

State, Economy, and Society in Western Europe 1815 – 1975

A Data Handbook in two Volumes

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and

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Volume I

The Growth of Mass Democracies and
Welfare States

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VOLUME I

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VOLUME II

The Growth of Industrial Societies and Capitalist Economies

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This book is about history and it has a history of its own. More than one observer, sympathetically or ironically, has called it an "enterprise of madness", and telling the project's story may help to convey its motives and objectives, however one might label them.

The story started in August 1971 in Lausanne at a conference organised by Stein Rokkan under the auspices of the International Social Science Council (ISSC) in co-operation with UNESCO, and also joined by the European Consortium for Political Research (ECPR). This "Workshop on Indicators of National Development" was to review endeavours to build up data resources for comparative studies of national development and to link up this work on historical data with the attempts to construct systems of social indicators. It represented a further and important link in a chain of collective efforts forged by Rokkan to advance comparative research in the social sciences.

The workshop followed another conference which had been organised a year before by UNESCO at Cerisy-la Salle in France to review progress toward the formulation of coherent models for the explanation of interactions among a wide range of variables in the process of state formation and nation-building. There had been a wide consensus at the conference that in a next round the efforts on the theoretical front should be matched with corresponding efforts on the data resource front. This was seen as a 'sine qua non' of further progress towards an understanding of the extraordinary variations across the world in the interaction among economic, social, cultural and political components of growth.

The themes of the Lausanne Workshop, which was attended by forty-four social scientists from eleven European countries, the United States and three Latin American countries, were grouped under three main headings: cross-national historical files; within-nation archives; social indicator systems. It was under the first heading that Wolfgang Zapf and I reported on our QUAM-Project (Quantitative Analysis of Modernisation) at the University of Frankfurt, a project essentially geared to the testing of models of modernisation and mass mobilisation during the century after the Napoleonic wars.

In his "Materialien zur Theorie des sozialen Wandels" (Materials for the study of social change) of 1967 Wolfgang Zapf had presented what was then probably the first systematic time series data collection. It embraced a 'decade collection' from 1820 to 1960 including 38 indicators for ten countries (Great Britain, France, USA, USSR, Germany, Japan, Spain, Argentina, India, China), and a 'year-to-year collection' from 1860 to 1960 including six indicators measuring industrialisation, international involvement, and political stability for four countries (Great Britain, France, USA, Germany). Between 1969, when I started to work with Wolfgang Zapf, and 1971 a 'refined collection' from 1815 to 1965 was compiled, consisting of more sophisticated indicators of social mobilisation for six countries (USA, USSR, Japan, Germany, France, United Kingdom). Finally, in 1971, a fourth collection was added consisting of indicators of urbanisation and literacy from 1850 to 1965 for all countries of the world.

The QUAM-Project had been stimulated by two streams of study in the social sciences since the 1950s, both essentially American: the modernisation theory (a common label for relatively disparate approaches to the theory of development), and the efforts to establish cross-national data collections beginning in the late 50s and early 60s. Underlying much of this work was the, perhaps obsolete, idea that one could discover 'general laws' in the evolution of global societies, and the belief that in this enterprise the collection and analysis of quantitative data was of crucial importance.

Since the early 70s or even late 60s, the criticism of the 'modernisation theory' has mounted and the optimistic hope of attaining the envisaged goals has somewhat diminished. This period, however, has left an important stamp on macro-sociology: the conviction that in this field, too, systematic empirical research is essential and possible. The renaissance of historical sociology has somewhat changed the orientation and emphasis of research towards a more careful and less abstract analysis of variations in more specific institutional and 'geographical' contexts.

My first encounter with Stein Rokkan was crucial for the new project which finally led to this book: his enthusiasm incited our energies and channelled them in different directions. It was at the Lausanne conference that I envisaged, however vaguely, a chance to combine my interest in the study of global societies, my preoccupation with European history, and my preference for a systematic empirical approach in macro-sociology in a new enterprise on a broader basis and with a longer time perspective.

In the course of the next year this idea took shape and developed into a plan and proposal for a project with the acronym HIWED (Historical Indicators of the Western European Democracies). Without Wolfgang Zapf's patronage, I would never have been able to start this project, and I would like to express my warmest thanks to him. He was an

altruistic advisor and relentless promotor of us 'young folk' as we then were. We directed the project together at the University of Mannheim during its first phase from 1973 to 1976. It was generously funded by the Stiftung Volkswagenwerk and we have been very fortunate in that this foundation was prepared to finance also a second phase from 1976 to 1979 in which the project moved with me to the University of Cologne. I am grateful for this opportunity to praise the Stiftung Volkswagenwerk: there is certainly no other foundation in Europe which has done more for comparative research and there may be none which is less bureaucratic. Special thanks go to Helga Junkers and Otto Häfner at the foundation for their personal commitment and unusual patience.

The HIWED-Project had two objectives, both influenced by Rokkan's work. First of all, to produce a data handbook on Western Europe since the Congress of Vienna covering major political, social, and economic changes in the last century and a half. With this we wanted to open up new sources and to lay a more solid foundation for a historical, comparative, and interdisciplinary, in one word macro-sociological, study of that territorial diversity which is called Europe. Rokkan always wanted a 'thick book'. Here it is. It will be the first and programmatic publication in a series called European Social Science Studies.

The second objective was concerned with Rokkan's theory of European political development in which he distinguished between four basic processes: state formation *strictu sensu*, nation-building, the institutionalization of political rights (mass democracies), and the institutionalization of social rights (welfare states). Since in his own empirical works he was mainly concerned with a study of the evolution of mass democracies and the processes and problems of nation-building, we wanted to push forward the comparative analysis of the evolution of welfare states in Europe. Some of the analyses undertaken have already been completed and will be published in the above-mentioned series.

When we started our work on the handbook in 1973 we did not realize what would await us. I must confess, that looking back I would not try it again. There were too many hurdles, detours and blind alleys, simply too many years of 'deferred gratification'. The first discovery we made was that in opening up the statistical sources we had to start practically from scratch. Thus, we had to squander most of our initial efforts in bibliographical work and the building up of an archive of micro-fiches and foto-copies for which we had to order literally thousands of books from other libraries in Germany or from abroad. Without the exploitation of many devoted students we would not have succeeded and here I would like to extend warm thanks to Elisabeth Bieling, Petra Dunkel and Maria Müller who worked with us in Mannheim, and to Michael Sondermann, Karl-Heinz Korn and Hans Jäger who worked with us in Cologne. Above all others I would like to thank 'Hansi' who was the life and soul of the project.

The first product of these efforts was a bibliography of the major statistical sources in Europe since the early nineteenth century which also included an institutional history of official statistics. The bibliography was completed in 1975 and published in 1977 (*Quantitative Historical Sociology*. Current Sociology 23.2. Mouton, Paris). A bibliography of all census publications in Europe since 1801 was added later. I would like to extend my warmest thanks to Regina Kays, the librarian who worked with me on setting up the bibliography; the entire project owes a great deal to her efforts.

On this basis then we proceeded to our essential task, the production of our handbook. It was to be a truly collective effort. If we take into account the fact that research undertaken in universities is always only part-time work, then all project members taken together worked about 35 years on this book; and this, perhaps unfairly, excludes student and secretarial work. Only a fool could have done this work alone. Even so, many of us occasionally had the feeling of fooling away our lives. These high investments require a more detailed description of the individual contributions. However, it cannot do justice to the enthusiasm and deprivations of all project members.

As a general rule, each project member collected data only or mainly in the fields of his analytical interest. Thus, Jens Alber, a long-standing friend and colleague of mine, and a sociologist like myself, has created a data collection on the evolution of the modern social security systems, and at the same time, he completed in 1979 a thesis on the same topic which has been published in the above mentioned series. Being already involved in the preparatory stage of the project, he had to carry much of the initial burden in creating the project's infrastructure, and altogether he worked with me on the book for eight years. In addition to his part on social security, he produced the part on governmental coalitions and contributed to that on the labour force.

Franz Kraus, an economist, joined our project during its first year in Mannheim. Initially, he worked on the national product data which, beyond their intrinsic interest, have been most useful for the calculation of many indicators in other parts of the handbook. When he moved with the project to Cologne, he turned to his main field of interest, the study of income distribution and redistribution. On the basis of a painstaking and painful scrutiny of a myriad of tax statistics, he established what will be the major collection of historical data on income distribution. He is still working on his thesis and is at the same time preparing a separate and voluminous handbook with his much more detailed data on income distribution.

Jürgen Kohl, a sociologist, participated directly in our project during its first phase in Mannheim. He then moved to the University of Bielefeld, but continued to work with us. At the beginning, he worked mainly on the data of enfranchisement, electoral turnout and changes of the electoral systems which were included in the respective part of the handbook. Thereafter, he concentrated all his efforts on the collection and analysis of public expenditure data. In 1979, he completed a thesis on this topic which will be published in this series.

During the project's first phase in Mannheim, three students made important contributions. Elisabeth Gransche wrote a thesis on housing conditions in Europe since the First World War, Winfried Pfenning one on trade unions and strike patterns since the end of the nineteenth century, and Kurt Seeböhm one on the evolution of taxation since the mid-nineteenth century. Both Pfenning and Seeböhm went with the project to Cologne to continue their studies. Kurt Seeböhm, an economist, extended and refined his pioneering collection of tax statistics and put a great deal of effort in to the completion of our demographic data. Winfried Pfenning, a sociologist, extended his work on the development of trade union membership and industrial conflict, and also made major contributions to the parts of the handbook covering labour force and urbanisation. Since early 1979 he has been responsible for our computerized 'Western European Data Archive' (see below).

In spring 1977, after the project had been moved to Cologne, Richard Eichenberg, a political scientist from the University of Michigan, Ann Arbor, came to strengthen our team during the project's second phase. Eichenberg contributed the part on public bureaucracies. More importantly, however, he laid the basis for our computerized data archive and intensified our contacts with the central archive of the Inter University Consortium for Political and Social Research (ICPSR) at his original university in Ann Arbor.

This archive has been most helpful in computerizing our complex cross-tabulations of age by sex and civil status for 225 population censuses. These tables, which are not included here but will be published separately, have been important for calculating various indicators in the handbook. My warmest thanks go to Catherine Kelleher who 'lent' us one of her best young scholars, and to Jerry Clubb who gave a great deal of support to the creation of our computer archive in its initial phase.

Finally, in 1978, Reinhard Schneider, a sociologist at the University of Bielefeld, joined our project as an external member. He has been working on a broad comparative study on the evolution of public educational systems in Europe and has contributed the corresponding part of the handbook. In the collection of the quantitative data he built on some earlier efforts in Mannheim and Cologne, especially by Joachim Heinlein.

In our work on the handbook we relied mainly on statistics collected and published by public authorities, mostly national statistical offices and other national agencies, and occasionally international organizations. In a few cases, however, and above all in the parts on public expenditures and economic growth, we have used data collected and analysed by other social scientists or economists. These sources are documented in the appendix of the second volume. Usually, the range of these works is relatively limited with respect to the number of countries included, the time period covered, and their number of variables. There were, however, two major exceptions.

David Singer was kind enough to leave us the data on military personnel for the period 1850 to 1970 which had been collected in the Correlates of War Project directed by him at the University of Michigan. They are published here for the first time. I am most grateful for this gift and would like to thank him and his team for their support. The other data collection which we made use of has already been published, and is the most useful compilation of historical statistics on elections by Tom Mackie and Richard Rose (*The International Almanac of Electoral History*. London, Macmillan, 1974). As we did not want to exclude this essential information from our handbook, we asked them to permit the publication of their tables with the percentage distribution of votes and seats. We are most indebted to them for their kind permission.

A few words about my own role in the project. I have been a slave driver but the handbook has enslaved me too. To a varying extent, I have been involved in the process of defining the indicators, searching for sources and collecting data for practically all parts of the handbook, and some I have contributed myself. I have checked most, or at least many, of the data in process of their collection as well as in the proof-reading stage, but this does not diminish the responsibility of the other project members. The conception, composition and text of the handbook are essentially mine, but this does not detract from the collective character of the book.

The handbook assembles data on political, social, and economic developments in Western Europe since the Congress of Vienna. This preliminary definition of its contents immediately requires some specifications and qualifications. The first problem is space. Not only for me, an Austrian by birth and nationality, is 'Western Europe' a vague concept. In its present use it is clearly a product of the Second World War, before which it was a more limited term which has widened its range only by incorporating parts of 'Central Europe' a crucial concept in European history (see the Introduction below).

In defining the space covered by our handbook we have made the following essentially pragmatic decisions:

- From 1815 to 1918 we include the Austrian part of the Austro-Hungarian monarchy as defined by the 1867 constitution.
- We thus exclude to the east: the Hungarian kingdom; the European territories of the Ottoman Empire, though all had gained independence before the First World War; the Russian Empire with the exception of Finland, though it became independent only in 1917.
- After World War One we include among the succession states of the Austro-Hungarian monarchy only the Republic of Austria, and we also exclude Poland and the Baltic states which became independent in 1918.
- Unfortunately, we cover (with some exceptions) Italy only since 1861 and Germany only since 1871. The great

number of Italian and German states and territories as well as the relative scarcity of statistical sources made this regrettable decision necessary.

- An even more lamentable omission is the exclusion of Greece, Portugal and Spain. There are some grounds for arguing that these countries belong, or belonged, to a lesser extent to 'Western Europe' but their exclusion is mainly due to our insufficient knowledge of the three languages.
- Finally, we do not include Luxembourg and Iceland, as well as the other smaller European 'states', for pragmatic reasons only, though at least Iceland has always incited our curiosity.

The territorial changes which the countries included in our study have undergone between 1815 and 1975 are described in chapter I, part 1. In the tables and graphs we use the following abbreviations:

AU Austria	IK Ireland	EW England and Wales
BE Belgium	II Italy	SO Scotland
DE Denmark	NE Netherlands	GB Great Britain
FI Finland	NO Norway	NI Northern Ireland
FR France	SW Sweden	UK United Kingdom
GE Germany	SZ Switzerland	

With few exceptions, all data in the handbook are national data, i.e. they refer to nation-states. They are either (quantitative) aggregate data or (qualitative) institutional data. For the latter (e.g. institutional traits of social security systems) the nation-state is the natural 'unit of analysis'. This is less true for aggregate data. Often national averages hide important internal, regional or other, differences or the nation-state may not be the adequate 'unit of analysis' as in the case of the international division of labour and economic interdependence. Future data collections will certainly have to include other, subnational, international and supranational, units. For most variables, however, the nation-state still remains the crucial 'level of aggregation'.

The maximum time period covered is 1815 to 1975. The Congress of Vienna was chosen as our starting date because it defined or redefined, after more than two decades of revolution and war, our units of analysis, the nation-states. With the exception of Belgium which became independent in 1830, no major territorial change occurred in 'Western Europe' until the Italian and German unifications. The choice was also dictated by the availability of data. Before 1815, we find hardly any national statistics; in most European countries the development of official statistics did not 'take-off' until 1818. 1975 was chosen as finishing date when we still thought that we could complete the handbook much earlier than we actually did.

Of course, relatively few time series really go back as far as 1815, most start only in the second half of the nineteenth century. The reasons for this are simple. Obviously, some series cannot start before the institutions to which they refer were created: no electoral results without suffrage, no divorce rates without legalising divorce, no pension figures without social security systems, etc. Equally obviously, other series can only commence when the respective statistics were collected for the first time. The initiation of population censuses and the establishment of parish or civil registration has been most important in this respect. Most of our countries started censuses in the early nineteenth century, but many items such as occupation, employment status, language, religion, citizenship or even housing conditions were usually included only later. In other cases, public authorities collected statistics but did not publish them. This holds true above all for financial statistics before governments were forced by parliaments to lay open their budgets. A final limitation exists where we had to rely on secondary sources, on the historical reconstruction of national accounts statistics. Thus, with only few exceptions, our time series start when the respective institution was created or when the respective statistics were collected for the first time.

The structure of the handbook has changed several times in the course of the past nine years, often because we realized that some objectives had been unrealistic, sometimes because we discovered new possibilities. As it is today, the structure mirrors more a need for numerical aesthetics than for logic. Some logic does exist, however.

The handbook is divided into two volumes of equal length. The first is entitled 'The Growth of Mass Democracies and Welfare States'; the title of the second volume is 'The Growth of Industrial Societies and Capitalist Economies'. With this sequence of the two volumes we want to indicate that we follow neither the Durkheimian nor the Marxist tradition. Both see the 'state' more or less as an appendix to some more 'fundamental' structure, be it the division of labour or the mode of production. But the modern state has shaped the structure of social and economic relationships at least as much as it has been influenced by them.

The first volume contains basic data on the Western European nation states (external boundaries, population by nationality, internal cultural heterogeneity), the evolution of mass democracies (suffrage, electoral results, parliamentary seats, government coalitions), the growth of public budgets (taxes and expenditures) and public bureaucracies (civil and military personnel), and finally, the development of welfare states (public education and social security systems). There are some gaps, among the many, which we greatly regret. We would like to have included data on political parties, social movements, collective violence and political instability and to have incorporated more aspects of the welfare

state, especially the public health sector; but all this proved to be unrealistic, given the number of countries and the time span covered in the study.

The second volume on social and economic developments is necessarily more selective. As B. R. Mitchell's great handbook on 'European Historical Statistics 1750-1970' already covers a broad array of economic statistics, we confined ourselves in this respect to indicators of economic growth (national product figures for various concepts and national product by origin and use) and measures of income distribution. Thus, our handbook contains no production figures and, though regrettable, no indicators of unemployment and inflation. For the same reason, we excluded statistics on transport and communication. Like Mitchell, we did include, however, the essential demographic data but put much more emphasis on the calculation of comparable indicators. In addition, the second volume gives data on the process of urbanisation and changing housing conditions, the structure of the labour force, the development of trade unions, and the pattern of industrial conflict.

Besides the many unavoidable gaps, the handbook has one systematic lacuna. It assembles essential information for comparing developments of the Western European states, societies, and economies, but it does not touch on the political, social, and economic relationships between them: the exchange of goods, transactions of capital, and migrations of workers, overseas emigrations and European population displacements, students studying abroad and cross-national communication, diplomatic relations and military conflicts. Originally, we had hoped to add a third volume to include these data, such as those concerning external trade, overseas emigration and wars, relatively easily accessible, but a more comprehensive collection of data on inter-state exchanges and relations in Europe is still lacking.

As to the formal structure, both volumes consist of five parts with two chapters each. Thus, the handbook contains altogether twenty chapters which are grouped into ten parts. Both volumes have a longer historical-sociological introduction, and each single chapter starts with an explanation of the tables and graphs presented and a short discussion of methodological problems involved.

The documentation of such a work poses a major problem and requires some explanation. From the very beginning, we decided that in principle each datum should be reproducible implying that we document not only its source(s) but also the calculations and estimates we made. In this way we hope to facilitate the process of accumulation in future research. Initially, we produced and distributed several 'Data Reports', each of 100-200 pages, in which specific data sets were documented (enfranchisement, taxes, social insurance, public bureaucracies). Later on, however, we decided to switch completely to a computer-readable documentation.

In early 1979, we started, in collaboration with the Zentralarchiv at the University of Cologne, the Western European Data Archive Project (WEDA), again funded by the Stiftung Volkswagenwerk. The computerization of all HIWED data (many more than included in the handbook) and of the extensive documentation formed the major part of this project. The Zentralarchiv was a very generous host of this project, and I am grateful for the opportunity to thank Maria Wieken, Erwin K. Scheuch and above all Ekkehard Mochmann for their support.

Obviously, an inclusion of the documentation would have enormously expanded the handbook, restricting its convenient use and raising its price. Thus, we have tried to keep the number of annotations in the book as small as possible, and we offer instead separate documentation which will be available through the ICPSR at Ann Arbor for the American user and through the Zentralarchiv in Cologne for Europe. The details of this documentation will be found in the appendix to the second volume describing briefly the major primary and secondary sources we have used.

