniques and so on were to have a big impact on manpower needs. These changes, which originated during the eighteenth century, called for greater mobility on the part of those engaged in agriculture. This seasonal mobility for the harvesting of grain, grapes and other crops reached a peak around 1850. Afterwards, as we have seen, it steadily declined. At the same time those living on poorer land, especially in the mountains, found that temporary migrations enabled them to earn the cash that was needed after the period of family self-sufficiency had come to an end. Their occupations reflected the needs of the time in both rural and urban areas. In the former, many people from the mountains migrated temporarily to work as craftsmen (boilermakers, tinsmiths, etc.), as teacher-servants (before the public authorities established schools) and as tradesmen and dealers of various kinds, while in the towns they became water-carriers, shoeblacks, chimney-sweeps, builders, etc. This type of mobility too reached its maximum in about 1850.

This temporary mobility is very important, not only on account of the number of people concerned but also because of the way it developed later. It is thus surprising that it does not figure explicitly in the theoretical model being used as a reference. It should be observed however that this mobility is very difficult to gauge, especially in the nineteenth century. It is therefore quite possible that in many countries it has escaped the investigation of statisticians. In France, a number of surveys, though far from perfect, have enabled us to appreciate its considerable importance.

Although move on a seasonal or temporary basis reached its maximum during this period, we should not overlook the large number of longer-term movements, now called 'migrations'. During this period it is hard to distinguish between these different kinds of movement, in much the same way as it is hard to distinguish between permanent and temporary moves in present-day developing countries. Some of these moves lasting several years were none the less regarded as temporary since their purpose was in many cases to earn money in the town to buy a piece of land or repay a loan.

Throughout the nineteenth century, a considerable number of agricultural workers migrated to land which was difficult to cultivate such as mountain slopes which had to be terraced, marshlands which had to be drained and so forth.

Because of the high death rate in the towns, the urban population could not grow without considerable immigration from rural areas. At the same time the towns were, by the first half of the nineteenth century, beginning the process of industrialization which would not gather momentum until later. From 1830, too, the railway system was gradually established, cutting down travelling time between the increasing number of towns and cities. However, the focal point of this network remained Paris.

It was during the second half of the nineteenth century that France really entered its phase of centralized industrialization. This centralization was related to increasing demand which made it necessary to obtain raw materials from abroad. This new constraint underlined the importance of certain locations, such as ports and road or rail junctions, where industry became increasingly concentrated. At the same time, the intensive mining of the big coal basins such as those in the north or at Saint-Etienne, gave the advantage to these regions, and other industries requiring a lot of power (steel mills, textile works, etc.) were established there.

This industrial concentration was accompanied by higher output in agriculture through the introduction of new crops (beetroot, potatoes, etc.) and the use of fertilizers which cut out the need for fallowing. In addition, growing mechanization reduced the manpower required for harvesting.

These new factors had a decisive influence on most of the population movements in the latter half of the nineteenth century and the early twentieth century. During this period the economy clearly predominated over all the other systems of relations.

Temporary and seasonal mobility fell sharply. In agriculture as we have seen, this labour was replaced by increased mechanization, though it is important to realize that mechanization was a consequence of the shortage of seasonal workers rather than a cause of the migration of agricultural workers to industry. By 1914 the seasonal move of agricultural workers had virtually ceased; where it did occur it was increasingly a migration of foreigners.

Temporary movements of craftsmen, dealers, builders, and so forth during this period became permanent or at least long-term migrations. Urban growth which was now a result of industrialization, made these skills necessary all the year round. The income disparities between town and country strengthened this trend towards settlement in the towns which, as we have said, deprived the rural areas of a seasonal workforce. On the other hand, technical progress and changing needs made certain other migrations pointless: the water-carriers from Auvergne became wine-and-coal dealers and settled in the towns for several years at a time or even for the rest of their lives. During the second half of the nineteenth century, then, temporary moves were again taking on a permanent character.

In France, this transition from seasonal and temporary moves to migrations on a more long-term basis proceeded slowly over a period of more than sixty years. In our view, very useful comparisons can be made with current trends in certain developing countries.

It should not be forgotten that migrations from rural areas to towns throughout this period contributed to a slow but regular increase in the urban population. These movements were not, of course, all in one direction: there was much coming and going between town and country. Nevertheless the rural population fell steadily, from 81 per cent of the total population in 1806 to 47 per cent in 1946. The urban population gradually became concentrated in a few regional capitals which were the focal points of the political, industrial and business life of the entire country.

In France, then, urban concentration was not preceded by a stage of international emigration to new lands (America or Australia, for example) which was the second phase in the theoretical model. It may be taken that the French population, whose fertility had fallen at the end of the eighteenth century, had in fact no need for this safety-valve. Indeed, at least from the second half of the nineteenth century, this fall in the birth rate created a need for the recruitment of foreign workers, and they were required in increasing numbers throughout the first half of the twentieth century except for the period of economic crisis during the 1930s.

Once again this type of immigration, which was envisaged by the reference model only during the fourth phase of the demographic transition, appears in France during the third. This suggests that societies are confronted not by a single path development which all must follow but by a much more complex range of possibilities. In this respect the

course of development in France is worthy of interest.

After the Second World War the economic dimension kept its importance but new systems of relations were coming to the fore. Thus, free enterprise became increasingly restricted by the straitjacket of political space staked out by national development policies and by the Modernization and Development Plans which were designed to restore the balance between the various regions of France and slow down the growing concentration of the population into a few major cities. Similarly the associative relationships and recreation-induced mobility became more and more important, a trend which was reinforced by the development of means of transport such as the motor car and the aeroplane and by the increase in leisure time and longer holidays.

This pattern of change, which should correspond to the fourth phase of the theoretical model, was again marked by numerous differences. For example, after the fall in the birth rate throughout a period of 150 years, a rise in fecundity brought about an increase in the population of France by over 12 million inhabitants between 1946 and 1975. This growth was also related to the strong international immigration during this period.

Let us see how spatial mobility provided a response to some of these changes. In the first place, movements between town and country underwent a further change. The rate at which people left the land, and the numbers involved, reached unprecedented levels. This sudden rise reflected a further transformation of the farming world involving, in particular, increased mechanization and a strong concentration of land ownership. But this transformation also gave rise to a new demand for seasonal workers for the busiest periods of the year, a demand which could only be met by workers from abroad. Thus a new form of temporary move was brought into being.

