Hugh Clout (editor)

Europe's cities in the late twentieth century

Nederlandse Geografische Studies / Netherlands Geographical Studies

Redaktie / Editorial Board

Prof. Dr. J.M.M. van Amersfoort Dr. H.J.A. Berendsen Drs. J.G. Borchert Prof. Dr. A.O. Kouwenhoven Prof. Dr. H. Scholten Drs. P. Siitsma

Plaatselijke Redakteuren / Associate Editors

Drs. J.G. Borchert. Faculteit der Ruimtelijke Wetenschappen Universiteit Utrecht Dr. D.H. Drenth. Faculteit Beleidswetenschappen Katholieke Universiteit Nijmegen Dr. A.C.M. Jansen. Economisch-Geografisch Instituut Universiteit van Amsterdam Drs. F.J.P.M. Kwaad. Fysisch-Geografisch en Bodemkundig Laboratorium Universiteit van Amsterdam Drs. P. Siitsma. Faculteit der Ruimtelijke Wetenschappen Rijksuniversiteit Groningen Dr. L. van der Laan. Economisch-Geografisch Instituut Erasmus Universiteit Rotterdam Dr. J.A. van der Schee. Centrum voor Educatieve Geografie Vrije Universiteit Amsterdam Drs. F. Thissen. Instituut voor Sociale Geografie Universiteit van Amsterdam

Redaktie-Adviseurs / Editorial Advisory Board

Prof. Dr. G.J. Ashworth, Dr. P.G.E.F. Augustinus, Prof. Dr. G.J. Borger, Prof. Dr. J. Buursink, Prof. Dr. K. Bouwer, Dr. C. Cortie, Dr. J. Floor, Drs. J.D.H. Harten, Prof. Dr. G.A. Hoekveld, Dr. A.C. Imeson, Dr. A.C.M. Jansen, Prof. Dr. J.M.G. Kleinpenning, Prof. Dr. F.J. Ormeling, Prof. Dr. H.F.L. Ottens, Dr. H. Reitsma, Dr. H.Th. Riezebos, Drs. P. Schat, Drs. F. Schuurmans, Dr. J. Sevink, Dr. W.F. Sleegers, T.Z. Smit, Drs. P.J.M. van Steen, Dr. J.J. Sterkenburg, Drs. H.A.W. van Vianen, Prof. Dr. J. van Weesep

ISSN 0169-4839

Netherlands Geographical Studies 176

Europe's cities in the late twentieth century

Hugh Clout (editor)

Utrecht/Amsterdam

The Royal Dutch Geographical Society/ Department of Human Geography Faculty of Environmental Sciences, University of Amsterdam

Lay-out. Department of Human deography, oniversity of Amsterdam
CIP-GEGEVENS KONINKLIJKE BIBLIOTHEEK, DEN HAAG
Europe's
Europe's cities in the late twentieth century / Hugh Clout (ed.) - Utrecht: The Royal Duto Geographical Society; Amsterdam: Department of Human Geography, Faculty of Environmental Sciences. University of Amsterdam III (Netherlands geographical studies, ISSN 0169-4839; 176)
Met lit. opg. ISBN 90-6809-190-5
Trefw.: stadsgeografie ; Europa ; geschiedenis ; 20e eeuw
ISBN 90-6809-190-5 (NGS 176)
Copyright © 1994 Department of Human Geography University of Amsterdam

No part of this book may be reproduced in any form of print, photoprint, microfilm, or any other means without written permission from the publisher.

Printed by Elinkwijk by Utrecht, the Netherlands

CONTENTS

	Prolo	gue	11
1		and the Ile-de-France: national capital, world city	13
			13
	1.1	The return to growth	14
	1.2	Deepening economic specialization	15
	1.3		17
	1.4	Changes in the environment	23
	1.5	Beyond the 1980s	23
2	London: change and uncertainty in a world city		29
	Hugh	Clout	
	2.1	A City in Context	29
	2.2	Time, Space and Ideology	30
	2.3	Londoners and their Homes	35
	2.4	The Central Business District	40
	2.5	Docklands	44
	2.6	Challenges	47
3	Madr	51	
		iel Valenzuela and Ana Olivera	F4
	3.1	Introduction	51
	3.2	Land and Environment	53
	3.3	Historical evolution and urban growth	54
	3.4	Population	57
	3.5	Economic activity	59
	3.6	Infrastructure and transport	62
	3.7	Urbanism and Urban policy	63
	3.8	Culture, leisure and open spaces	66
4	Dubli	in: change and challenge	69
		Brady	
	4.1	Introduction	69
	4.2	Population Structure and Distribution	70
	4.3	Housing	74
	4.4	The Economic Base of Dublin	77
	4.5	Transport Policy	79
	4.6	Conclusion	83
5		terdam: capital city without capital functions	85
		van Engelsdorp Gastelaars and Wim Ostendorf	25
	5.1	Amsterdam within the Randstad	85
	5.2	Amsterdam and its urban region	87
	5.3	The urban mosaic	91
	5.4	Amsterdam's inner city	94
	5.5	Conclusion	96

6	Turin	in the 1980s	99	
	Anna	Segre		
	6.1	The role of a great firm on urban development	99	
	6.2	Changes in Production in the 1970s	100	
	6.3	From Factory Town to Metropolitan Complex	101	
	6.4	Territorial management	102	
	6.5	The New Structure Plan and the derelict industrial areas	103	
	6.6	Explaining redundant industrial sites	106	
	6.7	Population Change	106	
	6.8	Demand for Housing	107	
	6.9	Transport Systems	108	
	6.10	Turin in the future	109	
7	Mano	hester: the Millennium City	111	
		r Bristow	7, 5,	
	7.1	The post-industrial challenge	111	
	7.2	The Victorian Legacy	112	
	7.3	Into the Twentieth Century	114	
	7.4	Outer City, Inner City	117	
	7.5	The Millenium City	120	
8	Düsse	eldorf: economic restructuring and demographic transformation	125	
	Güntl	ner Glebe		
	8.1	Introduction	125	
	8.2	The changing profile of Düsseldorf's economy	126	
	8.3	Demographic transformation	131	
	8.4	The housing situation	135	
	8.5	Some planning problems in the 1990s	138	
9	Belfas	st: a city on edge	141	
	Fred	Boal		
	9.1	Population Dynamics	141	
	9.2	Ethnic Geography	146	
	9.3	Economy and Unemployment	148	
	9.4	Beyond the Shocks	149	
	9.5	Plus ça change: plus c'est la même chose - a concluding comment	154	
10	Grenoble: city of paradox			
		Chamussy		
	10,1	Myths and reality	157	
	10.2	Separate development	157	
	10.3	The environment of Grenoble	159	
	10.4	The spirit of Grenoble	160	
	10.5	Reading the urban landscape	161	
	10.6	Grenoble and Alpine tourism	165	
	10.7	Communications	166	
	10.8	Population Change	167	
	10.9	Grenoble tomorrow?	168	