The data collection was almost finished in 1979 and we thought that we could publish it soon after. But we had grossly underestimated the tedious work of typing hundreds of tables and drawing the numerous graphs. We had decided to do this work ourselves in order to avoid excessive costs. Four women suffered from this decision: Carla Heusser and Ursula Feger at the University of Cologne, Dagmar Alber and Ursula Nocentini at the European University Institute in Florence where the manuscript was completed. Knowing how dreadful this work was (I had myself to do most of the proof-reading) I can only thank them most warmly.

Lastly but not least, I want to thank my wife, although she is one of those modern women who believe that their husband's work is purely entertainment. Generally only half-true, it was even less so in this case. However, she had to tolerate a husband whose mood steadily declined in the nine years of working on the book.

This book is dedicated to Stein Rokkan. The permanent encouragement he gave us would be more than enough to justify the dedication. But we owe him much more: intellectual leadership through personal authority and friendship. The joy and relief which accompanies the completion of this book is blended with a sad thought that we cannot show the book to him; he died before we could finish it.

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Peter/Flora

Franz Kraus and Winfried Pfenning

Volume II

The Growth of Industrial Societies and
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VOLUME I

The Growth of Mass Democracies and Welfare States

Preface

Introduction: Stein Rokkan's Macro-Model of Europe

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Chapter 2: Cultural heterogeneity

II Mass Democracies

Chapter 3: Suffrage and elections

Chapter 4: Parliaments and coalitions

III Personnel of the State

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Chapter 6: Military personnel

IV Resources of the State

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The two volumes of the handbook

The structure and contents of the first volume of this historical data handbook are closely related to Stein Rokkan's macro-model of Europe in which he tried to develop a systematic account of the major variations among the European nation-states. Of the four phases of political development which he distinguished, *the growth of mass democracies and welfare states* form the core of the first volume. Due to limitations of available data, the other two processes of state formation and nation-building, which in the European context predated the institutionalization of political and social rights, are dealt with to a far lesser extent.

That political development in Europe would lead to a system of nation-states was not evident at the beginning. If one follows Charles Tilly (1975), then the nation-state represented only one of five possible paths of development in the thirteenth century; the others being the persistence of feudalism, the evolution of an embracive trading network, and the creation of a political or a theocratic empire.

Today, we know of course that the nation-state finally triumphed: a relatively centralized political system with a consolidated territory, differentiated political structures and a monopoly of the legitimate use of force. It triumphed for several reasons. Most important were probably the political fragmentation of Europe and the openness of her periphery, but also early capitalism, the growth of cities, commerce and manufacturing, which offered the resources for centre building and state formation.

It took some time, however, to triumph; at least until the sixteenth century when the Hapsburgs failed to consolidate their empire. According to Wallerstein (1974), this failure was an essential precondition for the emergence of a capitalist world-economy which none of the emerging nation-states could control.

A world-economy, in Wallerstein's understanding, is one of two types of world-system which he defines in terms of a relatively closed division of labour and plurality of cultural systems. In contrast to a politically unified world-empire, a world-economy embraces several political systems. In a capitalist world-economy, production is predominantly oriented towards market exchange, and profit becomes the driving force in quantitative expansion and qualitative improvement. It is furthermore characterized by labour becoming a 'commodity', i.e. by the extension of a labour market, in contrast to a system in which the owners are mainly small farmers and artisans.

What one today calls modernization, started in Europe in the context of an international system of nation-states and a capitalist world-economy. This framework has shaped the European development, and with Europe's expansion it has left its imprint on other world regions. Thus the nation-state, although hardly achieved anywhere, is still the predominant model of political development. And the position of the newly independent states in the international division of labour — a structure of dependence and inequality — sets limits to the options open for national development.

At the same time, however, we have learned today that there are more paths to modernity, more ways to build industrial and urban societies, than those suggested by European experience. 'Capitalist development' or even 'capitalist-democratic development' is only one form of modernization, and history has certainly not yet exhausted the combinatorics of modern institutions. Beyond the variations in basic political and economic institutions, however, all modern or modernizing societies share many fundamental characteristics. This combination of uniformity and variety is expressed by the title of the second volume of the handbook *'The growth of industrial societies and capitalist economies'*.

Capitalist development, industrialization, modernization

When Tocqueville wanted to know more about the future of France he went to study American democracy. When Marx wished to understand more about the future of Germany he began to study English industrial capitalism. They could do this only because both of them had concepts of a *general* development, different as these were. But Tocqueville was a little more prudent. Not only was he aware of the unique features of American democracy, he also conceived of alternative developments of democracy, pluralistic and totalitarian as we would call them today. Marx, on the other hand, cared less about the unique features of English capitalism, and he did not conceive of forms of non-bourgeois or even non-capitalist industrialization.

Marx' reliance on England as exemplifying capitalism made him underestimate the role of the state in capitalist development. His conception of capitalism as a general and necessary stage of development gave him no reason to distinguish between 'capitalism' and 'industrialism'. Marx was primarily interested in the class character of capitalist societies, based on the institutions of private property and wage labour; and he was interested in the logic of capitalist development, as shown in the process of capital accumulation and endemic crises of overproduction. From this point of view 'industrialism' is important only insofar as the existence of a capitalist society presupposes a high level of industrialization.

The reverse, however, does not hold true. For this we should not blame Marx too much, because at the time when he was writing there was no example of non-capitalist industrialization. Even after the Russian Revolution and the accelerated industrialization of Russia in the 1930s, it took a long time until a clear distinction was drawn, first perhaps by Raymond Aron in his famous lectures on the industrial society of 1955 (1962). For Aron 'industrial society' is the general type of modern society, and he distinguishes subtypes by the form of ownership of the means of production and by the basic allocation mechanism. Accordingly, predominantly private ownership, wage labour and the division between employers and employees, profit orientation as crucial momentum, and decentralized allocation via the market, are the essential characteristics of 'capitalist societies'. To these Aron adds the openness of the national economy vis-a-vis the world economy with the resulting pressures of adaptation, the decisive influence of consumer decisions on the distribution of resources, and the existence of free trade unions.

These capitalist societies share, however, certain features with other industrial societies. Aron emphasizes above all the accumulation of capital and the concentration of the workforce, the high level of economic rationality, the extended division of labour within enterprises, and the separation of family and workplace. He also mentions the expansion of formal education, the importance of science and technology, the bureaucratization of production, the increase of dependent labour, and the regulation of work and work life. In this sense 'industrialization' has a standardizing impact on the social structure of modern societies, although differences in class structures and other aspects clearly persist. This limited convergence with respect to social structure, however, does not in Aron's view imply a convergence in politics, of democracy and dictatorship.

After Aron, and mainly under the influence of American sociology, the concepts of industrial society' and 'industrialization' were largely replaced by 'modern society' and 'modernization'. This was necessary, although it has not contributed much to the clarification of concepts. It was necessary, because the broad changes which European societies underwent for more than two hundred years and which other societies undergo today, cannot merely be interpreted as preconditions, implications or consequences of industrialization in a stricter sense. It has created conceptual confusion, because for a long time the uniformities of the modernization process were overstressed. This led to a neglect of the alternative paths to modernity which spring from differences in inherited institutions as well as from changing external conditions.

The vital revolution and demographic transition

The secular increase of Europe's population from the second quarter of the eighteenth century was a revolution, but not a completely new phenomenon. In fact it represented the third major upswing in European population history, the first extending from the middle of the eleventh to the end of the thirteenth century, and the second from the middle of the fifteenth to the end of the sixteenth century. The third upswing was initially caused by a release from the population constraints associated with war and epidemic, and by considerable improvements in agricultural production and commerce.

Although population increase predated the Industrial Revolution in a stricter sense, it was this later process which transformed the third upswing into the Vital Revolution. This time the upward movement not only started from a higher level, but it was able to maintain, and for some time even to increase its momentum. Unlike the previous upswings, population growth was not terminated or reversed by catastrophes but was eventually slowed down by a change of the basic 'generative structure'.

The demographic revolution was broadly synchronized with the spread of industrialization and the shift from rural to urban life. In the nineteenth century improvements in the quality of food, shelter, clothing, water supply and sanitation gradually brought about a reduction in death rates, this reduction being accelerated after 1900 when modern medical science began more systematically to contain infectious disease and reduce infant mortality. This decline in death rates outweighed the usually later decline in birth rates, giving rise to a population surge which culminated in the period from the late nineteenth century to World War I.

In most instances fertility had already begun to decline in the nineteenth century and showed an irregular but generally downward trend from the turn of the century. Upsurges in birth rates after 1918, in the late 1930s, and after 1945 did little more than compensate in some measure for birth deficits associated with war and depression. For the first time, during the depression of the 1930s net reproduction rates (which measure the future reproduction of the population on the basis of the current rates of fertility and mortality) fell below the level of 1.00. After World War II, however, there was a widespread increase of birth rates, and it was not until the 1960s that they started to decline again, bringing net reproduction rates to even lower levels.

Europe's demographic development has formed the empirical basis for a generalized 'theory of demographic transition' which essentially states:

1. Pre-industrial societies are characterized by high levels both of fertility and mortality. Because of high fertility populations are young and because of high mortality population increase is small. Fertility generally is higher than mortality, but population growth is frequently checked by catastrophic mortality. This is due to the extreme vulnerability of pre-industrial societies to calamities of all sorts which makes epidemics in particular a regulatory device.
2. Fully industrialized and urbanized societies instead are characterized by low levels both of fertility and mortality. Because of low fertility populations are old and population increase is small or even negative. Due to the higher adaptive capacities of these societies mortality fluctuates only moderately whereas fertility is more volatile.
3. The demographic transition from high to low levels of fertility and mortality is characterized by a time-lag between the decline of mortality and the decline of fertility. This produces a high rate of natural population increase as a transient phenomenon. The reason for this time-lag is assumed to be that industrialization has a more immediate impact on mortality whereas a decline of fertility requires far more complex changes in social structure which ultimately are also produced by the process of modernization.

In terms of this simplified model one can specify some features of the demographic transition which are peculiar to Europe in comparison to the late-comers among the modernizing countries: a much slower and more gradual decline of mortality because of the later impact of modern medicine; a generally lower fertility because of a specific 'European marriage pattern'; as a consequence, a comparatively lower natural increase of population with demographic pressures further eased by the exceptional opportunity of inter-continental migration (between 1846 and 1932, according to Carr-Saunders (1936), more than 50 million Europeans emigrated overseas).

The first and last features speak for themselves, but the second needs some explanation. There is a distinctively (North-Western) European marriage pattern which can be traced back to the seventeenth century and which existed up to World War II. Its distinctive marks are (a) an advanced age at marriage and (b) a high proportion of people who never married (Hajnal 1965). This pattern was related to a specific household system in which the great majority of households were nuclear-family households which did not contain relatives, but which included life-cycle servants (i.e. young women and men who lived in the household of their masters).

Malthus thought that late marriage in Europe resulted in lower birth rates, as one of the 'positive' or 'negative' checks which would appear when population transcends its 'optimum size' and approaches a certain 'ceiling'. His model of development was formulated in terms of fixed land and population growth. Whereas the 'passion between the sexes' makes population grow in 'geometrical progression', food supply

only increases 'arithmetically'. With the supply of free land exhausted, the law of diminishing returns leads to a decline in labour's marginal product. This means a fall in living standards which in turn produces the above checks to population growth.

Ironically, Malthus, bound to traditional Europe, developed his gloomy futurology at a time when the technological process was beginning to invalidate the law of diminishing returns by constantly raising labour's productivity. Thus, by contrast with Malthus' theory of stagnation, Kuznets (1966), the great pioneer in the development of historical national accounting systems, regards population and economic growth as being closely related. He understands modern economic growth as a sustained increase in per capita or per worker product, most often accompanied by an increase in population and usually by sweeping structural changes.

The urban and industrial revolutions

Modern economic growth, according to Kuznets, is characterized by rates of increase in per capita product which range from less than 15 to about 30 percent per decade. Assuming a rate of population growth of about 10 percent per decade, this means an enormous growth of total output ranging from 20 to close to 50 percent per decade.

Sustained economic growth of these proportions was only made possible by the Industrial Revolution, the most dramatic of all revolutions in world history. In a narrow sense, the Industrial Revolution was a process by which societies acquired control over vast sources of inanimate energy. But such a definition does not do justice to the complex economic, social, political and cultural implications of this phenomenon. Kuznets therefore stresses that the rate of increase in per capita product was not primarily due to quantity of input, but to improvements in quality, i.e. increases in useful knowledge and better institutional arrangements for its utilization. Furthermore, the growth in efficiency was not only rapid but also pervasive. This means that the industrial revolution was preceded and accompanied by an agricultural revolution and by a striking increase in the capacity of transportation and communication.

The Industrial Revolution occurred in England because of a specific constellation of historical circumstances, and from England it soon spread to the rest of Europe. By 1850 it had penetrated into Belgium, France, Germany, and Switzerland; by 1900 it had extended to Northern Italy and Scandinavia. Until the entry of Japan in the late nineteenth century, followed by the U.S.S.R. in the 1930s, modern economic growth was concentrated in the European countries and their offshoots overseas. In these countries per capita incomes were well above the average even before industrialization.

The Industrial Revolution gave Europe a tremendous advantage over the rest of the world, founding its world-wide predominance in the nineteenth century. But even within Europe, the different timing of industrialization or of the economic take-off as W. W. Rostow has called it, meant great inequalities in the rate of aggregate growth which often cumulated in marked shifts in relative economic and political power among the European nations.

Beyond the creation of new inequalities between countries, however, modern economic growth in general strengthened the interdependence between nations, in terms of the international flow of men, goods and capital. This is especially true for the period from the second quarter of the nineteenth century up to 1914. World War I radically changed these international flows. International migration has never resumed pre-1914 levels, whereas the flow of goods and capital did, but only after World War II.

Internally, modern economic growth produced a basic transformation of social structure. Two broad changes were especially important: the marked and rapid changes in industry, status and occupational structures of the labour force; and the great increase of mobility in its various forms, the occupational shifts within and between generations and the considerable migration within countries, urbanization being the most important form.

Urbanization is not the same as urban growth. Cities have a history of almost ten thousand years which is closely related to the creation of large political structures, the growth of great religious cults, and the expansion of trade. Urbanization, on the other hand, is a much more recent phenomenon. In its simplest ecological meaning it is an increase in the proportion of the total population of an area which is living in cities. Before the Industrial Revolution there was no country with much more than a tenth of its population living in cities, and few cities had more than a million people. Up to the mid-nineteenth century no society could be described as predominantly urbanized.

It is a curious fact that urbanized societies arose in a region, North-West Europe, which had not given rise to the major cities of the past. However, this region has given birth from the tenth and twelfth centuries onwards to a unique form of city. The cities of Medieval and Renaissance Europe had something essentially different from towns in other world regions. They were autonomous organisms, clearly separated from the surrounding countryside, the core of new social and political structures, of a new culture and a new economy.

At a certain point, however, these cities, founded on guilds and corporations, became an obstacle for an inter-urban restructuring of economic life. Thus, the current wave of urbanization started much later, around 1700, with the emergence of national states and the extension of the capitalist world economy. It developed into a truly revolutionary process through its connection with the later industrialization.

Industrial urbanization differs from other forms of urbanization not only in terms of pace, scale and thoroughness, but also in quality. It does not produce a city structure as a specific social form. The city instead tends to lose its different structural and cultural characteristics: it tends to coincide with global society. This is mainly due to the technological implications of the increasing division of labour. These have centralizing as well as decentralizing consequences, leading to urban concentration as well as geographical diffusion.

Modern urbanization thus is best understood in terms of its connection with economic growth. As Kingsley Davis (1974) has put it, urbanization is a finite cycle through which nations go in their transition from agrarian to industrial society and which can be represented by a curve in the shape of an attenuated S. However, even if this curve is similar for all modernizing countries, in comparison to the latecomers, urbanization in Europe had at least two specific marks: its pace was much slower and its connection with industrialization much closer.

Until the nineteenth century, Europe was agricultural and rural. Within a century it became industrial and urban. This long-term transformation is often described in terms of a sequence of different types of societies: a traditional society in which agrarian work predominates, an industrial society characterized by manufacturing, a post-industrial society in which service work prevails. Clark and Fisher were the first to analyze this development in terms of a sectoral change of the labour force. Somewhat later Jean Fourastié (1963) tried to incorporate these changes into a broader concept of a transitional period between a stable 'primary civilization' of the past and a stable 'tertiary civilization' of the future.

It is technological progress which destroys the traditional balance. It increases the productivity of capital and labour, but these productivity gains vary among economic sectors (being high in the 'secondary', medium in the 'primary', and low in the 'tertiary' sector). Because the elasticity of demand also varies among sectors (being low in the 'primary', medium in the 'secondary', and high in the 'tertiary' sector), intersectoral differences in productivity increases lead to a change in the structure of demand, and thus to a change in the structure of production, and ultimately to a change in the structure of employment.

Given these intersectoral differences, technological progress, according to Fourastié, produces the following:

- a steady decline of employment in the primary sector, essentially agriculture, in form of an inverted attenuated S, from almost 80 percent to maybe less than 5 percent;
- a steady increase of employment in the tertiary sector, basically all varieties of services, in a kind of mirror-image of the decline of agricultural employment;
- a transient increase in industrial employment, starting slowly, then accelerating in the 'expansion period' up to a maximum of say 50 percent, after which it begins to decline again, flattening out at the end at a much lower level.

The transitional period therefore is marked by the rise of industry to predominance, and by its subsequent relative decline. For Fourastié, this is a period of economic, political and social instability. The traditional crises of agricultural underproduction are replaced by crises of industrial overproduction with recurrent mass unemployment. The rapid and thorough changes in the structure of the labour force generate anomie, lead to a mobilization of large population groups, and create political conflicts and crises.

In a recent work, however, Hartmut Kaelble (1983) has shown that a pronounced period of industrial society can only be found in Europe. The modernization of advanced non-European societies was characterized instead by a direct transition from an agrarian to a service society. Only in Europe was industrial work the most dynamic sector of employment from the nineteenth century until recently, and even now the move towards a service society seems to be less marked than abroad. The explanation which Kaelble offers for this

— once more — unique European development lies, above all, in the high exportation of manufactured goods from Europe to the world market and in the labour intensive industrialization of Europe. The longstanding predominance of a large and homogeneous industrial working class has certainly contributed a great deal to the interpretation of European modernization as the emergence of class society.

The rise and subsidence of class society

One can define class in such a generic way that the term applies to all societies in human history which have surpassed the subsistence level and have a certain division of labour. In these societies the control of the means of production may be crucial in the structuring of social inequality. It seems more useful, however, to interpret class society as a modern phenomenon which emerged in Europe from the ruins of feudalism. The extension of markets in general and of the labour market in particular, was a precondition for the emergence of class society. Capitalism had to destroy the legally sanctioned differentiation between estates, the feudal bonds and personalized ties of fealty, and the relatively self-sufficient character of local communities.

In this perspective, class society is something essentially different from estate society. It is founded upon the differentiation of two institutional spheres, commerce and industry on the one hand and the state on the other, thus breaking up the old fusion of economic and political power. Classes are defined as large-scale (national or even international) groupings of nominally free persons who have a common relation to the means of production, and occupy a similar position in the division of labour and market exchange. They do not necessarily have a sense of identity, a common class consciousness or class organization.

Our understanding of the long-term change of class structures has been shaped again and again by the arguments of, with, and about Marx. This is not the place to repeat — yet again — his basic ideas. In one way he had a very clear view of the future development, namely that capitalism would lead to a concentration of productive capital in the hands of fewer people and that the share of dependent work would steadily increase. In another way, however, he was rather misled, namely that in the long run capitalist development would produce a much more simplified class structure and an increasingly clear-cut and overt class conflict. The contrary is true: today, the class structure is more complex than ever, and class conflict has become more diffuse and simultaneously more institutionalized.

In order to overcome sterile disputes about the existence of class society, Anthony Giddens (1973) has suggested that we speak about types and levels of class structuration, an idea derived from Weber's class analysis. For Weber a class structure is a specific form of social inequality in which life chances are essentially determined by market position. In this sense market position is class position. There can be a great variety of different market positions and therefore a plurality of classes, the two most important dimensions being property (ownership classes) and qualification (acquisition classes). The whole spectrum of classes may be more or less structured, according to Weber, depending on the extent of inter-class mobility. Class structuring will also depend, Giddens adds, on the typical division of labour and the authority structure in enterprises as well as on differentiations in the sphere of consumption.

