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The A.A.G. Bijdragen and the Study of Dutch Rural History

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I

Three men can justly be regarded as the founding fathers of the study of economic history in the Netherlands: Posthumus, Sneller and Van Dillen. Although they continued to publish work until the 1950s and even the 1960s, their period of main activity was between the two world wars. By this time two of them, Posthumus and Sneller, had chairs in economic history. Van Dillen was less successful, and the cuts in government expenditure during the Depression as well as World War II hindered the development of his academic career. When he became professor, he was too old to influence the teaching of history at the university effectively. He retired in 1955 leaving no pupils behind him. In this respect, however, Posthumus and Sneller were hardly more successful. Their failure to establish a group of young economic historians was mainly due to the fact that they were appointed not in history departments, but in faculties of economics (Posthumus in Amsterdam, Sneller in Rotterdam). They attracted many brilliant students, who wrote important theses, but the majority of them had to seek a livelihood in business, public administration or economics, and so left the field of economic history. It was only the History Department of the University of Amsterdam that had a Professor of Economic History, as Posthumus held an appointment in the faculty of arts as well as of economics.

Before World War II there was little interest in economic and social history among professional Dutch historians. After the war this attitude changed only slowly, and it was not until the late 1950s that it became possible to study for a university degree with special emphasis on economic and social history. Nevertheless in the post-war period, the history depart-

ments as well as the faculties of economics managed to hold lectures in economic and social history so that by 1961 there were eleven professors of this branch of history, although they still had very few lecturers. In 1962, apart from the Department of Rural History at the Agricultural University at Wageningen, there were only ten lecturers in economic and social history. At that time the Department of Rural History at Wageningen (Afdeling Agrarische Geschiedenis = A.A.G.) was composed of one professor (B.H. Slicher van Bath and five lecturers (J.A. Faber, J.M.G. van der Poel, H.K. Roessingh, J.S. Wigboldus and A.M. van der Woude).¹

What is the explanation of this exceptional situation? During the reconstruction of the Dutch economy after World War II, the Agricultural University at Wageningen profited from the high priority given to agriculture which at that time was the major contributor to national exports. So, some of the money devoted to agriculture flowed into research in agricultural sciences. At the same time the Agricultural University, which before the war consisted nearly exclusively of departments in the traditional agricultural sciences, expanded with new departments in technology and the social sciences. First came rural sociology and rural economics; many other departments followed, rural history being one of them. These social science departments profited from their incorporation in the faculty of agricultural sciences. As social science research is relatively cheap compared with that in the traditional agricultural sciences, these social science departments were better off than those at the other Dutch universities during the 1950s and 1960s. The generous policy of the administration of the Agricultural University and the relatively small burden of teaching explain fairly well the good opportunities for historical research in Wageningen.

In 1949 Slicher van Bath began to teach agricultural history on a provisional part-time basis. He was already Professor of Economic History at the University in Groningen. In 1955 the decision was taken to set up the Department of Rural History in Wageningen under his direction and he was nominated professor and left Groningen. The appointment of a staff of five within a reasonable period was part of the agreement and by 1962 this was completed. In the same year the department started its own series of publications: the *A.A.G. Bijdragen*.²

¹ At the end of 1956 the staff of the Department consisted of Slicher van Bath, van der Poel, Roessingh and Faber. Van der Woude was appointed in 1960 and Wigboldus in 1962. In 1965-1970 the Department reached its greatest number with the appointment of W. D. Brouwer. In 1972 Slicher van Bath left the Department, and in 1974 Faber was nominated as Professor of Economic and Social History at the University of Amsterdam. In 1975 van der Woude was nominated as Professor of Rural History in the Department.

² The numbers 1-7 were distributed as off-prints of articles published elsewhere or in cyclo-stencilled form. *A.A.G. Bijdragen* 8 (1962) has to be considered as the starting point of the printed series.

In the nearly twenty years which have elapsed since the foundation of the Department, its members have published more than 8,000 printed pages, 3,800 of them in the *A.A.G. Bijdragen*. Within the coming two years the publication of a further 1,000 pages of work done at the Department is expected so that by the twentieth anniversary some 9,000 pages will be in print. These figures show that it is not possible to review the work done simply by considering the *A.A.G. Bijdragen*. They are part of a wider publication policy, and this policy reflects to some extent the internal structure of the Department, which is divided into western rural history (Slicher van Bath, Faber, Roessingh and Van der Woude), non-western rural history (Slicher van Bath and Wigboldus) and the history of agricultural implements, prehistoric agriculture and western agriculture in modern times (J.M.G. van der Poel). The publications have been mostly in the fields of western rural history and the history of agricultural implements, etc., while in the field of non-western rural history energy has been directed more to teaching. The *A.A.G. Bijdragen* has until now mainly contained publications by the members concerned with western rural history.

The studies by the members of the Department can be roughly classified under about ten headings. These are — with the main publications given — as follows:³

1. survey articles: *Zwanzig Jahre Agrargeschichte im Benelux-Raum 1939-1959* (*Zeitschrift für Agrargeschichte und Agrarsoziologie*, 1960 and *A.A.G. Bijdragen* 4); Historical demography in the Netherlands; Theory and practice in economic and social history; Paleodemography (*A.A.G. Bijdragen* 11, 14 and 15); Historical demography and the science of history (*Tijdschrift voor Geschiedenis* 1969).
2. bibliographical publications: *Bibliography of Dutch forest history* (1967), Alphabetical list of books and articles on ancient measures and weights in Belgium and the Netherlands (*A.A.G. Bijdragen* 11). In the spring of 1975 Pudoc, Wageningen, will publish a *Bibliography of Dutch agricultural history* (2 vols.).
3. studies on the management of individual farms: A Friesian farm in the second half of the Sixteenth Century (*Agronomisch-Historische Bijdragen* 4, 1958); The note book of Dirck Jasz. (*Estrikken* 31, 1960); *The Wilhelminapolder* (1959); Accounts and diaries of measures and weights in Belgium and the Netherlands (*A.A.G. Bijdragen*

³ This enumeration of the main publications has no bibliographical pretensions. The original titles are given as far as it concerns publications in English, French and German. If the publication was in Dutch with the addition of a translated summary, the title of the summary has been given. If the publication was only in Dutch, the title has been translated into English. Even in this non-bibliographical form this enumeration may be of some help for those working in this field.

- 8). In the forthcoming *A.A.G. Bijdragen* the book-keeping on four farms in southern Holland will be analysed.
4. studies on the level of production or consumption: Yield ratios of grain; The consumption of cereals, meat and butter in Holland about 1800 (*A.A.G. Bijdragen* 9 and 10); Le développement de la productivité des travaux agricoles (*A.A.G. Bijdragen* 14); The influence of economic conditions on the development of agricultural tools and machines in history (in: *Mechanisation in agriculture*, J.L. Mey editor, 1960); Fluctuating, constant and variable elements in the production and consumption of agricultural commodities in pre-industrial society; Two social stratifications; Harvests and climatic influences in the past (*A.A.G. Bijdragen* 15); *Heu oder Butter* (*Festschrift Wilhelm Abel*, 1974). A study on the weight of Dutch cattle in the seventeenth and eighteenth centuries is in preparation.
5. studies on agricultural techniques, farm buildings and implemtents, agricultural history (in the limited sense): Agriculture in prehistoric times (*Berichten van de rijksdienst voor het oudheidkundig bodemonderzoek* 1960-61); The rise of intensive husbandry in the Low Countries (in: *Britain and the Netherlands* J.S. Bromly and E.H. Kossman, editors, 1960); The cultivation of madder (*Ceres en Clio*, 1964); *Old Dutch ploughs* (1967); *The traditional plough in the Netherlands* (1968); *Van Brakell van den Eng* (1959); *A century of mechanisation in Dutch agriculture* (1967); L'histoire des forêts dans les Pays-Bas septentrionaux (*A.A.G. Bijdragen* 14); Studies on land-measures in Friesland and Gelderland (*It Beaken* 1965 and *Bijdragen en mededelingen geschiedenis der Nederlanden*, 1969); Cattle plague (*Mededelingen Landbouwhogeschool Wageningen* 62, 1962); Land rent (*Bijdragen en mededelingen Gelre* 1968-69); A forthcoming study by Roessingh on the cultivation of tobacco in the Netherlands also belongs to this group.
6. rural industry and social history of the countryside: Friesian shipping and trade (*It Beaken* 1959 and *A.A.G. Bijdragen* 14); Crafts and trades in the Veluwe in the middle of the Eighteenth century (*A.A.G. Bijdragen* 13); The service pattern in the Veluwe in 1749 (*Acta Historiae Neerlandica* IV); The edition of an industrial survey in Holland in 1801 (*A.A.G. Bijdragen* 18); The emergence of an oligarchy in Friesland in the second half on the Seventeenth Century (*A.A.G. Bijdragen* 15); The socio-religious pattern in the Veluwe in the second half of the Eighteenth Century (*A.A.G. Bijdragen* 11); Literacy and culture in the past (*Spiegel Historiae* 1972). A vast project on literacy in the Netherlands is under way, and the data concerning the literacy of