		170
		170
		171
		176
		180
11.5	Bonn - a former capital in search of its future	184
Göttin	gen: a German university town over the past quarter century	187
Dietric	h Denecke	
12.1	Urban Structure and Land Use	187
12.2	Population	188
12.3	Building Development and Urban Expansion	189
12.4	Renewal and Conservation of the Inner City	191
12.5	Service Centres	191
12.6	Planning for Traffic and Transport	193
12.7	Göttingen and its Surroundings	193
12.8	The University	194
12.9	Research outside the University, Educational and Cultural	195
12.10	Handicrafts and Manufacturing Life, and Tourism	196
12.11	From Periphery to Core in the New Germany	197
Lund i	n the late twentieth century	199
Nils L	ewan	
13.1	Introduction	199
13.2	The growth of the university	199
13.3	The growth and relocation of industries	200
13.4	The growth of population and urban area	200
13.5	The growth of historic awareness	201
13.6	The growth of traffic and commuting	203
13.7	Growth in the region	203
13.8	Lund outside Lund	204
13.9	The growth of possibilities and problems	205
Epilogue		207
	Günth 11.1 11.2 11.3 11.4 11.5 Göttin Dietric 12.1 12.2 12.3 12.4 12.5 12.6 12.7 12.8 12.9 12.10 12.11 Lund i Nils L 13.1 13.2 13.3 13.4 13.5 13.6 13.7 13.8 13.9	11.2 Bonn's development as capital of the FRG 11.3 Population structure and population change 11.4 Planning strategies and problems - selected case studies 11.5 Bonn - a former capital in search of its future Göttingen: a German university town over the past quarter century Dietrich Denecke 12.1 Urban Structure and Land Use 12.2 Population 12.3 Building Development and Urban Expansion 12.4 Renewal and Conservation of the Inner City 12.5 Service Centres 12.6 Planning for Traffic and Transport 12.7 Göttingen and its Surroundings 12.8 The University 12.9 Research outside the University, Educational and Cultural 12.10 Handicrafts and Manufacturing Life, and Tourism 12.11 From Periphery to Core in the New Germany Lund in the late twentieth century Nils Lewan 13.1 Introduction 13.2 The growth of the university 13.3 The growth of the university 13.4 The growth of population and urban area 13.5 The growth of historic awareness 13.6 The growth of traffic and commuting 13.7 Growth in the region 13.8 Lund outside Lund 13.9 The growth of possibilities and problems

3 Madrid, capital city and metropolitan region

Manuel Valenzuela and Ana Olivera

3.1 Introduction

Situated in the geographical centre of Spain, Madrid owes its status as a major city to Phillip II's choice in the middle of the 16th century to make it the new capital. Because Madrid was principally a political capital, the city reflected the evolution of Spain's international situation as well as the continual and sometimes violent changes in the regime. This was the case during the Civil War (1936-39) which led to forty years of rule under Franco, who accelerated Madrid's economic and demographic growth. Due to the lack of urban and social planning, this dynamism gave rise to an anarchic city with a basically unjust socio-spatial structure until the democratic reforms of 1975. Since then the growth of Madrid has shifted into a suburban 'ring' of more than 20 municipalities and officially declared to form a Metropolitan Area in 1963. These satellite towns, many of which lack employment opportunities of their own, still find themselves with an inadequate provision of services compared with the Capital. Their dependence on the central city is therefore very strong. However Madrid also had an impact on a much wider area, from which it obtained many resources (water, building materials, fresh food); second-home developments and open air recreation areas were exploited principally after the 1960s, when car ownership became more general, and spilled into a rural urban fringe more than 50km in radius.

After 1979 the Municipality of Madrid had its own democratic representatives and in 1983 the old province of Madrid became an Autonomous Community (Madrid Region) under the same terms as all the other regions in Spain (Figure 3.1). From this point on, two politico-administrative entities co-existed and often overlapped: the Municipality of Madrid (607 km² and 3 million inhabitants in 1991) and the Community of Madrid (7,995 km² and 4.9 million inhabitants). During the 1980s both institutions were governed by the Socialist Party, thereby avoiding conflicts. The situation today, however, is quite different with the conservative Popular Party in power in local government. There are many topics which cannot be agreed and others which are delayed to the detriment of the *madrileños* (the people of Madrid). The worst

arguments are usually over infrastructure.

Madrid remains the capital of Spain but the country is by no means the centralized state it was in the past. However, at the moment, the disadvantages of this outweigh any advantages. The Municipality of Madrid must face the large expenses incurred by any capital city and the loss of income resulting from housing many government offices. The daily life of Madrid's citizens is undoubtedly affected by numerous official visits and the frequent demonstrations which come to the city from all regions of Spain. Because of this all of the major political parties agree that Madrid should have its own special 'Capital Statute', to regulate relationships between the various institutions and to compensate the 'cost' of being the capital. Political party interests are slowing down the statute being passed.

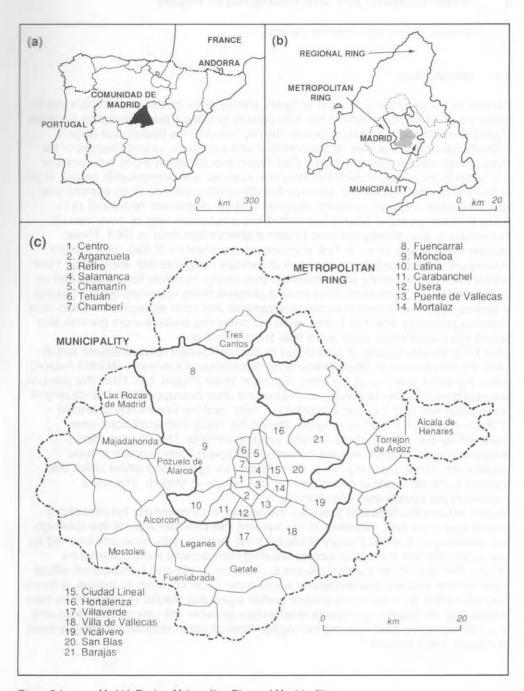


Figure 3.1 Madrid: Region, Metropolitan Ring and Municipalities

3.2 Land and Environment

Physical features

The city is situated in the centre of the Iberian Peninsula on the Castillian Meseta which stands at an average altitude of 660m. The land around Madrid originates from the sedimentary basin of the river Tajo and is formed by Tertiary materials (detritic Miocene) resulting from the erosion of the nearby granitic Guadarrama Sierra and Quaternary river sediments carried by the Manzanares. These are mainly sands and in some areas clays and marl. The countryside is characterized by gentle hills and valleys.

The climate is of a continental Mediterranean nature, with strong seasonal differences in temperature and little rainfall. The mean annual temperature is 14°C. The mean monthly temperature in the warmest month (July) is 25°C and in the coldest month (January) is 5°C. The thermal range is very pronounced, with maximum and minimum temperatures ranging between -6°C and 40°C. High summer temperatures intensified by the urban heat island effect, mainly in the city centre, can produce great discomfort on certain days. The precipitation regime is dry Mediterranean. Annual rainfall is 440 mm, with large year to year differences and prolonged dry summers. Rain comes mainly at the end of the autumn/beginning of winter, with a second period of rainfall in spring. High pressure during winter and summer causes these two seasons to be extremely dry. Totally or partially clear days during the year exceed 250, giving Madrid a high sunshine rating.