A flow in the opposite direction, from town to country, also became established. More people went to second homes in the country, and retired people migrated back to their native rural areas or made for other regions which enjoyed a favourable climate or were near the sea, for example. Holiday-makers too flocked to these favoured regions. Lastly, an increasing number of townspeople began to settle in rural communes. These migrations were facilitated by the means of transport and telecommunications which reduced distances over a wide radius. This phenomenon, which has been termed 'counter-urbanization', had not been anticipated by W. Zelinsky in 1971. However, there is some doubt as to whether it is likely to continue in view of the energy costs of this new spatial distribution of the population. It was common to all industrialized countries in 1970s but is now showing signs of diminishing in certain countries with population registers (Belgium), where there is evidence of a further concentration of the population.

Migrations between towns or within conurbations are still increasing. This strong urban mobility is characteristic of our society. Until 1962, for example, there was a perfect pattern of migration affecting all rural areas, towns and

cities: the net migration of a town of a given size was always positive because in-migration from rural areas and smaller towns exceeded out-migration to larger towns. This pattern confirmed the existence of hierarchy of towns. From 1968, however, the pattern became more complex since migrations to rural areas began to become more numerous. In 1975, an even greater change occurred: the net migration of Paris became strongly negative while that of the other towns and cities was only just positive. One reason for these changes may be the impact of development planning policies. It should be noted that, not only do the changes affect the overall balance, but the migratory flows themselves, whether between towns or between town and country, continue to increase.

But the migration most affected by the action of the public authorities has been international migration. Here again, though its strong growth up to 1974 was predicted by the theoretical model, which correctly asserted that it reflected the demand for semi-skilled workers or labourers, its sudden termination by political measures was not anticipated. These measures were not peculiar to France: most developed countries in Europe did the same, partly because of the economic crisis and growing unemployment. But the main reason why the model overlooked this aspect was its failure to allow for the increasingly important role of population policies. It should be noted, too, that this immigration was also influenced by the policies of the labour-supplying countries. In the same way, national policies influenced the emigration of skilled personnel sent out by France to various developing countries.

This brief survey has shown how France went through the transition from the family structures of the agricultural world to other structures, more political and more informal in nature centred on the urban and industrial world. But recent changes suggest that these structures will themselves be transformed, in particular as a result of improved means of transport and telecommunications.

To conclude, we feel it necessary to go beyond the purely national context of this study and attempt to set it in a broader current of thought on human mobility. The fact is that human mobility transcends the concept of migration, which is a narrow framework propounded by present-day developed nations. It must be seen in the widest possible terms since it then provides a coherent picture of how space is perceived by the members of a society or a culture. However it must be understood that we are not dealing with a single view of space but with 'spaces' based on systems of relations (which we have already attempted to describe) that are sufficiently general to be applied to any culture. Although we have not explored them all in detail, they appear to provide a fairly sound and reliable basis for considering the question of mobility.

This is the basis we have used to present the history of mobility in France. The solutions adopted by France and their impact on its population trends may provide countries facing similar problems with a substantial body of experience for the consideration and clarification of the results they wish to achieve.

Appendix: Methodology

I. THE VARIOUS TERRITORIAL DIVISIONS USED

In order to throw light on the variety of movements being examined we shall have to observe France from several standpoints and using different scales. For example, if we want to compare the mobility of the French population with that of other countries, all changes of dwelling-place must be included, because any division that is made, which will necessarily differ from country to country, will remove all possibility of comparison. On the other hand, in order to bring out changes in spatial distribution, we shall have to adopt a suitable division of the national territory. In that case migrations within a section of the grid will be ignored, and account taken only of movements between different sections. The resulting simplification does however create a few problems.

One of these lies in deciding on a suitable division. A priori, it may seem preferable to disregard migrations on a scale below a given limit. This would make it possible to ignore micro-movements that lead to no change either in the everyday life or in the work of individuals. Once these small-scale migrations have been discounted, the search for a satisfactory division can be made. This approach cannot unfortunately be applied to France, at least for the time being, because the census data are based on the existing administrative divisions, which thus become an unavoidable straitjacket preventing us from choosing the most suitable standpoint. For instance, a small-scale migration which crosses an administrative boundary would be recorded, even though it may be a purely localized movement. Conversely, a large-scale migration which does not cross any boundary would not be recorded, even though it may have involved major changes in the everyday life and work of individual migrants. These drawbacks must remain in the following analysis.

We shall thus have to choose from among the administrative divisions used in the statistics those that are best suited to the study of geographical mobility. We shall divide them into two broad types that in fact correspond to different views of space: geographical levels (communes, cantons, départements, regions, etc.) on the one hand, and categories of commune (rural, towns of under 5,000 inhabitants, towns of 5,000 to 9,999 inhabitants, etc.) on the other hand.

1. Geographical levels

This purely geographical approach looks at areas, in most cases spatially continuous ones,¹ covering the whole of France. It will thus be possible to go from a very fine division to a cruder one by grouping together a number of these basic areas that are contiguous.

The smallest division is made up of *communes*, themselves derived from the *parishes* that existed before 1790.² They usually cover an area of a few kilometres around a village or town. These communes or parishes have not remained the same throughout history either in number or in territory. In the first place, the change from parishes to communes involved some modifications: one parish may have been split into several communes, though this seldom happened, or several parishes may have been merged to form a single commune. Later, all through the nineteenth and twentieth centuries, communes were created or discontinued (by being attached to the territory of another one). Despite these changes, the number of communes has remained substantially the same over these two centuries, if we omit the annexations or incorporations of parts of the national territory: these suppressions or creations of communes are in fact relatively infrequent and have often been on more or less the same scale. Taking Aude département, for example, we can observe that 13 of its 445 communes have been discontinued and 9 created since 1791, that is, a variation of 1 per cent. In consequence, the present territory of France comprised a total of 36,394 communes in 1975.³

The next geographical division is the *canton*. Unlike the commune, this new division created in 1790 has varied greatly over time. Moreover the canton is not necessarily an amalgamation of communes: one commune may form part of several cantons; conversely, a canton may be formed by the amalgamation of communes. It cannot therefore be used for historical comparison. However, it can be used over short periods as it provides a sufficiently small division of the national territory for a local study of migrations without bringing in, as the commune does, too many subdivisions. In 1975, the total number of cantons was 3,509.

The division of the territory into *départements* also dates from 1790. The division into départements has been much more stable than the one into cantons but has undergone a number of modifications nevertheless. These modifications have been occasioned by the annexation of territories, in particular by Germany between 1871 and 1918, and by the break-up of the départements of Seine and Seine-et-Oise between the censuses of 1962 and 1968.⁴ Thus the number of départements rose from 90 in 1962 to 95 in 1968. Map 7 shows the division into départements in 1975.