The complexity of this concept emphasizes the difficulties involved in a systematic empirical analysis of the long-term change of class structuration in the process of industrialization. Especially as regards the distribution of property, social mobility, work and authority relationships in enterprises or consumption patterns, one has to rely mainly on case studies which never give a complete picture.

To some extent this is also true for the distribution of educational and vocational qualifications among the population, although in this case one can use — at least indirectly — the available information on the evolution of the national education systems. There can be little doubt that the extension of secondary and higher education has changed the form and extent of class structuration: by the upgrading of market capacities — in the form of 'human capital' — of broader population groups on the one hand, and by creating greater differences among the employed labour force on the other.

In principle, both tendencies must be reflected in the distribution of income, strengthening the middle income strata and differentiating income from dependent work. We certainly do not know enough about long-term changes in income inequality at the national level, as our information is dependent upon the — relatively late — introduction of national income taxation. Some broad trends, however, seem to be con-

firmed by existing studies (Kraus 1981). Changes in the top income strata seem to have been decisive for the trend in overall income inequality. The relative decline of top incomes appears to have been a general development, starting perhaps in the late nineteenth century and being most evident during both world wars. It is probable that all other income groups have gained to some extent from this relative decline, but the middle groups seem to have profited the most.

European societies have become less class structured because market positions seem to be more differentiated and market capacities more continuously distributed. They are also less class structured in the sense that today individual life chances are less determined by market position. Material welfare is much less dependent on market income. Direct and indirect taxes, transfer payments, and the provision of public services have clearly reduced the importance of wages and assets in determining economic status.

It is not unlikely that the initial phase of European industrialization was marked by an increasing class structuration (Kaelble 1983). But since the turn of the century this — real or presumed — trend has been reversed. The long-term process of class de-structuration has been paralleled by an increasing organization and institutionalization of class conflict. In a very broad sense, this refers to the evolution of mass democracies which has frequently been interpreted as an institutionalization of class conflict, leading to the creation of welfare states. In a stricter sense, however, it refers to the establishment of trade unions and recognized forms of collective bargaining.

The trade unions, the second major pillar of the working class movement, developed throughout Europe as a product of the industrial revolution. However, the countries responded in very different ways to this general development. Reinhard Bendix (1964) has distinguished three broad types of policies. The Scandinavian and Swiss type can be characterized as a modernization of the traditional organization of crafts, allowing for a high degree of continuity and a low degree of repression. The absolutist type instead represented a major break with the traditions of liberty as a corporate privilege, leading to the repression of all sorts of associations. In the liberal type exemplified by England, workingmen's associations were also suppressed, but the right of association was preserved in other respects. Thus, the political and institutional frame work of trade union development greatly varied across Europe.

Trade unions were first organized by highly qualified groups in certain crafts with remnants of a 'guild spirit'. The *raison d'être* of these craft unions was not only to organize strike support, but also to provide social security on a mutual benefit basis and to monopolize qualified labour. The first national craft unions were established in the last third of the nineteenth century, and this process was largely concluded on the eve of World War I. The foundation of national trade union federations started at about the same time, culminating around the turn of the century.

The formation of industrial unions according to the principle of 'one establishment — one union' was a basic goal of national trade union federations everywhere, but the success with which the unions pursued this goal has greatly varied. To some extent, these variations are explained by differences in the early development of craft unions. This explains at least the major differences between the United Kingdom, Ireland and Scandinavia, where craft unionism still predominates, and the other countries where industrial unions were formed to a large extent. Some of the variations are also explained by later developments which have weakened the industry principle and furthered organization along status lines. The general change in the occupational structure, brought on by the growth of public and private bureaucracies and the emergence of new professions, has led to the formation of white-collar organizations in all countries, some dating back to the end of World War I. But again there are great variations in the form and the degree of the unionization of white-collar employees and civil servants.

Finally, one must also take into account the varying impact of rival political unionism on the structure of the trade union systems. Political cleavages were especially strong in the Catholic countries and the Protestant countries with a strong Catholic minority. Only in Austria and Germany, the cleavage between Catholic and socialist trade unions has been overcome. It persists in Belgium, France, Italy, the Netherlands and Switzerland, where unification attempts have largely failed. In several countries, the structure is further complicated by the varying splits between socialist and communist trade unions.

Differences in the organization of labour are closely tied to variations in strike patterns. Over the last hundred years the form and frequency of strikes has profoundly changed. According to Edward Shorter and Charles Tilly (1974) three great changes have occurred in virtually all Western European countries:

- secular increase in the rate of conflict during the last quarter of the nineteenth century and the first quarter of the twentieth century, followed by a large-scale decline during the 1920s and the Depression;
- a secular decrease in the duration of conflict starting around the Great Depression, and continuing after the Second World War;
- an increase in participation in strikes, sometimes beginning during the Great Depression, sometimes beginning just after the Second World War.

The user of this handbook will be able to check these statements on the basis of the data given in the concluding chapter of the second volume. They will not be able, unfortunately, to analyse the relationships between changes in labour disputes and the development of the trade unions. The chapter on trade unions is missing for reasons explained in the preface.

The other chapters are structured according to the outline given in this introduction. The second volume starts with two chapters in Part VI both of which are related to the demographic transition. They are followed in Part VII by two chapters on the process of urbanization and the changing housing conditions. The two chapters of Part VIII then give the essential data on economic growth, i.e. on the growth of the national product, its changing origin and use. These are followed again in Part IX by two chapters on the most important concomitants of economic growth, a changing division of labour and a changing economic inequality.

References

Raymond Aron, *Dix-huit Leçons sur la Société Industrielle*. Paris, Gallimard, 1962.

Reinhard Bendix, *Nation-Building and Citizenship*. New York, Wiley, 1964.

A. M. Carr-Saunders, *World Population: Past Growth and Present Trends*. Oxford, Oxford University Press, 1936.

Kingsley Davis, 'The urbanization of the human population', pp. 160–177 in: Charles Tilly (ed.), *An Urban World*. Boston, Little, Brown and Company, 1974.

Jean Fourastié, *Le Grand Espoir du XX^e Siècle*. Paris, Gallimard, 1963.

Anthony Giddens, *The Class Structure of the Advanced Societies*. London, Hutchinson, 1973.

J. Hajnal, 'The European marriage pattern in perspective', pp. 101–143 in: D. V. Glass and D. E. C. Eversley (eds), *Population in History, Essays in Historical Demography*. London, Edward Arnold, 1965.

Hartmut Kaelble, 'Was Prometheus most unbound in Europe?', *Journal of European History*, 14, 1985.

Franz Kraus, 'The historical development of income inequality in Western Europe and the United States', pp. 187–236 in: Peter Flora and Arnold J. Heidenheimer (eds), *The Development of Welfare States in Europe and America*. New Brunswick and London, Transaction Books, 1981.

Simon Kuznets, *Modern Economic Growth. Rate, Structure, and Spread*. New Haven and London, Yale University Press, 1966.

Edward Shorter and Charles Tilly, *Strikes in France 1830–1968*. Cambridge, Cambridge University Press, 1974.

Charles Tilly (ed.), *The Formation of National States in Western Europe*. Princeton, Princeton University Press, 1975.

Immanuel Wallerstein, *The Modern World-System. Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York, Academic Press, 1974.

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Historical Indicators of the Western European Democracies

Report No

2

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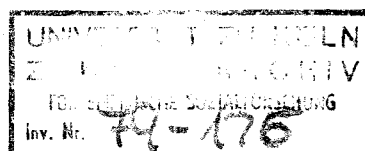
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Report No 2

QUANTITATIVE HISTORICAL SOCIOLOGY

by

Peter Flora



MS for 1975 issue of

Current Sociology

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QUANTITATIVE HISTORICAL SOCIOLOGY

Statistical sources and quantitative analyses
of Western European modernization:

A select bibliography

1. GENERAL HISTORIES, BIBLIOGRAPHIES, ALMANACS

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- 5.7 Government intervention and public finance
- 5.8 Social conflicts and collective violence

The bibliography is relatively embracing with respect to general statistical sources and highly selective in relation to quantitative analyses. It is limited to Western Europe since around 1800, excluding Greece, Iceland, Luxembourg, Portugal and Spain, but including all territories of the Austrian monarchy until World War I and of Germany until World War II; part 1, 3 and 4, however, necessarily include sources on other countries too.

Part 1 contains the major comparative studies on the history of national and international statistics and the main bibliographies of statistical sources.

Part 2, covering more than half of the bibliography, is subdivided into 13 paragraphs on just as many Western European countries; each paragraph is introduced by one or more histories and bibliographies of national official statistics; the main sources of general statistics follow, usually in a combined chronological and systematic order, framed by a description of the organizational evolution of official statistics; all general statistical series, statistical yearbook, statistical journals and historical handbooks have been included; special statistical publications and the more recent monthly bulletins usually have been omitted.

Part 3 comprises the main publications of international statistics since the late nineteenth century, including publications of the International Statistical Congresses, the International Statistical Institute, the League of Nations, the United Nations, the International Labour Organisation, and the United Nations Educational, Scientific and Cultural Organisation.

Part 4 gives a list of private collections of statistics, reaching from early national and older comparative collections to the newer compilations since the 1960's.

Part 5, finally, is a highly selective bibliography of quantitative analyses of Western European modernization, including population growth and demographic transition, international migration and urbanization, the changes of the working population, economic growth (national income), literacy and primary education, enfranchisement and electoral participation, government intervention (public finance), social conflicts and collective violence. In this part usually only long-term national or comparative studies have been included.

1. GENERAL HISTORIES, BIBLIOGRAPHIES, ALMANACS

1.1 Histories

The development of official statistics in most European and a few non-European countries may conveniently be reconstructed using the following four publications, all of which give a description of the evolution of statistical institutions, activities and publications for each single country. Whereas the first book has only one author, the other three are composed of chapters written by country experts:

- 1 Boeckh, R. Allgemeine Übersicht der Veröffentlichungen aus der administrativen Statistik der verschiedenen Staaten. Berlin, Schade, 1856. 65 p.

All European countries including the various German and Italian states, the United States of America and some information on Latin America.

- 2 Société de Statistique de Paris. Le 25^e anniversaire de la Société de Statistique de Paris. Paris and Nancy, Berger-Levrault, 1885. 411 p.

Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Sweden and Switzerland.

- 3 Koren, J., ed. The history of statistics. New York, Macmillan, 1918. XII + 773 p.

Austria, Belgium, Canada, France, Germany, Great Britain and Ireland, Hungary, India, Netherlands, Norway, Sweden and United States.

- 4 Institut International des Sciences Administratives. Monographies sur l'organisation de la statistique administrative dans les différents pays. Brussels, 1933 and 1938. 2 vols.

Austria, Czechoslovakia, Denmark, England, Estonia, Finland, France, Greece, Ireland, Italy, Netherlands, Rumania and some non-European countries.

The best and most embracing account of the evolution of international statistics can be found in:

- 5 Statistische Hefte. Cahiers Statistiques. Statistical Papers. 1 (1/2), 1960.

The entire volume is devoted to "International statistics, history and organisation" and contains four articles: "On the concept of international statistics" (G. Menges), "An essay on the history of international statistics from forerunners in ancient times to the inception of the League of Nations" (G. Menges), "Statistics in international organisations in the days of the League of Nations" (D. Bott) and "Statistics in international organisations since the end of the Second World War" (J. Großmann). German text, English and French summaries. For a short overall history until the International Conferences of 1947 cf.:

- 6 Campion, H. "International statistics". Journal of the Royal Statistical Society. 112 (2), 1949, ser. A, 105-134.

Finally, two volumes which combine a history of official statistics with a history of statistical methodology:

- 7 Meitzen, A. Geschichte, Theorie und Technik der Statistik. (History, theory and methodology of statistics.) Berlin, Cotta, 1886. IX + 214 p.

It has one extensive chapter on the history of official statistics and contains a bibliography giving the most important periodical statistical publications for almost all countries of the world.

- 8 Westergaard, H. Contributions to the history of statistics. London, King & Son, 1932. VII + 280 p.

The best combined history of statistical methodology and official statistics

covering the period from Political Arithmetic in the 17th century and even earlier until the end of the 19th century.

1.2 Bibliographies

Lists of statistical bibliographies are given in the two following books; the first enlists more older bibliographies, but the second is more extensive:

- 9 Besterman, T. A world bibliography of bibliographies. Lausanne, Societas Bibliographica, 1966. 5 vols.
- 10 Winchell, C.M. Guide to reference books. 8th ed., Chicago, American Library Association, 1967. 3 supplements. XX + 741 p.

Until World War I printed catalogues of the central statistical libraries have been the only general bibliographies. The first among them have been published in Belgium in 1843, in Sweden in 1855, in England (Board of Trade) in 1866, in Prussia in 1874 and 1879, in Denmark in 1880 and in England (Royal Statistical Society) in 1884. Here, only the catalogues of the two most important statistical libraries are given:

- 11 Katalog der Bibliothek des Königl. Statistischen Bureaus in Berlin. (Catalogue of the library of the Royal Statistical Office in Berlin.) Berlin, Verlag des königlichen statistischen Bureaus. Vol. 1, 1874; vol. 2, 1879.
- 12 Catalogue of the library of the Royal Statistical Society. 3rd ed., London, The Royal Statistical Society, 1921. 274 p.

After the turn of the century the printed catalogues were replaced by accession lists and current bibliographies. The first important one has been:

- 13 Bibliographie der Sozialwissenschaften. (Bibliography of the social sciences.) Monatshefte der Buch- und Zeitschriftenliteratur des In- und Auslandes über Gesellschaft, Politik, Wirtschaft, Finanzen, Statistik, ed. by the Internationales Institut für Sozialbibliographie and since 1925 by the Statistisches Reichsamt. 1-39, 1905-1943. Index 1-32, 1905-1936.

Monthly catalogues of books and journal articles, first of international publications but in the 1930's more restrained to German literature. At this time the International Institute of Statistics began its bibliographical work in:

- 14 Revue de l'Institut International de Statistique. 1-, 1934-.

Until 1966 this quarterly included a bibliography of practical all statistical publications, at the beginning 4/5 non-methodological, at the end 1/2. For the time between the two World Wars four single publications should be mentioned in addition:

- 15 London bibliography of the social sciences. London, The London School of Economics and Political Science, 1931, vol. 1-3; vol. 4. 6 supplements.

Being the subject catalogue of the British Library of Political and Economic Science, it is an excellent guide to statistical books and articles, especially for the late 19th and the early 20th century.

- 16 Gregory, W. List of the serial publications of foreign governments 1815-1931. 720 p.

It is the most comprehensive list not only of statistical but of all serial publications of national governments and provinces which are to some extent self-governing. Its disadvantages are, however, that titles are not translated and no annotations are made.

- 17 Caumartin, J. Les principales sources de documentation statistique. Paris, Dunod, 1935. 38 p.

Although mainly on France, it includes a list of statistical publications for 57 countries.

- 18 Verwey, G.; Renooij, D.C. The economist's handbook: A manual of statistical sources. Amsterdam, 1934. 460 p.

A very useful but more special bibliography classifying existing sources of the main countries and indicating where statistical data on any given economic subject may be found.

After World War II the U.S. Library of Congress and the Bureau of Census sponsored the Census Library Project for the purpose of securing bibliographic control of the major statistical publications of the world. The three most important works, edited under the general title "U.S. Library of Congress. Census Library Project", are:

- 19 Dubester, H.J., ed. National censuses and vital statistics in Europe 1918-1939. Washington, Library of the Congress, 1948. Supplement 1940-1948. VII + 215 p.
- 20 Carter, P.G., ed. Statistical yearbooks. An annotated bibliography of the general statistical year-books of major political subdivisions of the world. Washington, Library of the Congress, 1953. VIII + 123 p.
- 21 Carter, P.G., ed. Statistical bulletins. An annotated bibliography of the general statistical bulletins of major political subdivisions of the world. Washington, Library of the Congress, 1954. X + 93 p.

The first book gives very detailed information on all national censuses in Europe concerning population and occupation, housing, agriculture and livestock, industry and commerce. The other two are major supplements to Gregory. Finally, a bibliography which is a convenient guide for publications of smaller countries after World War II but which is not very complete and gives no annotations:

- 22 Ball, J. Foreign statistical documents. A bibliography of general, international and agricultural statistics, including holdings of the Stanford U. Libraries. Stanford, The Hoover Institution on War, Revolution and Peace, 1967. VII + 173 p.

1.3 Yearbooks and almanacs

There is a considerable number of older and newer international yearbooks and almanacs which also contain statistical data. An extensive list of them is given on pp. 75-81 in:

- 23 Gurr, T.R. Political metrics: An introduction to quantitative macropolitics. Englewood Cliffs, N.J., Prentice-Hall, 1972.

Here, only two are mentioned; undoubtedly the most important one is

- 24 The statesman's yearbook. Statistical and historical annual of the states of the world. London, Macmillan; New York, St. Martin's Press, 1-, 1864-.

It certainly is the best and most convenient source for national data, political, economic, military, education, government finance etc., for all countries and territories of the world, and it gives excellent bibliographic guides to primary sources.

The second publication is less important and reliable, but it includes statistical data as early as around 1820:

- 25 Almanach de Gotha. Annuaire généalogique, diplomatique et statistique. 1-, 1763-.

2. NATIONAL STATISTICS

2.1 Austria

There are several histories of government statistics in Austria. The three most important sources are:

- 26 Inama-Sternegg, M. von. "Die Statistik in Österreich" (Statistics in Austria), pp. 315-345 in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris. Paris and Nancy, Berger-Levrault, 1885.

This article contains (a) a detailed history of government statistics since the establishment of a statistical bureau in 1829, (b) a description of the organization of government statistics in the 1880's including a detailed account of the activities in the different fields of statistics, and (c) a list with all publications of the statistical bureau or the central commission until 1885.

- 27 Meyer, R. "The history and development of government statistics in Austria", pp. 85-122, in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.

Although less detailed than (26) this article is useful, because (a) it gives the basic information on the history until World War I and (b) it describes the activities of the statistical offices of the central departments and of the selfgoverning bodies.

- 28 Beiträge zur Geschichte der Statistik in Österreich. (Contributions to the history of statistics in Austria.) Den Teilnehmern an der 14. Session des Internationalen Statistischen Instituts gewidmet von der K.K. Statistischen Zentralkommission anlässlich der Feier ihres 50jährigen Bestandes. Brünn, Irrgang, 1913.

Besides a history of the central commission this jubilee volume contains special chapters on the development of statistics concerning emigration, currency, public finance, criminality and labour.

For the history of population and economic statistics in the 18th century cf.

- 29 Großmann, H. "Die Anfänge und geschichtliche Entwicklung der amtlichen Statistik in Österreich" (The beginnings and historical development of official statistics in Austria). Statistische Monatsschrift, n.s. 21, 1916: 331-423

Already in the second half of the 18th century population censuses were carried out in Austria, and a regular investigation of the movement of population was institutionalized in 1762. But it was not until the separation of the patrimonial dominions from the Roman-German Empire and their inclusion in the Empire of Austria that an organization of continuous statistics in all possible branches of administration was started. In 1817 a system of conscription was enacted which included a regular enumeration of population; an attempt to create a topographical office of statistics failed, however, in 1819. In 1829, finally, an administrative service was established which had to organize a regular report of the government departments:

- 30 Tafeln zur Statistik der österreichischen Monarchie. (Statistical tables of the Austrian monarchy.) 1-21, 1828-1848; n.s. 1-5, 1849/51-1860/65.

These "Statistical tables" remained the authoritative Austrian statistics until 1865. At first they were kept strictly secret, but soon after the establishment of a central bureau of statistics, the 'K.K. Direction für admini-

strative Statistik', in 1840 parts of the tables were published; full publicity came in 1848. In 1852 the central bureau started a new publication:

- 31 Mittheilungen aus dem Gebiete der Statistik. (Statistical communications.) 1-20, 1852-74.

Usually four parts were published annually, a few containing general tables (Übersichtstafeln) of the monarchy, the other referring to more specific subjects, above all to the movement of population, education, traffic, industry, and later also to public finance and elections.