Despite an adequate system for water provision (involving 13 reservoirs to the north of the city) it has been necessary in recent years to restrict irrigation of private and public gardens during the summer because of on-going drought. Historic parks are excluded from this ban. The river Manzanares has a weak flow with a low water level, characteristic of other Mediterranean watercourses. For many years it was a dirty river, but has been improved greatly following the Plan de Saneamiento Integral (1977-85). This perhaps explains the relationship between city and river, which is very different from that in other European cities. Madrid has always turned its back on the Manzanares. The river banks have never been prestigious places (unlike some stretches of those of the Seine or the Thames), but have been a physical barrier to urban development, which only crossed the river in the 20th century.

Environment

Madrid's environmental problems are similar to those of other large urban areas, but are aggravated by shortage of rainfall, scarce and weak winds, stagnant air during high pressure conditions in winter, widespread use of coal-fuelled heating, and density of traffic. Three-quarters of atmospheric pollution is due to traffic and the worst conditions occur at the end of December and the beginning of January, when heating is employed to the maximum, traffic is very dense because of Christmas shopping, and the air is usually at its most stagnant. The number of days in which officially recognized pollution levels are violated are very few, but it must be appreciated that these official values are a lot higher than those agreed in the majority of the EC. At times pollution levels are three times those tolerated by the World Health Organization.

Noise pollution is significant in certain districts. Madrid is a noisy city, partly because of the dense traffic, but also because of the climate and way of life (which greatly favour

use of the street) and a more vibrant night-life than in other European cities. The accumulation of waste is also a big problem, because existing dumps are insufficient

and because of the presence of illegal waste grounds in the periphery. Measures for control and recycling and for the conservation of green areas have improved in response to these factors during the last decade (Valenzuela 1990).

3.3 Historical evolution and urban growth

The pre-industrial city

The origins of Madrid are very late by comparison with most Spanish cities, which are rooted in Roman or even pre-Roman times. Madrid first appeared in the 9th century as an Arab border stronghold on the site of the present-day royal palace, and made good use of the small escarpment alongside the river. This Muslim 'Mayrit' was conquered by the Christians in the 11th century and developed as a small market town until the 16th century. Various defensive walls appeared at later stages (the Islamic wall adjacent to the Alcazar, the 12th century wall which ended in the Plaza Mayor, and the 'arrabal wall' which stretched to the Puerta del Sol). Only a small part of the Arabic wall remains. Generally speaking any monumental or historic remains were already few in number by the Modern Age.

In 1561 Phillip II moved the Spanish court to Madrid and made it the capital of Spain,

an event which carried with it profound quantitative and qualitative changes. Population increased rapidly and the city become an almost entirely administrative centre and was to remain so until the end of the 19th century. The city grew to the east avoiding the natural barrier of the river and the Casa de Campo (royal hunting ground) to the west. During the Austrias dynasty the Plaza Mayor was remodelled and the city expanded to the dimensions of the present-day Centro district, which was completely surrounded by a fiscal wall. The city perimeter remained intact until the end of the 19th century, creating a dense concentration of people and resulting in the disappearance of open spaces. The layout was characterized by narrow winding streets. In the 18th century with the arrival of the Bourbons various public works were commissioned to improve the image and level of hygiene of the city, especially during the reign of Charles III. These included installation of a sewerage system and improvement of two central axes (the Paseo del Prado-Recoletos-Castellana, from north to south, and the Calle Alcalá from west to east)(Figure 3.2). The Prado area was lined with trees and adorned with sculptures, fountains and monumental buildings, many of which were destined for scientific use. These buildings include the Gabinete de Ciencias (which is the present-day Prado Museum), the Botanical Gardens, the Astronomic Observatory and the San Carlos Hospital (now the Reina Sofía Museum for Contemporary Art). The nobility also built palaces in the area, for example the Palacio de Linares (today the Casa de América). The Puerta de Alcalá was commissioned on the city's west-east axis, which, together with the Cibeles fountain,

The 19th and 20th centuries

The reforms of the 18th century improved the image of the city, but residential growth continued and was increasingly densely packed and overcrowded. Halfway through the 19th century there were 280,000 inhabitants within the limits established in the two previous centuries. In 1860 the Ensanche (Plan Castro) was passed which was to occupy land north and east of the historic centre. This new idea was conceived to form a well planned residential area with wide streets in an orthogonal layout (a large grid

are perhaps the two most characteristic monuments in Madrid.

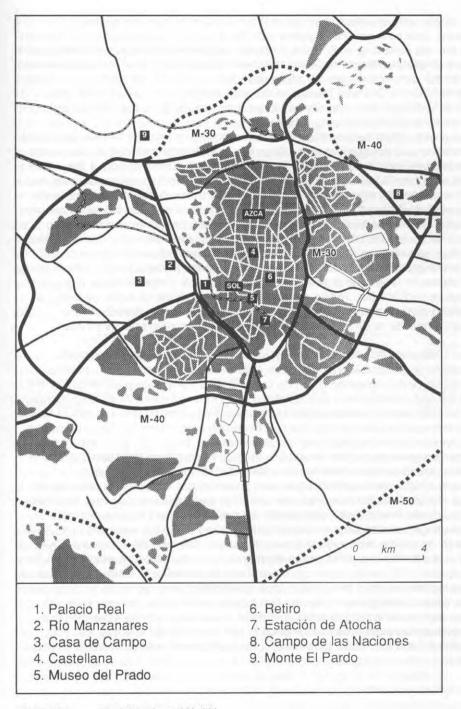


Figure 3.2 The Urban Area of Madrid

forming blocks with abundant open spaces) and was to be favoured by the bourgeoisie. This area now corresponds with the districts of Salamanca and Chamberí. In 1868 the last remaining wall, which hindered expansion of the city, was destroyed. When industrialization began between 1875 and 1916 working-class suburbs started to appear on the periphery, especially along main thoroughfares, concentrated principally in the north (Cuatro Caminos-Tetuán), in the east (Ventas), and in the south-east (Puente de Vallecas). Thus the city had three main components: the historic centre, the Ensanche and the developing suburbs.

At the start of the 20th century there were two outstanding projects: the Ciudad Lineal of Arturo Soria and the opening of the Gran Vía, a traditional commercial axis. In the 1930s proposals from the Zuazo Plan were applied to direct the growth of Madrid to the north along the Castellana. It was in this period that the first residential areas were built in the garden city style (e.g. El Viso). After destruction during the second world war, the reconstruction of the city and the reinforcement of the idea of Madrid as the state capital (the 'Great Madrid'), with necesary political, defensive and economic functions) converted the city into the 'capital of capital'. Employment in manufacturing, construction and services attracted thousands of migrants, whose presence caused severe housing problems. Shanty towns appeared on the periphery with approximately 50,000 shacks in 1956. Social problems arose as a result of the shortage of housing, infrastructure and facilities. Public programmes to improve the situation, by creating new working-class suburbs in the south and east of Madrid (e.g. San Blas and Entrevías), normally made up of isolated blocks of flats, spread over large open spaces.

