

European Economic History in Recent German Historiography

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In the 19th century the great majority of German historians and political economists were engaged in supranational economic history research. It will be sufficient to quote only a few of the many names: A. Doren, who wrote an economic history of Italy in medieval times¹ and is an expert on Florentine history,² A. Schulte,³ H. Simonsfeld⁴ and E. Gothein.⁵

As nationalism increased in German Universities in the 20th century, German historians and political economists confined themselves more and more to national subjects only. And still even after World War II even famous researchers like Lütge and Bechtel still specialized in national themes. In their text-books on German social and economic history «*Deutsche Sozial- und Wirtschaftsgeschichte*» they only examine European aspects marginally. There is at present only one great exception in Western Germany: Herman Kellenbenz, who has dealt in many European languages with a great variety of social and economic problems pertaining to almost all important European countries as well as to South America. There are only two text books in Western Germany today that devote sufficient attention to supranational questions in economic history adequately. Husherr's and Kulischer's.⁶

¹ See A. DOREN, *Storia economica dell'Italia nel medioevo*, Padova 1936.

² See A. DOREN, *Studien aus der Florentiner Wirtschaftsgeschichte*, vol. I, «Die Florentiner Wollentuchindustrie vom vierzehnten bis zum sechzehnten Jahrhundert», Stuttgart, 1901.

³ See A. SCHULTE, *Geschichte des mittelalterlichen Handels und Verkehrs zwischen Westdeutschland und Italien mit Ausschluss von Venedig*, vol. I, 1900.

⁴ See H. SIMONSFELD, *Der Fondaco dei Tedeschi*, in «Venedig und die deutsch-venezianischen Handelsbeziehungen», 3 Volumes, 1887.

⁵ See E. GOTHEIN, *Die Culturentwicklung Süd-Italiens*, Breslau, 1886.

⁶ See H. HAUSHERR, *Wirtschaftsgeschichte der Neuzeit*, 3rd edit., Köln-Graz, 1960, and J. KULISCHER, *Allgemeine Wirtschaftsgeschichte des Mittelalters und der Neuzeit*, 2 Volumes, 1st edit., Munich-Berlin, 1928/1929; 4th edit., Munich, 1971.

After the introduction which deals with the phenomenon of « Grundherrschaft », Hausherr speaks of the economy of European towns and of trade in the late middle ages. In the long chapter on the 16th century he describes mining production, discoveries, capital companies in Southern Germany, price development and changes in agriculture. He next turns his attention to European mercantilism and to industrialization in England, France and Germany. But when it comes to the economic history of Mediterranean countries Hausherr is not an expert as he did not study Latin-language literature for his work. Kulischer dealt especially with the historical development of England, France and Germany, but devotes a great part of his work, too, to the history of Mediterranean countries. Let us now examine European literature on the middle ages.

I. EUROPEAN ECONOMIC HISTORY IN THE MIDDLE AGES.

In 1968 the Frankfurt am Main publisher S. Fischer published the 10th volume of its world history. This volume was written by Jan Dhondt (*Das frühe Mittelalter, Fischer Weltgeschichte, Band 10, 1968*). Dhondt examines the social mentality and structure in Carolingian times with new methods. He is interested in explaining the technical instruments of Carolingian life. A considerable part of the book is devoted to economic development between the 8th and 10th centuries and economy and society in the 10th and early 11th centuries. In dealing with them he shows great interest in relations between the feudal lords and their vassals.

At the Vienna Conference on history in 1965 a working party was set up as an international commission for research on the history of European towns. This commission work is divided in three sectors: *a*) International Bibliography of the history of towns, *b*) Maps of European towns and *c*) a Handbook which is intended to be a first step in the compared history of European towns. The first volume of this handbook was published in 1967.⁷ It consists of four parts: the most important diplomas for urban history prior to 1250 for Germany, Belgium and the Netherlands and prior to 1300 for the Scandinavian countries.

The book also contains a good introduction, an index of sources (but not for Belgium) and indices of special words and place names of localities.