bridegrooms and brides during the Nineteenth Century in more than 300 Dutch communities have already been collected.

7. historical demography: *The population of Rotterdam in the Seventeenth and Eighteenth Centuries* (1965; a summary in: *Population*, 1966); Studies on the size and structure of households between the 16th and 18th centuries (*A.A.G. Bijdragen* 15 and 18; a new study will be published in *A.A.G. Bijdragen* 19, while a study on the structure of the household in a number of villages and two cities in Southern Holland in the 17th Century is soon to be published; an abridged version of the study published in *A.A.G. Bijdragen* 15 is to be found in: *Household and family in past time* (P. Laslett and R. Wall, editors, 1972); The number of inhabitants in the Veluwe 1526-1947 (*A.A.G. Bijdragen* 11) Poll-tax and population in the bailiwick of Bois-le-Duc about 1700 (*A.A.G. Bijdragen* 13); Registers of the militia as a demographic source (*A.A.G. Bijdragen* 8).
8. methodology and theory: on the concept « agricultural history » (*Nederlands archievenblad*, 1958-59); Rural history and the science of sociology (*Mens en Maatschappij*, 1962); The importance of regional history (*Varia Historia Brabantica*, 1962); The use of social science concepts in analysing the economic and social facts of the past (*A.A.G. Bijdragen* 18).
9. broad surveys of agrarian history: this part of the activities is probably the best known thanks to *De agrarische geschiedenis van West-Europa* by Slicher van Bath (1960), which up till now has been translated into English (*The agrarian history of western Europe*, 1963), Spanish, Italian and Japanese. To the same category belongs the chapter written by Slicher van Bath in 1969 for the *Cambridge Economic History of Europe: European agriculture from 1500 till 1800* (still unpublished).
10. studies on regional history: *Een samenleving onder spanning, A history of the countryside of Overijssel*, Assen 1957; *Het Noorderkwartier, A study of the demographic and economic history of western parts of the Netherlands from the end of the middle ages to the beginning of the Nineteenth Century* (*A.A.G. Bijdragen* 16, 3 vols.); *Friesland, economic and social development 1500-1800* (*A.A.G. Bijdragen* 17, 2 vols.).
Certain studies by Roessingh on the Veluwe, cited above under the nos. 5, 6 and 7 also belong to this group.
11. studies on various subjects: Grain trade (*A.A.G. Bijdragen* 9 and *Tijdschrift voor Geschiedenis*, 1962); Manorial history (*Ceres en Clio*, 1964 and *A.A.G. Bijdragen* 11); Social and economic history of

Friesland during the middle ages (*A.A.G. Bijdragen* 13); The extent of Protestantism and Catholicism in the Netherlands about 1650 (*A.A.G. Bijdragen* 13); « Wüstungen in Twente » (*Verslagen en mededelingen van de Vereniging tot beoefening van Overijsselsch Regt*, 1958); Urbanisation and environment (*A.A.G. Bijdragen* 18); Stratification in history (*Tijdschrift voor Geschiedenis* 1972), Anthroponymics (*Holland*, 1973); City and countryside in historical perspective (in print); Church attendance, church collection and butter prices in Friesland (*It Beaken*, 1964).

Even though the range of subjects is wide, the main emphasis has been on studies on agricultural history in the limited sense (no. 5), broad surveys of agrarian history (no. 9) and studies on regional history (no. 10). In fact this last topic has been the most important research area for the Department, and more than 2,500 pages have been devoted to regional studies of the countryside in the provinces of Overijssel, Friesland, Holland and Gelderland by Slicher van Bath, Faber, van der Woude and Roessingh. Because these studies have been written in Dutch, they are not easily accessible to non-Dutch scholars. A short survey of the design, content and main results of these studies is therefore not out of place. This can best be done first by explaining the way in which the concept « agrarian history » has been defined by Slicher van Bath, and by indicating some of the developments and publications in the historical and social sciences which have influenced the work of the Department.

II

Before World War II, agrarian history was an underdeveloped field in historical research not only in the Netherlands but throughout the world.⁴ With the exception of Germany, Czechoslovakia and the United States, specialized organizations for the study of the history of agriculture at that time did not exist. With some notable exceptions, like Marc Bloch, interest was shown not by professional historians but by practitioners of the history of law, agriculturists, geographers and local amateurs. This situation had three important consequences. First, the history of early West-European agriculture was concerned mainly with topics connected with legal history, such as the juridical position of the different feudal estates, manorial rights, property and property rights. Such topics had some relevance for the agrarian history of the Middle Ages — even though the studies did not embrace the full economic and social reality of the farmer's existence —, but they proved completely inadequate for the modern period. Secondly, agriculturists were concerned mainly with recent agricultural history or else with technical matters like the history of different crops, cattle breeding, plant and animal diseases. Thirdly, the intermediate period (i.e. late Middle Ages to Nineteenth

⁴ With the single exception perhaps of England.

Century) was less intensively explored. The activities of the Department were from the beginning, then, mainly directed to this period, about which least was known.

Before World War II agricultural history was studied in a haphazard, unsystematic way, in isolation from more general economic and social problems. While agrarian history in itself is not a problem but a field of study, too often older publications on this subject were interesting but somewhat antiquated and of a too specialized character. In the post-war period however the history of prices, population and economic growth became the interconnected focusses of historical research. By connecting research in agricultural and rural history with these main issues in economic history, the Department succeeded in overcoming the unsystematic way in which agricultural history had often previously been studied. Although frequently important excursions were made into the field of social history, with studies on issues connected with population, occupational structure, social mobility, the relationship between the various socio-judicial groups, literacy and the importance of religious attitudes, it proved difficult to develop a coherent framework for the study of social phenomena in the countryside. In a way this can be regarded as a reflection of the state of social history in general, which is still searching for its identity.

Greater clarity in the extensive and hybrid field of the history of agriculture and the peasantry could be obtained by developing more concise definitions for the concepts « agricultural history », « agrarian history » and « rural history ». By the concept « *agricultural history* » is meant the history of farming in its technical aspects: the history of manuring, field work, crop rotation, cattle breeding, introduction and distribution of new plants or varieties, crop yields, natural circumstances of soil and climate and the influence of the purely technical side as studied in the history of the development of agricultural implements and techniques, farm buildings and mechanization. « *Agrarian history* » includes the study of the economic aspects of farming and the social life of the farmers. It covers subjects like property and land rent, labour productivity, the prices of agricultural commodities, the relationship between natural and money economy, the sizes of farms, the manorial system, peasant revolts, the reclamation of land, but also the standard of living of farmers, profits of agriculture, taxation of agriculture, position of living-in servants, stratification of the peasantry, inheritance customs and so forth. The concept « *rural history* » denotes the total social and economic history of the countryside. The population of the countryside did not consist only of farmers' families and others directly engaged in agriculture; there were also craftsmen, fishermen, millers, clergymen, carriers, schoolmasters, midwives, tradesmen, stewards and so on. In some regions their share in the occupational structure was small, but in other regions — and especially in the Netherlands — the farmers were often

only a minority, the bulk of the country population earning their livelihood from non-farming activities. Often the differences between farming and non-farming activities are not clear: a lack of occupational differentiation, with farmers engaged in rural industry or handicraft, and craftsman and other labourers engaged in agricultural activities. The history of population in the countryside, rural-urban migration, the whole impact of the city and of city life on the countryside, the political organisation or representation of the countryside, are all themes which have been classified as « rural history ».