Between 1948 and 1954 the Municipality of Madrid annexed 13 other peripheral municipalities (e.g. Carabanchel, Vallecas, Villaverde), which had already been swallowed up by the sprawling city. This multiplied the surface area of the city by ten. In 1963 the Metropolitan Area was redefined and remained within those administrative limits until 1981 when it was enlarged to its present-day dimensions. The city of Madrid became Metropolitan Madrid regardless of the green belts which had been proposed. Some towns in the metropolitan ring became dormitory towns and grew uncontrollably (e.g. Alcorcón grew from 3,356 inhabitants in 1960 to 46,000 in 1970 and 139,600 in 1991; Móstoles grew from 2,886 to more than 192,000 inhabitants today). The growth of 20th century Madrid has been spontaneous, except for a few specific locations. Private initiative produced new areas for the middle classes (e.g. Moratalaz or 'Ciudad de los Periodistas'). High-status estates of detached houses and rows of family dwellings have appeared in recent years, especially in the west and north, and attract high- to middle-class people leaving the urban core and the Ensanche. The only attempt at residential and employment decentralization has been the new town of Tres Cantos. Since 1979 the city once again has had a democratically elected town council. which during the period of the socialist local government renewed many working-class suburbs. Older buildings have been replaced by better designed housing built with higher quality materials. At the same time these areas acquired many facilities that they previously lacked. Certain small areas in the inner city are in decay, but not excessively so and the recent processes of renovation and restoration seem to have halted this.

3.4 Population

Population change and demographic trends

Between 1950 and 1970 the city's economic development attracted a large number of migrants and population grew from 1 to 3 millions in the post-war period. Growth in the 1960s was mainly due to inmigration, most which coming from Toledo, Ciudad Real, Extremadura and Jaén. In 1960 one in every two inhabitants had been born outside the capital. In the following decade inmigration fell, producing and excess of outmigrants over inmigrants, and the increase in population was due to strong natural growth. After 1975 the growth of other major cities in Spain began and the population of the capital stabilized (Table 3.1). The exodus to outer metropolitan municipalities was due to the shortage of housing and rising prices closer in, which led young middle-class families to move to cheaper housing in southern and eastern towns (Móstoles, Fuenlabrada, Leganés, Torrejón and Alcalá de Henares). Simultaneously other middle and higher class families moved to new anglo-saxon style high-status suburbs in the north and the west (Las Rozas, Majadahonda, Pozuelo, La Moraleja and Tres Cantos), in search of a higher standard of living, greater security, and green areas. At the beginning growth was greatest in municipalities in the south and south-west and more recently it has intensified in the north and west.

Table 3.1 Madrid: Resident Population 1975-1991

	1975	1991	Change
Municipality (1)	3,228,057	3,010,492	- 217,565
Metropolitan Ring (2)	847,090	1,579,606	+ 732,516
Metropolitan Madrid (1+2)	4,075,147	4,590,098	+ 514,951
Madrid Region	4,319,904	4,947,555	+ 627,651

From 1975 to 1991 the population of the Municipality of Madrid decreased by 217,565 due to young people moving to the Metropolitan Ring, the declining number of children, and to the general fall in the fertility rate. (In the Region of Madrid the number of children per woman was over 2.8 in 1976, but fell to 1.3 in 1990). In 1989 the birth rate in the capital was 9 per thousand and in the Metropolitan Ring 13 per thousand. The Metropolitan Ring now represents one-third of the population of the region, by comparison with only 4% in 1940. The relative importance of the population of the City of Madrid within the metropolitan region diminished from 69% to 61% over the same period.

In the capital the last decade can be characterized by a very slight natural increase and a negative net migration. As a result of this process, the population of the city was 3,010,492 according to the last Census in 1991. This is 8% of the entire population of the country. In line with recent trends this decrease continues, but at a much slower rate. In the period 1981-86 the rate of change was -3.2% and for 1986-91 the figure had declined to -1.6%. Although the birth rate has been falling continually, the rate of out-migration has been less than in previous years (Table 3.2). The capital experienced natural decrease (-726) in 1991, due to a fall in births and a small rise in mortality as a consequence of ageing. This fact demonstrates that Madrid has not regained its natural growth as is the case in certain other European capitals. Despite

this, the cohort of babies of less than 1 year is slightly larger than in recent years and could represent the start of a change in the trend.

Table 3.2 Municipality of Madrid. Evolution of Population by Components

Year	Resident population	Change	Growth rate	Natural increase	Net migration
1960	2,177,123	442 674	20.4	101 205	252.200
1965	2,620,797	443,674		191,305	252,369
1970	3,120,941	500,144	19.1	217,674	282,470
1975	3,228,057	107,116 - 69,236 -100,639	3.4	191,777	-84,661
			-2.1	125,243	-194,479
1980	3,158,818		-3.2	60,286	-160,655
1986	3,058,182	* * * * * * * * * * * * * * * * * * *			The state of the s
1991*	3,010,492	- 47,690	-1.6	19,686	-67,376

^{*}Approximate figures

From 1986 to 1991 the population of the city decreased by 1.6%, the Metropolitan Ring increased by 12%, and for the first time the non-metropolitan municipalities experienced a population increase of 13.5%, namely greater than that of the Metropolitan ring. This seems to reflect a more even spread of population, even though Metropolitan Madrid (capital + ring) made up 93% of the regional population. Within the Municipality the districts which are losing the most population are in the urban core (the historic centre and the Ensanche). This is partially due to competition between the residential and tertiary sectors which has considerably increased land prices. On the other hand some peripheral districts in the north and east, like Fuencarral, Hortaleza or Barajas, which had land available, have seen a significant increase, especially in the north.

Demographic and social structure

Low fertility and high life expectancy have accentuated ageing. The age group of 65 years and over is the same as the number of children from 0 to 15, with each consisting of 15% of the total population. The proportion of old people is larger in the centre of the city and the Ensanche (especially Centro and Chamberí), where elderly people account for more than a quarter of the population in some areas. On the contrary, in the Metropolitan Ring more than one-third of the population are under 20 years of age. Three-quarters of the elderly people of the region live in the capital but only half of its young people. This new situation has brought with it a mismatch between supply and demand regarding medical services and other types of facility. The deceleration of productive activity and the abundance of young adults, due to the high birth rates of the 1960s and 1970s, has given rise to a high level of unemployment, which is much worse than in other major European cities. Approximately one-fifth of the workforce is unemployed in various southern and eastern districts. The most affected are young people between 18 and 24 living in the south of the city and in the south of the Metropolitan Ring. During the final quarter of 1992 Madrid's average unemployment rate was 15.5%.