Stimulated by the growing need of the diet for quick information, a small manual with general statistics was started in 1861 by the director of the central bureau:

- 32 Statistisches Handbüchlein (Statistical manual), compiled by C. von Czoernig and ed. by the K.K. Direction der administrativen Statistik. 1-10, 1861-1871.

This is a very useful source with presents in addition to current statistics from all fields several time-series and also gives verbal information.

With the establishment of a central statistical commission, the 'K.K. Statistische Central-Commission', in 1863 the main publication became the:

- 33 Statistisches Jahrbuch der österreichischen Monarchie (Statistical yearbook of the Austrian monarchy). 1-19, 1863-1881.

Since 1867 it was called 'Statistisches Jahrbuch der österreichisch-ungarischen Monarchie' (Statistical Yearbook of the Austrian-Hungarian Monarchy). It embraces all fields of government statistics and has been enlarged successively.

In 1875 the earlier Statistical Communications were replaced by the:

- 34 Statistische Monatsschrift (Monthly journal of statistics). 1-43, 1875-1917; n.s. 1-3, 1919-1921. Index: 1-33, 1875-1907 in vol. 34.

This journal is invaluable for its short summaries, historical overviews and detailed monographs in all fields of government statistics.

New changes in the system of publications were introduced after 1880. The Statistical yearbook was abolished then and continued by the 'Austrian Statistical Manual', another yearbook:

- 35 Österreichisches Statistisches Handbuch für die im Reichsrathe vertretenen Königreiche und Länder. Nebst einem Anhang für die gemeinsamen Angelegenheiten der österreichisch-ungarischen Monarchie (Austrian statistical manual for the kingdoms and provinces represented in the Reichsrath. Including an appendix concerning the common concerns of the Austrian-Hungarian monarchy). 1-35, 1882-1916/17.

It gives a condensed, purely tabular survey of all branches of official statistics. In the same year a uniform collection of statistical publications was started:

- 36 Österreichische Statistik (Austrian statistics). 1-93, 1880-1910; n.s. 1-18, 1910-1918. Index: 1-76, 1882-1905 in vol. 76.

This main series of statistical sources contains the results of the census of population and regularly the statistics of the movement of population, the statistics of traffic, commerce and banking, the sanitary and educational systems, the elections and public finance, justice and criminality.

The readjustment of political relations with Hungary limited the jurisdiction of the Central Commission in 1867 which succeeded, however, in publishing an official manual of the Austrian-Hungarian monarchy comprising the period 1867-1876:

- 37 Statistisches Handbuch der österreichisch-ungarischen Monarchie für den Zeitraum 1867-1876 (Statistical manual of the Austrian-Hungarian monarchy for the

period 1867-1876). 1, 1878. Not continued.

At its 54th anniversary in 1913 the Central Commission published an historical manual (with a French introduction):

- 38 Statistische Rückblicke aus Österreich (Résumé rétrospectif de la statistique de l'Autriche), der 14. Tagung des Internationalen Statistischen Instituts überreicht von der K.K. Statistischen Zentralkommission. Wien, Manz, 1913. XXIX + 99 p.

Containing 169 tables, it is a convenient source for a first and short historical overview; its shortcomings are, however, that only few annotations are made and that the time periods covered differ widely; the most important tables refer to the basic census results and the movement of population since 1818, traffic since the 1830's, private and public communication since 1848, education since 1861, foreign trade since 1867, public finance since 1868, some economic production statistics since the 1850's to 1870's, health service since 1873, criminal statistics since 1873 and, finally, labour statistics since the 1890's.

The reorganization of official statistics after the First World War is described briefly in:

- 39 "Die Entwicklung der amtlichen Statistik in Österreich" (The development of official statistics in Austria), in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1933. Vol. 1.

After the war the main statistical series of the 'Bundesamt für Statistik', the statistical yearbook, appeared under the title:

- 40 Statistisches Handbuch für den Bundesstaat Österreich (Statistical handbook for the Federal Union of Austria). 1-18, 1920-1937.

In 1938, when the yearbook appeared for the last time before the end of World War II, its title was changed to 'Statistisches Jahrbuch für Österreich'. Following the war the title was changed once again, now to be named:

- 41 Statistisches Handbuch für die Republik Österreich (Statistical handbook for the Republic of Austria). n.s. 1-, 1950-.

Besides the statistical yearbook the main series published by the Bundesamt was:

- 42 Beiträge zur Statistik der Republik Österreich (Contributions to the statistics of the Republic of Austria). 1-12, 1919-1923.

Of the twelve volumes of this series five are dedicated to election statistics, four deal with the results of the censuses, the remaining two covering population movements and labour statistics.

In 1923 the series was merged with the monthly journal "Statistische Mitteilungen" (Statistical communications), published between 1921 and 1923, to become:

- 43 Statistische Nachrichten (Statistical news). 1-16, 1925-1938, n.s. 1-, 1946-.

Some years later an independent publication similar to the earlier "Beiträge" was begun:

- 44 Statistik des Bundesstaates Österreich (Statistics of the Federal Union of Austria). 1-12, 1934-1937.

The first eleven numbers of this series contain the results of the census of 1934, the twelfth is dedicated to population movements.

After the Second World War a related series was started, now named:

- 45 Beiträge zur österreichischen Statistik (Contributions to Austrian statistics). 1-, 1946-.

These "Contributions" of which every single number refers to a special subject practically embrace the entire field of official statistics. The most important periodically covered topics are population movements, statistics of higher education, judicial statistics and agricultural statistics.

2.2 Belgium

There are two major histories of government statistics in Belgium:

- 46 Julin, A. "The history and development of statistics in Belgium", pp.125-175 in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.
- 47 "Belgium", pp. 205-228, chapter in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Paris, 1860-1885. Paris and Nancy, Berger-Levrault, 1885.

The first article contains (a) an historical survey of statistics since the time of the French domination, (b) an account of the subject matters of the principal publications concerning demographic, economic and social statistics, and of the censuses, and (c) a complete list of all official statistical publications between 1830 and 1914. The second article, being shorter with reference to (a) and (c), has the advantage of giving a much more detailed account of the work and the publications of the different ministries. Both articles should be used together. Further bibliographic information on official (and private) publications containing statistical data may be found in:

- 48 Heuschling, X. "Aperçu des principales publications statistiques faites sur la Belgique depuis l'incorporation de ce pays à la France, en 1794, jusqu'à ce jour". Bulletin de la Commission Centrale de Statistique 1, 1843: 579-627.
- 49 Ministère de l'Intérieur. Catalogue de la bibliothèque de la Commission Centrale de Statistique. Brussels, Hayez, 1902-1911. 7 vols.
- 50 Weerdt, D. de. Bibliographie rétrospective des publications officielles de la Belgique, 1794-1914. Louvain and Paris, Nauwelaerts, 1963. 427 p.

The prosperity and complexity of Belgian society very early have created and facilitated a vigorous interest in statistical research. It was, however, chiefly under the Austrian and French domination that the number of investigations and reports increased. During the time of unification with the Netherlands a first statistical commission was created in 1826, attached to the central office in The Hague. After the revolution of 1830 an independent general statistical bureau was organized in 1831, a series of official publications started in 1832. The first two volumes have a more specific character but the following four contain general statistics of the kingdom concerning the physical, industrial, political and moral 'state of the nation':

- 51 Documents statistiques sur le Royaume de Belgique, recueillis et publiés par le Ministre de l'Intérieur. 3rd official publication, 1836; 4th official publication, 1838; 5th official publication, 1840; 6th official publication, 1841.

In 1841 this form of publication was discontinued; it was decided to decentralize statistics and to assign its branches to different ministries. At the same time a central statistical commission was created in the ministry of the interior as a coordinating and advisory institution. Besides the pre-

paration of the censuses, this commission has been charged with publishing a periodical account of the condition of the kingdom:

- 52 Exposé de la situation du Royaume, (période décennale de 1841-1850), publié par le Ministre de l'Intérieur, 1852, 1 vol.; id. (période décennale 1851-1860). 1865, 3 vols; id. de 1861 à 1875, publié par les soins de la Commission Centrale de Statistique. 1885, 3 vols.; id. de 1876 à 1900, rédigé sous la direction de la Commission Centrale de Statistique. 1907, vol.1; 1912, vol. 2; 1914, vol. 3.

Covering around 6.000 pages and combining numerical data with qualitative information and verbal interpretation concerning all conceivable aspects of society in historical perspective, these volumes are unrivalled in any other country. An earlier and smaller publication partially embracing the period 1831-1840, may be understood as their predecessor:

- 53 Résumé des rapports sur la situation administrative des provinces et des communes de Belgique pour 1840, présenté au Roi par le Ministre de l'Intérieur. 1841.

In 1843 the central statistical commission started a statistical journal being published irregularly:

- 54 Bulletin de la Commission Centrale de Statistique, vol. 1, 1845; vol. 2, 1845; vol. 3, 1847; vol. 4, 1851; vol. 5, 1853; vol. 6, 1855; vol. 7, 1857; vol. 8, 1860; vol. 9, 1866; vol. 10, 1866; vol. 11, 1869; vol. 12, 1872; vol. 13, 1878; vol. 14, 1881; vol. 15, 1883; vol. 16, 1890; vol. 17, 1897; vol. 18, 1904; vol. 19, 1906; vol. 20, 1909; vol. 21, 1921; vol. 22, 1928.

It contains relatively few monographs on population movements, education and other topics, but gives a lot of information about methodological problems of Belgian statistics and usually has a bibliographic part.

In 1857 an annual publication of general statistics was started, partially following the earlier "Documents statistiques":

- 55 Documents statistiques, publié par le département de l'intérieur avec le concours de la Commission Centrale de Statistique. 1-15, 1857-1869.

With some variation statistical data collected by three ministries were annually compiled: data on population, elections, and communal finances by the ministry of justice; data on communication, transport and state mines by the ministry of public works. After 1869 these documents have been replaced by the

- 56 Annuaire statistique de la Belgique. 1-, 1870-. Title varies.

From the very beginning this yearbook has been so extensive and detailed that it compensates, together with the "Exposé", for the great decentralization of Belgian official statistics.

2.3 Denmark

There are several publications relevant for the history of official statistics in Denmark:

- 57 Gad, M. "Danemark", pp. 258-268, chapter in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Paris, 1860-1885. Paris and Nancy, Berger-Levrault, 1885.

- 58 Jensen, A. "The history and development of statistics in Denmark", pp. 201-214 in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.
- 59 Jensen, A. "La statistique au Danemark" in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, vol. 1, 1933.
- The first article is essentially a history of official statistical works and publications between 1835 and 1885. It presents not only a list of all publications, but also describes their general character and their specific contents, even of the first statistical yearbook. The second article gives a more extensive treatment of the institutional history until the First World War and it contains a list of statistical publications at the turn of the century, bibliographical details missing, however. The third article mainly deals with the period between the two World Wars and gives an account of the organization, the works and the publication of the central statistical bureau. In addition there are several more extensive histories in Danish:
- 60 Holck, A. Dansk statistik historie 1800-1850 (Danish history of statistics 1800-1850), ed. by the State Statistical Bureau. Copenhagen, 1901. 321 p.
- 61 Samfundet og statistiken. Et historisk rids 1769-1950 (Society and statistics. An historical exposé 1769-1950), ed. by the Statistical Department. Statistiske Meddelelser, s.4, vol. 139, pt.1. Copenhagen, 1949.
- 62 Statistisk bureaus historie (History of the bureau of statistics), ed. by the State Statistical Bureau. Copenhagen, 1899 (French summary).
- 63 Det statistiske department 1896-1920 (The statistical department 1896-1920), ed. by the Statistical Department. Copenhagen, 1920 (French summary).
- 64 Det statistiske department 1920-1950 (The statistical department 1920-1950), ed. by the Statistical Department. Statistiske Meddelelser, s.4, vol. 139, pt. 4. Copenhagen, 1951.

Although two population censuses were carried out in 1769 and 1787 already, the history of organized official statistics in Denmark began in 1797 when the 'Dans-norske Tabelkontor' (Danish-Norwegian Tabulating Office) was created. Since it could not accomplish its principal tasks, it was abolished in 1819. There was no special body for official statistics until 1834 when the 'Tabelkommission' (Tabulating commission) was established. In addition to the population censuses this comparatively independent commission consisting of high civil servants collected statistics of the movement of population, life stock, foreign trade, elections, suicides and criminality which were published in the first series of the:

- 65 Statistisk tabelvaerk (Statistical tables). 1-21, 1835-52; s.2, vol. 1-26, 1850-63; s.3, vol. 1-33, 1860-76; s.4 A, vol. 1-9, 1879-96, B, vol. 1-8, 1878-93, C, vol. 1-9, 1878-96, D, vol. 1-30, 1878-96, E, vol. 1-4, 1887-94; s.5 A, vol. 1-, 1899-, B, vol. 1-, 1898-, D, vol. 1-, 1902-.

The first two series of the "Statistical tables" were also published in German. Since the members of the commission were not primarily occupied with statistics, they could not cope with the growing need for and the expansion of statistics.

Therefore, in 1850 a central statistical bureau was created, called 'Det Statistiske Bureau', which continued and successively enlarged the work of the commission. There have been two greater extensions and reorganizations of the bureau accompanied by a change of name: since 1895 it was called 'Statens Statistiske Bureau' (State statistical bureau), and since 1913 'Statistiske Department' (Statistical department). The central statistical bureau continued to publish the "Statistical tables", adding new fields, above all statistics of public income and expenditure since the late 1850's and social statistics since the end of the century. Beginning with the 4th series the "Statistical tables" have been subdivided into: A = population (and industrial) statistics, B = judicial statistics, C = agricultural statistics, D = commercial statistics, E = financial statistics.

Beside the "Tables" comprising the most important works the bureau began to publish statistical communications which embrace the results of some minor and more or less regular works as well as the result of occasional investigations:

- 66 Statistiske Meddelelser (Statistical communications). 1-6, 1852-61; s.2, vol. 1-13, 1862-77; s.3, vol. 1-18, 1879-97; s.4, vol. 1-, 1897-.

The contents are very varied covering almost all fields of statistics, especially schools, elections, taxation and foreign trade, besides a mass of economic and social statistics; until the first World War statistics referring to Iceland are also included.

In 1869 the central statistical bureau started a yearbook under the title:

- 67 Sammendrag af statistiske Oplysninger angaaender Kongeriget Danmark (Summary of the principal statistics of Denmark). 1-11, 1869-93.

This "Yearbook" appeared annually, however, only from 1869 to 1874, the following five volumes being scattered over the next two decades. Two summaries (1874 and 1878) were also published in French. In 1896 these documents were continued by the:

- 68 Statistisk Aarbog (Statistical yearbook). 1, 1896. (Danish and French)

There is no historical statistical handbook.

2.4 Finland

There are only two histories of official statistics, published in another language than Finnish or Swedish:

- 69 Ignatius, K. E. F. "Finlande", pp. 251-257, chapter in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris, 1860-1885. Paris and Nancy, Berger-Levrault, 1885.

- 70 Kovero, M. "La statistique officielle de la Finlande", in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1935. Vol. 1.

The first article contains a short history and a bibliography of official statistics until 1885. The second article presents a more extended history including a detailed account of the different series published under the common title "Finnish official statistics"; in addition it gives an account of the statistical work between the two World Wars, classified according to branches of statistics as well as according to the publishing statistical office.

The history of official statistics in Finland reaches back to the middle of the 18th century when the Swedish-Finnish population tables were introduced. They were continued after 1809 when Finland was separated from Sweden, and in 1832 the first summaries of the tables were published. Besides, there have been reports of the governors of provinces, also going back to the 18th century. Around the middle of the 19th century some of the departments of government began to publish reports containing statistical materials (above all reports on factories and the health service). Finally, a Central Bureau of Statistics (Statistiska Centralbyran - Suomalainen Tilastollinen Päätoimisto) was established, at first temporarily in 1865, and definitely in 1870; at the same time an advisory Central Commission of Statistics was created. The organization of official statistics remained decentralized, however, and this principle was still strengthened in 1884 when the Central Commission was abolished and statistical offices created in connection with several central departments. For the user of Finnish statistics this decentralization is somewhat counterbalanced by the fact that most statistics have been published in one source since 1865:

- 71 Suomen virallinen tilasto - Finlands officiella statistik (Official statistics of Finland).

Under this uniform title different series are published whose chronological order gives an impression of the development of official statistics in Finland; among others the following series were successively included (first year covered): foreign commerce (1865), quinquennial reports on economic conditions (1861, discontinued in 1900), national income (1865), population (1865), agriculture (1869), railways (1871). After 1880 the number of new series greatly increased: prisons (1882), public assistance (1881), primary schools (1883), secondary schools (1884), health service (1884), industry (1884), postal service (1885), justice (1891), insurances (1892), emigration (1893), elections (1907), communal finance (1910). The earliest volumes were usually published in Swedish only, but soon two editions were usually prepared, one in Swedish and one in Finnish; after the first World War most but not all publications were in one bilingual Swedish-Finnish volume.

In 1906 the Central Bureau of Statistics started a series containing statistical information on different subjects which was discontinued, however, in 1920 already:

- 72 Tilastollisia tiedonantoja - Statistiska meddelanden (Statistical communications). 1-33, 1906-1920.

Besides the "Official statistics in Finland" the main publication is the statistical yearbook which was started in 1879. There have been two editions until the 1930's, one in Swedish/French and one in Finnish/French:

- 73 Statistisk årsbok för Finland - Annuaire statistique de Finlande. 1-23, 1879-1902; ns. 1-, 1903-.

- 74 Suomen tilastollinen vuosikirja - Annuaire statistique de Finlande. 1-23, 1879-1902; ns. 1-, 1903-.

2.5 France

France probably has the best documented history of official statistics of all our countries. There are at least four articles giving a general historical description:

- 75 Levasseur, E. "France", pp. 145-204, chapter in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris, 1860-1885. Paris and Nancy, Berger-Levrault, 1885.
- 76 Faure, F. "The development and progress of statistics in France", pp. 215-329 in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.
- 77 Huber, M. "L'organisation de la statistique en France", pp. 9-42 in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1933, vol. 1.
- 78 Eichert, E. "Von der Statistik Générale de la France zum Institut National de la Statistique et des Etudes Economiques. Hundertfünfzehn Jahre französische Statistik, 1833-1948." Allgemeines Statistisches Archiv 33, 1949: 367-396.

Since French official statistics were characterized by an excessive decentralization, the great merit of the first article lies above all in its most detailed description of the organization, the works and the publications of all statistical services of the different ministries, thus presenting a complete bibliography up to around 1885. The second article is less useful as a bibliographical source, but it gives a much more extended history going back to the earliest beginnings and ending with the First World War. The third article continues the history for the period between the two World Wars and the fourth describes the great reorganization during and shortly after the second World War. For a more extensive treatment of the last time cf.:

- 79 Marietti, P.G. La Statistique Générale en France. Paris, Presses Universitaires de France, 1949. X + 249 p.

Since only the first article contains a useful bibliography, other publications should be consulted; above all the book of Gille who gives an amazingly full and lively account of the statistical sources in France between the second half of the 17th century and 1870, concentrating on the enquêtes, but also including the regular and administrative statistics, whose contents are described in all details.

- 80 Gille, B. Les sources statistiques de l'histoire de France. Des enquêtes du XVII^e siècle à 1870. Geneva, Droz, 1964. 288 p.

In addition:

- 81 France, Statistique Générale de la France. Historique et travaux de la fin du XVIII^e siècle au début du XX^e. Paris, Imprimerie Nationale, 1913.
- 82 France, INSEE. Répertoire des sources statistiques françaises. Paris, Imprimerie Nationale, 1962 ff.

Finally, a very useful and manageable bibliography has been compiled by

- 83 Tilly, L.A.; Tilly, C. "A selected bibliography of quantitative sources for French history and French sources for quantitative history since 1789, in: Lorwin, V.R.; Price, J.M., ed. The dimensions of the past. Materials, problems, and opportunities for quantitative work in history. New Haven and London, Yale University Press, 1972.