The division into administrative *regions* is more recent (it derives from the regional action areas created in 1960) but as it was made by grouping départements together it can be used for the whole period back to 1790. The number of these regions rose to 22 in 1970 with the creation of the region of Corsica separate from Provence-Côte d'Azur. These will be found on Map 8.

We thus have a highly diverse series of geographical divisions for the 551,000 km² of French territory, ranging from over 36,000 communes to 22 regions.

2. Categories of communes

The perspective here is very different from the preceding one. We shall attempt to define the concept of 'urban population' and then rank these towns and cities in order. Among the numerous definitions that have been proposed to characterize what is 'urban', we shall here only be concerned with quantitative definitions using geographical criteria, populations and some of the characteristics of these populations. While they are doubtless less satisfactory than more complex definitions which, in particular, distinguish between the functions of these towns, these characteristics are easier to define and will be used here.

We should observe that as early as 1808 a law defined the concept of 'agglomération' (urban area) in terms of a minimum population figure of two thousand people, not including those scattered population of outlying hamlets or villages of the commune. Since the concept of 'population agglomérée' (urban population) is used to define a town, it might be thought that it was so obvious as to be beyond dispute: all that had to be done to clarify it was to determine the exact limits of the town.⁵ On the other hand, the lower limit of 2,000 inhabitants seems much more arbitrary and appears to have been linked to the fiscal policy of governments. In fact, this minimum has varied quite widely, from 1,500 in 1821 to 5,000 in 1826, for example. As it is necessary for a study covering a long period to take a single lower limit, we shall keep the threshold of 2,000 inhabitants while admitting its arbitrary nature.

A *rural commune* is thus defined as one having fewer than 2,000 inhabitants in its administrative centre [chef lieu] and an *urban commune* as one having more. The whole population of the commune is then regarded as rural or urban as the case may be. This makes it possible to classify communes by size, thus introducing a hierarchy of urban areas. The classification limits adopted have varied over time and are generally arbitrary.

In fact developments in urbanization over a period of time have increasingly revealed the defects of this definition

1. Although spatial discontinuities exist, especially for certain cantons, these areas are in principle all in one block.
2. The terms parish and community were replaced by the term commune by the decree of the National Convention of 10 Brumaire Year II.
3. However, we should note quite a significant reduction in the number of communes between 1968 and 1975. In 1968 there were 37,708 communes.
4. In brief, it can be said that the territory included within the frontiers of 1815 included the present-day territory less Savoie, Haute-Savoie and part of the Alpes-Maritimes. This remained the territory until 1860 when the département of Alpes-Maritimes was formed (with the Comté of Nice and the arrondissement of Grasse) as well as the départements of Savoie and Haute-Savoie. From 1860 to 1871 the territory of France was as it is today. In 1871 Germany annexed part of the départements of Moselle and Meurthe and the départements of Haut-Rhin and Bas-Rhin, and this reduced the territory until 1918. Since then, except for the period of the Second World War, this territory has remained the same. Since the 1968 census, Seine and Seine-et-Oise have been replaced by the following départements: Ville de Paris, Yvelines, Essonne, Hauts-de-Seine, Seine-Saint-Denis, Val-de-Marne and Val-d'Oise. In addition, Corsica was divided into the départements of Haute-Corse and Corse-du-Sud in 1975.
5. The 'population agglomérée' was defined as follows in the 1891 census: '... population agglomérée' shall be taken to mean the population dwelling in houses that are contiguous or connected to one another by parks, gardens, orchards, yards,

based exclusively on the commune. As soon as the urban areas outgrow the boundaries of their central commune it becomes necessary to introduce a new definition to permit the inclusion of the other urbanized communes in the population of the towns. These drawbacks, even though not very noticeable before the Second World War except for the large urban centres, became obvious after 1946. In the 1954 census some attempts were made to define multi-commune urban centres, with the result that a new definition wider than the previous one was worked out in 1962.

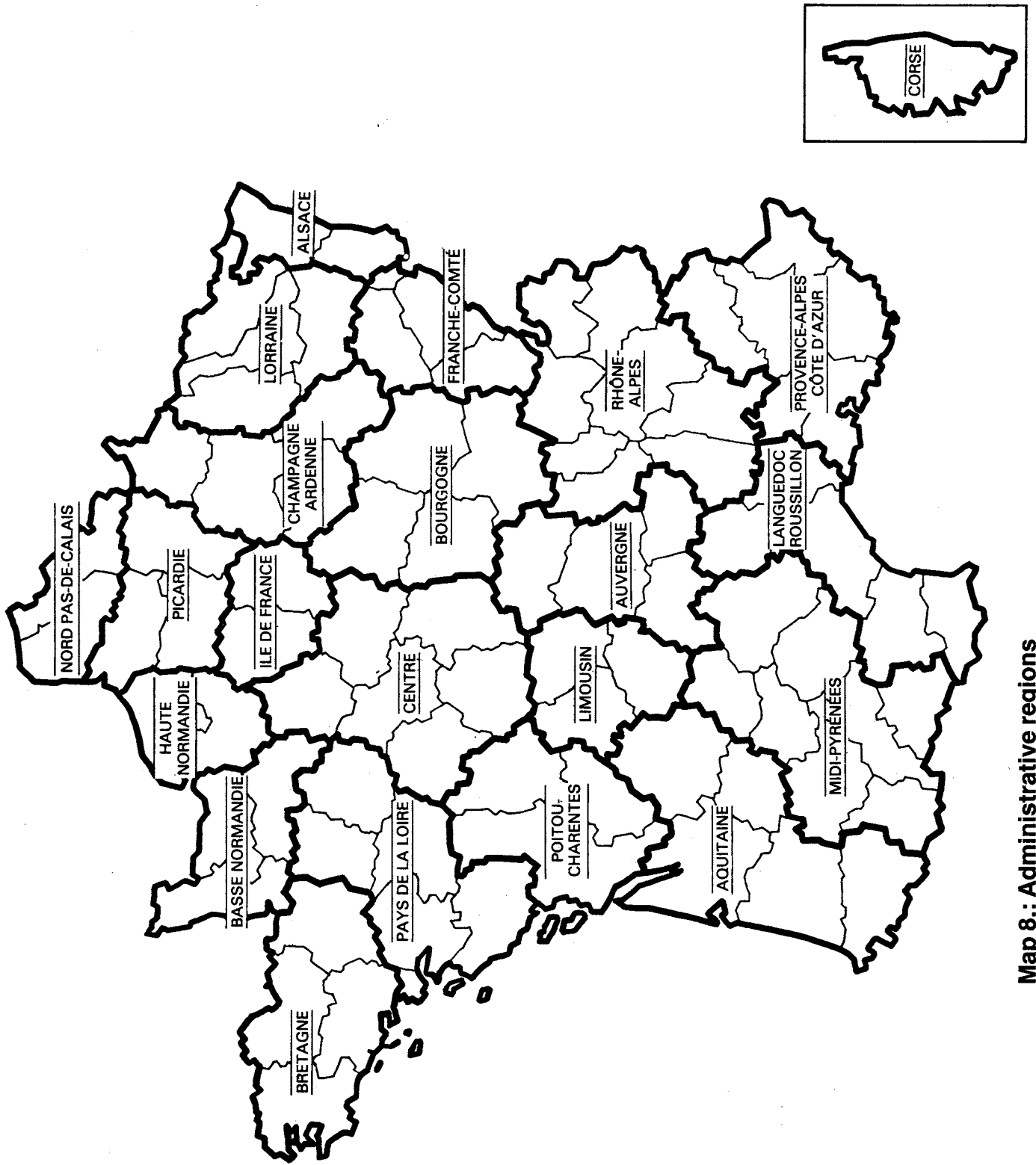
New criteria relating to the continuity or otherwise of built-up areas were applied, following the recommendations of European statisticians. An 'agglomération' is a group of dwellings such that none is more than 200 metres from its closest neighbour and which has at least fifty inhabitants.⁶ The communes over which the 'agglomération' extends are grouped together on the basis of this definition to make up an *urban unit*.⁷ These units also include, of course, isolated urban communes as we have defined them above. In this case all those which do not come within the boundaries of an urban unit are classified as rural communes (new definition).