From a social point of view the town is divided diagonally into two parts, from the south-west to the north-east, passing through the south of the Centro and Retiro districts and linking national roads II and V. The social contrast between the north-west

and the south-east is notable, but Madrid is not merely a dual city, despite increasing inequalities in recent years. Nowadays the highest incomes come from the Salamanca, Chamberi, Retiro, Chamartin and Moncloa districts and the luxurious estates in the west and north of the Metropolitan Ring. By contrast, the greatest degree of poverty can be found in the south and east and in some small run-down areas in the centre. In recent local elections the conservative Partido Popular received most votes. The urban core and the Ensanche are traditionally conservative while the south and east of the city have left-wing tendencies.

Foreigners with official permission to reside in Spain totalled 82,000 in the metropolitan region in 1991, most of whom lived in the City of Madrid. This is a very small proportion of the population (2-3%). The majority find integration easy as they tend to come from Europe or Latin America, but recently the communities that have increased most rapidly are of African or Asian origin. There are no ghettos, although Moroccan and Portuguese shanty towns are beginning to appear. Illegal immigration is still on the increase and this provokes social tension in the form of racism and competition for jobs. This is by no means comparable to the situation in such cities as London or certain German towns.

3.5 Economic activity

Madrid has traditionally been a service city, because it is the political, financial and economic capital of the country. The 1973 crisis had a harsh ongoing effect on the city's economy. But since the beginning of the 1980s the international economic recovery and particular national conditions (especially those involved in opening up to exterior markets, derived from Spain's entry to NATO in 1982 and to the EC in 1986) have had a profound effect. Madrid is becoming a second-level global city, with the role of privileged focus of economic relationships with Latin America, North Africa and Portugal. This is transforming the city's economy but is also bringing about physical changes in the city, which will need new infrastructure and new areas for economic activities.

Madrid attracted 47% of foreign investments in Spain in 1990 and 40% in 1991. Madrid and Barcelona between them captured more than three-quarters of total foreign investments. Madrid's principal attraction for international economic activity is its central role in political and economic life, and its accessibility. The capital is well provided with financial and retail institutions. The greater part of these originate from EC countries (especially the Netherlands, France and the UK), Switzerland, Japan and the USA. Even today more than 60% of the city's jobs are to be found in the central districts, producing an imbalance between residential areas and the main area of activity, which causes traffic problems. The distance from home to place of work has tripled since 1986.

Political capital

Madrid is the centre of political decision making in Spain. More than 20% of madrileños earn their salaries directly from the state. It is also the city with the largest concentration of administrative functions, employing one-fifth of Spain's civil servants, despite decentralization after the country split into Autonomous Communities. Madrid contained 1,786 administrative offices in 1989, including those of the state, the region, the municipality, and political parties and trades unions, as well as consulates,

embassies, and international organizations. State activities take up the greater share of office space and employment, and are concentrated in the Chamartín, Centro, Chamberí and Salamanca districts.

Economic and financial capital

In 1988 39% of Madrid's workforce were employed in administrative activities, banks, offices, teaching and health. A figure of 29% worked in transport, communications and the hotel and catering trade, whereas 17% were employed in manufacturing and construction. Madrid's economic output represents a large part of the national total. Construction and many segments of the service sector (credit, insurance, hotels, transport and communications) occupy first place in the national league table. In 1955 the city's contribution to GDP was 11% and rose in to 16% in 1987 for total production and to 20% for the service sector. One-quarter of GDP produced by credit, insurance and sales and more than one-fifth of income generated from transport, communication, and private teaching and health care stems from Madrid. The GDP produced in Madrid derives mainly from public services, retail, credit and insurance, transport, communications, and hotel and catering.

Madrid is the principal centre for decisions affecting the national economy and is the country's leading financial centre. The major banks and insurance companies have their headquarters there. With a quarter of Spain's banking and insurance workers being based in Madrid, the city is ten points ahead of Barcelona, which has 16% of the nation's jobs in these sectors. Madrid and the four provinces of Catalonia have 40% of all bank deposits nationwide. The stock exchange experienced an enormous growth between 1984 and 1989, due to the arrival of foreign capital.

Offices

Madrid controls much of the country's public and private business activity. Almost half of the workforce has jobs in offices related to direction, management and providing technical and administrative services. In the Madrid region private offices occupy 9 million m² and public offices 3 million m². In 1989 the region had 37,000 premises dedicated to private office space, employing 460,000 workers. These premises are principally situated in the traditional tertiary centre, the old CBD of Sol-Gran Vía and more recently stretching north to the new CBD of Azca-Castellana. This has caused a strong tertiarization of the Ensanche. According to a recent survey, the main location factors have been in order of importance, prestige of the area, proximity to the financial centre and state institutions, advanced telecommunications, and ease of vehicle access. The most sought-after locations were in the centre and the Ensanche, with the figure of 87%, while 9% of enterprises claimed they would prefer to be in the periphery of the city and only 3% in the Metropolitan Ring.

The average sale price of offices grew from 143,000 ptas/m² in 1986 to 380,000 ptas in 1990, but in the best areas of the Castellana, Retiro and Salamanca districts such prices range from 500,000 ptas to 1 million ptas. At the end of the last decade there was a decentralization process towards peripheral and metropolitan areas, although this is still relatively new and uncommon.

Retailing

At the national level, Madrid occupies second place in retail after Barcelona. Today the retail trade is very diverse and is an area of fierce competition. Small local shops survive but with great difficulty, whereas new forms of shopping (hypermarkets and

large commercial centres) have been very successful. The small shops are mainly found in Centro and Salamanca districts and the larger hypermarkets are often situated in the periphery and in the domitory towns. (These shops are often controlled by French interests, e.g. Pryca, Alcampo, Continente). Large commercial centres began to appear at the end of the 1970s, usually beginning as fashionable outlets and serving one particular neighbourhood. More recent centres are of a mixed nature, including every type of shop and various kinds of leisure activity at the same time, thereby ensuring they have a more regional sphere of influence. The first commercial centre especially designed with a regional clientele in mind was Madrid-2 (La Vaguada), inaugurated in 1983 in the district of Fuencarral. In 1989 the Parque Sur de Leganés (in the southern metropolitan ring) was opened for business, including a water park. The Mercado Puerta de Toledo, near the Rastro flea market, also deserves special mention. Renovated from the old central fish market, the centre now houses fashion, jewellery and antiques outlets. Nowadays all of the central markets supplying Madrid have merged into MERCAMADRID, located in the southern periphery of the town.