Although concentrating on quantitative (secondary) analyses of French history, it also includes the most important (primary) sources of official statistics.

Although a great variety of statistical information has been produced in France since the 17th century, to mention only the famous reports of the intendants, it was only in the last years of the ancien régime that a regular compilation of statistics was attempted and, immediately following, the French Revolution gave a strong stimulus to the collection, and above all to the publication of statistics. In 1796 the 'Bureau Officiel de la Statistique' was created, only to be abolished again in 1812. In 1801 and 1806 the first two general enumerations of the population were carried out, however, not very successfully. With few exceptions the Restauration interrupted the progress of official statistics whose continual organization had to wait until the revolution of 1830. The special statistical institutions created in France after 1830 are fairly numerous and the organization of official statistics remained decentralized until the Second World War. Its history is rather complicated, therefore, and the number of publications of 'General Statistics' is comparatively small.

The 'Bureau de la Statistique Générale', created in 1833, is the first and most important statistical office. Its principal object at all periods has been the population of France, but to a limited degree it also played the role of a central office. In 1835 it started the publication of a series which, though far from including all national statistics, dealt with some of the main branches (territory and population, agriculture, industry, foreign trade, public finance, prices, consumption, public assistance, prisons):

84 Statistique de la France. 1-14, 1835-1852.

(A detailed account of the contents is given in Gille's bibliography, pp. 205-211.) The majority of statistics unified in this series have been dispersed successively in particular publications of different ministries. The original program was never realized and in 1852 furthermore restrained, since in the meanwhile other ministries had developed their own statistical services, especially the ministry of justice (regular publications since 1827) and the ministry of public works (statistical office since 1844). In 1855 the 'Bureau de la Statistique Générale' started a second, more limited series whose 21 volumes contain statistics relating to population, public assistance, agriculture, and industry:

85 Statistique de la France. s.2, vol.1-21, 1855-1872.

After 1871 this general series was subdivided into special series and again reduced. On the other hand, however, the bureau started in 1878 the publication of its only document of truly general statistics:

86 Annuaire statistique de la France. 1-58, 1878-1951; ns 1-, 1952-.

This statistical yearbook summarizing all official statistics of France usually embraced annual tables as well as retrospective tables referring to France and other countries; between 1914 and 1927 the annual and the retrospective tables were published alternatively every second year; later, the historical retrospections were published more irregularly, the last one in 1966:

87 Annuaire statistique de la France 1966. Résumé rétrospectif.

Although the publication of the statistical yearbook somewhat increased the importance of the 'Bureau de la Statistique Générale', the decentralization still grew owing above all to the creation of two important new statistical offices in the ministries of finance (1876) and agriculture (1881). The

first of these offices published a statistical journal of general interest which, though concentrated on public finance, taxes and commerce, also contains other statistics relating to insurances, consumption, prices, communication, transport, as well as social and labour statistics:

- 88 Bulletin de statistique et de législation comparée. 1-64, 1877-1940. Index: 1-40, 1877-1896; 41-60, 1897-1906; after 1940 continued as "Bulletin de législation comparée".

In 1855 the 'Conseil Supérieur de Statistique' was created to counteract the disadvantages of the organizational decentralization; but it had purely advisory functions and no executive powers. It was not before 1910 when the 'Direction de la Statistique Générale' became an autonomous organization that the process of decentralization was slowed down. In 1911 it started a new journal dealing with the total of French official statistics and containing not only figures but also statistical monographs and statistically relevant laws and orders:

- 89 Bulletin de la statistique générale de la France. 1-, 1911-; since 1950 continued as "Bulletin mensuel de statistique" to which a quarterly supplement "Etudes statistique" is added containing data as well as analyses.

After the First World War the 'Statistique Générale' tried to attain the position of a central office, it was not before the Second World War, however, that French official statistics were radically reorganized. In 1941 a 'Service National des Statistiques' was created by unifying the 'Direction de la Statistique Générale de la France', the 'Direction de la Démographie' and the 'Institut de Conjoncture'. In 1946 again it was reorganized and enlarged when the 'Institut National de la Statistique et des Etudes Economiques' (INSEE) was established.

Among the several private statistical societies founded in France since 1800 the 'Société de Statistique de Paris' is undoubtedly the most important one. Created in 1860 it has published since then one of the most famous statistical journals in Western Europe:

- 90 Journal de la Société de Statistique de Paris. 1-, 1860-; Index: 1-51, 1860-1910; 52-76, 1911-1935; 77-101, 1936-1960.

It is a useful source containing statistical monographs on a variety of topics for various countries as well as short numerical information and longer methodological discussions.

Finally, another important private journal should be mentioned which, though concentrated on statistics relating to economy and public finance of most European and other countries, has also a more general character:

- 91 Annuaire de l'économie politique et de la statistique. 1-56, 1844-1899. Paris, Guillaumin.

This journal was founded by M. Guillaumin and M.J. Garnier and later edited by M. Block. The first three volumes appeared under the title "Annuaire de l'économie politique", but since the fourth volume the journal assumed the character of a statistical manual combining numerical information and verbal interpretation. Since 1848 each volume had four sections referring to France, the city of Paris, foreign countries, and a mixed section; in 1865 a fifth section relating to Algeria and the colonies was added. Some parts were published regularly, especially the annual reviews of economic events in different countries, of public finance, and of the movement of population.

2.6 Germany

The variety of greater and smaller states in the old German realm as well as the strong federative character of the German Empire make it difficult to draw a clear picture of the development of official statistics. Since an inclusive bibliography or history are missing, several publications should be consulted:

- 92 Günther, A. "Geschichte der deutschen Statistik" (History of German statistics), pp. 1-65 in: Zahn, F., ed. Die Statistik in Deutschland nach ihrem heutigen Stande. München and Berlin, J. Schweitzer, 1911; 2 vols..
- 93 Heuschling, X. Bibliographie historique de la statistique en Allemagne, avec une introduction générale. Brussels, Librairie Polytechnique d'Aug. Decq., 1845. 105 p.

The first article gives a general but not very detailed history of statistics in Germany since the middle ages. It should be used in connection with the early, extensively annotated bibliography of Heuschling dating until the 1840's. The following four publications deal with more specific periods and are restricted to official statistics:

- 94 Fallati, J. "Stand der administrativen Statistik in Deutschland im Jahre 1848-49" (The state of administrative statistics in Germany in 1848-49). Zeitschrift für die gesamte Staatswissenschaft 6, 1849:725-795.
- 95 Becker, K. "Die Organisation der deutschen Reichsstatistik" (The organization of German imperial statistics), pp. 271-307 in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris, 1860-1885. Paris and Nancy, Berger-Levrault, 1885.
- 96 Würzburger, E. "The history and development of official statistics in the German Empire", pp. 333-362 in: Koren, J., ed. History of statistics. New York, Macmillan, 1918.
- 97 Reichhardt, W. "Der statistische Dienst in Deutschland" (The statistical service in Germany), pp. 153-192 in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1938; vol. 2.

Article (94) is very useful, because it is the only overall account of official statistics in Germany at the middle of the 19th century when statistical investigations were exclusively in hands of the single states - with the exception of the limited activities of the Tariff Union. The articles 95-97 chronologically describe the development of statistics in the German Empire between 1871 and the 1930's. They all are mainly concerned with the centralized part of German official statistics, giving an account of the history, organization, activities and publications of the 'Statistical Office of the German Empire'.

A bibliography of all publications of the 'Statistical Office of the German Empire' between 1872 and 1942 can be found in:

- 98 Statistisches Jahrbuch für das Deutsche Reich (Statistical yearbook for the German Empire). 59, 1941/42. pp. 19-50.

In 1911 two volumes were published in honor of the great statistician Georg von Mayr containing 52 articles by leading experts and referring to all different branches of statistics, official as well as private. They may conveniently be used as starting points for any detailed investigations. In 1940 two succeeding volumes were published under the same title, similarly structured but now containing 155 articles which describe the development in the various fields since the First World War:

- 99 Zahn, F., ed. Die Statistik in Deutschland nach ihrem heutigen Stande (The present state of statistics in Germany). München and Berlin, J. Schweitzer, 1911. 2 vols., XXVI + 824 p., X + 1021 p.
 - 100 Burgdörfer, F., ed. Die Statistik in Deutschland nach ihrem heutigen Stande (The present state of statistics in Germany). Berlin, P. Schmidt, 1940. 2 vols., XXVIII + 639 p., XV + 668 p.
- Concerning the single German states, the development of official statistics has been documented very extensively for Prussia, Bavaria and Saxony, much less, however, or even not at all for the other states. For the first three states only a selected list of publications is presented here.
- Prussia: whereas the book by Behre describes the development of Prussian statistics until the beginning of the 19th century, including various results of older statistical investigations, the book by Blenck summarizes the work of the statistical office during the 19th century referring to all different branches of statistics and including a complete bibliography until 1905.
- 101 Behre, O. Geschichte der Statistik in Brandenburg-Preussen bis zur Gründung des Königlichen Statistischen Bureaus (History of statistics in Brandenburg-Preussen until the foundation of the Royal Statistical Bureau). Berlin, C. Heymanns, 1905. XVI + 468 p.
 - 102 Blenck, E. Das Königliche Statistische Bureau im ersten Jahrhundert seines Bestehens 1805 bis 1905 (The Royal Statistical Bureau in the first century of its existence 1805 - 1905). Berlin, Verlag des Kgl. Statistischen Bureaus, 1905. XII + 271 p.
- Bavaria: the first of the following three publications refers to the older Bavarian statistics, the other two describe the development of official statistics in the 19th century. Whereas the latter of the two gives a much more detailed history and has also a statistical part, the former has the advantage of including a systematic and complete bibliography until 1895.
- 103 Kgl. Statistisches Landesamt, ed. Geschichte der älteren bayerischen Statistik (History of the older Bavarian statistics). Beiträge zur Statistik des Königreiches Bayern, No. 77. Munich, Lindauer, 1910. XI + 224 p.
 - 104 Kgl. Statistisches Bureau, ed. Geschichte und Einrichtung der amtlichen Statistik im Königreich Bayern (History and establishment of the official statistics in the Kingdom of Bavaria). Munich, G. Franz, 1895. 335 p.
 - 105 Kgl. Statistisches Landesamt, ed. Geschichte der neueren bayerischen Statistik (History of the newer Bavarian statistics). Beiträge zur Statistik des Königreiches Bayern, No. 86. Munich, Lindauer, 1914. VIII + 277 p.
- Saxony: the first publication gives a history of official statistics between 1851 and 1881 as well as some of the main results of Saxonian statistics in this period; the second continues the history and includes a much more extended statistical part.
- 106 Direction des Statistischen Bureaus, ed. Das Statistische Bureau für das Königreich Sachsen in den ersten fünfzig Jahren seines Bestehens (The Statistical Bureau of the Kingdom of Saxony in the first fifty years of its existence). Leipzig, Duncker & Humblot, 1881. 96 p.
 - 107 "Das Königl. Sächs. Statistische Bureau von 1875-1890" (The Royal Saxonian Statistical Bureau from 1875-1890). Zeitschrift des K. Sächsischen Statistischen Bureaus, 36, 1890: 1-140.

There are only a few useful works concerning the development of statistics in the smaller German states; among the following publications the No. 108 and 112 contain bibliographies of official statistical publications for Braunschweig (1854-1904) and for Hamburg (1866-1966).

- 108 Zimmermann, F.W.R. "Die ersten fünfzig Jahre des Statistischen Bureaus des Herzogl. Braunsch.-Lüneb. Staatsministeriums 1854 bis 1904" (The first fifty years of the Statistical Bureau of the Ducal State Ministry of Braunschweig-Lüneburg), pp.1-51 in: Beiträge zur Statistik des Herzogtums Braunschweig, No. 18. Braunschweig, 1904.
- 109 Zur Geschichte der Hessischen Statistik und ihrer amtlichen Organisation (On the history of Hessian statistics and its administrative organization), ed. by the Großherzogl. Hessische Zentralstelle für die Landesstatistik at its 50th anniversary. Darmstadt, Großherzogl. Staatsverlag, 1911. 69 p.
- 110 Kollmann, P. "Das statistische Amt für das Grossherzogtum Oldenburg in den ersten fünfzig Jahren seines Bestehens" (The statistical bureau of the Grand-Duchy of Oldenburg in the first fifty years of its existence). Jahrbücher für Nationalökonomie und Statistik, s.3, vol.23, 1906: 747-755.
- 111 Statistisches Landesamt der Freien und Hansestadt Hamburg, ed. 100 Jahre Statistisches Amt Hamburg, 1866-1966 (100 years statistical bureau of Hamburg, 1866-1966). Hamburg, 1966.
- 112 Die Veröffentlichungen des Statistischen Landesamtes der Freien und Hansestadt Hamburg (The publications of the Statistical Bureau of the Free Hanseatic City of Hamburg). Supplement to the December-number 1966 of the series "Hamburg in Zahlen". 21 p.

In the old German realm dissolved in 1806 only the free imperial cities and some of the states knew statistical investigations whose results, however, were usually kept secret. Until the creation of the German Empire the development of official statistics remained in hands of the single states and even after 1871 the importance of 'Central statistics' grew only slowly. In the different parts of Germany the progress of official statistics has been unequal as indicated by the year of foundation of a statistical office: Prussia (1805), Bavaria (1808), Württemberg (1820), Hannover (1848), Saxony (1851), Mecklenburg-Schwerin (1851), Baden (1852), Braunschweig (1855), Oldenburg (1855), Saxe-Coburg-Gotha (1858), Hessen (1861), Thuringian States (1864), Hamburg (1866), Anhalt (1867), Bremen (1867), Lübeck (1871), Alsace-Lorraine (1872), Saxe-Meiningen (1875). The following bibliographic description is necessarily limited to the more important states which have a longer and richer tradition of official statistics.

Prussia:

For a long time following the establishment of a statistical office in 1805 the extent of Prussian statistics remained very limited (essentially to direct enumerations) and the results were not published regularly; the main publications were edited privately by Hoffmann and later Dieterici, directors of the office (see No. 102, pp. 128/9 for a bibliography of their works). Regular publications started after the revolution of 1848. Dieterici began to publish a statistical journal in 1848 already and a series of statistical sources in 1851:

- 113 Mitteilungen des Statistischen Bureaus in Berlin (Communications of the Statistical Office in Berlin). 1-12, 1848-1859/60.
- 114 Tabellen und amtliche Nachrichten über den preussischen Staat für das Jahr ... (Tables and official news about the Prussian state for the year ...). For the year 1849: vol. 1-5, 6 A+B, 1851-55; 1852: 1, 1855; 1855: 1, 1858; 1858: 1, 1860.

The ten volumes differ somewhat in content; taken together they contain statistics referring to the structure and movement of population, life-stock, education, churches, health, administration and factories.

After 1860 when Engel became director of the statistical office, the system of publications was completely reorganized. In 1861 a new statistical journal and a new series of statistical sources was started, in 1863 a statistical "yearbook".

- 115 Preussische Statistik (amtliches Quellenwerk) (Prussian statistics -- official sources). 1-305, 1861-1934.
- 116 Zeitschrift des Königlich-Preussischen Statistischen Bureaus (Journal of the Royal Prussian Statistical office). 1-71, 1861-1933. Index: 1-52, 1861-1912.
- 117 Jahrbuch für die amtliche Statistik des preussischen Staates (Yearbook for the official statistics of the Prussian state). Vol. 1, 1863; 2 (continuing vol.1), 1867; 3, 1869; 4 (2 vols), 1876; 5, 1883.

The Prussian statistics are the main series containing the more extensive works of the statistical office which refer above all to the results of the various censuses, the movements of population, health, agriculture and life-stock, industry, trade and transport, primary education and universities. Covering all fields of official statistics, the statistical journal belonged to the most important ones with an international perspective before the First World War. There have been several supplements to the journal (Ergänzungshefte zur Zeitschrift des Königlich Preussischen Statistischen Bureaus) containing statistics of public finance, the army and primary schools. The third kind of publication was not a "yearbook" in a stricter sense, since it was published irregularly; the contents were somewhat standardized, the most extensive volumes embracing three parts on population, economy, and state. After 1883 the "Yearbooks" were followed by very voluminous "Statistical Handbooks" giving a broad quantitative picture of the Prussian state and including a few time-series; only four volumes of this handbook were published, however, and in 1903 a statistical yearbook was started.

- 118 Statistisches Handbuch für den preussischen Staat (Statistical handbook for the Prussian state). Vol. 1, 1888; 2, 1893; 3, 1898; 4, 1903.
- 119 Statistisches Jahrbuch für den preussischen Staat (Statistical yearbook for the Prussian state). Title varies slightly. 1-30, 1903-1934.

Bavaria:

Official statistics have a long and rich tradition in Bavaria. They flourished above all under the ministry of Montgelas (1799-1817) who established a statistical office in 1801 and again in 1808 which succeeded in 1809/10 for the first time in producing an embracing statistical report covering the whole kingdom. After the dismissal of Montgelas the development of statistics stagnated until the 1830's when a variety of investigations were started. However, it was the revolution of 1848 again which brought the decisive turning point. In 1850 the statistical office became an independent agency and began a series, still published today, containing the major statistical sources:

- 120 Beiträge zur Statistik des Königreiches Bayern; later: Beiträge zur Statistik Bayerns (Contributions to statistics of the Kingdom of Bavaria). 1-, 1850-.

This series of which 139 volumes have been published until the second World War contains above all the statistics referring to the structure and movement of population, agriculture and life-stock, criminality, police and prisons, health and suicides, education and public finance. In 1869 when a 'Central Statistical Commission' was created, the new director

of the office, Georg von Mayr, started a journal giving the various current statistics of Bavaria:

- 121 Zeitschrift des Königlich Bayerischen Statistischen Bureaus (Journal of the Royal Bavarian Statistical Bureau). 1-, 1869-. Index: 1-28.

In 1876 a first attempt was made to edit a yearbook. Since annual statistical observations were missing for several important fields, however, it was stopped after the third volume and started again not before 1894.

- 122 Statistischer Abriß für das Königreich Bayern (statistical abstract for the Kingdom of Bavaria). 1-3, 1876-78.

- 123 Statistisches Jahrbuch (Statistical yearbook). 1-, 1894-.

Saxony:

In 1831 a private, but officially supported statistical society was founded which became engaged in a broad spectrum of statistical investigations (among others: population, education, prisons, mortality, health, welfare, prices etc.) and which published the first German statistical journal:

- 124 Mittheilungen des Statistischen Vereins für das Königreich Sachsen (Communications of the Statistical Society for the Kingdom of Saxony). 1-14, 1831-39; 15, 1842; 16, 1844; 17, 1848.

As the activities of this society diminished in the 1840's, an official statistical office was established in 1850, Engel becoming its director. In 1851 he started a series of "Statistical Communications" (containing above all the census results) which was followed in 1855 by a statistical journal which gained high reputation:

- 125 Statistische Mittheilungen aus dem Königreich Sachsen (Statistical communications of the Kingdom of Saxony). 1-4, 1851-55.

- 126 Zeitschrift des Sächsischen Statistischen Bureaus (Journal of the Saxon Statistical Bureau). Title varies slightly. 1-87, 1855-1941/42.

Engel also tried to publish a yearbook, but succeeded only to produce one volume. The regular publication of an annual had to wait until 1871:

- 127 Kalender und statistisches Jahrbuch für das Königreich Sachsen... (Calendar and statistical yearbook for the Kingdom of Saxony...). 1-64, 1871-1904. Title varies. 1873-1904 issued in two parts with separate title-pages: Kalender ... and Statistisches Jahrbuch. 1905- published separately.

Other states:

Among the other states only Württemberg has a tradition of official statistics predating the revolution of 1848:

- 128 Württembergische Jahrbücher für Statistik und Landeskunde (Württembergian yearbook for statistics and geography). 1-, 1818-.

The publications of other states are mentioned here without titles only. Some kind of "Contributions to the statistics of ..." or "Statistical Communications" were published in (year): Hannover (1850; merged into Prussia in 1866), Oldenburg (1857), Baden (1858), Frankfurt-on-the-Main (1858; merged into Prussia in 1866), Mecklenburg-Schwerin (1858), Bremen (1862), Hesse (1862), Hamburg (1867), Bremen (1871), Brunswick (1872). A more or less regular statistical yearbook has been published in (year): Lübeck (1864), Bremen (1867), Baden (1868), Mecklenburg-Schwerin (1872), Hamburg (1874), Hesse (1903).