The volume does not provide a complete knowledge of European urban history, but raises many important questions for historical research. Documents concerning the history of law are in the majority, while those concerning economic history take second place. However many facts have already

⁷ *Elencus fontium historiae urbanae*, edited by C. van de Kieft and J. F. Niemeyer, vol. I, prepared by B. DIESTELKAMP and others, Leiden publ. house, Brill, 1967.

been dealt with by Keutgen in « Sammlung von Urkunden zur städtischen Verfassungsgeschichte ».

Up to the present little research had been done on the economic basis of life under the « Imperator Sacri Imperii ». This gap has now been filled by Carlrichard Brühl.⁸

Since the beginning of our century German historians have shown great interest in the travelling king of the middle ages and how he satisfied his needs. Brühl has now completed this work with a wealth of sources and literature concerning Germany, France and Italy. Avoiding and refuting some exaggerated theories, he has succeeded in establishing many valuable facts.

The travelling king's economic basis was « Gastung » (hospitality). Before he arrived, the king sent a messenger to the town, « Pfalz » (palatinate), bishop's residence or monastery where he wished to be given hospitality. On the basis of available documents Brühl examines the period, structure, needs and organization of « Gastung » as well as conflicts with the people of the town, village, etc. On an average the king had about 1000 men in his suite; in the 12th century the king of France had only 300-350 followers. The king's « servitia » from the lists of the imperial estates (« Tafelgüter ») would only have been sufficient for 300 men. We have therefore to suppose that the king's « servitia » was not sufficient to satisfy the royal court's average daily needs. Brühl provides evidence of how « Gastung » developed from the king's stay in towns in Merovingian times to his stay in palatinates in the Carolingian and Ottonian era and finally, from the reign of Henry II on, to his stays in bishops' residences and monasteries. In Staufian times « Gastung » once more returned increasingly to the towns which, in Germany, became more attractive to the Emperor and kings as their wealth increased with the spread of trade beyond local boundaries. In Italy, on the contrary, towns had always been preferred as « Gastung » places by the German kings from the beginning to the end of the middle ages. The French king, however, was always restricted to his domains in the high middle ages. Whereas « Gastung » began to disappear in France in the 12th century, in Germany and Italy it continued to play an important role in the Empire until the 13th century. In Italy « fodrum » began (especially under Barbarossa) to take the place of « Gastung »; this was a consequence of the increasing monetary economy of the big cities of Upper Italy. Through the very advanced tax systems applied in the Italian communes Barbarossa succeeded in gaining large revenues from Italian taxes. Brühl believes that his monetary revenues from Italy reached the revenues of Henry II of England

⁸ CARLRICHARD BRÜHL, *Fodrum, Gistum, Servitium regis. Studien zu den wirtschaftlichen Grundlagen des Königtums im Frankenreich und in den fränkischen Nachfolgestaaten Deutschland, Frankreich und Italien vom 6. bis zur Mitte des 14. Jahrhunderts.* « Kölner historische Abhandlungen » 14/I. u. II., Böhlauerlag, Köln und Graz, 1968.

and surpassed those of Louis VII of France. But monetary revenues from Germany were very modest.⁹ It is a pity that Brühl does not examine «Gastung» problems in Spain, England and Eastern Europe in his book.

The book by Rolf Sprandel¹⁰ on iron production in the middle ages affords a truly European view. The author deals with iron production and iron trade between the years 500 and 1500 A. D., using published sources, some documents from archives and a great deal of international literature. Sprandel endeavours to connect perspectives of social and development history. He describes the correlations between iron mining, iron industry and the general development of companies. He applies the quantitative method of economic history successfully. In the middle ages there were iron beds in north-west Spain, in the Siegerland (north-west Germany) and in Styria (Austria) as well as in Lotharingia and central and east England.

Some technical knowledge had been preserved after the fall of the Roman Empire. In the middle ages the members of many classes of society undertook activities in the field of iron production: Cistercian monks, knights (especially in France and England), immigrants to towns, farmers, craftsmen (especially smiths) and, last but not least, noblemen. From the end of the 12th century, moreover, iron production also benefited from the close link between monetary economy, trade and production. The growth of trade (especially long-distance trade) fostered an increase in iron production.

In the third chapter Sprandel describes the development of iron production in some regions, such as Spain, Elba, Tuscany, Northern Italy, the Dauphiné, Normandy, Lotharingia, Wallonia, Eifel, Inner Austria, Germany, Central Sweden, England and Eastern Europe in the late middle ages. The organization and social structure of producers did not undergo any changes in the middle ages; newcomers could always start new enterprises. Now, however, as production costs increased, there was an economic concentration of production in some regions and the economic policies of the various states gained influence over the organization of production.