Another useful distinction is introduced by the concepts « micro-economic » and « macro-economic ». Micro-economic research concerns the economy of one or more individual farms or demesnes, and is evidently connected with the concepts « agricultural » and « agrarian history ». Macro-economic research focusses its attention on the part played by agriculture in the whole economic structure of a region, on the relationship between agriculture and rural industry. Price history and the influence of demographic variables on the overall economic process are involved, as well as the role of agriculture in the national budget. This concept is clearly connected with « rural » and « agrarian history » while it omits all the social aspects of farming and country life. With the aid of these concepts the Department of Rural History has succeeded, during the last two decades, in fully developing the study of the history of agriculture and the countryside in the Netherlands. Without doubt the main interest has been the study of rural history, because the importance of non-agrarian activities in the Dutch countryside proved to have been so great and sometimes so intertwined with agriculture that a separate treatment of agriculture isolated from the other sectors of economic life would give a distorted picture.

What have been the main influences on the members of the Department of Rural History? How does their work fit in with the historical sciences? Given the situation of research and teaching in economic and social history at the Dutch Universities before the sixties, there cannot have been any noticeable influence from that side. Slicher van Bath, by training a medievalist, became involved in questions of agrarian history when writing his thesis on rural settlement in the eastern parts of the Netherlands in the early Middle Ages (*Mens en land in de middeleeuwen*, 2 vols. 1944). His discovery of extensive source material in the archives of the Province of Overijssel, of which he became director during the years 1946-1948, proved to be very important for later developments. This material concerned population, occupations, land tenure, land clearance, rural industry, livestock and so on, especially for the Seventeenth and Eighteenth Centuries. His work on these sources, which resulted in the publication of the first great rural regional history in 1957 (*Een samenleving onder spanning. A history of the countryside of Overijssel*) was influenced more by *sociography*, a peculiar branch of Dutch social science, than by Dutch historical science.

The concept of sociography was introduced in Dutch social science in 1913 by S.R. Steinmetz (1862-1940), the founder of sociology in the Netherlands. By profession he was a cultural anthropologist and human geographer, in which subjects he held a professorship at the University of Amsterdam. Sociography can be regarded as a reaction against the speculative generalizations, which characterized many sociological publications of that period. Steinmetz despised these broad generalizations based on a minimum of data. He thought it necessary to collect facts about various social phenomena systematically and with great scrutiny over a long period. He was deeply convinced of the totality of social processes and aimed at knowledge of all their aspects: the economic as well as the moral, cultural, criminal, geographical, demographical and historical aspects. His sociography and that of his many students can be characterized by the words: descriptive, empirical, inductive, individualising, total, interdisciplinary, quantitative. Its weakness lies in its lack of adequate theory, and in less successful publications too much emphasis was given to pure data collection, which was inadequately related to previously posed problems. In the development of social science in the Netherlands sociography can be said to have stood between human geography (with which it had many disputes) and sociology, and a generation of Dutch scholars passed through it on their way from human geography to sociology.

It is evident that a discipline placing such emphasis on conscientious fact-finding always will strongly attract historians, especially when new fields are explored, as was the case with rural history in the Netherlands in the fifties. Because of its origins in human geography, sociography fitted in well with the second major influence on the work of the Department of Rural History: the French *Annales* school. By tradition the teaching of geography and of history has been closely related at the French universities. French geography under the strong influence of Vidal de la Blanche has always demonstrated its consciousness of regional differentiation in physical and human geographical phenomena (*La France, c'est la diversité*). This has led to a great interest in problems related with agriculture, rural settlement and so on, as well as a preference for attempting the broad regional syntheses. Demangeon's study on Picardy is an outstanding example of this tradition. The influence of geography on the French historians can clearly be traced. Examples of geographical subjects are: Febvre (*La terre et l'évolution humaine*), Braudel (*La Méditerranée*) et Le Roy Ladurie (*Histoire du climat*); of agricultural history: Bloch (*Les caractères originaux*), Meuvret, Duby; of broad regional syntheses: Febvre, Roupnel, Goubert, Baehrel, Le Roy Ladurie, Poitrineau, etc. They and their French colleagues exercised an enormous influence on the Department of Rural History by their high standards of scholarship, their inclination towards an « *histoire de synthèse* », their regional specialization, their interest in agrarian and rural history, and their work on the history of prices and of population. In fact, the Department of

Rural History has played an important role in the Netherlands in the promulgation of knowledge about the French school, which until the sixties remained largely unknown to Dutch historians.

Two fields of study, the history of prices and of population, were of major interest for the Department, and the interaction between harvest yields, prices and population in preindustrial society has often been demonstrated. For long-term studies, the so-called secular developments, prices of agrarian commodities as well as population phenomena, have proved to be of special importance. Especially since about 1960, the problem of secular trends has become one of the main research concerns of the Department, and in practice questions about the secular expansion and contraction (regression, stagnation) of the Dutch economy and its relationship to general European secular developments have become more and more the corner-stones of even regional research projects. The problems of secular trends provided a centralizing theme for the historical sociographic method, which itself is insufficiently problem-orientated. In this connection the writings of many historians had an important impact upon the research of the Department. Among the French writers, Simiand with his studies on price movements since the Sixteenth Century and his famous « phase A and B » has been of great importance. But the books of Labrousse on prices and revenues and on the economic crisis in France at the end of the Eighteenth Century, made probably even more of an impression and exercised great influence on the study of agrarian history. In England it was above all Beveridge, who not only through his own work on English prices and agrarian history, but also through his International Committee for the History of Prices already in the thirties stimulated many publications which subsequently became very important to the Department of Rural History. Postan with his work on the depression of the late medieval economy should also be mentioned together with others who pioneered the related subjects of agriculture, population, economy and rural history, like Chambers with his *Vale of Trent*, the so-called Leicester school of Finberg, Hoskins and Joan Thirsk with their regional studies and Beresford's *Lost Villages*. A careful analysis of the work of the Department, however, shows that it owes most to the works of the German agrarian economist and historian Wilhelm Abel, who with Achilles, Saalfeld, Riemann, Henning and Wiese founded a real school of agrarian history in Göttingen. Before the war, he was really the first, to set the secular movement of the prices of agrarian commodities in a European framework. He was also a pioneer in the study of the long-term interaction of population and economy in the European past, and paved the way for much of the work undertaken after the war in the field of agrarian history and rural settlement (see his study on *Wüstungen*).

The rise of historical demography after World War II was very easily integrated in the work of the Department, mainly because population has

always been one of the major topics in sociography. Population problems fit in very naturally with the problems of agrarian and rural history in the pre-industrial era and population history — together with the price trends — forms the backbone of the concept of a secular trend. The population growth and decline during the Middle Ages (1050-1450) was the first issue of interest. While during the sixties most attention was given to demographic developments between the 16th and 18th Centuries. This shift can easily be explained by the growing interest in parish registers, following the Henry-Fleury method and the often useful confrontation of price and population series. Everywhere there was a close co-operation between rural history and historical demography because often both were concerned with same topic: the social and economic history of the countryside.