Prior to the unification of Germany common statistics of the German states existed only to a limited extent for the purposes of the 'Tariff Union' which was established in 1833. It made uniform enumerations of population necessary as the income from the tariffs and the common imposts was to be distributed among the separate states according to the size of their population. Therefore, from 1834 to 1867 triennial enumerations of population were made. The Tariff Union even took the initiative for the first over-all enumerations of the working population and industry, in 1846 and 1861.

Besides the Tariff Union only private initiatives have had some importance, above all the 'Verein für deutsche Statistik', founded in 1846 by v. Reden who also published its impressive statistical journal; although two volumes have only appeared, they give a rather comprehensive picture of Germany at that time, comprising more than 2000 pages:

- 129 Zeitschrift des Vereins für deutsche Statistik (Journal of the Society for German statistics). 1-2, 1847-48.

The revolution of 1848 further stimulated the already existing efforts to establish regular statistics for the whole German realm; these efforts, however, had the same fate as the revolution. Later attempts, at the International Statistical Congresses in 1857 and 1863, to agree on common principles also were not very successful.

The turning point came with the foundation of the German Empire. In 1872 the 'Imperial Statistical Office' was created. From this time onwards the work of the statistical offices has been divided into three parts:

- (a) Central statistics = statistics collected solely and directly by the officials of the Empire (above all: foreign commerce, tariffs, indirect taxes, election to the Reichstag, criminal statistics, health insurance);
- (b) Federal statistics = statistics collected by the separate states, but according to uniform principles and compiled by the imperial office for the whole Empire (above all: statistics of population in the widest sense, censuses of occupation in 1882, 1895 and 1907, industry and agriculture);
- (c) Special statistics = statistics collected by the individual states on their own initiative and without reference to the Empire (above all: poor relief, medical service, education, prisons, public finances).

Shortly after its foundation the 'Imperial Statistical Office' began to publish its main series:

- 130 Statistik des Deutschen Reiches (Statistics of the German Empire). 1-65, 1875-1882; ns. 1-594, 1884-1941.

Each number of this series is dedicated to a special topic. The most important topics covered annually are: movements of population, taxation, criminality, health and health insurance, and foreign trade. The most important topics covered periodically are: censuses of population, occupation, and industry, and the elections to the Reichstag.

The publication of a statistical yearbook had to wait until 1880, but it soon became the principal general source of German statistics, containing the most important figures in all branches of official statistics:

- 131 Statistisches Jahrbuch für das Deutsche Reich (Statistical yearbook for the German Empire). 1-59, 1880-1942.

For specific publications of a larger size there is a special series conceived to supplement the "Statistik des Deutschen Reiches":

- 132 Einzelchriften zur Statistik des Deutschen Reiches (Special publications on statistics of the German Empire). 1-43, 1927-1942.

The publications of this series focus on public administration and public finance, usually including comparative statistics of the major powers.

Regularly compiled statistics not included in one of the major series were usually published in:

- 133 Vierteljahreshefte zur Statistik des Deutschen Reiches (Quarterly publications on statistics of the German Empire). 1-51, 1891-1942.

Between 1873 and 1891 this series was a part of the "Statistik des Deutschen Reiches". It focused on economic statistics, occasionally including, however, statistics of employment, housing, emigration and immigration, among others. Finally a monthly periodical should be mentioned:

- 134 Wirtschaft und Statistik (Economy and statistics). 1-24, 1921-1944.

Current data, but also special analyses on a wide variety of subjects as well as methodological notes; "Sonderbeilagen" (supplements) and "Sonderhefte" (special editions) with longer accounts of specific issues added from time to time.

Although the federal statistics constituted the major part of the work of the 'Imperial Statistical Office', the importance of the central statistics grew, especially as result of the social legislation; in 1902 a special division for labour statistics was created. The first World War did not essentially change the organization and function of the central office and its different publications were continued. It was left to the Nazis to centralize statistics further by merging the central office with the statistical office of Prussia in 1934; statistical works of a political nature, however, were mostly reserved to agencies of the National Socialist Party.

Concerning private activities, the outstanding society to be mentioned is the 'Deutsche Statistische Gesellschaft' founded in 1911. Its official organ became a journal which had already been published since 1890 by G. von Mayr:

- 135 Allgemeines Statistisches Archiv (General statistical archive). 1-, 1890-.

It belongs to the few statistical journals which are still mainly concerned with official statistics. More detailed and varied information may be found in another journal edited by E. Würzburger:

- 136 Deutsches Statistisches Zentralblatt (Central journal of German statistics). 1-31, 1909-1939.

After the Second World War the administration of the American occupation zone published a handbook with statistical time-series for a shorter period:

- 137 Statistisches Handbuch von Deutschland 1928-1944 (Statistical handbook of Germany 1928-1944), ed. by the Länderrat des amerikanischen Besatzungsgebiets. München, Ehrenwirth, 1949.

Over 200 tables give extensive information referring to all fields of official statistics, leaving only the field of labour statistics somewhat neglected. Most of the tables refer to the above time-period but some reach further back, a few even to the last century.

The three Western occupation zones soon established a common statistical office which in 1950 became the 'Statistisches Bundesamt' (Federal Statistical Office). This office in 1952 started a statistical yearbook summarizing all fields of official statistics in the German Federal Republic:

- 138 Statistisches Jahrbuch für die Bundesrepublik Deutschland (Statistical yearbook for the German Federal Republic). 1-, 1952-.

Even earlier, two general series in the tradition of the 'Statistik des Deutschen Reiches' began to appear:

- 139 Statistische Berichte (Statistical reports), Arbeitsnummern I-VIII. 1948-1961.
 140 Statistik der Bundesrepublik Deutschland (Statistics of the Federal Republic of Germany). 1-266, 1950-1961.

The first series consists of eight special subseries, each subdivided again according to more specific topics which are periodically covered. The second series contains statistics on a great variety of subjects; among the most important periodically covered fields are population movements, migrations, general elections, public finance, criminality and health services.

In 1962 both series were superseded by:

- 141 Fachserie A-N (Special series). 1961-.

The letters designate the 13 principal subseries, each subdivided again in so-called "Reihen" which represent different topics and are periodically covered in an number of "Hefte".

Finally, the old "Wirtschaft und Statistik" has been published anew:

- 142 Wirtschaft und Statistik (Economy and statistics). ns. 1-, 1949-.

Like its predecessor it contains special studies on a variety of subjects, including analyses of recent census results. Current series of vital, social and economic statistics.

A collection of longer time-series was published by the 'Statistisches Bundesamt' in 1972, commemorating the centenary of the central statistical office:

- 143 Bevölkerung und Wirtschaft 1872-1972 (Population and economy 1872-1972). Stuttgart und Mainz, Kohlhammer, 1972. 278 p.

Besides a short account of the development of the various branches of official statistics it gives some 150 tables covering the entire field of official statistics. Not all of the tables refer to the whole time-period, however.

2.7 Ireland (Republic)

For the history of official statistics in Ireland until the first World War cf. the United Kingdom. A description of later developments may be found in:

- 144 Lyon, S. "Statistics in the Irish Free State", pp. 235-252 in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1958. Vol. 2.

Prior to the turn of the century statistics relating to Ireland were rather dispersed and restricted, with the notable exception of population and agricultural statistics. The first special statistical offices have been created in 1900 in the new Department of Agriculture and Technical Education, and in 1919 in the Irish Department of the Ministry of Labour in London. When the Irish Free State was established in 1922 these two offices were merged and in 1926 became the statistics branch of the Department of Industry and Commerce, practically fulfilling all the essential functions of a Central Bureau of Statistics. Since this time official statistics are almost completely centralized in Ireland. The Department of Industry and Commerce is also responsible for the publication of a statistical yearbook:

- 145 Annual abstract of the Irish Free State. 1-, 1931-.

In addition this department edits a journal containing a considerable amount of various statistical information:

- 146 Irish trade journal and statistical bulletin (later: Irish statistical bulletin). 1-, 1926-.

2.8 Italy

The history of Italian statistics prior to the unification has been re-traced by César Correnti in the first volume of a private statistical year-book:

- 147 Correnti, C., ed. Annuario statistico Italiano (Statistical yearbook of Italy). Turin and Milan; vol. 1, 1853; vol. 2, 1864.

The development of official statistics after the Italian unification can be reconstructed using the two following articles:

- 148 Bodio, L. "Italie", pp. 347-360 in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris 1860-1885. Paris and Nancy, Berger-Levrault, 1885.

- 149 Gini, C. "Ordinamento centrale dei servizi della statistica in Italia" (The central order of statistical services in Italy), pp. 53-85 in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les pays différents. Paris, 1933; vol. 1.

Besides a short history, the first article describes the organization and statistical activities at that time, including a bibliography of the main official publications. The second article retraces the evolution since 1861 and gives a description of the organization and activities in the 1930's. The first bibliography of Italian statistics, including publications since the 1830's, has been:

- 150 Sui documenti statistici del Regno d'Italia. Cenni bibliografici presentati al VI Congresso Internazionale di Statistica da Luigi Bodio (About the statistical documents of the Kingdom of Italy. Bibliographical annotations presented to the 6th International Statistical Congress by Luigi Bodio). Florence, Barbèra, 1867. XXXIX + 152 p.

It is very useful, because the list of private and official statistical publications is preceded by a 150 pages introduction giving a detailed description of the statistical activities and publications in the various branches. Later bibliographies have all been published in the series "Annali di statistica":

- 151 Saggio di bibliografia statistica Italiana (Preliminary bibliography of Italian statistics). Annali di statistica, s. 4, vol. 4, 1885, XIII + 149 p.; 2nd enlarged ed., 1885; 3rd enlarged ed., 1889 and 1890.
- 152 Elenco delle pubblicazioni fatte dal 1861 al 1894 (List of publications between 1861 and 1894). Annali di statistica, s. 4, vol. 75, 1894. 102 p.
- 153 Indici degli annali di statistica dal 1871 al 1934 (Indexes of the Annali di Statistica from 1871 to 1934). Annali di statistica, s. 6, vol. 30, 1934. XII + 398 p.

Besides various indexes of the Annali di statistica, the last two volumes also contain a bibliography of all publications of the central statistical office and of the main statistical publications of various ministries. Most useful, finally, is a newer volume which gives a detailed account of the evolution of statistical activities concerning the movement of population, the labour force and migration, health and medical care, public assistance, education, elections, justice, criminality and cultural activities:

- 154 Le rilevazioni statistiche in Italia dal 1861 al 1956. Statistiche demografiche e sociali (The statistical activities in Italy from 1861 to 1956. Demographic and social statistics). Annali di statistica, s. 7, vol. 6, 1957. VII + 511 p.

Apart from a shortlived statistical office in the time of the Italian Republic, the institutionalization of statistics did not start before the 1850's and even then the progress was very unequal in the different parts of Italy. In the Kingdom of Sardinia, where statistics were well developed in general, a 'Higher Statistical Commission' was established in 1838 which published:

- 155 Informazioni statistiche raccolta dalla Commissione Superiore per gli Stati Sardi in Terraferma (Statistical information collected by the Higher Commission for the Sardinian States on the Mainland). 1-4, 1839-1855.

Among others the volumes contain the results of the population censuses and vital statistics between 1819 and 1838.

In Tuscany vital statistics have been published since 1818 by a special office, and in 1848 a statistical bureau was created which edited the:

- 156 Richerche statistiche sul Grandduccato di Toscana (Statistical investigations about the Grandduchy of Tuscany). 1-5, 1848-1854.

The volumes contain primarily statistics on population, primary education, prisons and the army.

In the Kingdom of Two Sicilies two statistical offices were established, one for Sicily in 1832 and the second in Naples in 1834. The main publication of the first has been:

- 157 Giornale di statistica (Journal of statistics). 1-21, 1836-1851.

Statistics collected by the second office were published in:

- 158 Annali civili del Regno delle Due Sicilie (Civil annals of the Kingdom of Two Sicilies). 1836-1851.

For Parma, Modena and the Papal States statistics have been published by private persons mainly. Statistical information concerning Lombardy prior to 1859 and Venetia prior to 1866 is usually given in the respective Austrian sources. For Lombardy three volumes of a statistical yearbook have been edited between 1859 and 1861.

A compilation of the results of earlier population censuses can be found in:

- 159 Censimento degli antichi Stati Sardi e censimenti di Lombardia, di Parma et di Modena (Census of the former States of Sardinia, censuses of Lombardy, Parma and Modena). Turin, 1862.

The most important private statistical journal in this period has been:

- 160 Annali universali di statistica, economia pubblica, geografia, storia e viaggi (Universal Annals of statistics, economics, geography, history and journeys). Milan, 1-80, 1824-1844; s.2, vol. 1-36, 1844-1853; s.3, vol. 1-24, 1854-1859; s.4, vol. 1-48, 1860-1871 (title of s.1, vol. 1 differs slightly).

It was later followed by:

- 161 Archivio di statistica (Archive of statistics). Rome, 1-7, 1876-1885.

Following the union of the Kingdom of Sardinia with the central and meridional provinces of Italy, a central statistical office was established in 1861, and in 1868 a central statistical commission. Since this time Italy has one of the most centralized organizations of statistics in whole Europe. Official statistics have usually been published in a great variety of different series devoted to special subjects. The two most general and important series are:

- 162 Annali di statistica (Annals of statistics). s.1, vol. 1-10, 1871-1877; s.2, vol. 1-25, 1878-1881; s.3, vol. 1-16, 1882-1885; s.4, vol. 1-111, 1884-1910; s.5, vol. 1-11, 1912-1925; s.6, vol. 1-38, 1929-1936; s.7, vol. 1-6, 1938-1940; s.8, vol. 1-, 1947-. Index: s.6, vol. 30, (1871-1934), 1954.

The "Annali" contain official communications on vital, economic and other statistics, interpreting articles and bibliographic information. Usually all fields of statistics are covered, with the exception of series 4 where more than half of the volumes contain industrial statistics only. The index-volume gives a detailed description of the content of all volumes.

- 153 Annuario statistico Italiano (Statistical yearbook of Italy). s.1, vol. 1-13, 1878-1905/7 (1908); s.2, vol. 1-9, 1911 (1912)-1922/25 (1926); s.3, vol. 1-7, 1927-1933; s.4, vol. 1-, 1934-.

In 1968 an historical statistical manual has been published which covers practically all fields of official statistics (population, health, public assistance, education, justice, criminality, agriculture, industry, transport and communication, commerce, prices, labour force, strikes, consumption, public administration and national accounts). It has some disadvantages, however, since annotations are rare and statistics before 1921 are given on a decade basis only:

- 164 Istituto Centrale di Statistica, ed. Sommario di statistiche storiche dell'Italia 1861-1965 (Summary of historical statistics of Italy 1861-1965). Rome, 1968. XXXI + 147 p.

2.9 Netherlands

The somewhat complicated development of statistics in the Netherlands may be reconstructed using the following three sources:

- 165 Beaujon, A. "Pays-Bas", pp. 229-240, chapter in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris, 1860-1885. Paris and Nancy, Berger-Levrault, 1885.
- 166 Verriijn Stuart, C.A. "The history and development of statistics in the Netherlands", pp. 429-444 in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.
- 167 Methorst, H.M. "L'organisation de la statistique aux Pays-Bas", pp. 215-232 in: Institut International des Sciences Administratives, ed. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1938. Vol. 2.

The first article contains only a short history of official statistics but a very detailed account of the organization, the work and the publications of the different ministries. Furthermore it gives a list of all statistical publications between 1850 and 1884 and of some periodical publications started even before 1850. A more extensive description of the development can be found in the last two articles, the third one also giving information on the statistics collected and published by the central statistical bureau after the First World War.

Until the end of the 18th century there was almost an absolute lack of regular statistical observations in the Netherlands. The first attempt of the Dutch government at statistics as such was the summary census of 1795, intended as the basis for determining the composition of a general popular representation in the Batavian Republic. In 1826 a statistical bureau was established which was in charge of the first regular census of 1829 and published a three-fold collection of tables as a result of its labour. After the Belgian revolution of 1830 this bureau ceased to exist and until 1848 the Netherlands did not possess any statistical service. This period was somewhat bridged by the publication of a small yearbook started by the bureau in 1826 and continued from 1831 to 1849 by the statistician Lobatto:

- 168 Jaarboekje over ... uitgegeven op last van Z.M. den Koning (Yearbook for ... edited by order of H.M. the King). 1-23, 1831-48.

With the establishment of a new statistical bureau in 1848 it was transformed into a statistical annual containing more valuable statistics than its predecessor:

- 169 Statistisch Jaarboek voor het Koninkrijk der Nederlanden (Yearbook for the Kingdom of the Netherlands). 1-15, 1851-68.

Although the statistical bureau in the ministry of the interior had no general competence, it worked as a kind of central bureau of statistics, since it edited the statistical yearbook containing essentially all official statistics. When the yearbook was discontinued, however, the bureau was restrained to the publication of the population statistics and the statistics of the ministry of the interior under the general title:

- 170 Statistische Bescheiden van het Koninkrijk der Nederlanden (Statistical documents of the Kingdom of the Netherlands). 1-10, 1865-74.

These volumes contain statistics relating to the population movements, the recruitment of the militia, mortality and the finances of the provinces and communes. Later the title was changed into:

- 171 Bijdragen tot de algemeene statistiek van Nederland (Documents of general statistics in the Netherlands). 1-3, 1876-78.

In correspondence with the decreasing importance of the statistical bureau a private statistical society was gaining influence in 'official' statistics. Already in 1849 when Lobatto's yearbook ceased to appear, a small circle of statisticians was founded, formally organized in 1856 as 'Vereeniging voor Statistiek in Nederland' (Union for Statistics in the Netherlands). The Union first issued an annual booklet purporting to be a periodical collection of statistical treatises:

- 172 Staatkundig en staatshuishoudkundig Jaarboekje uitgegeven door de Vereeniging voor de Statistiek in Nederland (Political and economic yearbook edited by the Union for Statistics in the Netherlands). 1-36, 1849-84; Index: 1849-84.

The booklet covers, more or less regularly, practically all fields of statistics and sometimes also contains time-series.

Later the Union undertook the publication of broadly devised general statistics of the Netherlands. Two volumes were published dealing with the political character of the country, the population, the intellectual and religious life, and criminality:

- 173 Algemeene statistiek van Nederland (General statistics of the Netherlands). Leiden, Sijthoff, 1870-1873. 2 vols.

These publications somewhat bridged the years from 1867 to 1882 when no general statistics in form of a statistical yearbook were edited.

After the statistical bureau in the ministry of the interior, which already had lost most of its importance, was suppressed in 1878, a subsidy was approved to the Union by the parliament in 1879. Strengthened by these means, the Union undertook the edition of a new statistical yearbook in the spirit of the 'Statistical Abstract':

- 174 Jaarcijfers (Yearly figures). 1-, 1881-.

With the assistance of the municipality of Amsterdam, the Union for Statistics established in 1884 its own Statistical Institute which became responsible for the publication of the statistical yearbook. The institute was dissolved again

in 1892 when a Central Commission for Statistics was created which took over the compilation of the "Jaarcijfers" and which soon began also to enlarge the scope of statistical observation, especially in social matters. The centralization of statistical undertaking was greatly promoted by the establishment of a Central Bureau of Statistics in 1899, the Central Commission becoming exclusively an advisory board. With few exceptions (e.g. agriculture, commerce, and shipping) the centralization was completed in 1906. The different statistics collected by the Bureau were published in one common series made up of a number of annual publications:

- 175 Bijdragen tot de statistiek van Nederland (Contributions to the statistics of the Netherlands). 1-, 1900-, (since 1920: Statistiek van Nederland).

The repeated interruption of the publication of a statistical yearbook was somehow compensated by the early publication of a comprehensive historical handbook under the auspices of the private statistical society mentioned above. One year after the first edition in Dutch a French version followed:

- 176 Résumé statistique pour le Royaume des Pays-Bas 1850-1881. Publication de la Société de Statistique des Pays-Bas. S'Gravenhage, 1885.