In Southern and Western Europe there was a boom in iron production in the 13th century. The 14th century was distinguished by a prosperous trend in the Alpine countries, while Normandy and England suffered from a depression. In the late middle ages, however, new regions of production appeared: north-west Spain and the Upper Palatinate (Oberpfalz) in the 14th century and other regions in Central Germany, Switzerland and Lotharingia in the

⁹ See HAVERKAMP, ALFRED, *Die Regalien-, Schutz- und Steuerpolitik in Italien unter Friedrich Barbarossa bis zur Entstehung des Lombardenbundes*, in: «Zeitschrift für bayerische Landesgeschichte» 29, München, 1966; see also DEIBEL, GERTRUD, *Die finanzielle Bedeutung Reichs-Italiens für die staufischen Herrscher des zwölften Jahrhunderts*, in: «Zeitschrift für Rechtsgeschichte (ZRG)», GA 54, Weimar, 1934, pp. 134-177.

¹⁰ SPRANDEL, ROLF, *Das Eisengewerbe im Mittelalter*, A. Hiersemann, Stuttgart, 1968.

15th century. In the late middle ages, in short, the countries of Central, Northern and Eastern Europe entered iron production.¹¹

The author believes that European iron production in 1500 amounted to 40,000 tons, 50% of which was accounted for by the German countries, 30% by Western Europe and 20% by Italy and Eastern Europe. Between 1400 and 1500 there was a 50% increase in production.

Analyzing the consumption of charcoal, Sprandel points out that there were marked regional differences and variations in time as regards costs, prices and proceeds. But the favourable market conditions for iron are generally found to have been enjoyed not by the producers, but by the owners of the ground and the merchants. Sprandel believes there was no capitalistic organization of enterprises. The « Hammermeister » was without a doubt the dominating figure.

At the end of this chapter I should like to mention a completely new subject of modern research; the role of the Alps in medieval history.¹² At the Lake Constance conference on the importance of the Alps in European history in the middle ages there were members of many branches of historical research from a number of European countries. They discussed questions regarding the historical role played by the Alps which is of interest not only to German but also to Italian, French, Austrian and other scientists. Here I shall mention only the social and economic lectures held on the island of Reichenau. Theodor Mayer spoke of the Alps as frontier between states and bridge between peoples in the European middle ages (*Die Alpen als Staatsgrenze und Völkerbrücke im europäischen Mittelalter*, pp. 7-14), while Hans Eberhard Mayer spoke of the Alps and the Kingdom of Burgundy (*Die Alpen und das Königreich Burgund*, pp. 888-1032), reaching the conclusion that the politics of the kings of Burgundy were influenced by the question of the western Alpine passes. In his lecture on the main features of political events in the Central Alpine region from the Lake of Constance and of Geneva to the Gotthard Pass between the 6th and 12th centuries (*Vom Bodensee und Genfersee zum Gotthardpass. Grundzüge des politischen Geschehens in Zentralalpengebiet vom 6. bis 12. Jahrhundert*, pp. 77-110), Heinrich Büttner investigated the beginnings of cooperative movements in the communes. The history of Rhaetia from the Carolingian era to the 16th century is dealt with by Otto P. Clavadetscher in *Flurnamen als Zeugnis ehemaligen Königsgutes in Rätien* (pp. 113-139) in which the author follows

¹¹ See THEODOR G. WERNER, *Die grosse Fusion der Zechen um den Rappolt in Schneeberg unter Führung der Nürnberger von 1514*, in: «Mitteilungen des Vereins für Geschichte der Stadt Nürnberg», 57. Band, Nürnberg, 1970, pp. 150-175.