International fairs, conferences and tourism

The opening up of Spain to the international economy has helped Madrid become one of the top ten cities to host international conferences. Twelve years ago such events were very rare in the capital, but in 1990 the city came in seventh place in world ranking. This trend was rather late but was very rapid once it began, involving a public body being established to promote and manage events in the city (IFEMA). In 1992 there were 56 trade fairs. Today Madrid hosts half of all international conferences coming to Spain. It is now well equipped to receive these types of activity, especially with the inauguration of the Campo de las Naciones in 1991. Furthermore Madrid is well supplied with 4- and 5-star hotels and is a national and international centre for transport and communication. One should also note that the city has a pleasant climate and has a rich cultural and historic heritage (Camara de Comercio 1991). Tourism is also very relevant in the life of Madrid. The largest contingents of visitors are from other Spanish provinces, followed by the British, French, Italians, Germans, North Americans, and Japanese. Most tourism is of a cultural nature, and reflects the quality of museums, art galleries and leisure activities in the city.

Manufacturing

Manufacturing activity has always been given relatively little attention in the city, however Madrid is the second most important region in the country for industrial production. Major branches include transport products, electrical goods, machinery, chemical and pharmaceutical products, and publishing. After 1950 many manufacturing enterprises closed, some permanently and others because they relocated to the peripheral south (Villaverde) or later on to other metropolitan municipalities. Some empty buildings remain in old industrial areas in central Madrid but most have been remodelled for residential use, above all in the Arganzuela, Chamartín and Chamberí districts (Pardo and Olivera 1992). This industrial decline will continue in the near future and will intensify in the south of the city because of the Pasillo Verde Ferroviario Plan and basic strategies contained in the Plan General.

3.6 Infrastructure and transport

As the political capital of a centralized state, Madrid found itself in a privileged position with regard to railway and road networks established during the 19th and 20th centuries. Both were basically radial and Madrid enjoyed a central position. However the city did not fare so well after 1967, with the new motorway programme mainly benefitting the Basque Country, the Ebro Valley and Catalonia. From Madrid there was only a short stretch of motorway (some 100 km) leading towards one of the most backward regions in the country (Galicia), although any logical connection with the European motorway network would have to come from the Basque Country or Catalonia. In fact a Transport Infrastructure Plan for Madrid had existed since 1975, which proposed half a dozen radial toll motorways but none of these has been built. However access to Madrid has improved as all the old radial roads were incorporated into the Dual Carriageway Programme, which was integrated into the first National Highway Plan (1984-1991).

The railway network, on the other hand, has barely changed, maintaining its radial form from Madrid toward the periphery. However, the delayed modernization of the track gauge used by RENFE (the state company) and its numerous financial losses removed competitiveness as a growing share of clientele preferred to travel by road. However, the construction of the Spanish High Speed Rail Link between Madrid and Seville will open the way for Madrid to join the European High Speed network through Catalonia in 1997 - provided there are no delays.

Even with these improvements, access to Madrid is still subject to criticism from citizens and to controversy among politicians. This is certainly true of the Madrid Urban Motorway Network which connects the radial roads with each other and with the urban road network. These urban motorways are of vital importance for the metropolis of Madrid which has a large flow of through traffic. Yet, a quarter of a century after it was begun (in 1967) the motorway network still has not been finished. Changes in political regime and in town-planning ideology, and variations in economic conditions and electoral behaviour have conspired to stop or interrupt the so-called Red Arterial of Madrid.

It seemed that the Transport Plan for Large Cities (1990-93) - also called the Plan Felipe (after Prime Minister Felipe Gonzalez) - was finally to put an end to all the waiting. For the first time all the Madrid institutions were in agreement, as demonstrated by the three-part agreement between municipality, regional government and state government. This plan would allow for the completion of the third ring road (M-30), the construction of the fourth (M-40), and the beginning of the fifth (M-50). But all has not gone to plan. Discrepancies over the schedule and possible political gains and losses caused friction between the political parties involved. There were also arguments over the route, for example in the controversy over the Monte del Pardo crossing. This involves the most important forest area in the outskirts of Madrid which once belonged to the Crown. The route of the new road has also sparked off protest from neighbours in nearby residential areas.

Controversy has surrounded another important communication project, namely the expansion of Barajas airport. This would involve construction of an 'airport city' of some 350 ha, where airport services would be located, together with offices and open spaces. Involving a projected investment of 350,000 million ptas, the capacity of the airport would rise to 30 million passengers per year and an ultra-modem tertiary zone would be created. The project has not gained support in the eastern part of the city.

The new airport, it is claimed, will threaten the health, quality of life and safety of half a million people who live in nearby suburbs. Residents are also critical of professional pilots who, they maintain, jeopardize the lives of those who live in the area. These residents do not condemn the expansion of airport facilities for Madrid, but favour a new airport being built to the south, or even converting the former US air base in Torrejón de Ardoz, only a few kilometres from Barajas.

Madrid, like all great cities, operates different forms of public transport, organized in a centripetal pattern due to the fact that the central parts of the city also have the densest concentrations of employment. Underground (metro), bus and railway stations are concentrated in these areas. What is rather different from many other large cities is the attitude of the citizens with regard to public transport. This can be seen in the excessive use that madrileños make of their cars to travel to and from work, which explains the high levels of congestion and pollution which occur in Madrid during certain periods of the day and the week.

Madrid has had a metropolitan railway since 1919 which, despite successive extensions still only serves its own municipality. Financed partially by public money, its private actions ended in the 1980s when the Regional Transport Authority (1985) was established, whose function is to co-ordinate services and to fix fare levels. It is formed by the Empresa Municipal de Transportes, many private bus companies which operate around the periphery, and the state railway (RENFE).

Use of the railway as a means of transport on the periphery experienced a huge boom during the 1980s. Ambitious investment associated with the Suburban Railway Plan has undoubtedly improved the network as well as its stations, access to them, and rolling stock. Equally, the effort put into linking the various means of transport by constructing interchanges and adapting old long-distance stations for commuters (most notably Atocha and Principe Pio) should not be forgotten. Among other aims, the Pasillo Verde operation was to improve connections between these two stations. When the new urban axis is finished, in place of an old railway line, it will be like a new Gran Vía, linking the Parque del Oeste with the new Parque Tierno Galván, Housing, offices and retail units will be side by side with new parks, sports grounds and facilities. The future Technology and Science Museum, the present Railway Museum and the Planetarium will give the operation its cultural flavour. The high cost (more than 10,000 million ptas) comes from the fact that much land has had to be acquired from private ownership by compulsory purchase to enable new offices and dwellings to be built. The case of Atocha station has special relevance for this programme, because, apart from the volume of travellers who use it daily (200,000), it forms part of an ambitious urban plan, which goes beyond railways to affect the whole urban environment of the Prado-Castellana axis, one of Madrid's most vital and aesthetically beautiful thoroughfares.

3.7 Urbanism and Urban policy

The major urban projects in Madrid in the 1980s

At the beginning of the 1980s the urban and metropolitan plans, inherited from the Franco era, appeared to be exhausted. In fact, any attempt during the 1970s to update plans were in vain. It is for this reason that, after the first democratic local elections (1979) and the Madrid Autonomous Community's constitution (1983), all forms of legislation regarding planning at both regional and municipal levels had to be renewed.