But once again these communes vary widely. Among them are to be found communes that are basically agricultural mixed in with others whose population is strongly tied to the nearby urban centres. This is why it seemed useful to establish zones larger than the urban units, the definition of which was no longer based on the continuity of the built-up area but on criteria reflecting the populations enumerated (proportion of the population engaged in agriculture, amount of 'commuting', proportion of the population in paid employment, etc.). This produces *industrial and urban settlement zones* (ZPIU),⁸ which correspond to a broader view of the urban domain and have been used since the 1962 census.

We have thus moved from a very narrow definition of the urban commune to a very broad definition of industrial and urban settlement zones which is designed to characterize the urbanized population more accurately. In the course of this study we use one or the other, depending on the period being considered.

- workshops or other enclosed areas of this type, even where such dwellings or enclosed areas are separated from each other by a road, ditch, stream, river or pedestrian thoroughfare (...) thus, the population's potential, if not actual, communications across enclosed areas surrounded by walls and hedges are sufficient to constitute an 'agglomération'; but unenclosed fields, waste land or cultivated areas shall be regarded as breaking the continuity of the 'agglomération'.
6. Land used for public purposes such as public gardens, aerodromes, roads, cemeteries, public buildings, land used for industrial or commercial purposes, such as factories, shops, commercial buildings, railways, parking areas..., and waterways crossed by bridges are ignored when determining the distance between dwellings.
7. In fact those communes in which the urban population of the built-up area is less than half the population of the commune are excluded.
8. This definition takes account of the following data:
 - number of wage-earners in industrial, commercial or administrative establishments;
 - proportion of the population engaged in agriculture;
 - proportion of the resident economically active population working outside the commune;
 - growth rate of the population over several previous inter-censal periods.

For more details see the definition given in the volumes on 'Les zones de peuplement industriel et urbain' [industrial and urban settlement zones] of the population censuses.



Map 8.: Administrative regions

Summary

Two types of territorial division will be used here: a division into geographical levels (communes or parishes, départements, programme regions) and a division into categories of communes (rural communes and urban communes grouped by size, industrial and urban settlement zones).

II. DATA SOURCES ON GEOGRAPHICAL MOBILITY IN FRANCE

In order to give an overall view of French mobility we shall consider the widest possible variety of movements. We must in fact go beyond the concept of internal migration, which is only one component of this mobility, and include international migrations in specific directions. Temporary movements also affect the spatial distribution of population by their variety and their very variable duration; migrations for periods of several years, seasonal movements, 'commuting', and so forth. The extent of one of these types of movement will obviously affect all the others, including internal or international migrations, and we shall only throw light on the development of geographical mobility in France by studying the interrelationships between them.

Unfortunately the available data on all these movements vary in quality for different periods. We shall divide them into four broad periods which correspond to significant changes in the available sources:

- before 1791;
- from 1791 to 1880;
- from 1881 to 1961;
- the present day, since the 1962 census, which included a question on the place of residence at the date of the previous census.

1. The period before 1791

Before the first census of the whole French population in 1790,¹ the existing sources on mobility, despite their deficiencies, are far from negligible.

The most valuable source is made up of the parish *libri status animarum*, the keeping of which was ordered by the *Rituale Romanum* in 1614, at the same time as the keeping of parish registers.² These forerunners of population registers, kept up to date either on a continuous basis or by periodic revisions, were, among other things, intended to provide information on the arrivals and departures in each parish. Unfortunately, this decree was not so well observed (especially in France) as the one on parish registers and above all many of these registers were not preserved.

Another fiscal source exists: the registration of *congés et translations de domicile* (records of dismissal notices and changes of domicile). This source exists for the '*pays d'élection*' subject to the system of personal 'taille', which cover about half the territory of France.³ It did not affect the whole population, but only the heads of family subject to the 'taille'. Movements of children placed as apprentices, seasonal or temporary movements, most movements in connection with marriage, vagrants and beggars are not recorded in this source. Despite these limitations, this is a valuable source for the study of migrations.

Other more fragmentary data can be used, such as the *livres de bourgeoisie*. This most interesting ones are to be found in Alsace. They were used to record the admissions of new bourgeois and sometimes included their place of birth. In practice these books were far from recording all the newly arrived bourgeois but only those wishing to enter the municipal administration.⁴ In addition, they represent only part of the population. Most other members of the family (wives, children) and above all the lower social classes of the urban population, which varied greatly over time, do not figure in them. They thus form a very incomplete source of data.