It was amidst these national and international influences that the Department of Rural History started its research in the mid-fifties. It was the product of special local and national circumstances. The Department tended to adopt as quantitative an approach as possible, without neglecting qualitative aspects of the problems studied. Its work has an interdisciplinary character necessary in agricultural, agrarian and rural history, and is always borrowing from agricultural, botanical and soil sciences, economics, sociology, demography, linguistics, folklore, agrarian archeology, geography, etc. Till now its main interest has been the period 1500-1800. Its publications can be typified by the concept introduced by Chaunu: « *histoire sérielle*. The idea of the existence of secular trends in the history of the Western European economy has served as a major reference point for its research. Therefore the « *longue durée* » is its main occupation, but these long-term developments are considered in their total historical setting and as such lead towards an « *histoire des structures* ». The comprehensive monographs on regional rural history, as mentioned, provided together with the broad general surveys of agrarian history between 1957 and 1972 the main outlet for these studies. They will now briefly be discussed.

III

Three books and a number of articles, in all about 2,500 pages, that deal with the economic and social structure of four regions between 1500 and 1800 (which in that year contrained about 20% of the total Dutch population) cannot be adequately summarized in a few pages. Nor can one simply compare the main findings by listing them together in tables as would seem probable. The main reason for this is that the Republic of the United Provinces consisted of seven, in many respects autonomous territorial units, and some other regions that were not autonomous, but had their own administration and own system of taxation. Thus one can find much

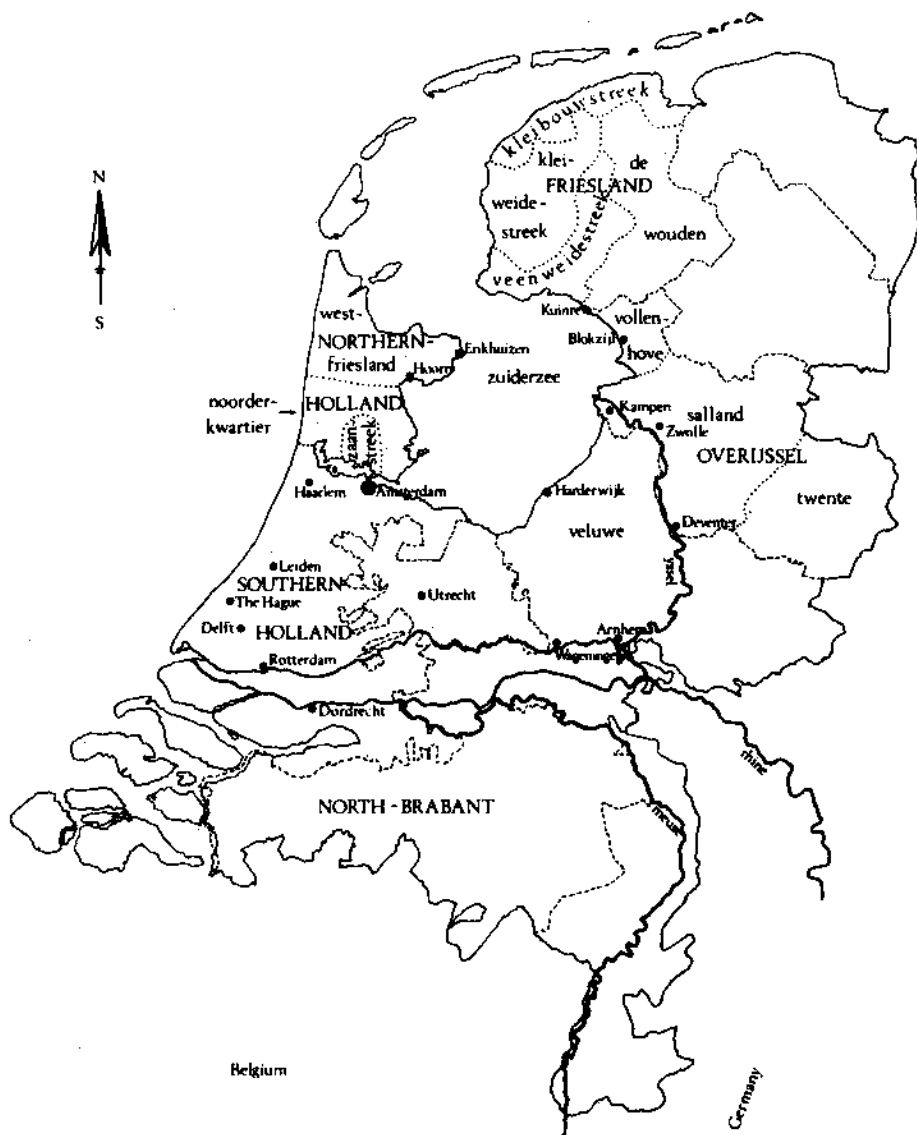
information on a given subject in one administration, while in the others the sources are completely silent. This situation is further aggravated by the availability and condition of the source material in the various administrations. By chance the relatively backward and sparsely populated Province of Overijssel — first described in this series of monographs — has massive detailed information on agriculture, the peasantry and rural industry, while the archives of the most advanced province, Holland, have nothing comparable. This has probably much to do with the more complicated and diversified economic and social structure of society in Holland, but it is also evident that much source material in Holland has disappeared or has been recorded in such a way that it is not suitable for research. The Friesian archives come between Overijssel and Holland as far as the state of preservation and content are concerned. The situation in the Veluwe archives is so bad that it has been decided to abandon the efforts to make a coherent study of this region and to switch to the publication of articles on certain aspects of the original programme. A fundamental objection to direct comparison lies finally in the fact that the differences in structure and evolution between the regions were often so great that a simple comparison is senseless. The small Dutch republic was as diversified in its regions — or perhaps even more so — than many a great country. One of the merits of these regional studies is that they have clearly demonstrated the existence of these differences, often within remarkable short distances. So these studies do presume the existence of many socio-economic (as well as cultural?) landscapes, overlapping the administrative boundaries, yet notwithstanding these complications, three main topics can always be discerned in the composition of these studies: one or more chapters on population, a chapter on the occupational structure of that population and chapters treating its means of livelihood. The chapter on occupations holds an essential position in this programme. By analysing, on both regional and local levels, which parts of the labour force were earning their livelihood in the various trades and professions, some quantitative knowledge of the relative importance of the various branches of the economy can be gained. Of course this method would be seriously limited where very divergent capital intensive and capital extensive plants, farms, etc. existed side by side or where a highly mechanized sector could be discerned from a non-mechanized one. But on the whole this was not so, and even in the windmill industry, capital input per worker was relatively low, while apart from the grinding or crushing most of the industrial process was manual. Therefore, by analysing the developments of the various sectors or branches of the economy and keeping in mind the importance of each for the labour force, new and especially more balanced knowledge on the inter-related situation of population, labour force and economic activities in the region can be gained. This does not mean that population variables were always determined by the labour opportunities or the other way round, but it is

evident that there are relationships, and that in the long run certain boundaries could not be crossed.

If the results of the research on the population developments of the four regions are taken together, two great regions can be discerned: Northern Holland-Friesland (north-west) on one hand and the Veluwe-Overijssel (east) on the other (see map). In the north-western region something like a population explosion during the 16th and the early 17th Century can be observed. Furthermore a similar explosion took place in southern Holland, with the effect that in the total Holland-Friesland area the number of inhabitants rose from about 350,000 to 1,000,000 between ca. 1500 and 1650. But this changed completely between 1650 and 1750, when the loss of 120,000 inhabitants in this region has to be taken into account. While the population growth before 1650 seems more or less regularly spread over the various regions, cities and countryside and through the period, the losses after about 1650 or 1670 were not uniform.

The population decline probably started soon after 1650 in Northern Holland and Friesland. It reached its greatest intensity in Northern Holland in the first half of the eighteenth century. Around the middle of that century a new phase began, which showed opposing tendencies of stagnation, further decline, but also of renewed, if slow, growth. In Friesland, the decline halted earlier, somewhere in the first half of the eighteenth century. The second half of that century showed significant renewed growth there. As far as southern Holland is concerned, our knowledge of population developments in the countryside during the period 1650-1750 is still far from satisfactory, but all indications are that the most reasonable hypothesis is population stagnation. The cities in southern Holland experienced opposing tendencies; at first there was in all likelihood a further but not explosive growth until about 1680, but then in some cities like Amsterdam and The Hague, stagnation prevailed. In many other cities, like Haarlem, Leiden, Delft, and in all probability Rotterdam too, however, a very sharp decline lasting until about 1750 can be observed. After the middle of that century stagnation or a very small decline was the general rule in the Dutch cities, with the notable exception of the city of Rotterdam, where the population rose again.