It contains a large number of time-series giving very detailed information on various topics (especially population, public finance, and education) commented upon in a fifty pages introduction.

In 1960 the Central Statistical Bureau published a new historical handbook, ten years later followed by an extended edition:

- 177 Zeventig jaren statistiek in tijdreeksen, 1899-1969 (Seventy years in time-series). S'Gravenhage, Centraal Bureau voor de statistiek, 1970.

Published as a computer print it covers 24 topics, but gives only very few comments. The most important tables refer to population movements, the development of the labour force, education, economic statistics, public finance, foreign trade, criminal statistics, social and labour statistics. Electoral statistics are also included, but only to a limited extent. The time-period usually covered is 1900 to 1969.

2.10 Norway

The history of Norwegian official statistics may be reconstructed using:

- 178 Hiaer, A.N. "The history and development of statistics in Norway", pp. 117-165 in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.

- 179 Statistisk Sentralbyrå gjennom 75 år. Tre 25-årsmeldinger (The Central Bureau of Statistics through 75 years. Three 25 year accounts). Norges Offisielle Statistikk. s.11, no.65. Oslo, 1951.

The first article contains a history of the organization, the works and publications of official statistics until the First World War, but has no bibliography.

A complete list of all official publications between 1823 and 1950 can be found in:

- 180 Fortegnelse over Norges Offisielle Statistikk 1823-1950 (Catalogue of the official statistics of Norway 1823-1950). Norges Offisielle Statistikk. s.11, no.63. Oslo 1951. 97 p.

In 1963 and 1969 the Central Bureau of Statistics published a guide to Norwegian official statistics, systematically arranged by subject and accompanied by information on the responsible agency, the scope and frequency of statistics, and the principal publications:

- 181 Veiviser i Norsk Statistikk (Guide to Norwegian statistics). Oslo 1963, 1969. 61 p.

Organized official statistics start in Norway with the creation of the 'Dansk-norske Tabellkontor' (Danish-Norwegian Tabulating Office) in 1797 in Copenhagen. Regular official statistical statements, however, date back much further: vital statistics were begun in 1735, the first census of population was carried out in 1769 and tabular reports on imports and exports were also prepared in the 18th century already. After the separation from Denmark in 1814 no separate statistical office existed until 1837 when a tabulating office was organized in the department of finance, in 1846 being transferred to the department of the interior. With the year 1838 the regular publication of official statistics began under the title:

- 182 Statistiske tabeller for Kongeriget Norge (Statistical tables for the Kingdom of Norway). 1838-1860.

In all, twenty different collections of tables were prepared and published by the statistical office covering the results of the censuses of population, and statistics of the movement of population, agriculture, live-stock, commerce and shipping.

Preceding the organization of the bureau, the governors of the provinces had been obliged in 1825 to send reports on the economic conditions of their districts. Beginning with 1828 these reports were published every five years until 1858:

- 183 Beretninger om Rigets økonomiske tilstand (Reports on the economic condition of Kingdom). 1828-1858.

In 1861 the form of publication of official statistics was reorganized and the statistical reports prepared by the different departments of government were henceforth published in a common and uniform collection entitled:

- 184 Norges offisielle statistikk (Official statistics of Norway); s.1, 1861-80; ns, 1883-84; s.3 no.1-345, 1885-1900; s.4 no.1-150, 1901-1905; s.5 no.1-220, 1906-1913; s.6 no.1-194, 1914-1920; s.7 no.1-200, 1920-1926; s.8 no.1-200, 1926-1933; s.9 no.1-200, 1933-1940; s.10 no.1-200, 1941-1949; s.11 no.1-355, 1949-1959; s.12 no.1-, 1960-.

The first two series are subdivided by letters and numbers indicating the editing departments and the subjects dealt with; the following series are numbered consecutively.

As the continuous growth of material necessitated a reorganization of official statistics, the existing office in the department of the interior was transformed into an independent institution called 'Statistisk Sentralbyrå' (Central bureau of statistics). It was from the outset responsible for a considerable proportion of the official statistics, above all for the population and economic statistics. In the following there was a steady process of centralization interrupted only by a period between the turn of the century and the First World War.

In 1879 the 'Central Bureau of Statistics' began to publish a yearbook. Its first volume appeared in French; in the following four years two separate editions were prepared in French and Norwegian; since 1885 the yearbook is edited as bilingual volume in Norwegian and French, and since the Second World War in Norwegian and English:

- 185 Annuaire statistique de la Norvège. 1-5, 1879-1884. Statistisk arbog. 1-, 1880-.

This yearbook had two single predecessors, the first being published by the director of the statistical office in 1871, and the second by the office itself in 1875:

- 186 Kiaer, A.N. Statistisk handbog for Kongerit Norge (Statistical handbook for the Kingdom of Norway). Christiania, Mallings Forlagsboghandel, 1871. 76 p.
- 187 Résumé des renseignements statistiques sur la Norvège, ed. by the Statistical Bureau of the Ministry of Interior. Christiania, 1875.

There are several historical statistical handbooks. The first was edited by the central bureau of statistics in 1914, the second in 1926, the third in 1948, with a supplementary edition in 1958. The last of these handbooks is:

- 188 Historisk statistikk 1968 - Historical statistics 1968. Norges offisielle statistikk; s.12 no.245; XVI + 632 p. Oslo 1969.

The statistical series contained in the handbook date as far back as available figures exist and generally up to and including 1966.

2.11 Sweden

Descriptions of the history of official statistics in Sweden may be found in:

- 189 Sidenbladh, E. "Suède", pp. 241-250, chapter in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris. Paris and Nancy, Berger-Levrault, 1885.
- 190 Arosenius, E. "The history and organization of Swedish official statistics", pp. 537-569, in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.

The first article contains a short history and a more extensive treatment of the organization and the work of official statistics according to the subdivisions of the main series "Contributions to the official statistics of Sweden"; it gives a list of all publications included in this series until 1885, but also names periodical publications not included. The second article gives a very detailed history including an account of the older demographic statistics and of the contents of the main series of official Swedish statistics; no bibliography.

- 191 Statistiska centralbyran 100 år (100 years central bureau of statistics). Stockholm, Statistika Centralbyran, 1959.

An English summary of this Swedish book, issued to celebrate the centenary of the establishment of the central bureau of statistics can be found in:

- 192 Kock, K. "The central bureau of statistics - 100 years old", pp. 363-372, in: Central Bureau of Statistics, ed. Statistical Review; ns. vol. 8, no.7 July 1959.

The birthday of organized official statistics dates back to 1749 when for the first time tabular records were prepared for the whole country concerning the structure and movement of population. In 1756 the committee in charge of this work was made a permanent commission, in fact the first institution of this kind in Europe. After a period of centralization around 1800, population statistics practically remained unchanged for half a century. Although new branches mainly concerned with economic statistics grew up, Sweden, a pioneer in the

18th century, was comparatively behind the times at the middle of the 19th century. In 1858, therefore, a 'Statistiska Tabellkommissionen' (Statistical Tabulating Commission) was founded, consisting of a 'Statistiska Beredningen' (Statistical Council) as an advising and coordinating agency and a 'Statistiska Centralbyrån' (Central Bureau of Statistics) as executive agency. The organization of official statistics remained decentralized, however, since a number of other departments continued to edit statistical reports. Since 1858 these reports were published uniformly under the common title:

- 193 Bidrag till Sveriges officiella statistik (Contributions to the official statistics of Sweden). 1858-1910.

At the end of the 19th century this series had grown from 7 to 25 subseries concerning among others: population and vital statistics (beginning with 1851), judicial statistics (1857), manufactures and trade (1858), commerce and shipping (1858), prisons (1858), the quinquennial reports of the governors (which had been started shortly after 1800 and which were summarized by the bureau since 1860), telegraphy (1861), hygiene and hospitals (1861), state railways (1862), postal service (1864), agriculture and live-stock (1865), public education (1868), elections (1871), public works (1872), local government, poor relief and finance (1874), salaries and pensions (1881). There was, however, an increasing number of periodical statistical reports not incorporated in the series, e.g. reports on taxation and public finance. Besides, the Central Bureau of Statistics published a statistical journal containing general summaries of the large official statistical investigations, statistical monographs on special subjects and shorter statistical communications:

- 194 Statistisk tidskrift (Statistical journal). 1-165, 1860-1919; Index: 1860-1913.

From 1871 to 1913 the first number of each volume, usually containing three numbers, was devoted to a summary of all the official statistics corresponding to the statistical yearbooks of other countries:

- 195 Sveriges officiella statistik i sammandrag (Summary of Swedish official statistics). 1-44, 1870-1913 (first volume published separately).

The Central Bureau of Statistics was in charge of any statistics not dealt with by any other governmental agency and it slowly could take over some of the new statistics (e.g. statistics of elections, public assistance, municipal finance), but the basic decentralization of official statistics remained unchanged, even in the years immediately preceding the First World War when the whole system of publications was modified. In 1911 the older "Contributions to the official statistics of Sweden" were continued as:

- 196 Sveriges officiella statistik (Official statistics of Sweden). 1911-, (consists of subseries).

The summaries of official statistics published in the statistical journal since 1871 were discontinued in 1913 and a separate yearbook was started:

- 197 Statistisk arsbok för Sverige - Annuaire statistique de la Suède. 1-, 1914-.

At the same time a new series was started containing most of the special surveys and in general shorter and more professional reports:

- 198 Statistiska Meddelanden (Statistical communications); s. A 1-6, 1913-1952.

With the publication of this series and the yearbook the 'Statistical Journal' lost most of its importance and was discontinued in 1919. After these changes, the years up to 1945 saw an expansion of the Central Bureau of Statistics. Existing statistics were improved and new ones set up, above all statistics of

higher education and of the distribution of income and property. In 1951 the 'Statistical communications' were discontinued and the bureau resumed the publication of a statistical journal, where now preliminary figures, the results of special surveys, articles on different statistical subjects etc. may be found:

- 199 Statistisk tidskrift - Statistical review. 1-, 1952-; Index: 1952-1962.

Since the turn of the century several historical statistical handbooks have been published. The first edition by Sundbärg had three issues: a French one in 1900, a Swedish one in 1901, and an English one in 1904. The second thoroughly revised edition by Guinchard had also three issues: a German, an English one in 1914, and a Swedish one in 1915:

- 200 La Suède: Son peuple et son industrie. Exposé historique et statistique. ed. by G. Sundbärg. Stockholm, Government Printing Office, 1900. IX + 510 p.

- 201 Sweden: Historical and statistical handbook. 2nd edition, ed. by J. Guinchard. Stockholm, Government Printing Office, 1914. XVI + 785 p.

These handbooks give an embracing picture of the Swedish state, economy, society, and culture, mainly in verbal form but supplemented by statistical time-series referring to the structure and movement of population, criminality and prisons, elections and public finance, public assistance and hospitals, education and communication, economic production and consumption, trade cycles and commerce, and finally, labour and social statistics.

In 1955 the central statistical office began to publish a series of three historical statistical handbooks, each one of them being confined to selected topics:

- 202 Historisk statistik för Sverige. Del 1. befolkning (Historical statistics of Sweden. Part 1. population). Stockholm, Statistiska Centralbyran, 1969. 2nd rev. and extended edition. 144 p.

Besides a brief historical survey of the organization of Swedish population statistics and an annotated source bibliography this volume contains time-series on the size and geographic distribution of the population, on age, sex and marital status, on marriage, fertility and mortality, on the economically active population and on emigration and immigration. While a general table on population and vital statistics reaches back to 1720 most of the tables cover the time-period 1750 to 1967.

The second handbook is dedicated to climate and agricultural statistics; only the few tables on the distribution of land (holdings by size, leased farms) covering the time-period from 1885 to 1950 are of major interest to the social scientist:

- 203 Historisk statistik för Sverige, II: Väderlek, lantmåteri, jordbruk, skogsbruk, fiske (Historical statistics of Sweden, II: Climate, land surveying, agriculture, forestry, fisheries). Stockholm, Statistiska Centralbyran, 1959. 95 p.

The third volume of the series is the most comprehensive one:

- 204 Historisk statistik för Sverige. Statistiske översiktstabeller (Historical statistics of Sweden. Statistical survey). Stockholm, Statistiska Centralbyran, 1960. 280 p.

This volume gives a total of 280 tables on 19 topics, including public finance, elections, education, personal and national income, foreign trade, social welfare, labour statistics and criminal statistics. Most of the tables are confined to the period 1900 to 1950. In contrast to the first two volumes annotations are very scant and seriously missing.

2.12 Switzerland

There are two general histories of the development of statistics in Switzerland:

- 205 Kummer, J.J. "Suisse - histoire de la statistique de la Suisse", pp. 361-398, in: Société de Statistique de Paris, ed. Le 25^e anniversaire de la Société de Statistique de Paris, 1860-1886. Paris and Nancy, Berger-Levrault, 1885.
- 206 Reichesberg, N. Die amtliche Statistik in der Schweiz. Geschichte und Organisation. (Official statistics in Switzerland. History and organization) Bern, Scheitlin, Spring & Cie, 1910. 48 p.

The first article gives a very detailed history of the organization, the work and the publications of official statistics and of the most important contributions of private statisticians until 1885. The second article, although less detailed, continues the history until 1910 and includes some information on official statistics not collected by the statistical bureau as well as on the statistical offices of various cantons. Additional information on the historical development may be found in:

- 207 Baechtold, H. "Die Schweizerische statistische Gesellschaft 1864-1914", (The Swiss statistical society 1864-1914). Zeitschrift für Schweizerische Statistik 50, 1914: 247-280.

The publications of the federal statistical office are conveniently compiled in:

- 208 Eidgenössisches Statistisches Amt. Bureau Fédérale de Statistique: Veröffentlichungen. Publications, 1860-1950. Berne, 1950. 16 p.
- 209 Veröffentlichungen. Publications, 1880-1964. Berne, 1964.

In comparison to other Western European countries official statistics in Switzerland lagged far behind and developed only slowly, in correspondence with the slow process of political centralization. Until 1848, when the federation of states was transformed into a federal state, official statistics were almost non-existent, the main work being done by private persons. In 1849 the department of the interior became responsible for official statistics with the main objective to carry out the population census of 1850 as a basis for the apportionment of representatives, taxes and recruits among the cantons. Statistics collected in the following years were published in the series:

- 210 Beiträge zur Statistik der schweizerischen Eidgenossenschaft (Contributions to the statistics of the Swiss Confederation). 1-5, 1851-1858.

The five volumes include the results of the census and give statistics of population movements, agriculture and commerce.

In 1860 a federal statistical office was created. The development of official statistics was, however, still impeded by the necessity to cooperate with the cantons which were not obliged to collect certain statistics until 1870. Although the constitution of 1874 greatly extended the functions of the federal government, the federal statistical office was reorganized not before 1888 and its activities remained comparatively restricted until the First World War. Its works were published in the series:

- 211 Schweizerische Statistik (Swiss statistics). 1-217, 1860-1919.

More than ninety percent of this series are restricted to the census results, the movement of population, the recruiting and commercial statistics; only a few parts deal with statistics of agriculture, poverty, prisons, railways, factories, and insurance. In 1919 the Swiss statistics were discontinued and followed by another series:

- 212 Schweizerische statistische Mitteilungen (Swiss statistical communications). 1-11, 1919-1929 (several volumes each year).

The content of this series somewhat changed: statistics of factories, housing, public finance and taxes were taken up and statistics of recruitment, prisons, commerce, railways and insurances were dropped. In 1950 it was discontinued again and followed by two different series:

- 213 Statistische Quellenwerke der Schweiz (Statistical sources of Switzerland). 1-, 1930-.

- 214 Beiträge zur schweizerischen Statistik (Contributions to Swiss statistics). 1-, 1930-.

The first series is the main statistical source comprising more than 400 volumes until now which mainly refer to the censuses of population, agriculture, industry and commerce, the movements of population, federal subsidies, taxes and insurances and a few other topics. The second series comprises only some dozens of volumes containing statistics of elections, public finance, national income, higher education and some life-tables.

Shortly after the federal bureau of statistics had been created, a private statistical society (Schweizerische Gesellschaft für Statistik, later: für Statistik und Volkswirtschaft) was founded in 1864 with the objective to improve and supplement official statistics. It immediately began to publish a journal which is one of the major sources covering practically all fields of statistics and dealing with methodological as well as material problems:

- 215 Zeitschrift für Schweizerische Statistik (Journal of Swiss statistics). 1-, 1864-.

Index: 1864-1924. Title since 1919: Zeitschrift für Schweizerische Statistik und Volkswirtschaft (Journal of Swiss statistics and economics).

Since 1937 the journal includes a bibliographical part entitled: Schweizerische Bibliographie für Statistik und Volkswirtschaft (Swiss bibliography of statistics and economics).

2.13 United Kingdom

There are two general histories of official statistics in the United Kingdom:

- 216 Baines, A. "The history and development of statistics in Great Britain and Ireland", pp. 365-389 in: Koren, J., ed. The history of statistics. New York, Macmillan, 1918.

- 217 Clark, C. "The organization of statistics in England", pp. 193-212 in: Institut International des Sciences Administratives. Monographies sur l'organisation de la statistique administrative dans les différents pays. Paris, 1938; vol. 2.

The first article contains an extensive history of the organization of official statistics and indicates the departments in which each main branch of statistics may be found. The second article gives only a short history but a more detailed account of the various statistical works of the different departments between the two World Wars. Neither one has a bibliography. A general bibliography of the official statistical publications in the 19th century is missing, but in 1921 a 'Permanent Consultative Committee on Official Statistics' was created which annually published a:

- 218 Guide to current official statistics of the United Kingdom. 1-17, 1922-1958.

In these guides the publications of all government departments and offices which issued statistics were indexed. The second volume (1925) contains an

"Appendix relating to selected statistical publications prior to 1925". A brief but useful account to the more important statistical publications in the 1920's is given by:

- 219 Bowley, A.L. Official statistics: What they contain and how to use them. London, Humphrey Milford, 1928. 72 p.

After the Second World War the function of the older "Guides" has partially been fulfilled by two new series; the first is:

- 220 Studies in official statistics. 1-, 1949-.

A list of the volumes published until 1972 can be found in (225). The studies mainly deal with problems of economic statistics after World War II. In contrast, the second series has a much broader range, each volume including an historical survey:

- 221 Guides to official sources, ed. by the Interdepartmental Committee on Social and Economic Research. 1-6, 1950-1961.

The volumes deal with "Labour statistics" (1950), "Census reports of Great Britain 1801-1931" (1951), "Local government statistics" (1955), "Agricultural and food statistics" (1958), "Social security statistics" (1961), "Census of production reports" (1961).

An embracing private survey of statistical sources and of the methodological problems of statistics, historical as well as current, is given in:

- 222 The sources and nature of the statistics of the United Kingdom, ed. for the Council of the Royal Statistical Society by M.G. Kendall. London, Oliver and Boyd; vol. 1, 1952, V+432 p; vol. 2, 1957, V + 540 p.

The two volumes contain 39 articles written by leading experts concerning different branches of statistics. Although heavily concentrated on economic statistics, the more general articles practically cover the whole field of official statistics. Each article surveys all the statistical information in the special field, including short remarks on the historical development. Furthermore they call attention to the pitfalls of interpretation and give additional references. Finally, a general bibliography of British official publications should be mentioned which contains a short but useful chapter on statistical publications:

- 223 Pemberton, J.E. British official publications. 2nd. rev. ed. Oxford etc.: Pergamon Press, 1973. IX + 304 p.