We then have to consider the use of *parish registers* in order to obtain more comprehensive information on the population. It is to be noted at the outset that the *baptismal registers* almost never recorded the geographical origin of the parents. However, on the basis of names of non-local origin it is possible to glean some information on the migrations of parents.⁵ In fact this source is of little use to us. *Parish burial registers* are useful to the extent that they give information on the place of birth or the place of origin of migrants. In many towns it is not enough to consult the parish registers, one also has to look at the registers kept in the hospitals or hospices. In fact there is reason to believe that a migrant long settled in the parish would not be shown as such in the registers. On the other hand, the *hospital registers*, whether death registers or admissions books, generally give the age and place of origin of patients. They are of the greatest use when they specify the parish of birth. It should be noted however that these registers cover only a part of the population of the towns, especially the lower classes, and that it is impossible to distinguish between those merely passing through and residents. Thus, here again, they provide incomplete data.

Marriage registers constitute the most important source of information for the study of migrations. In the first place they exist in almost all parishes and cover all classes of society; only lifelong celibates do not appear in them. On the other hand, as the age at marriage was higher than it is now, the details recorded concern people who are already well settled. As the parish priest had to publish the banns in the native parishes of the future marriage partners information on these places is therefore to be found in most registers. Moreover, when they are well kept, they give the age at marriage and the occupations of the persons concerned and of their parents.

Their use does however pose certain problems. In the first place, the quality of these marriage registers varies greatly from one parish to another and the details provided may be inadequate. Comparison with *marriage contracts*, where these exist, is then extremely useful, as these contracts are generally very comprehensive. Unfortunately they only involve part of the population. Secondly, the widespread custom of marrying in the parish of the bride can lead to distortions unless one is careful. It is thus worth while examining the registers of adjoining parishes for the marriages of persons who in fact live in the parish being studied. Conversely, one should check that the marriages registered in this parish are indeed those of people who ordinarily live there. Finally, it is useful to note separately the marriages of widowers and widows, so as not to count them several times in the statistics of migrants.

Despite these drawbacks the marriage registers constitute the fullest and most useful source of information on past migrations. As a further step, it would be possible to establish where the main events in a person's life took place by comparing these three registers (baptisms, marriages and

burials). To do so, however, would entail an exhaustive examination of all French parish registers to bring out the spatial movements of the population. It would be an enormous task to carry through such a project and it would run into many problems related to the incompleteness of the registers, variations in the detail with which they were kept, the difficulties of identifying the same individual in different registers, and so forth. However, in a more limited region such a task would be more feasible and would provide a more accurate idea of the internal geographical mobility within such a region.

These parish registers also give us an idea of foreign immigration into France. To find out about emigration abroad we have to use other sources. The port *passengers' embarkation registers* give some idea of departures overseas but the numbers recorded no doubt fall short of the actual number as concealment must have been not uncommon. For overland emigration the *passport registers* can be useful. It should be noted that these very often relate to permits to travel or move temporarily and that numerous emigrants left without passports. Such registers must therefore be used with the greatest care. Lastly, it is worthwhile checking whether the countries receiving these emigrants possess statistics making it possible to identify them.

The *salt registers* in Savoy give statistics of the inhabitants year by year, showing the seasonal migrants. This body of statistics is not necessarily complete as it is likely that heads of family concealed the presence of children or servants so as to be less heavily taxed. *Internal passports* are also an unreliable source. When they were issued expenses were incurred that migrants sought to avoid.

Lastly, there exist a number of sources relating to particular populations. The *army muster rolls* very often give the recruit's birthplace and his place of domicile at the time of enlistment. As conscription was not systematic before 1798 this source can only be used to study the military population. On the occasion of some partial enumerations or surveys questions were asked about place of origin, but these other sources are generally incomplete and are not a great deal of use since they were affected by certain highly variable rules relating, for example, to length or right of residence.

2. The period from 1791 to 1880

This period is marked by the existence of *censuses* of the French population although the frequently included question on birthplace was not the subject of statistical processing or general publication. However some new data were published in them which improve our knowledge of geographical mobility in France.

At the beginning of the period, numerous revolutionary documents, such as censuses and police identity cards, give information on migrations that is often very detailed. In Paris during the Revolution, for instance, men aged fifteen and over were obliged to have a *police identity card*. The registers of issue of these cards record both the present place of residence and the former domicile as well as the date of arrival in Paris and the place of birth. Many censuses carried out during this period also give the place of birth.

Although no comprehensive table of places of birth was published at successive censuses this question was often asked. The *nominal rolls*, compulsory from 1836 on, often

give the birthplace and sometimes even the date of settlement in the area (the 1831 Bordeaux census for example). Unfortunately, there was no regulation making it mandatory to keep these rolls and thus in many parts of France they have not been preserved. Even when they do not include the place of birth, it is possible, by comparing the lists established at successive censuses, provided the local registers of birth, marriage and death are available, to estimate arrivals and departures during the intercensal period.

It should be noted that from the 1841 census onward there was a change of definition of the population being enumerated. Until 1836 only the legal domicile was recorded: the population temporarily absent was not distinguished from the population present at the census. Starting from the 1841 census the legal domicile was replaced by the habitual place of residence. From then on the 'floating population', including individuals temporarily away or travellers who were not at their place of residence at the time of the census, was counted separately.

As conscription was systematic after 1798, from that date the *conscription lists* as well as the *registration rolls* of men drafted provide information on mobility. The conscription lists give the birthplace and domicile of all conscripts before their exemption or replacement. The registration rolls which follow the men drafted provide some information on their careers. After 1823 they also give the place of residence of the recruit's parents at the time he was drafted. Since recruits were chosen by lottery from among the conscripts, the registration rolls should in theory provide a representative sample of the affected age-groups. However, replacements and the exemptions of recruits on grounds of ill health or small stature modify this sample in a significant and non-random way. From 1873 recruitment included everybody. Even so, the composition of drafts was still not representative of the whole because of various exemptions.

To ascertain international immigration, the censuses after 1851 identify the foreign population by nationality. For emigration it has been possible to make an estimate by comparing the data in the receiving countries with data compiled by the French administration concerning passports issued and emigrants leaving through a number of French ports.

To ascertain temporary movements one can use the *surveys* that were made throughout the nineteenth century, which included specific questions on these movements. Only one of these surveys, that of the First Empire from 1808 to 1813, covered the whole of France and was concerned exclusively with temporary movements. Other official economic surveys however, such as the surveys of 1848, 1852, 1866, 1882 asked questions about these movements and provide accurate information on the matter. *Internal passports* remained compulsory during this period but as most temporary or seasonal moves did not bother with them they are not a means of quantifying these movements accurately. Similarly the *workers' employment books*, which were only compulsory in industrial work (and then only until 1890), were far from being used by all workers.⁶ Finally, mention must be made of Savoy, which did not become part of France until 1860. Enumerations had a column for 'emigrants' for individuals who had left the kingdom with the intention of returning. This provides a means of estimating temporary moves from the Kingdom of Sardinia between 1815 and 1860.