¹² *Die Alpen in der europäischen Geschichte des Mittelalters. Reichenau-Vorträge 1961-1962* («Vorträge und Forschungen», edited by Konstanzer Arbeitskreis für mittelalterliche Geschichte, directed by Theodor Mayer, vol. 10), publ. house Thorbecke, Konstanz - Stuttgart, 1965.

the development of land distribution through an analysis of the names of plains bearing evidence of former royal ownership. In his lecture on the formation of property in Rhaetia (*Die Herrschaftsbildung in Rätien*, pp. 141-158) the same author speaks of the influence of external factors and the formation of association in agriculture. Giovanni Tabacco describes the formation of Savoyard power from the Carolingian era until the 14th century in his relation *La formazione della potenza sabauda come dominazione alpina* (pp. 233-243). It is to be hoped that at future meeting still more time will be devoted to economic and social questions connected with Alpine civilization.

II. EUROPEAN ECONOMIC HISTORY AND THE LATIN NATIONS.

One of the best experts on the 16th and 17th centuries is Hermann Kellenbenz. Articles by him on economic history — especially from the 16th to the 19th century — have been published in many historic and economic reviews in Europe and America. He has also written two volumes on two very interesting subjects of European importance. The first, published in 1958, deals with the economic and political role of the Sephardim.¹³ He speaks of the social and economic activities of this Hebrew minority in Spain, expelled because of its religion. The Sephardim had been successful merchants and entrepreneurs in Spain and Portugal and, after their expulsion from Spain, they brought their skills to Germany where they found a new home on the lower Elbe at the end of the 16th century.

Although they were Jews, the Sephardim had close connections with Christian civilization. They were well acquainted with economic possibilities and conditions and especially with those of the markets in which they operated. Their activities are linked with the economic history of Turkey, Italy, France, the Netherlands and, of course, Germany. They played important roles as bankers and merchants. After they emigrated from Germany, their place was taken by the Aschkenasim.

Kellenbenz's second book speaks of the farming of the « Maestrazgo » in Spain by the Fuggers.¹⁴ To prepare this volume of more than 400 pages the author spent many years working in the Fugger Archives and in the Spanish and Portuguese archives. He examines financial relations between the

¹³ See KELLENBENZ, H., *Sephardim an der unteren Elbe, Ihre wirtschaftliche und politische Bedeutung vom Ende des 16. bis zum Beginn des 18. Jahrhunderts*, in: « Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte (VSWG) », Beiheft 40, Publ. house Steiner, Wiesbaden, 1958.

¹⁴ KELLENBENZ, H., *Die Fuggersche Maestrazgopacht (1525-1542). Zur Geschichte der spanischen Ritterorden im 16. Jahrhundert*. Schwäbische Forschungsgemeinschaft bei der Kommission für Bayerische Landesgeschichte, Studien zur Fuggergeschichte, Ser. 18, Publ. house Mohr, Tübingen, 1967.

Spanish Court (representing the three Spanish orders of knight) and the Fuggers who farmed the revenues of the Spanish orders. We find payment to the knights of the orders of Santiago, Calatrava and Alcantara and transfers (in money and goods) to the clergy, monasteries, officials and other persons. Out of their revenues the Fuggers secured obligations given to the Emperor. All the Fuggers' pacts with the Spanish Crown referring to the «Maestrazgo» are reprinted.

In 1534 there were 429 «caballeros» of the order of Santiago and from this year on their number grew in spite of Charles V's wish to confine it to 300. The importance of these orders gradually decreased as Arabian expansion in the Mediterranean increased. The knights took no part in the discovery and conquest of America and membership in this order came to be merely a title with which the Spanish king rewarded services to the Crown.

After these publications by Kellenbenz, the famous Görresgesellschaft produced a volume on Spanish history.¹⁵ Two articles in this volume refer to economic history. Enrique Otte deals with the role played by Genoese merchants in Spanish-American relations in *Die Negersklavenlizenz des Laurent de Gorrevod. Kastilisch-genuesische Wirtschafts- und Finanzinteressen bei der Einführung der Negersklaverei in Amerika*.¹⁶

These merchants traded in corn from the revenues of the orders of Santiago, Alcantara and Calatrava, whose possessions had been incorporated by the Spanish kings at the end of the 15th century. After a period of direct administration the Crown gave the Almadén mines, which belonged to the order of Calatrava, to the merchant Alonso Guitérrez, who had to assure regular payments to Court. Guitérrez, who lacked capital, appointed the Genoese merchant Gasparre Centurione general collector for the three orders. From this trade, in which many Genoese merchants took part, he obtained corn and wheat which he exchanged for cargoes of slaves to be sent to America. Other members of the slave trading company lent capital to Emperor Charles V which the «Casa de Contractación» had to pay back out of American silver exports.