If we look again more closely at Northern Holland and Friesland, we see that further differentiation between subregions has to be made. In Friesland the population decline after 1650 was far from general. In fact it was most evident in the western and south-western parts of the province, i.e. in the regions bordering on the Zuiderzee. In the eastern part (De Wouden), on the contrary, the evidence points to steady population growth, even in the period 1650-1750. In this respect this region probably belongs to a different pattern of population development, characteristic of the eastern parts of the Netherlands, as will be stated later. In Northern Holland the population decline was fairly general, with the notable exception of the



Zaanstreek, the oldest and most industrialized country region of the Netherlands. While in the Zaanstreek a further population growth from about 24,000 to 28,000 occurred between 1650-1750, the number of inhabitants in the remaining parts of Northern Holland declined in that period from about 185,000 to about 100,000. More severe was the decrease in the number in the northern part of this region (West-Friesland), where it was halved (from about 12,000 to 60,000). At the local level the decline was often even more severe, as can be demonstrated from the number of inhabitants of the well-known city of Enkhuizen, with nearly 21,000 inhabitants in 1622 and less than 7,000 in 1795. During the second half of the Eighteenth Century the developments were reversed: now the Zaanstreek showed a rather sharp population decline, which continued during the period of French domination (1795-1813); in the middle areas numbers were more or less stagnant; in the northern half (West-Friesland), there was population growth again, although it was small. Much greater was the population growth after 1750 in the Province of Friesland (135,000 in 1744; 174,000 in 1815). Taken together, three periods can be clearly distinguished in the population developments in the north-western region of the Netherlands:

- 1500-1650: a general and rather steep population growth;
- 1650-1750: at first opposing tendencies of small further growth, stagnation and the beginning of decline can be discerned; after 1680 decline - sometimes disastrous decline - can be established;
- 1750-1815: in the most northern parts (Friesland and West-Friesland) renewed growth predominated; more to the south (i.e. in the vicinity of Amsterdam) lasting stagnation or even decline was the general rule; the period of the French occupation here in particular saw a further decline in the number of inhabitants.

If we turn our attention to the eastern regions (Veluwe and Overijssel) quite different developments can be traced. Before 1675 there are no sources on which we can calculate a population figure for the whole Province of Overijssel, but on the subregional and local level, there are enough data from the end of the Fifteenth Century to make a reasonable estimate. Around 1475, the total number of inhabitants was about 53,000. Notwithstanding serious devastations, especially in the most eastern sub-region (Twente) during the Eighty Years War (1568-1648), this number had grown to 71,000 in 1675. Between 1675 and 1748 population growth enormously accelerated (122,000 inhabitants in 1748), while during the second half of the eighteenth century it slackened off again (134,000 inhabitants in 1795). On the whole the developments seem to be more or less opposite to those in the north-western and western parts of the Netherlands. In the east there was quiet growth before 1675, and after 1750, and something like a growth explosion between

1675 and 1750, when there was a serious population decline in western and northern parts of the country. Looking more closely, however, at the subregional situation we can see that the tremendous growth between 1675 and 1748 took place especially in the most eastern part of the province (Twente), where the population increased from 18,000 in 1675 to 49,000 in 1748. Elsewhere in the province the increase was more moderate (Salland: 23,000 to 35,000; Vollenhove: 10,000 to 13,500; the three Yssel Cities: 20,000 to 25,000).

In the other eastern region which has been studied (the Veluwe), the population increase seems to have been regularly distributed over the period between 1500 and 1800 (1526: 36,000; 1650: 41,000; 1749: 54,000; 1795: 66,000). But here too the growth during the 16th and the first half of the 17th century was on a more modest scale (0.10% on average per annum) than during the period 1650-1750 and 1750-1795 (0.29% and 0.42% on average per annum). Over the whole period there is a remarkable resemblance between the population growth in the Veluwe and in the adjoining area of Overijssel (Salland), and this was the same as in the eastern parts of Friesland (De Wouden). So it would seem that the demographic trend in the Veluwe and Salland areas is roughly characteristic of the sandy soils in the centre and east of the country, insofar as the latter underwent the normal economic developments of a sandy soil area. Where the population developments in such sandy eastern areas followed an altogether different pattern (as in the most eastern part of the country, Twente), this can be explained by economic developments quite different from those in the other sandy areas, as will be stated below.

A last remark still has to be made on a tendency in the population development of those cities and villages in Overijssel and the Veluwe which border directly on the Zuiderzee. It is striking that in the period 1650-1750, when in Northern Holland and south-western Friesland the populations bordering on the Zuiderzee were so seriously in decline, the number of inhabitants of the similar Veluwe and Overijssel municipalities was also stagnating or declining. The population of the Veluwe Zuiderzee harbour, Harderwijk, declined in that period probably by about 20%. Analogous developments can be seen in Hattum, Kampen, Vollenhove, Kuinre and Blokzijl, all of which are situated on or near the Zuiderzee.

From a survey of our present knowledge of the population in Holland, Friesland, Veluwe and Overijssel the following conclusions can be reached:

1. In Holland and Friesland there was a strong population increase during the sixteenth and the first half of the seventeenth century;
2. Between 1650 and 1750 the tendency in the whole region around the Zuiderzee was at best population stagnation, but mostly decline or very severe decline;

3. In about the same period (let us say between 1680 and 1750) there was also a very marked decline of population in the industrial cities in Holland (Haarlem, Leiden, Delft and even in Rotterdam);
4. After 1750 population growth occurred in the north (in Friesland, but on a smaller scale probably also in West-Friesland (i.e. part of Northern Holland) as well as in the most southern parts of Holland (the delta region around Dordrecht and Rotterdam). This last development was the geographical continuation of a pattern predominating in the adjoining regions in the south (i.e. the Dutch province of Noord-Brabant and the Belgian provinces). In interlying central parts of Holland, stagnation and even decline was common till 1815;
5. On the sandy eastern soils slow, but regular population growth seems to have predominated during the whole timespan of the three centuries. After 1650 this growth was a little faster than before that date;
6. Two regions stand out because of their quite divergent development. In the west the Zaanstreek, which did not exhibit the normal decline pattern between 1650 and 1750, but which underwent further growth until about 1730. In the east Twente, where in the period 1675-1750 the population growth far exceeded the normal eastern pattern in a very amazing way. In both cases, however, this divergent development can be explained in connection with the population decline elsewhere in the same period. As will be stated below, the divergent developments are in a sense to be considered as the reverse of the secular depression and belong to it.

We shall not discuss the questions about the complicated and little known demographic mechanisms that brought about these shifts in place and in time. The main problem is to know how this population earned its livelihood and to what extent changes in the means of subsistence may have influenced these population developments. To give an idea of this situation, the most important and complete data on the occupational structure in the four regions have been summarized in Table 1.

Not only in Northern Holland but in the other provinces too the percentage of the labour force which was engaged in agriculture was a minority. In Friesland, the Veluwe and Overijssel the normal level at that time seems to be about 45%. In Northern Holland it was even as low as 35%. This percentage is certainly lowered by the level of urbanization and the existence of industrialized rural areas, but leaving the cities and these areas out of our data, we find in the agricultural countryside levels of employment in agriculture (and fishing) from 54% in Northern Holland to 66% in the Veluwe. It is also better to leave out of this picture some subregions such as the Veenweidestreek in Friesland and Vollenhove in Overijssel. In the Veenweidestreek, national and international shipping

TABLE 1.