3. The period from 1880 to 1961

During this period a large number of *statistical tables by birthplace* were produced and provide an overall picture of French migrations. It should first be noted that from 1881 the census data now distinguish not only the legal population at their habitual residence but also the population present on the day of the census. The tables on the non-native population cover the members of that population that are present. These tables are more or less detailed according to the censuses. The 1901 and 1911 censuses, for example, give the structure by five-year age-groups of the population residing outside its *département* of birth. The censuses from 1891 to 1911 (except that of 1906) give a table with 8,100 boxes that correlates *département* of birth and *département* of residence. Lastly, all the censuses of this period classify the population of France under three headings:

- those born in the *département* of residence;
- those born in another *département*;
- those born outside France.

In 1954, a question was asked on the length of residence in the *commune* and on the previous *commune* of residence. Although the INSEE has not officially published anything, a number of somewhat sketchy tables have been constructed from the answers to this question.

The *electoral roll* has been kept by INSEE since the law of 8 August 1946,⁷ to ensure that the same elector does not appear on the roll in several constituencies. This roll gives information on three stages in the life of each elector:

- his place of birth,
- his former domicile,
- his present domicile.

This roll is of course not comprehensive since it includes only those of voting age and entitled to vote and in particular excludes foreigners. In addition the definition of this population has changed over time. The use of this roll and its value in studying migrations depend on the information it gives about electors. In practice many electors neglect to regularize their situation when they migrate and wait until the next election before doing so. A not insignificant proportion of the population entitled to vote is not on the roll—between 5 per cent and 10 per cent of the total. Thirdly, some people remain attached to their place of origin, although they have moved away, and go back on occasion in order to vote there. For all these reasons the electoral roll is not a very satisfactory source of information in France.

For international migrations the censuses always give the foreign populations by nationality and the naturalized population. The creation in 1946 of the *Office national d'Immigration* (ONI) made it possible to centralize all operations connected with the recruitment and placement of foreigners.⁸ This assumption of responsibility for international migrants by the State, which began at the beginning of the century, provides annual statistics on the entry of foreign workers. It should be noted however that as ONI was only entrusted with the recruitment of foreigners it provides no direct information on returns to the country of origin. Only the length of validity of the residence permit and its renewal can give some indication of the length of stay.⁹ It is also likely that some foreigners, having entered illegally, do not regularize their situation or do so much later.

As regards temporary movements, some official surveys (1882, 1892, 1929, etc.) again provide information on the mobility of French workers. But these workers were reinforced by numerous *foreign seasonal workers* whom ONI began to monitor from 1946. In fact until 1960 the entries of some seasonal workers were not officially monitored at all (in particular, Spanish wine-harvesters). Thus the statistics are likely to be more comprehensive after that date. Despite this, undeclared movements do occur since both the person employed and the employer have something to gain. The former avoids entry formalities, medical checks and conditions concerning age limits while the latter avoids having to pay the full rates laid down in employment contracts. Against this, the undeclared worker does not enjoy the benefits of social security and family allowances. It would appear in fact that these undeclared workers are only a small fraction of all seasonal workers.¹⁰

Other temporary movements, including *commuter journeys* between domicile and place of work, are recorded by recent censuses and figures have been published by certain INSEE regional offices (1954).

4. The contemporary period since the 1962 census

The main feature of this period is the inclusion of a question on the place of residence on 1 January of the year of the previous census. It thus gives details of *migrants* over periods, which unfortunately vary, between one census and the next:

- a little over eight years (1954-1964);
- six years (1962-1968);
- seven years (1968-1975).

Numerous tables have been published on these migratory flows. For the last two censuses, the existence of a file¹¹ classifying all recorded flows by *commune* of departure and *commune* of arrival, allows a wide choice of zones of emigration and immigration. However, it should be noted that the data in these two censuses derive from a 1:4 survey in 1968 and a 1:5 survey in 1975. It is therefore not possible to have significant results if one works on too narrow a division of the territory.

Since 1960 a number of *retrospective surveys* have been carried out by the *Institut national d'études démographiques* (INED) on the geographical mobility of the French population:

- 1961 surveys on the population of Paris and mobility in the provinces;
- 1967 survey on migrations;
- 1972 survey, etc.

These surveys covered a sample of about 2,500 persons and did not provide a basis for a detailed analysis of mobility. At present surveys are being carried out on large samples (by INSEE and INED) but it is still too early to take account of them in this work.

For international migrations there has been no significant change in the published statistics, and in particular no new information on returns home has been compiled.

As regards temporary moves in addition to the sources mentioned above, we may draw attention to the INSEE surveys on *daily journeys*: commuting, shopping, leisure trips, visits, business affairs, journeys to school, etc. They provide a more comprehensive picture of the spatial mobility of the French people.

Conclusion

This short survey of the sources of data on geographical mobility in France, although far from exhaustive, reveals the variety of available sources of information. Unfortunately they are all imperfect in that they capture only one aspect of these movements, and neglect others. In the case of migrations, for example, France does not unfortunately have *population registers* such as exist in many European countries (Sweden, Federal Republic of Germany, Belgium among others). We thus have to make do with questions asked at censuses or in retrospective surveys to reconstruct all the places of residence occupied by an individual during his life.

To supplement these sources we shall use indirect methods for measuring migrations. These involve assumptions that we must now consider as a means of taking our analysis further.

1. This census was in fact carried out between January 1790 and the beginning of May 1791. The series of five-yearly censuses really begins with that of 1801.
2. See R. Mols (1954) Volume 1, pp. 73-91. These registers were already kept in many parishes at this date.
3. See M. Lachiver (1977), p. 355.
4. See R. Mols (1955) Volume 2, pp. 360-366.
5. See J.P. Poussou (1973), pp. 33-34.
6. See A. Chatelain (1976), pp. 30-31.
7. Before this date, the roll was not kept by INSEE.
8. In fact the ONI did not record the entries of Algerian immigrants, who were counted until 1961 by the Délégation générale de l'Algérie, nor those of black Africans. Non-wage-earning members of the economically active population and their families are not included in these statistics.
9. See D. Courgeau (1968).
10. See R. Herin (1971), p. 232. The employment office in Montpellier, for example, estimated in 1966 that 90 per cent of wine-harvesters were legally brought in by the ONI.
11. For internal and external migrations this file is entitled MIGRA.INE; for commuting journeys it is entitled MIGRA.ALT.