Some years ago Pölnitz published a biography of Anton Fugger;¹⁷ consulting many European archives, he succeeded in writing a truly European

¹⁵ «Spanische Forschungen der Görresgesellschaft», 1: Series: *Gesammelte Aufsätze zur Kulturgeschichte Spaniens*, ed. by Johannes Vincke, Aschendorff'sche Buchhandlung, Münster, 1965.

¹⁶ See VERLINDEN, CH., *L'esclavage dans l'Europe médiévale*, Bruges, 1955; and *Schiavitù ed economia nel Mezzogiorno agli inizi dell'età moderna*, in: «Annali del Mezzogiorno», 1963, III.

¹⁷ GÖTZ FREIHERR VON PÖLNITZ, *Anton Fugger*, 1. Band 1453-1535, 2. Band 1536-1543, Schwäbische Forschungsgemeinschaft bei der Kommission für Bayerische Landesgeschichte, Studien zur Fuggergeschichte Band 13 und 17, Publ. house Mohr, Tübingen, 1958 and 1963.

study. Ehrenberg and Strieder had already attempted to describe and interpret the personality of Anton Fugger, but not very successfully. It was only Pölnitz who began to search systematically all sources concerning the life of Anton Fugger and the many activities carried on by his companies throughout Europe. His work was facilitated by the existence of the « Fuggerarchiv » at Dillingen on the Danube, of which Pölnitz had been the director for many years. In 14 years he consulted more than 70 archives and libraries in a number of European countries with the assistance of 15 collaborators. Further sources concerning Anton Fugger are probably to be found in the archives of Prague, and Joachimsthal (Czechoslovakia), Neusol (Slovakia today), Budapest and Roumania. The richest merchant of Southern Germany in the 16th century, Anton Fugger was able, thanks to his commercial power, to gain also political influence, as well, especially at the Court of the Habsburgs in Vienna. For almost all their political and military enterprises the Habsburg emperors depended on the « Fuggerkontor » at the « Weinmarkt » in Augsburg. Anton granted credit for Charles V's battles against France, England, Tunis and Algier and also supported King Ferdinand I's enterprises against Hungary and Turkey. But it is also true that Anton Fugger would not have been able to exploit silver, copper, salt and tin mines or to establish international banking connections without the protection of the Habsburg emperors. It was therefore a question of mutual assistance and dependance between politics and trade.

But Anton Fugger was first of all a businessman, not a politician. Whenever possible he preferred political neutrality. In order to maintain business privileges he sometimes established trading contacts with enemies of the Habsburgs. As far as his politics were concerned, he was a Conservative, not at a matter of conviction but merely because he thought Conservatism was more favourable to trade. Thus in the « Reformation » conflicts in Augsburg he remained a Catholic and fought against the Lutherans, and in Transylvania he objected to social changes. But he had no respect for colonels and ambassadors who tried to involve him in religious wars, to which he much preferred peace.

Pölnitz has collected a mine of information, also for future research. Evidence of this is to be found in the lengthy appendixes in both volumes. Pölnitz's description is not systematical but chronological; the chapter headings refer almost exclusively to the number of years covered. But because so many different influences, interrelations, divergent lines, and so on pervade Anton Fugger's trading activities, readers who are not well acquainted with the 16th century may often be troubled, for there are many interruptions and digressions.

Theodor G. Werner, who emigrated to Latin America during the Third Reich, has published some very important treatises in German reviews. In

1961 he wrote two interesting articles in VSWG.¹⁸ In his work on Hans Tetzels copper works in Cuba he proved that Tetzels, who was a citizen of Nuremberg, brought European iron techniques to South America. The company's charter shows that Tetzels had financed his enterprise with the help of rich relatives and friends. In 1496 Tetzels married Ursula Fürer, the daughter of a Nuremberg copper merchant named Sigmund Fürer and his wife Anna Tucher. Fürer had ten daughters who (together with their husbands) had shares in the Cuba company. It was the copper trade that brought Tetzels to Seville, a town to which the Fuggers and other merchants exported mainly Hungarian copper. During his stay there, Tetzels established friendly relations with the Fuggers and Welsers and acquired an excellent knowledge of this trade.