THE OCCUPATIONAL PATTERN (%)⁵

	Agriculture	Industry	Trade commerce	Other occupations	Unspecified labourers
A. TOTAL					
Northern Holland, 1811	35	29 (38)	16	9	11 (2)
Friesland, 1749	44	27	18	9	2
Veluwe, 1749	47	27	17	6	3
Overijssel, 1795	46	36	12	5	2
B. CITIES					
Northern Holland, 1811	17	33 (43)	25	12	12 (2)
Friesland, 1749	5	45 (49)	27	17	6 (2)
Veluwe, 1749	7	36 (51)	26	13	17 (2)
Overijssel, 1795	13	49	23	14	1
C. COUNTRYSIDE (without D)					
Northern Holland, 1811 ^a	54	17 (25)	12	7	10 (2)
Friesland, 1749	62	19	14	5	—
<i>Kleiweidestreek</i>	60	18	16	5	—
<i>Veenweidestreek</i>	49	20	25	5	—
<i>De Wouden</i>	66	20	11	4	—
<i>Kleibouwstreek</i>	69	17	9	5	—
Veluwe, 1749	66	22	6	2	3
Overijssel, 1795 ^b	60	23	11	4	2
<i>Salland</i>	71	18	8	3	0
<i>Vollenhove</i>	34	38	17	5	6
D. INDUSTRIALIZED AREAS					
Zaanstreek, 1811	11	53 (65)	14	8	14 (2)
Twente, 1795	44	43	8	3	2

^a without Zaanstreek^b without Twente

held a strong position in the occupational structure of the villages. Vollenhove was a region where peat digging was very important and in connection therewith shipping, ship-building, rope making, etc. In the predominantly agricultural regions of the north and the east, we find percentages for employment in agriculture somewhere between 60 and 70, while Northern Holland stands out with a low 54%.

The professional structure of the cities is remarkably uniform in all the regions studied. The only astonishing exception seems to be the cities of Northern Holland with a share of agriculture as high as 17%. In fact

⁵ Comment on the table, see Appendix I.

this is not a true picture because some cities had an extensive area of countryside within their boundaries which was almost exclusively agricultural (e.g. parts of drained lakes like the Schermer and the Purmer) or else was settled with a fishing community (Volendam). If we include this complication and that of the group of « unspecified labourers » (see comment on Table 1), we can see that as a rule a city population earned its livelihood for about 50% by handicraft industry, 25% by trade and traffic, and 15% by other professions, mainly services.

In the countryside outside the industrialized areas a proportion of about 20% of the labour force engaged in (handicraft) industry is found everywhere. In trade and traffic the differences are somewhat greater: they are distinctly lower in the sandy areas (Veluwe, Salland and Twente 6 to 8%) than in the regions abounding with water, where the normal level seems to be between 10% and 12%. The causes for the divergent percentages in Vollenhove and the Friesian Veenweidestreek are also partly responsible for those of the adjoining region of the Kleiweidestreek.

It is not by chance that the other occupations, mostly of a service type, reach a level as high as 9% in Northern Holland and Friesland, while they account for only 6% and 5% in the Veluwe and Overijssel. The more advanced character of the maritime communities compared with the eastern sandy-soil regions is clearly demonstrated by a closer survey of the countryside: against 8%, 7%, 5%, 5%, 5%, and 5% in Zaanstreek, Northern Holland, Kleiweidestreek, Veenweidestreek, Kleibouwstreek and Vollenhove we find 4%, 3%, 3%, and 2% in De Wouden, Salland, Twente and the Veluwe. Another striking difference occurs between Northern Holland and Friesland, both with 9%; in Friesland it was concentrated mostly in the cities (17%), but in Northern Holland on the contrary it was much more dispersed through the countryside (7%).

The differences between the two industrialized rural areas were not only limited to differences between the trade-traffic and the service occupations. The Zaanstreek was completely industrialized. About 60% or more of the labour force earned its livelihood in industry and only slightly more than 10% in agriculture. The occupational structure there was quite the opposite of that in an agricultural region. In Twente, however, agriculture and industry had an equal share in employment. This is fully in accordance with the fact that the hamlets were nearly completely agricultural, while the textile industry concentrated itself above all in the villages and small towns of Twente. Nevertheless that it was a real rural industry supplying a meagre livelihood for this poor and overcrowded region can be deduced from the fact that it was a very one-sided industry (textiles, i.e. linen) and that even the towns were very small, nowhere exceeding about 2,000 inhabitants. The very low percentage of the so-called service occupations testifies to the poor and underdeveloped character of that society.

Having established the relative importance of each branch and of the main industries for employment in the region at a certain date, we have tried to widen that knowledge, especially with regard to developments over time. This can be done by using the following information:

1. Other occupational censuses. In Friesland more information could be gained from the incomplete censuses of the years 1511 and 1796. In Holland, a source dating from 1514 makes it possible to get an idea of the most important means of subsistence in every town and village in that year.
2. Local sources recording occupations of the inhabitants.
3. Data on the number of industrial settlements, paper mills, saw-mills, ship-building yards, salt works, brick yards, breweries, and also of fishing boats, weaving looms, the number of farms, the extent of arable and pasture farming, the growth of labour-intensive crops, and so on.
4. Quantitative data for the various trades, crafts, industries to be found in the sources as well as in the existing literature.

As a result of this more extensive knowledge of the relative importance of the various sectors of the economy for the existence of the population, a better understanding of the impact of each on population developments could be gained, as well as interesting insights into the connections between the various means of subsistence. This requires not only detailed knowledge about agriculture, its character, productivity, fiscal burdens, the prices of products, of land and leases, landownership, the size of family and hired labour, the size of cattle herds, the relationship between arable, pasture and waste land, the importance of various crops, property and lease, land clearance and drainage activities, but sometimes also necessitates rather detailed research into the structure and development of such different branches as the textile industry, international and national shipping industry, fishing (inland fishing, coastal fishing, Zuiderzee fishing, sea fishing and whale hunting), shipbuilding, rope making, canvas weaving, salt refining, biscuits baking, bleaching, brewing, chalk burning, brick and tile working, timber trade and sawing, paper making, oil pressing, and peat digging. If we put together the data to discover the main trends of development, the following picture emerges.

All over Europe the 16th and first half of the 17th century was a relatively prosperous time for agriculture. The continuously rising price levels of agricultural commodities increased the value of land, stimulated the intensification of agriculture and caused higher levels of productivity. This situation was of course most keenly felt in the west and the north of the country, where the economy traditionally had been most market-orientated.

Much energy and inventiveness was used there to improve land by better water regulation systems and techniques for water control. In Northern

Holland especially this led to extensive draining activities, and by reclamation of both lakes and sea more than 90,000 acres of new land were added to the cultivated area in this region. The rural economy in the west and the north became wholly a money economy. Livestock farming specialized more and more in products for the market: butter and cattle breeding in Friesland, cheese and (later?) also wool in Northern Holland. This last region had also an important function in the grazing of imported cattle from such distant regions as Holstein and Jutland to be slaughtered for the Dutch urban population. In the neighbourhood of Amsterdam, the farmers specialized in milk production, and delivered their own milk in the streets of the city. Other signs of more intensive husbandry in pasture farming in this period before 1650 are to be found in the growing habit of manuring meadows as well as in the trenching of pasture land. In the same period new types of farm houses and buildings originated which were better adapted to specialized farming.

There are also data indicating the existence of very high yields even by the end of the 16th century. The same drive for intensive husbandry characterized by a large labour input, heavy manuring, the decline or even complete disappearance of fallow in the rotational system and high yields per acre can be observed in the birth of horticulture in the first half of the 17th century. It is probably in this branch of farming that the Dutch have contributed most to the development of agriculture. The influence of market conditions on agriculture is also clearly shown by the cultivation of commercial crops like flax, cole seed, rape seed, hemp and madder. The farmers could do this without endangering their own nutrition, or that of the fast-growing population, because of the ever-growing use of imported cereals.

Dutch trade, especially with the Baltic, the primordial place of Amsterdam in the international corn market, the excellent inland traffic system, the rise of Dutch merchant shipping, the development of a new type of freight carrier (the *flute*), the establishment of an internationally famous industry for ship-building and rope and sail making, the very important timber trade, timber shipping and sawing, the flowering of industries producing goods like refined salt, bricks and tiles, which could be used as ballast wares on the international shipping routes, the rise of agricultural specialization in dairy farming, horticulture and the cultivation of commercial crops, the population boom, are all then interconnected.