Prior to the Second World War during which a central statistical office was created, British statistics were characterized by a 'departmentalism', i.e. by a complete lack of centralization of any kind. Since each government department was responsible for administering and publishing its own statistics, the history of British official statistics naturally is intricate. Until the beginning of the 19th century the only statistics regularly compiled were those relating to public finance (compiled by the treasury) and to imports and exports (compiled by the board of trade). In 1801 the first decennial census of population was carried out and in 1837 a uniform system of civil registration was established in England and Wales, extended to Scotland in 1853 and to Ireland in 1863. Correspondingly, in all three kingdoms Registrar General's departments were created for the administering of the census and the registration. The first special statistical office, however, was established as a branch of the Board of Trade in 1852. From its original functions in connection with the collection of information about trade and commerce, the board of trade advanced in the course of the 19th century to a highly important position in regard to transport, labour, and the supervision of a considerable number of statutes. After the First World War it lost much of its original powers. The central position of the Board of Trade was derived above all from the publication of a statistical yearbook containing the more important statistics of all government departments:

224 Statistical abstract for the United Kingdom. 1-83, 1840/1853-1924/1938.

Each volume contains the statistics for approx. the fifteen preceding years. The 2nd volume (1840-1854) was reprinted in 1870, with additions to correspond with the information contained in the 17th volume (1855-1869). Since 1946 this compilation is produced by the Central Statistical Office under the title:

225 Annual abstract of statistics. 87-, 1946-.

Preceding the publication of the "Statistical abstract" the Board of Trade had edited a more limited series:

226 Tables of the revenue, population, commerce, & c. of the United Kingdom and its dependencies. 1-22, 1822-1852.

The tables had supplements containing statistics relating to the colonies and foreign countries which were later continued by the

227 Statistical tables relating to foreign countries. 1-12, 1855-1878.

and later again by the

228 Statistical abstract for the principal and other foreign countries. 1-39, 1872-1912.

In addition the Board of Trade also published statistical abstracts for the British Empire and for several British oversea dominions and protectorates.

Besides the Registrar General's departments and the Board of Trade, the most important departments concerning statistics have been: the Home Office, established in 1782 (criminal and civil judicial statistics since 1856); the Inland Revenue Department, established in 1849 (summary of income tax since 1857); the Local Government Board, established in 1871 to continue the work of the old Poor Law Board of 1834, and replaced by the Ministry of Health in 1919 (statistics on pauperism since 1848; on local taxation, public health and housing since 1871); the Board of Agriculture (1889), and the three Boards of Education (1899).

In no other country have private statistical societies exerted so much influence as in Great Britain. The most famous among them has already been founded in 1834: the 'Statistical Society of London', later 'Royal Statistical Society'. Since 1838 it published the probably most important European statistical journal:

229 Journal of the Statistical Society (Journal of the Royal Statistical Society). 1-, 1838-. Indexes: 1-15 (1838-52), 16-25 (1853-62), 26-35 (1863-72), 36-50 (1873-87), 51-71 (1888-1903), 72-87 (1904-24), 88-102 (1925-39), 103-117 (1940-53).

A history of the Statistical Society of London and a description of its activities is given by

230 Mouat, F.J. "History of the Statistical Society", pp. 14-59 in: Jubilee volume of the statistical society. London, Stanford, 1885.

and later in:

231 Annals of the Royal Statistical Society 1854-1934. London, The Royal Statistical Society, 1934.

There is a useful historical handbook which is restricted, however, mainly to economic statistics:

- 232 Abstract of British historical statistics, ed. by B.R. Mitchell with the collaboration of P. Deane. Cambridge, Cambridge University Press, 1962. 2nd. ed., 1971. XI + 513 p.

Most of the time-series included cover the whole of the United Kingdom and start in the 19th century; several go back even to the 18th century. With the results of the census of population reaching to 1951, the series stop in 1939 or even earlier. In connection with the second edition in 1971, however, a separate volume has been published continuing most series to 1965 and including new series referring to crime, elections, and education:

- 233 Second abstract of British historical statistics, ed. by B.R. Mitchell and H.G. Jones. Cambridge, Cambridge University Press, 1971. IX + 227 p.

These two private editions should be used together with an officially published and more specialized historical handbook of labour statistics which contains more than 200 time-series concerning among others the development of wages, prices and hours of work, employment and unemployment, industrial disputes and membership in trade unions:

- 234 British labour statistics. Historical abstract 1886-1968, ed. by the Department of Employment and Productivity. London, Her Majesty's Stationery Office, 1971. 435 p.

3. INTERNATIONAL STATISTICS

3.1 International Statistical Congresses

For historical information on the international statistical congress cf. part 1.1 of the bibliography (esp. Westergaard, chap. 14) and (236).

A general summary of the activities of the Congress is given by

- 235 Neumann-Spallart, F.X. von. "Résumé of the results of the international statistical congresses ...", pp. 284-306 in: Jubilee volume of the Statistical Society. London, Stanford, 1885.

A list of various publications referring to specific sessions of the Congress can be found on (11).

At a later session the Congress inaugurated a series of works which were thought to form a complete collection of international statistics. Only a few of them, however, have been finished. A bibliography is given on pp. 270-271 in (12).

3.2 International Institute of Statistics

There are two histories of the institute, the first giving a very detailed account of the work and the publications of the institute until the 1930's, the second containing a more general history including later developments:

- 236 Zahn, F. 50 années de l'Institut International de Statistique. The Hague, Institut International de Statistique, 1934. VII + 181 p.
- 237 Nixon, J.W. A history of the International Statistical Institute 1885-1960. The Hague, International Statistical Institute, 1960. VIII + 188 p.

Between 1885 when the institute was founded and the First World War its only publication has been a journal which soon became, however, the most important one for the development of international statistics:

- 238 Bulletin de l'Institut International de Statistique. 1-, 1886-.
Index: 1-30, 1886-1938.

Besides the reports on the sessions of the Institute (24 between 1887 and 1938) it primarily contains material statistical analyses, one fourth dedicated to population statistics, another fourth to economic statistics, and the rest to various topics such as social and labour statistics, criminality, public finance, education and the organization of statistics; it was not before the 1930's that statistical methodology gained more importance. In 1913 the Institute created a Permanent Office the main task of which has been the publication of an international statistical yearbook:

- 239 Annuaire international de statistique. 1-8, The Hague, 1916-1921.

It is not a yearbook in a stricter sense, since each volume is related to a special topic. The first five volumes contain statistics on the structure and movements of population in Europe (vol. 1, 1916 and vol. 2, 1917), the Americas (vol. 3, 1919 and vol. 4, 1920), Africa, Asia and Oceania (vol. 5, 1921); vol. 6 (1920) gives international labour statistics including among others wages and hours of work, unemployment, trade unions and strikes; vol. 7 (1920) is very inhomogeneous containing statistics on primary education, communication, housing, agriculture and price indices; vol. 8, finally, is dedicated to statistics on public finance, production and rates of exchange.

Since the League of Nations and the International Labour Organization had assumed statistical tasks in the meanwhile, this publication of general statistics was discontinued and the Permanent Office of the Institute started a new and more special series on population statistics:

- 240 Aperçu de la démographie des divers pays du monde. 1, 1923; 2, 1925; 3, 1927; 4, 1929; 5, 1932; 6, 1939.

Each volume has two parts; the first contains historical time series of the total population, the distribution of population according to sex, age, civil status, literacy, religion, nationality and language as well as the regional distribution and the urban population for the latest census; the second gives statistics of marriages, divorces, fertility and mortality including infant mortality, causes of death and life expectancy.

In the 1930's the Permanent Office also edited two major collections of economic statistics:

- 241 Recueil international de statistiques économiques. 1, 1919-1930 (1934), VII + 216 p; 2, 1931-1936 (1938) VII + 253 p. The Hague. English edition under the title "International abstract of economic statistics" prepared by the International Conference of Economic Service for vol. 1 and by the Permanent Office for vol. 2.

These are compilations of classified indices of economic activity in form of a monthly record and referring to finance, prices and wages, trade and output, transport, employment for 15 (vol. 1) and 31 (vol. 2) mainly European countries.

In addition the Permanent Office published two more special but useful books, one about the organization of vital statistics, the other about statistical institutions:

- 242 Renseignement sur l'organisation actuelle des statistique de l'état civil dans divers pays. The Hague, 1929.

- 243 Répertoire international des institutions statistiques. The Hague, 1934, VIII + 145 n.

The first shows what characteristics of civil status, marriages, divorces, births and deaths are recorded for about 50 countries. The second gives the names and periodical publications of international institutions, national statistical bureaus, provincial and municipal bureaus and research institutes.

Although the Institute lost more and more of its function as collector of international statistics, it preserved one real speciality: the international statistics of large cities. The first volume was published under the title:

- 244 Annuaire statistique des grandes villes. The Hague, 1927.

The second volume had a different title:

- 245 Statistique internationale des grandes villes. The Hague, 1951.

The third edition appeared under the same title but embraced four volumes dedicated to special topics: Tourisme 1929-1934 (1953), Electricité, gaz et eau 1934 (1959), Territoire et population 1928-1954 (1959), Logement 1928-1954 (1940). After the Second World War a new series was begun under the same title, divided into several subseries:

- 246 Statistique internationale des grandes villes. International statistics of large towns.

ser. A: Statistiques démographiques des grandes villes; vol. 1, 1954; vol. 2 1957.

ser. B: Statistiques du logement et de la construction; vol. 1, 1956; vol. 2, 1960

ser. C: Données économiques des grandes villes; vol. 1, 1958.

ser. D: Services publics et transports dans les grandes villes; vol. 1, 1959.

ser. E: Statistique culturelle et des sports; vol. 1, 1961.

In 1961 all subseries were united under the same title in a biennial publication.

3.3 League of Nations

The following two books give a very detailed and comprehensive account of the statistical activities and publications of the League of Nations:

- 247 Aufricht, H. Guide to the League of Nations publications. A bibliographical survey of the work of the League, 1920-1947. New York, Columbia University Press, 1951. XIX + 682 p.

- 248 Catalogue des publications éditées de 1920 à 1954, ed. by the League of Nations. Geneva, 1955. 276 p.

Statistics have mainly been compiled and published by some of the sections of the General Secretariat of the League of Nations as well as by some of the Committees of the League of Nations. The most important among the 15 sections has been the Economic and Finance Section (in 1931 split into two parts) including the Economic Intelligence Service which edited the main statistical yearbook and several series of economic statistics:

- 249 Annuaire statistique international. International statistical yearbook. 1-4, 1926 (1927) - 1929 (1930).

It usually has four main parts referring to: (a) territory and population, (b) production, consumption and life-stock, (c) commerce and transport, (d) public finance, currency and prices. It has been attempted to cover as many countries as possible and to render the statistical series comparable. The content essentially remained the same, when the title was changed in 1930; only some labour statistics were added:

- 250 Annuaire statistique de la Société des Nations. Statistical yearbook of the League of Nations. 1-13, 1930/31 (1931) - 1942/44 (1945).

The other more special statistical series edited by the Economic Intelligence Service refer to: (1) production and prices, (2) money and banking, (3) international trade statistics, (4) balances of payments; most important, finally, has been (5) the 'World economic survey', giving statistics on actual trends of economic development. In execution of the 1928 'International convention relating to economic statistics' the Economic and Finance Section set up a Committee of Statistical Experts in 1930 which published its statements and recommendations under the title:

251 Studies and reports on statistical methods. 1-9, 1938-1947.

Among the other sections of the General Secretariat only the Health Organization and the Disarmament Section have some importance in this context. Besides a bulletin and a yearbook relating to the Organization and Development of Public Hygiene, the Health Organization edited a very useful series of 14 statistical manuals reporting on the vital statistics in all Western European countries with the exception of Italy and including Canada, Czechoslovakia and Hungary:

252 Statistiques démographiques officielles de ... 1-14, 1924-1930.

As a pioneer effort, finally, the disarmament section published a yearbook with statistics on armaments, including military expenditures.

253 Annuaire militaire. Disarmament yearbook. 1-15, 1924-1939/40.

3.4 United Nations.

For an introduction to United Nations documents see:

254 Brimmer, B. et al. A guide to the use of United Nations documents. Including reference to the specialized agencies and special U.N. bodies. Dobbs Ferr, N.Y., Oceana Publications, 1962. XV + 272 p.

255 Winton, H.N.M. Publications of the United Nations system: A reference guide. New York and London, Bowker, 1972. XI + 202 p.

Whereas the first gives a more extensive description of the documentation system, the use of the second is more convenient. Besides a brief overview of the organization of the United Nations and their publications, it gives a number of valuable reference works, a comprehensive list of their periodicals and selected other recurrent publications.

Within the United Nations primarily the Statistical Commission and the Statistical Office (Department of Economic and Social Affairs), the four regional economic commissions and the twelve specialized intergovernmental agencies deal with statistics. Here, only some of the publications of the Statistical Office are mentioned. Most important are the following four yearbooks:

256 Statistical yearbook. 1-, 1948-.

It summarizes statistics from the more specialized yearbooks referring to population, employment and unemployment, industrial and agricultural output, education, communications, and social services. It also includes time-series.

257 Demographic yearbook. 1-, 1948-.

Each volume contains time-series of basic demographic data as well as statistics on special topics (e.g. fertility, morality, population censuses) which are repeated all five years.

258 Yearbook of international trade statistics. 1-, 1950-.

Each volume gives statistics on exports and imports by country of origin and destination, and indices of terms of trade.

259 Yearbook of national accounts statistics. 1-, 1957-.

Each volume among others includes statistics on GNP, governmental budgets, external transactions. The yearbook has been preceded by:

260 Statistics of national income and expenditure. Statistical papers, series II, no. 1-10, 1952-56.

Among the more or less periodical publications one is outstanding:

261 United Nations. Report on the world social situation. 1, 1952; 2, 1957; 3, 1961; 4, 1963; 5, 1965; 6, 1967; 7, 1971.

In the first part of each volume the social development is analysed by regions, in the second the following subjects are treated: world population situation, family planning, health, food and nutrition, housing, education, employment, prices and wages, social security, social welfare services. As an attempt to systematize the assembling of basic statistics for the report on the world social situation, a compendium has been issued as a joint undertaking of the UN, the ILO, the FAO, the UNESCO and the WHO:

262 United Nations. Compendium of social statistics. 1, 1963; 2, 1967.

3.5 International Labour Organization.

The International Labour Organization (I.L.O.) has been established in 1919 as an intergovernmental agency with the main object to improve, collect and publish comparative information relating to labour problems. The I.L.O. consists of the International Labour Conference, an assembly which passes the basic recommendations and conventions, the Governing Body, and, finally, the International Labour Office which functions as the secretariat of the organization. The work of this office has been supported more or less regularly by the 'International Conference of Labour Statisticians' (10 between 1925 and 1962). The organization and its activities during the first ten years are extensively described in the comprehensive survey:

263 International Labour Office, ed. The first decade. London, 1931.

A more embracing account of the I.L.O.'s contribution to the development of labour statistics is given in the synoptic article:

264 The research work of the I.L.O. International Labour Review 71, 1955: pp. 122-147.

For a more extensive documentation of the efforts at international standardization and improvement of labour statistics cf.:

265 The international standardization of labour statistics. Studies and reports. ser. N. no. 19 (1934) and no. 25 (1943); new ser., no. 53 (1959).

This series of articles gives an overview of the general development of labour statistics as well as detailed discussions of the evolution in the following branches of labour statistics: classification of industries and occupations, employment and unemployment, wages and hours of work, cost of living, industrial accidents, houses, collective agreements, industrial disputes, emigration and immigration. For bibliographic purposes the office publishes a special series:

266 Bibliographic contributions. 1-, 1951-.
See especially no. 25:

- 267 Subject guide to publications of the International Labour Office, 1919-1964. Geneva, 1967. V + 478 p.

The oldest periodical publication of statistics of the International Labour Office is its

- 268 International Labour Review. 1-, 1921-. Indexes: 1-20, 1921-1929; 21-30, 1930-1934; 31-75, 1935-1957.

Besides a bibliographical part the journal usually contains articles on a great variety of topics including among others analyses of labour statistics, discussions of their methodological problems and reports on political and administrative measures concerning economic and social questions. From 1924 to 1951 the journal also contained a special part devoted to statistics on employment and unemployment, hours of work, wages and cost of living; from 1952 to 1964 these statistics appeared in "Supplement to the International Labour Review" which since 1965 forms the

- 269 Bulletin of labour statistics. 1-, 1965-.

In addition to the 'International Labour Review' with its broad range of subjects, the office since 1920 published a series dedicated to more special problems. Until the World War II it has been divided into 16 subseries of which only one is of interest here:

- 270 Studies and reports. Series N, Statistics, 1-25. 1923-1943.

These volumes deal with problems and methods of compilation in the various branches of labour statistics, the work of the 'International Conference of Labour Statisticians', and general reports on the statistical work of the I.L.O. After World War II the 16 subseries were unified in a new and common series:

- 271 Studies and reports. New series. 1-, 1946-.

In 1930 the International Labour Office started a yearbook which mainly gave qualitative information but also contained a few tables referring to unemployment, wages and cost of living:

- 272 I.L.O. yearbook. 1-10, 1930-1940.

The scope of the tables increased in the next editions, and the edition for 1934-35 appeared in two volumes, one dedicated to statistics only. Since 1936 the statistical part has been published separately under the title:

- 273 Yearbook of labour statistics. 1-, 1936-.

The fields covered by the yearbook are: employment and unemployment, hours of work, wages, prices, family living studies, migration and industrial relations; between 1946 and 1961 a part on social security was also included. Each section starts with a discussion of the scope of the data, the method of their compilation and the degree of comparability.

3.6 United Nations Educational, Scientific and Cultural Organization

The UNESCO was founded in 1945. Two institutions, however, may be regarded as its predecessors. One is the 'Institut International de Coopération Intellectuelle' in Paris which was founded in 1925 by the French government and worked as an agency of the 'Commission de Coopération Intellectuelle' of the League of Nations. A comprehensive survey of its work, including a bibliography of its publications, is given in:

- 274 L'Institut International de Coopération Intellectuelle 1925-1946. Paris, 1946.

The other institution is the 'Bureau International de l'Education' which was privately founded in 1925 in Geneva. In 1929 it was transformed into an inter-governmental organization and soon began to publish a yearbook:

- 275 Annuaire international de l'education et de l'enseignement. 1-, 1933-.

Since 1948 this yearbook is published in cooperation with UNESCO and appears in English. In 1969 the 'Bureau International de l'Education' was incorporated into UNESCO.

The UNESCO compiles and publishes statistics on education, science and culture. The most important publication relating to education consists of a series of five volumes, the first of which is named:

- 276 Handbook of educational organization and statistics. Paris, 1951.

The following four appeared under the general title:

- 277 World survey of education. Vol. 2: Primary education, Paris 1958; vol. 3: Secondary education, 1961; vol. 4: Higher education, 1966; vol. 5: Educational policy, legislation and administration, 1971.

The three middle volumes report statistics on school enrolment in practically all countries of the world, many reaching back to about 1950.

Since 1963 the UNESCO issues a general yearbook which includes statistics on education, science and technology, libraries and museums, book production, newspapers and other periodicals, paper consumption, film and cinema, radio broadcasting and television:

- 278 UNESCO statistical yearbook. 1-, 1963-.

More detailed statistics on communication, including numbers of radio and TV sets, new films produced, and newspapers published and circulated are given in a manual which is published irregularly since 1950:

- 279 World communications: Press, radio, television, film. 1-, 1950-.

Finally, more special analyses on a variety of subjects which sometimes include time-series are given in the series:

- 280 Statistical reports and studies. 1-, 1957-.

4. PRIVATE STATISTICS

4.1 Early national collections

The value of the following collections lies above all in assembling dispersed statistics from a variety of official and sometimes also private sources at an early stage in the development of official statistics:

- 281 Dieterici, C.F.W. Handbuch der Statistik des preussischen Staates (Statistical manual of the Prussian state). Berlin, Mittler, 1861. 715 p.
- 282 Forsell, C. af. Statistik in Schweden. Nach der zweiten und verbesserten Auflage übersetzt von A.G.F. Freese (Statistics of Sweden. Translated by A.G.F. Freese using the second and improved edition). Lübeck, Rohden, 1855. VIII + 365 p.
- 283 Franciscini, S. Neue Statistik der Schweiz. Nach der zweiten und gänzlich umgearbeiteten Ausgabe aus dem Italienischen übersetzt (New statistics of Switzerland. Translated by using the second and completely revised Italian edition). Bern, Haller; vol. 1, 1848, 580 p; vol. 2, 1849, 298 p; Nachtrag (supplement), 1851, 372 p.