Tetzels decided to start copper production in Cuba after rich copper mines had been discovered there and after the goldsmith Luis de Espinola had succeeded in making copper. From five hundredweight of ore Espinola obtained one hundredweight, *i.e.* 20% of copper. But this copper was no good for working as it contained too much sulphur. Nor did the attempts to produce copper made by the Flemish master Gaspar Loomen in Cuba prove any more successful (1540-1542).

Tetzels first went to Cuba in 1542 and experimented in melting copper, but without success. He was 24 years old at the time. He then brought ore from Cuba to Germany to find a process for melting copper that would be very malleable. He attempted this in Nuremberg where highly developed metallurgy existed. Once this problem had been solved, he returned to Cuba and, in January 1546, signed a contract with the Spanish Crown for the exploitation of the Cuban copper mines. He had to establish a private enterprise under his own responsibility and with his own workmen and capital. He was granted permission to exploit 10 mines of his choice. In 1546 he founded the mining company « zu Sant Jacob de Cuba ». Tetzels made a second voyage to Cuba in 1547, enlarging the copper mines with the help of some German immigrants he brought with him.

In his second work on European capital in Spanish-American enterprises in the 16th century Werner shows what a great influence European capital had on the discovery, conquest and development of America. For political reasons, however, these capital participations had often to be kept secret.

In the past it was very difficult to study the influence of European capital

¹⁸ WERNER, TH. G., *Das Kupferhüttenwerk des Hans Tetzels aus Nürnberg auf Kuba und seine Finanzierung durch europäisches Finanzkapital (1545-1571)*, in: « Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte (VSWG) » 48, October 1961, Ser. 3, pp. 289-328, Ser. 4, December 1961, pp. 444-502 the same author: *Europäisches Kapital in ibero-amerikanischen Montanunternehmen des 16. Jahrhunderts*, in: « VSWG » 48, March 1961, Ser. 1, pp. 18-53.

in archives. But since the « Archivo de Protocolos » of Seville — from 1930-1937 — published extracts of notaries' deeds referring to the Spanish colonial empire, we have a deeper knowledge of capital relations between Europe and America. Capital was provided by Spaniards of all classes, often not only in money, but also in merchandise and investment goods.

There were three kinds of capital participation:

- (a) in companies for the discovery and conquest of overseas countries;
- (b) in occasional companies founded in European ports for sea enterprises limited in time;
- (c) in companies for agricultural and mining production over an unlimited period of time.

These companies had to perform the following tasks:

- (a) make discoveries in the new world and trade goods;
- (b) trade slaves for metals and others goods;
- (c) distribute profits from the trade of merchandise and metals;
- (d) set up sugar mills and agricultural enterprises;
- (e) establish and operate mining enterprises.

Capital and credit were granted to investors in the following countries: Antilles, Venezuela, Columbia, Mexico, Peru, Chile, the La Plata region and Brazil.

In a third work¹⁹ Werner deals with the participation in the conquest of Rio de la Plata and the foundation of Buenos Aires of the Welsers of Nuremburg and the Fuggers of Augsburg.

For their expeditions to the new continent Portugal and Spain needed the capital of rich merchants and they showed a preference for entrepreneurs in the big Italian cities and in Southern Germany. When, in 1508, Juan Diaz de Solis was invited by King Ferdinand to undertake an expedition to South America to find a passage to Eastern Asia, he took with him merchandise from Nuremburg, *i.e.* metal products, haberdashery and copper and brass products.

In 1514 Portuguese seamen tried to find the passage to Eastern Asia with the help of the pilot Juan de Lisboa. A manuscript referring to this expedition was found in the « Fuggerarchiv » in Dilligen; it is entitled « Copia der Newen Zeitung auss Presilly Landt » (Copy of the New Journal from the Land of Brazil) (1515). This proves how great an interest the merchants of Southern Germany took in the new continent. Probably a great deal of the goods brought to South America by this expedition came from Southern

¹⁹ WERNER, TH. G., *Die Beteiligung der Nürnberger Welser und Augsburger Fugger an der Eroberung des Rio de la Plata und der Gründung von Buenos Aires*, in: « Beiträge zur Wirtschaftsgeschichte Nürnbergs », Band I, Nürnberg 1967, pp. 493-592.