In the case of the Municipality of Madrid the new town plan was passed in 1985, after lengthy gestation. It was based on the assumption that Madrid was a socially unjust and incomplete city and that, by means of planning, the city might acquire all the elements demanded by the working class (e.g. public services, open spaces, cheap housing). This would mean an increase in public investment, a general change in the role of public administration, and a reduction in the role of private speculators. This ideology was established in a whole range of programmes and urban policies, mainly centred on working-class areas (south and south-east of the city) and on districts to which society 'owed a debt'. In other words, social inequality, in the form of working-class slums established in the period of immigration to Madrid (in the 1950s and 1960s), was to be eliminated. This was undertaken after 1979 with the financial support of the Ministry of Public Works. The programme affected 28 neighbourhoods in the inner ring and more than 30,000 substandard homes were replaced by modern neighbourhoods with adequate social services.

Municipal action taken in the historic centre of the city, where the proportion of substandard dwellings exceeded 30 in every 100, had exactly the same objective. Its restoration programme has included a series of measures to retain the population in the formerly most deprived historic zones while improving their quality of life as well as the built environment. The area which benefited most from this was near the Sunday flea market, commonly known as the Rastro. Furthermore, planning solutions were devised to protect and conserve the city's architectural heritage (e.g. the special Villa de Madrid Plan, 1980) which cover entire neighbourhoods deemed to be of special

value.

Concern about the environment influenced the 1985 Plan, both in terms of inner areas (Squares Environmental Improvement Plan) and above all the periphery. The plan proposed to create new suburban parks of immense dimensions (Parque Juan Carlos I, 200 ha), and the Manzanares Linear Park stands out particularly as a recreational green area on the southern banks of the Manzanares which had traditionally been degraded by rubbish dumps. An important structural programme of new thoroughfares for organizing new peripheral neighbourhoods can be exemplified by the Gran Vía de Hortaleza or Avenida de la Ilustración. This road has never had a smooth history ever since the Urban Motorway Network was proposed in 1967. The 1985 Plan totally changed its character by attempting to convert it into an urban avenue with walkways, gardens and monuments.

The regional administration set up in 1983, inherited the responsibilities of the former institution in charge of metropolitan urbanism (COPLACO) and extended them to the rest of the regional territory. Its normative role has concentrated on planning, particularly with respect to urban matters, and the conservation of nature and the environment. The Regional Planning Act of 1984 served to integrate issues, but did not have any practical consequences. The development of other normative instruments is anticipated (e.g. the Regional Plan, Land Law) which will refashion the responsibilities

of the regional government.

Among the policies initiated as a consequence of regional autonomy, those which call for a more equal relationship between the Municipality of Madrid and the other metropolitan urban and semi-urban areas stand out. Attempts have been made to relocate certain functions of the capital to towns in the Metropolitan Ring, in order to reduce the dominance of the city of Madrid and the dependency of the regional urban system on the core (Figure 3.3). This is the objective behind reviving the University of Alcalá de Henares, founded by Cardinal Cisneros in the 16th century. In the same

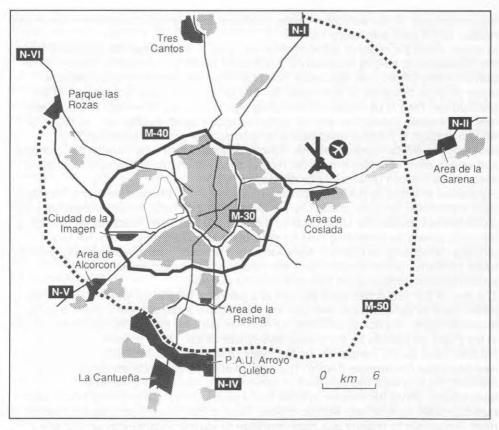


Figure 3.3 Madrid: Motorways and New Advanced Employment Areas

spirit, the new Carlos III University to the south of Madrid has divided its facilities between the two satellite towns of Getafe and Leganés.

The Region of Madrid has also inherited responsibilities from the state with respect to housing and most social services. However, in many of these duties the regional government counts on other levels of administration. This is why consortia have had to be formed with these administrations in order to tackle certain major urban projects. For example, in the case of Madrid Sur (social housing) the consortium is formed with the state, and in the case of the Ciudad Deportiva de Canillas with the town council. The consortium established by the town council and the regional government has a special social role in eliminating gipsy shanty towns. However, that process is neither fast nor untroubled and involves some racist reactions.

Planning mechanisms were frequently used to stimulate Madrid's economic development during the 1980s; for example, in the case of new exhibition centres situated outside the built-up area of Madrid near the airport. Promoted by the Socialist Town Council, the new development was completed by the conservative administration of the Popular Party. This complex, with a surface area of 438 ha and potential building space of 390,000 m², is one of the biggest urban projects of the period. Its

features include a new exhibition centre, a service area (offices, conference centre and hotels), and a park with sports facilities.

In recent years the regional administration has tried to encourage the replacement of the Campamento military installations (south-west Madrid) to enable a complex to be built including offices and high-status housing. The most ambitious of the regional urban projects designed to regenerate the former industrial zone to the south of the Metropolitan Ring is by means of promoting high technology activities. This southern axis will facilitate connection with the agglomeration's south-eastern arc, as the M-50 will run through it. Various residential and open spaces are also projected. The development will be named after the Culebro Stream, which runs through the complex and whose environmental and scenic regeneration will enable a new system of open space to be created (Ayuntamiento de Madrid 1991).

Substantial changes in the town planning of Madrid have occurred since the Socialists were replaced in the town council by the Centre-Right in 1989. Almost immediately the conservatives revised the Urban Plan of 1985, which had been criticised for restricting the city's growth by controlling land for development and thereby giving rise to a shortage of housing and offices. Madrilians have noticed more attention being given to traffic problems, which is reflected in the conservatives' programmes to build private-initiative underpasses and underground carparks.

The end of the 1980s has seen the end of a period of prosperity, which has affected urban plans in various ways. Perhaps the most visible symbol of the current crisis is that work came to a halt in mid-1992 on the twin 'inclining towers' that were being built in the Plaza de Castilla by the Kuwait Investment Office. Other projects have been finished, such as the Parque de las Naciones, where the architect Bofill has built the new Municipal Conference Centre. The conservative party's preferences (from 1991 onwards) lie in private management of former public services (e.g. funeral undertakers). Since its creation in 1992 the organization in charge of the new urban plan has been working with flexible criteria. Thus, in the future, town planning will be more responsive to change and more sensitive to economic factors at work at the particular time. The plan recognizes the need to create new residential zones, which property developers would prefer to establish in the north of the city.

3.8 Culture, leisure and open spaces

Madrid has a wide range of cultural and leisure facilities but these are distributed unevenly. Cultural features are strongly concentrated in the centre, which reflects the historic heritage of Madrid acquiring palaces, churches and museums throughout its history. A great part of the country's historic and artistic wealth can be found in the 'Madrid de los Austrias', the nucleus of which is the Plaza Mayor and the Calle Mayor. This artistic wealth is the inheritance from the 16th and 17th centuries (when Madrid was the capital of a world empire) and was to be enhanced in subsequent periods. By contrast, open spaces for leisure are predominantly situated in the metropolitan and rural-urban rings. Madrid also has a number of ski resorts in the Guadarrama Sierra and in nature parks (La Pedriza de Manzanares) which contain sports facilities for the elite (e.g. golf courses, horse-riding).