Summary

Available sources of data on mobility are far from being perfect. Before 1790, the main sources are the marriage and burial registers. After 1790, the censuses including a question on place of birth will be used together with certain surveys. Since 1962, a question on the place of residence at the previous census and more detailed surveys provide much more precise data.

III. INDIRECT METHODS OF MEASURING MIGRATIONS

We shall briefly outline a number of means used to measure migration indirectly. These means are of two broad types:

- combined use of populations counted at two censuses and natural population trends in the area;
- use of data from two censuses on place of birth to estimate migration during the intercensal period.

1. Net migration

If we know the population in a given area enumerated at two dates (P_0 at date t_0 , P_n at date t_n) as well as the births (N) and deaths (D) that have occurred between these two dates, we can obtain an estimate of what is called *net migration*, the difference between immigration (I) and emigration (E) in this area. The equation that makes it possible to go from population P_0 to population P_n is as follows:

$$P_n = P_0 + N - D + I - E$$

which gives us

$$I - E = P_n - P_0 - N + D$$

It can be seen that such an estimate, obtained by subtraction, depends heavily on the accuracy with which the terms are measured. Though in France births and deaths are accurately measured, populations are less so and, what is more important, successive censuses differ greatly in value. Such estimates should therefore be made with care. For example, the 1811 census, which was no more than a rough estimate, and the 1826 census, in which the population was calculated by adding the natural increase to the 1821 totals, provide no basis for estimating net migration. The latter census moreover clearly indicates a zero net migration for all arrondissements between 1821 and 1826! Even for recent censuses the net omission rates, i.e. the differences between omissions and double counts, have varied greatly, leading to significant errors in the net migration for a given area. Taking France as a whole, for instance, it has been estimated that the net omission rates in the 1962 and 1968 censuses rose from 1.3 per cent to 1.7 per cent. This means an error of over 14 per cent in the estimate of net international migration for the country as a whole.

Nor does this method allow us to distinguish net internal migration from net international migration in a given area.

There is another possible method using the statistics on birthplace. Since these statistics are more recent and since the method itself is imperfect,¹ we have not used it here. It is however a useful means of estimating the net international migration of the country as a whole² because the differences pertain to smaller totals than those for France as a whole. In this case, one can in fact deal with persons born outside France.

2. Estimates of intercensal migration using data on birthplace

On the face of it, variations in the number of people born in one area and present in another at two successive censuses ought to yield information on the migrations that have occurred between the two areas during the intercensal period. Indeed, individuals born in the first area who are still there at the first census but who migrate to the second during the period between the censuses and are still there at the second census are recorded in this variation. Unfortunately, however, other individuals who are extraneous or moving in the opposite direction affect the picture. Thus those who have returned to their native area during the intercensal period affect this variation. Similarly, those born in the first area who migrated to the second area and then migrated again, but to a third area or abroad, during the period between the censuses, also have an effect. The

result is that what can be estimated by means of the variation from earlier populations is composed of a mixture of individuals who have made many different kinds of migrations.³

If we assume that individuals make only one migration during their life-time, this mixture disappears and the number of migrations between two areas can then be calculated by means of the data on place of birth. One simply has to ascertain the difference between the population born in the first area and present in the second at the second census on the one hand and the product of the same number at the first census and the probability of survival for this subgroup on the other; this makes the necessary allowance for migrants who died between the censuses.

To estimate the probability of survival we need to know the age structure of the migrating population, which is very different from that of the total population. Since in the case of France we know this structure⁴ only for the population moving from one département to another, all the changes of département during the intercensal periods can be estimated.

Because the assumption underlying this estimate—a single migration during an individual's life—is undoubtedly wrong,⁵ it is possible, by using other, more realistic assumptions to make relatively crude adjustments to this underestimation. We shall not go into the details of this correction process here and we refer the reader who is interested in these problems to the work which discusses the matter in detail.⁶

Conclusion

The methods that we have briefly outlined here make it possible to supplement the information on migration in France provided by the usual sources. Although imperfect, they make for a more accurate view of past migrations and give us an idea of the long-term evolution of this mobility.

To close this more theoretical part of the study, it remains for us to describe briefly the methods of analysis that we shall be using.

1. For more details on the use of statistics by place of birth as a means of estimating the net migration of a given area, see D. Courgeau (1980), pp. 44-48.
2. See Y. Tugault (1971).
3. For more information and details on these totals, see D. Courgeau (1980), pp. 49-56.
4. We in fact know the age distribution of persons residing outside their native département only at four censuses: 1901, 1911, 1946 and 1962. The age structure of this population at the other censuses have been estimated either by assuming that the timetable of migration is constant or by using the interpolation method. For more details see Y. Tugault (1973), pp. 52-63.
5. In the case of the 1962 census it can be seen that the estimate using the statistics on birthplace gives approximately half the changes of département that actually occurred in the period 1954-1962. See Y. Tugault (1973), p. 67.
6. For this correction see Y. Tugault (1973), pp. 66-82.

Summary

In the absence of direct sources, indirect methods of estimating migration have been developed. These methods use comparisons between successive censuses and provide a means of estimating the net migration or the numbers of migrants during the intercensal period.

IV. METHODS OF ANALYSIS USED

There can be no question of giving a detailed account here of the various methods of analysis that are used in this study; reference can be made to a number of books or articles which have already described them.¹ Our purpose is rather to take an overall look at the very diverse methodologies that have been applied to the study of human movements. We shall consider here mainly the demographic, geographical and economic approaches and shall then give a more comprehensive view of this phenomenon, similar to that of historians or anthropologists.

1. The demographic approach

This approach, which is purely quantitative, approaches the study of migrations over *time* in three different ways: longitudinal analysis, transversal analysis and temporal models.