In the north-west, fishing and shipping had held an outstanding position in the occupational structure since the late Middle Ages. In many parts of Northern Holland the poor natural circumstances did not provide the population with a sufficient livelihood from agriculture, although Northern Holland at that time was the most densely populated area, with one third of the total population of Holland around 1500. The most important means of subsistence after agriculture was without doubt fishing, and for some

subregions it was the most important. Fishing includes not only the well known fishing for sea herring, but also coastal fishing and fishing for freshwater fish in the lakes and on the Zuiderzee. During the 16th century inland fishing was probably still as important as sea fishing. Due to a change in climatic conditions, the fishermen of the northern isles went over from fishing to shipping around the middle of the 16th century. Later, West-Friesian shipper and sailors also took a major part in the shipping trade, which grew enormously during the last decades of the same century. From that time shipping and fishing were definitely main occupations in the north-west area (Northern Holland as well as parts of Friesland). Consequently the share of agriculture in the occupational structure in the 17th century was much less than in 1800. Taking into account the number of inhabitants and the possibility that around 1650 farming was slightly more intensive than in the second half of the 18th century, in the southern half of Northern Holland (Noorderkwartier) from about 1625 until 1650 less than 20% of the male labour force was engaged in agriculture as its most important means of subsistence, compared with about 22% in 1750 and 28% in 1811. In the non-industrialized countryside of this region, the share was probably about 30% around 1650, against 47% (fishing included) in 1811. The others were engaged in non-agricultural activities. It is probable that in certain parts of Northern Holland, as in the northern isles and in the region between Hoorn and Amsterdam, in the first half of the 17th century nearly as much as 50% of the male labour force was directly employed in sea shipping and fishing. At the same time these circumstances stimulated many other industries, which were directly or indirectly connected with them.

In the period before the middle of the 17th century the situation on the mostly sandy soils of the eastern, Netherlands was quite different. With the exception of Vollenhove — itself not a part of the sandy soil area —, where already in the first half of the 17th century peat-digging and its export to Holland was very important, agriculture wholly predominated. The agriculture, however, was of a more primitive type than the highly commercialized farming of the western and northern areas. On these light sandy soils the farmers wrestled with the same problem as many of their European colleagues, a manure deficiency. The arable land was fertilized with a mixture of manure and sods of turf or heath. The sods were cut from the commons, which also served as very extensive grazing grounds for the cattle. Hence the arable land could not be expanded above a fixed proportion of the common waste (about 1:3 to 5). So the need for manure kept intact the large area of commons and limited the area of the arable lands, while at the same time the relative shortage of manure prevented intensive husbandry on that arable land. So rotation systems relying on the use of the fallow were normal, and traditional rye cultivation predominated. However, there were some agricultural innovations in the east. In the Veluwe, during the

period 1550-1650, buckwheat was introduced on the higher lands. Buckwheat had the advantage that it could be grown as an unmanured last crop in the rotation after one or two rye harvests. This was very important in view of the continual lack of manure. Buckwheat cultivation had the added advantage that it suppressed the masses of weeds which accompanied the cultivation of rye as a single crop. Thus the expansion of buckwheat cultivation had a multiple effect: the same amount of manure was used more efficiently, the harvested crop was augmented by adding buckwheat where formerly fallow had been the rule, and the yield of the rye harvest was improved.

A gradual, if small, clearance of land and the introduction and spread of such novelties as buckwheat, permitted the steady growth of population on the sandy soils before the middle of the 17th century. In the very eastern part, Twente, a quick recovery took place with the ending of the continuous war devastations of the closing decades of the 16th century and the early 17th century. Nevertheless this grain-producing area would have been hit by the secular decline of grain prices, which began after the middle of the century, and further population growth would probably have been seriously hampered, had no new means of subsistence been developed. Profiting, however, from their very competitive wage-levels and the serious difficulties which beset important branches of industry in Holland at the same time, two important rural industries with a high intensity of labour gained a hold in the east: the paper industry in the Veluwe and the textile industry in Twente (and to a smaller extent in the Veluwe). In agriculture the declining grain prices favoured the rise of labour-intensive tobacco cultivation, which gained enormous importance during the period 1650-1750, when grain prices remained depressed. All three forms of enterprise were practised on a family basis, and made nearly exclusive use of family labour. The linen weaving in Twente was an occupation of the poor, and the tobacco was cultivated essentially by very small farmers. In Twente the linen industry stimulated the cultivation of flax, which is also a labour-intensive crop especially when it is converted into yarn. In all these highly labour-intensive enterprises, every family worker could be put to good use and children were more of a blessing than a burden. Thus in the east the population growth even intensified after the middle of the 17th century.

In the west and the north the development took a different course in the second half of this century. The leading sectors, fishing and shipping, underwent serious setbacks. Freshwater fishing on the Zuiderzee, in the lakes and in the canals had nearly totally disappeared in comparison with its enormous extent in the early 17th century. An important reason for this disappearance were climatic changes on the Zuiderzee, which caused the water to turn brackish. To keep the brackish water off the land, the water works and the water regulation systems underwent further refinements, but this proved to be detrimental to many species especially among the

migratory fish. In addition, the extent of the inland fisheries greatly declined as the lakes were drained. Sea fishing also underwent serious problems, as can be seen from the Soundtoll registers which show an enormous decline in Dutch herring exports to the Baltic area. On the home market, too, the sale of salted fish, as well as freshwater fish gradually decreased, probably owing to a change in eating habits, and perhaps the price of fish became less competitive in a period of declining grain prices. Another cause can be found in a decline of the average size of fishing catches, which has been put at about forty last per ship in the first half of the 17th century against thirty in the 18th century. Mercantilist measures also stimulated the national fisheries of other countries. All these effects taken together resulted in difficulties for the once famous Dutch sea fishery so that it declined after the middle of the 17th century. In Northern Holland — where this decline was most keenly felt — the number of herring boats decreased from about 270 in the decades before 1650 to about 200 around 1700, to less than 100 in 1730 and less than 75 after 1750. In its wake many industries, like ship building, sail and rope making, net knitting, anchor forging, salt refining, cooperages, timber trade and sawing were also hit.

More mysteries still surround the development of Dutch shipping from the middle of the 17th century. As far as can be judged from the number of Soundtoll-passages, Dutch shipping seriously declined in the period 1650-1750. But the printed edition of the Soundtoll also contains some indications that it was the average number of passages per ship rather than the actual number of Dutch ships passing which declined. This means that the Dutch merchant fleet was either more idle or else more engaged in trade on routes other than the Baltic. There are indeed clear indications that merchant ships were used alternately for freight carrying and whaling, which caused an enormous increase in the number of ships from about 1640 until 1665, but suffered great ups and downs mostly owing to the wars, and did not reach its maximum of sailing vessels before the 1720s, by which time at least most of the crew was made up of foreign sailors from the north-western German isles and shores. Whether or not there was a decline in Dutch shipping, it is evident that there was a serious decline in the number of Dutch sailors. From the late 17th century on, there is an increasing number of complaints about a manpower shortage for the fleet in war-time. This perfectly fits in with the sharp population decline which can be observed after middle of the 17th century everywhere around the Zuiderzee, that is to say in the very region where formerly thousands of sailors could easily be recruited.

It is evident that the decline in fishing, and probably to a certain extent in shipping, too, could not remain without consequences for industry, demand on the home market and so forth. The ship-building industry and the other industries connected with it might be supposed to be the first victims, yet

at the first glance this seems not to be true, for we know that the famous ship-building industry along the River Zaan did not decline before the second quarter of the next century. But the impression of a thriving ship-building industry which it gives, may be fallacious. Leaving aside the possibility that a growing number of foreign orders may have compensated to a certain extent for the declining home demand, we know that before the end of the 17th century the formerly thriving ship building industries in the cities of Hoorn, Edam, Haarlem, Rotterdam (and Dordrecht?) wholly or nearly wholly collapsed. Unfortunately our knowledge of the Amsterdam ship-building industry is still next to non-existent, but we must treat seriously the suggestion that large parts of this industry in the Dutch cities was destroyed, leading to a concentration, perhaps on a smaller scale, in the countryside along the River Zaan. In this region, favoured by its lower wage level, its very suitable geographical position and shape, the proximity of the Amsterdam timber market, and by the presence of the most important Dutch timber-sawing industry, ship-building could maintain its position, while in many other places it dwindled away.