There is a very important concentration of works of art in Madrid which is one of the richest cities in the world for museums. Some of these are very specialized (e.g. the railway and naval museums), however painting is the most important field (Monasterio

de las Descalzas, Academia de San Fernando, Centro Reina Sofía, and others). The Prado Museum, possibly the best art gallery in the world, is the central element of an important cultural axis, which runs from the Plaza de Colón via the Paseo de Recoletos to the Paseo del Prado and the remodelled Atocha station. The National Library, specialized cultural centres (Botanical Garden, Casa de América), the Reina Sofía Museum and the Thyssen-Bornemisza Gallery, the most important private collection in the world (housed in the 18th century Villahermosa Palace) are also part of this axis.

In 1992 Madrid was European City of Culture, which gave rise to many cultural events, enhanced existing facilities and created new ones, such as the City Museum. At the end of the 1980s trade in art and culture was also given a significant boost. Art galleries, fairs and auctions have become abundant, among the most important of these being ARCO (Contemporary Art) which is held annually in the Madrid Exhibition Centre. A good demonstration of Madrid's position on the world art stage can be seen in the increase in art galleries in the Salamanca district and Prado Museum area since 1975.

Cinemas, theatres and concert halls are concentrated in the centre of the city. Despite the general decline of cinema attendance, a number of very large cinemas are still to be found around the Gran Vía and Fuencarral street, giving the area its own special atmosphere. There are more than 30 theatres, ranging from classical (Comedia Theatre) to vaudeville (Alcázar Theatre); the Teatro Español is run by the Municipality and is the inheritance of the 17th-century Corral de Comedias. Madrid's classical music followers are eagerly awaiting the reinauguration in 1993 of the old Royal Theatre as an Opera House, but it is possible to enjoy classical music in the National Auditorium (1988) which is home of the National Orchestra.

Numerous leisure activities are found in Madrid. The more traditional ones (bullfighting, 'romerías', 'verbenas') still have a large loyal clientele, and during the 1980s the popular street 'fiestas' (usually in the summer) went through a period of rediscovery, with the help of new democratic town councils. New forms of leisure activity, reflecting the mood of rebels against established culture, have been named 'movida'. This explains the taste among madrilian youths for enjoying the early hours of the morning in jazz clubs, cafeterias, discotheques or bars and also in 'terrazas' in the open air, parks and boulevards. There are various zones in the city centre where you can experience different aspects of Madrid's rapidly changing night-life.

Open spaces have been largely displaced to more peripheral areas but that is not to say that the central city does not offer any important open areas to madrileños. In the central area there are 43 parks which take up 33 million m² of green space. Many of these originate in old estates once owned by the royalty and nobility, where many historic palaces, gardens and monuments can still be found. The Retiro stands out among these parks. It is an old royal estate of 120 ha of green open space (with 15,000 trees) which accommodates fairs and exhibitions and is the playground for thousands of madrileños. When the park is full on Sundays the Retiro acquires its own particular charm (concerts, open air theatre, etc.).

The Casa de Campo, with 1,800 ha of holm oaks, is more on the periphery and includes an exhibition centre, an amusement park, a zoo and sports facilities. Moving on to the north-west of the municipality one finds El Monte de El Pardo, which form the traditional 'lungs' of Madrid and contain a national park of 15,000 ha. This is one of the most valued legacies from the Spanish Royalty to the people of Madrid, although only a small part of it is opened to the public. This area contains the most important

concentration of country clubs and sports facilities for the elite (e.g. horse racing, shooting, golf). The north and north-west of Madrid enjoy an ample supply of green space and leisure facilities both within and beyond the municipality. The opposite is the case in the south and south-east, and this reflects important socio-economic differences in greater Madrid. There is a park programme for the entire Metropolitan Ring, which aims to restore abandoned land to give parkland to the more deprived areas.

The recreational habits of madrileños have an impact on the rural-urban fringe, particularly at weekends. In these areas you can find the best resources: large forests, rivers and reservoirs. The most frequented spots are the Cercedilla Mountains, the granitic area of La Pedriza and the Lozoya Valley, all in the nearby Guadarrama Sierra where people can go to swim, picnic and fish and also ride horses and enjoy water sports in the reservoirs of the Canal de Isabel II.

Those responsible for the Madrid Region try to maximize the recreational use of the city's sphere of influence by means of establishing new zones in many parts of the region. At the same time, they are enforcing protective measures for areas of outstanding natural beauty that are threatened by urban pressures. The first regional park in Madrid was opened in 1984 and covers an area of 46,300 ha. in the upper basin of the Manzanares. More recently Peñalara and its surroundings have been brought under protection in the central area of the Guadarrama Sierra. There are currently ten other studies being carried out in other natural areas; similarily there are measures to protect 72 other enclaves, noted for their flora and fauna or outstandingly beautiful countryside.

References

- ANON. (1981), Madrid. Estudios de Geografía Urbana. CSIC, Madrid. ANON. (1992), Atlas de la Ciudad de Madrid. Consorcio para la organización de Madrid Capital Europea de la Cultura, Madrid.
- AYUNTAMIENTO DE MADRID (1991), Madrid Metrópoli. Madrid. CAMARA DE COMERCIO E INDUSTRIA DE MADRID (1991), Madrid, capital internacional de servicios. Madrid. COMUNIDAD DE MADRID (1991), Madrid región metropolitana. Estrategia territorial y actuaciones. Consejería de Política Territorial, Madrid.
- COMUNIDAD DE MADRID (1992), Atlas de la Comunidad de Madrid. Consejería de Política Territorial, Madrid.
- GARCIA DE ENTERRIA, E. ET AL. (1983), Madrid, Comunidad Autónoma Metropolitana. Instituto de Estudios Económicos, Madrid.
- GAVIRA, C. (1989), Geografía Humana de Madrid. Oikos-Tau, Madrid.
- HEITKAMP, T. (1991), Metropolitanes Wachstum und Raum-Zeit-Strukturen in der Region Madrid. IRPUD, Universität Dortmund, Die Raum-Zeit-Struktur römischer Borgate, Text 3.
- PARDO, C., OLIVERA, A. (1992), Les friches industrielles à Madrid: opportunités urbanistiques et réutilisation du sol urbain. Revue Belge de Géographie, 51, pp.195-201.
- VALENZUELA, M. (1987), Territorio y expansividad económica. Tendencias y perspectivas en la Comunidad Autónoma de Madrid. Estudios Territoriales, 25, pp.25-47.
- VALENZUELA, M. (1990), La Comunidad de Madrid y la construcción del territorio metropolitano. Boletín de la Asociación de Geógrafos Españoles, 11, pp.15-50.

Sincere thanks to Alan Dearden for his help with the translation into English. The text was revised by the editor.