(a) Longitudinal analysis

This first type of analysis is the most satisfying in that it allows us to follow the migratory behaviour of a generation, for example, throughout its existence. Unfortunately, the data to carry out such an analysis are still in short supply and for this purpose we shall mainly use the findings of retrospective surveys. To perform such an analysis we begin with the migrations made by individuals and construct series of *annual rates*, relating the number of migrations made to the population of potential migrants. This series can be summarized in an *average number of migrations* made before a given age. One can also examine migrations according to age and thus define annual *first migration* probabilities by relating the number of first migrations made to the population of potential migrants, second migration probabilities knowing that the first was made at a given age, and so forth. This analysis can be extended by bringing in the different types of *interactions* between migration and other demographic phenomena, such as the marriage rate or fertility. Indeed, there is reason to believe that the transition to a new stage in one's life-cycle (marriage, first child, etc.) modifies an individual's spatial mobility. From another angle, it is interesting to see whether or not the migration of a country-dweller to an urban area, for example, affects his marital behaviour or fertility. Methods of analysing such interactions have been developed, so as to compare the behaviour of notional subgroups at various stages of their life-cycle.²

By making use of data that are less satisfactory than surveys or registers it is possible, given certain assumptions, to undertake a longitudinal analysis of migrations. The statistics by place of birth allow this to be done and we use these findings to present an overall view of mobility in France over a long period. We shall in fact only have available the estimate of out-migrations not followed by a return to French départements. Taking the same age, forty-five years for example, for all the cohorts, we can thus work out what proportion was living outside the département of birth at that age.

(b) Transversal analysis

This is more difficult to interpret, as it attempts to describe the behaviour of a population over a given period. In fact it preceded longitudinal analysis since the sources employed can derive directly from the comparison of two censuses. Analysis of net migration by means of *net migration rates* which eliminate the distorting effect of the population, has been done for a long time. This analysis can be extended by introducing *rates of out-migration* and *rates of in-migration*.³ Lastly, to bring out certain structural effects, *indices of migration differentials* are calculated. That means, for example, comparing the rate of emigration of a given category of the population with that of the population as a whole. This brings out the various effects of age, sex, occupation, level of education and so on. One should however beware of over-hasty conclusions, as the subgroups being compared may differ for other reasons that are not revealed by this analysis.

(c) Demographic models

These are not much used here. They seek to reconstruct all migrations observed, for example, using a small number of indices. Such models as are employed will be kept simple. We shall use them in particular to compare the total number of migrants counted over different periods, as is the case in France.

2. The geographical approach

Here, *space*, which was generally overlooked in the demographic approach, takes a leading place. Again, three ways of approaching the study of migrations will be dealt with here: analysis of spatial differentiation, analysis of spatial interaction and spatial models.

(a) Analysis of spatial differentiation

This type of analysis aims to bring out the effect of migration on the variation in the population in many areas of France, without being concerned with the place of origin of immigrants or the destination of emigrants. It deals largely with net migration rates and seeks to identify areas where migratory behaviour is homogeneous.

(b) Analysis of spatial interaction

This, on the other hand, is concerned with all the flows between areas. To compare such flows it is useful to calculate *indices of migration intensity*, which eliminate the effect of the populations at the points of departure and arrival on the migrants exchanged. This index is calculated by dividing the number of migrants by the number of inhabitants in the departure zone at the beginning of the period multiplied by the number of individuals in the arrival zone at the end of the period. It is also interesting to calculate the *net flows* between the two zones so as to identify the recruitment areas of the towns, which can then be related to the *total flow* to obtain an *effectiveness index*.

(c) Spatial models

These are useful for giving a synoptic view of a large number of flows. If, for example, one is working on migrations among the ninety-five départements, one is dealing with 8,930 flows while migrations between the 36,000 communes would produce a table with approximately 1,300,000 boxes. Admittedly most of these boxes would be empty. These

models can allow for the distance between zones (*gravitational models*), or allow for the intermediate points available to estimate the flow between two zones. But such models in fact explain only part of the observed variation in flows. It is thus necessary to try an economic approach with a view to improving this explanation and giving it a clearer significance.

3. The economic approach

It is obvious that movements do not occur in an abstract physical space, but in a space on which the economy leaves its mark. The location of enterprises is by no means random and people tend to settle near where they are sited.

This approach is mainly based on *models* that seek to clarify the impact on the observed flows of economic variables such as rates of unemployment, employment qualifications, wages offered and so forth. These models may be additive, in which case coefficients showing the effect of each variable on the migratory flows are estimated by the *method of least squares*. Alternatively, they may be multiplicative, in which case we often come back to the linear model by expressing them in logarithmic form.⁴ But it should be noted that the estimated coefficients no longer correspond to the minimum of the quadratic deviation in the initial model. Finally, these models may bring in, as variables to be explained, not only migration itself but also a number of other variables that interact with migration. We then have a system of equations which distinguishes between variables that are endogenous to the model and those that are exogenous. If this system is linear it can be solved by the *method of double least squares*.

Though models constructed in this way do show the impact of economic variables on migrations, they still do not fully explain all the variations in these flows, which are in fact determined not only by economic factors but by numerous other factors which must now be identified.

4. The global approach

This approach, which has been taken up by some historians and anthropologists, is still far from providing a clear explanation of human movements. It does however give a broader and deeper perspective on these movements than the ones discussed above. We shall say briefly how we conceive it.⁵

Earlier approaches assume that the individual takes his decision to migrate by comparing the respective advantages and disadvantages of each territorial area. Such approaches generally overlook the fact that the individual finds himself in a social universe with complex structures. Each of these *systems of relations* (family, economic, political, religious, educational, associative and informal) covers a particular space in which physical movements occur. The systems must first be analysed individually: they are made up of groups of individuals organized so as to achieve one or more shared tasks. This organization has spatial implications that prompt some movements and inhibit others. The next step is to separate out the links between these systems of relations since each individual participates in more than one system and the new complex space thus created should make it possible to explain the relationships between each of these systems and their evolution over time.

Although analysis along these lines is still in its infancy it appears to promise much for the future.

1. See especially, P. George (1960), J. Beaujeu-Garnier and G. Chabot (1964), D. Courgeau (1980).
2. See D. Courgeau (1980), pp. 99-104.
3. Rates of emigration, which relate emigration from a particular area to its initial population, have a clear significance: the events in the numerator are experienced by the population which is the denominator (this is in fact true only if the period is very short). Conversely the rates of immigration, which relate immigration into a particular area to its final population, do not have any clear significance: the denominator is no longer a population of potential migrants.
4. An attempt can be made to solve the multiplicative model by successive approximations, but the sheer number of calculations makes this method rather impractical.
5. For more details see D. Courgeau (1979, b).

Summary

The various approaches—demographic (longitudinal and transversal analyses, demographic models), geographical (analyses of spatial differentiation and spatial interaction, spatial models) and economic—are here replaced by the quest for a more comprehensive approach to mobility. We begin by approaching this mobility through the various systems of social relations (family, economic, political, religious, educational, associative and informal) before attempting to find a synthesis.

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