In a way this process of ruralization of trade and industry, resulting in all probability from the impact of secular stagnation in combination with the very high wage levels in Holland, was a more general phenomenon. A general trend can be observed of a movement of economic activity away from Holland toward outer districts with a lower wage level or, where this was not possible — as in the case of the ship-building industry — from the cities in Holland to the countryside. In the same way textile manufacture withered away in Haarlem and Leyden, whilst it sprang up in the countryside of Twente and North Brabant. Delft pottery did the same, while this industry thrived in Friesland and other places. Biscuit baking was being transferred before the middle of the 17th century from the North Holland countryside to places outside the borders of Holland. When in the second half of the 18th century Dutch shipping through the Sound was increasing in absolute numbers again, it was the Friesian shippers who profitted most from the new opportunities.

To make matters worse, the countryside in Holland and Friesland became progressively more severely depressed after the middle of the 17th century. For a number of reasons, of an economic, natural as well as political character, agriculture in the Holland-Friesland area was in all probability much more severely hit during the period of secular depression between the mid-seventeenth and eighteenth centuries than in the east of the country. The secular depression in agriculture brought about a decline in purchasing power in many parts of the European countryside, and it cannot have failed to do so in Holland and Friesland. This situation must have had a depressive effect on many industries, trades or handicrafts, and often customers postponed their purchases or even omitted them. In any case the high quality products

of urban industries could so easily be displaced by cheaper rural products of poorer quality, as can be seen in the case of textiles.

Contrary to the widespread view that the secular depression was above all a depression in arable farming caused by the steady decline of cereal prices until about 1740, it can be shown that the prices of butter and cheese, which formed the basis of farming in Friesland and Northern Holland, fell at least as much as cereal prices did. At the same time the States (especially of Holland) were in desperate need of money as the result of the many wars in the second half of the 17th and the beginning of the 18th century. In the worst case, Holland, the burden of taxation, even on agriculture, became greater in absolute terms, and in the best case, Friesland, it did not decline with agricultural prices and income and so became relatively more oppressive.

In this grave situation nature itself turned on the Dutch farmers. Three times in the 18th century (1714-20; 1744-54 and 1769-72) cattle plague brought havoc to the herds. In many cases the losses were as high as eighty or ninety percent in a year. Many farmers were so unlucky as to lose their complete cattle herd two or three times in a period of ten years. During the third and most mild attack in Holland alone, more than 185,000 cattle died from plague between April 1769 and October 1772, as much as 80% of the normal number of the total cattle herd. Most severe was the plague in the years 1744-1754. In the drained lake of the Schermer more than 11,500 cattle died between 1744 and 1752, that is to say as much as two and a half times the total cattle herd. In a Friesian community not less than 2,554 head of cattle out of a total number of 2,844 died between 10 December 1744 and 1 May 1745.

But cattle plague was not the only scourge from heaven. In 1732 it was discovered that the pile or seaworm (*teredo navalis*) had destroyed the defence system against the sea and thereby endangered the very existence of whole provinces. At enormous cost the sea dykes, which at that time were still made of wooden timbers, had to be replaced by the now normal stone cover and this demanded great amounts of money from the owners and occupiers of land. A further deterioration of the relation between the level of the sea to the land in the first half of the 18th century has also to be taken into account. There are indications that the sea level rose, which meant more difficult circumstances for profitable farming (higher costs for the regulation of the water level, shorter dry summer period, more weed growing in the meadows). The whole complex of worsening conditions for agriculture in the period 1650-1750 can be understood from the continuous drop in lease-prices, the enormous drops in property prices, the arrears in the payment of taxes, the signs of a more extensive husbandry, the growth of the average farm sizes caused by the withdrawal of farmers, the abandonment of numerous small farms by the owner-occupiers with the resulting appearance of a type of « *Wüstungen* ».

During the second half of the eighteenth century agriculture recovered from the blows inflicted before about 1750. In some regions like Friesland it even became a period of prosperity. This cannot be said of Dutch industry in this period, most branches of which dwindled further. Even the poor rural textile industry in Twente had difficulties, its wage levels in its turn being too high for new competitors from Silesia, Ireland and Scotland. But the real breakdown of Dutch trade and industry only took place at the time of Napoleon, when almost the entire Dutch economy collapsed or disintegrated with the sole exception of agriculture. Our knowledge, however, of the Dutch economy during the first half of the 19th century is still too meagre to allow us to set the developments of the late 18th century in their right secular perspective.⁶

⁶ The *A.A.G. Bijdragen* are sent free of charge to scientific institutions and to scholars. Requests should be addressed to the publisher of *A.A.G. Bijdragen*, Department of Rural History, Agricultural University, De Leeuwenborch, Hollandseweg 1, Wageningen, the Netherlands. Proposals to exchange the *A.A.G. Bijdragen* on a reciprocal basis free of charge may be sent to that address. The numbers 1-11 and 13 are out of print.

APPENDIX I.

SOME REMARKS ON TABLE I.

Sources:

1. A. M. VAN DER WOUDE, *Het Noorderkwartier*, p. 271 ff. The occupational structure of the whole of Northern Holland is constructed on the supposition that the occupational structure in the West-Frisian cities was identical to that in the cities of the Noorderkwartier and that the occupational structure of the West-Frisian countryside was identical to that of the countryside of the Noorderkwartier outside the industrialized Zaanstreek (see *Noorderkwartier* Table 5.5). On this supposition the occupational structure can be reconstructed with the aid of the data in Tables 2.11 and 2.18.

2. J. A. FABER, *Drie eeuwen Friesland*, p. 99 ff. and table III.2.

3. H. K. ROESSINGH, «Beroep en bedrijf op de Veluwe in het midden van de achttiende eeuw, *A.A.G. Bijdragen* 13 (1965), p. 185 ff.

4. B. H. SLICHER VAN BATH, *Een samenleving onder spanning*, p. 125 ff.

The comparability of the data is limited, as is the accuracy of the data which is why they are presented as percentages. In Northern Holland we have at our disposal the occupations of the male population of the age of 21 years and older. In the other regions we have the occupation of the head of the household, without distinction according to age or sex. Moreover, the years of registration are not the same. The greatest complication for comparability is to be found in the category "unspecified labourers", which reach relatively high percentages in Northern Holland, Veluwe and Friesland, but a very low one in Orevijssel. It is evident that this difference has only been caused by the system of registration. To obtain comparable data we tried to allot these labourers to other professional groups (in parenthesis). In his study Faber observed that the "unspecified labourers" in the Friesian countryside should be regarded as "agricultural labourers" (Faber, p. 100). Therefore their allotment in the classification scheme to "agriculture" is not placed in parenthesis. Their assignment in the Friesian cities, the Veluwe and Northern Holland is more doubtful. In Northern Holland they certainly should not to be allotted to "agriculture" (v.d. Woude, p. 273). As far as they can be allotted «(handicraft) industry» seems to hold the first place in job opportunities for this section of the labour force (v.d. Woude, p. 274). In the Veluwe the "unspecified labourers" are only a group of importance in the cities (Roessingh, p. 260). They have been classified under the heading "trade-traffic" by Roessingh. But comparison of the data in the four regions suggests that it is much more sensible to range them under "industry". The category "agriculture" includes "fishing", which was in the period, from which we have the data, only of minor importance, even in Northern Holland. The main occupations to be found under the heading "other professions" are: civil servants, clergymen, teachers, lawyers, notaries, medical professions, domestic servants, military men, etc.