Germany. But unfortunately we do not have any documents to prove the financial participation of German merchants in Juan Diaz de Solis's second expedition. Perhaps the sum of 60 ducats paid to Johann de Solis by the Fuggers' factory in Rome points to activities of this family in the new world.

Wernes assumes that the Fuggers also had a capital participation in the Magellan expedition (1519-1522). Southern German merchants participated in the Spanish expedition of Garcia de Loaisa to the Moluccas. The Fugger enterprise's share amounted to 10,000 ducats — 5,500 of which invested by private persons who were in touch with the Fuggers — while the Welser company only invested 2,000 ducats. The Spanish merchant Cristobal de Haro invested 2,000 ducats in this expedition. It is remarkable that the great majority of the sailors were Southern Germans. Only three of the ships got through the passage and reached the Moluccas; however they were captured by the Portuguese.

Most of the merchants investing in Sebastian Cabot's expedition to Rio de la Plata (1426-1430) were Italians; there were also, however, some Spanish and English merchants and several from Southern Germany. A German merchant in Seville, Lazerus Nürnberger, acquired shares for 680 ducats, Ambrosius Talfinger, the Welser's future factor in Venezuela, for 430 ducats and the consortium of Jakob Cronberger, Kasimir Nürnberger and Hans Brunberger of Southern Germany each had a share of 120 ducats; Brunberger was a goldsmith and a factor of the Fuggers. In this expedition the Fuggers were probably represented by merchants of Southern Germany. Between 1526 and 1530 ships of the Fuggers and Welsers had even reached Rio de la Plata. Merchants of Nuremberg and Augsburg played very important parts in Pedro de Mendoza's expedition (1535-1537). The Spanish Crown had arranged with Pedro that he should colonize the Rio de la Plata countries. The Welsers of Nuremberg and the Neidharts of Augsburg are known to have taken part in this expedition with a ship. Also present was Ulrich Schmiedl, the son of the mayor of Straubing (Lower Bavaria), who made a very interesting report on some expeditions to South America.²⁰

Spanish discoveries, trade between South America and Spain, the production of gold and silver and its effects on the trade and economy of European countries are efficiently dealt with in van Klaveren's text-book on the European economic history of Spain in the 16th and 17th centuries.²¹

²⁰ Ulrich Schmiedls *Reise nach Südamerika in den Jahren 1534 bis 1554*, edited by Johann Mondschein (Programm zum Jahresbericht der K. Realschule Straubing für 1892/1893), Straubing 1893, fol. 6 and 7. Mondschein used Schmiedl's original manuscript in the Staatsbibliothek Stuttgart for his edition. It was also translated into Spanish by EDMUNDO WERNICKE, *Derrotero y viaje a España y las Indias*, Santa Fé 1938. See also SCHOTTENLOHER, KARL, *Die Bayern in der Fremde*, München, 1950, p. 256 ff.

²¹ VAN KLAVEREN, *Europäische Wirtschaftsgeschichte Spaniens im 16. und 17. Jahrhundert*, publisher G. Fischer, Stuttgart, 1960.

III. TRADE HISTORY IN THE MIDDLE AGES AND IN MODERN TIMES.

As medievalists in Germany are still attached to political and ecclesiastical history, medieval publications on economic history are very rare. Often it is only what may be termed the « outsiders » of history, like Bartels, who appear as pioneers of medieval trade history. Secondly, as almost all the representatives of economic history are professors in the economic faculties of the German universities (where, I am sorry to say, the middle ages are not much in demand), research in the field of the economic history of the middle ages is neglected by German professors who, in the last decades, have shown a growing tendency to specialize in the economic history of the 19th and 20th centuries.

Bartels has returned to the great tradition of the last century when German historians showed a keen interest in the problems of Italian economic and trade history. He has included in his work on the history of pharmacy²² the results and methods of several branches of science and research, *i.e.* pharmacy, jurisprudence and economic history. Comparing the oldest orders of pharmaceutical law in France, Germany, Italy and Switzerland from the 13th to the 16th century, he discovers that 19 out of 20 articles are identical and that Nuremberg's pharmaceutical law depended on that of Venice. The explanation Bartels gives for this influence of Venice on Nuremberg's pharmaceutical law is that it was the result of a strong current of economic and cultural exchanges between the two towns. He finds evidence of this not only in modern Italian and German literature, but also in sources such as the trading books of Bartolomeo Paxi (Venice 1503) and Lorenz Meder (Nuremberg 1558) and in a number of public and private archives. He also succeeds in proving that some medical laws, such as the « Pestordnung » were taken straight from the original Venetian text and transferred to Nuremberg. Of course the fact that many inhabitants of Nuremberg studied at the university of Padua, which then belonged to Venice, had a considerable influence too.²³

Bartels believes that this juridical influence was due not only to brisk trade relations, but also to the similarity of the two towns' commercial law and economic policy which he ascribes economic and geographical conditions were alike. Here, however, Bartels fails to take one big difference into consideration: Venice had a trade monopoly, while Nuremberg granted freedom of trade. Thus it was different economic policies and geographical positions that led to similar attitudes and institutions in Venice and Nuremberg.

²² BARTELS, KARL HEINZ, *Drogenhandel und apothekenrechtliche Beziehungen zwischen Venedig und Nürnberg*, « Quellen und Studien zur Geschichte der Pharmazie », Ser. 8, publisher Govi, Frankfurt/M, 1966.

²³ See HOFMANN, HANS HUBERT (UNTER MITARBEIT VON H. HOFFMANN, W. O. KELLER u. K. L. LÖFFLER) *Eine Reise nach Padua, 1585. Drei fränkische Junker « uff der Reiss nach Italien »*, publisher Jan Thorbecke, Sigmaringen and München, 1969.

Whereas Bartels deals with an interesting chapter in the relations between Nuremberg and Venice, Kaltenstadler describes the great importance of the harbour of Trieste for Germany and Austria in the 18th century. The object of this author, who studied in Austria, Germany and Italy, is to demonstrate the outstanding importance of Mediterranean sea traffic via Trieste.²³⁴

At the beginning of the 16th century Austria was already interested in the Adriatic and in Mediterranean trade. As mercantilism increased in Europe, the high customs in Northern Germany led Austria to seek other trade routes. The higher costs of transport by land to the ports of Northern Germany caused the Austrian Court and merchants to prefer sea trade. The Austrian Emperor Charles VI resolved to establish a large harbour with attractive privileges. He finally decided on Trieste and Fiume (Rijeka today), proclaiming them free ports in 1719. In 1769 Trieste became a free town with an imperial patent. Until the era of Maria Teresa, however, traffic in the harbour was slack as Trieste had to compete with the ports of Venice and Hamburg. From 1719-1740 its main exports were mercury, copper, salt, iron and timber. From 1740-1775 the Austrian provinces' main imports were olive oil, drugs, spices, groceries, raw cotton, almonds and sugar, while their principal exports were iron and ironware, linen and linen goods, wax, brass and brassware.

The foremost exports were Slovenia and Hungary, accounting respectively for 27.5% and 26.3% of Austria's sea exports through Trieste; imports were headed by Hungary with 21.2% and Slovenia with 17.7%. Over the period 1761-1765 Austria's total exports amounted to 3,545,944 florins a year and her total imports to 2,452,947 florins. In 1765 Austrian transit accounted for 15% of Trieste's total trade. Transit traffic is divided into « transit by sea » and « transit by land », the former being a third part of the latter. Transit by sea referred in particular to trade in fruit and corn through Trieste harbour. For transit by land (from land to sea) the main goods were linen, woollen goods, cloth, skins and wax conveyed from Southern Germany, Turkey and other countries to the Mediterranean countries and even to Northern Europe. For transit by land (from sea to land) the main goods were olive oil, cotton, drugs, spices and groceries conveyed from the Levant and Italy to Southern Germany, Eastern Europe and Turkey.

In a lengthy chapter the author examines Austria's trade policy towards various European and African countries. The principle of non-discrimination is often recognizable in these mutual agreements and contracts.

The improvement of Austrian roads was of great importance to shipping and trade in the Adriatic, but the many high customs duties levied by local sovereigns often proved an obstacle to transit trade through Austria. Two

²³⁴ KALTENSTADLER WILHELM, *Der österreichische Seehandel über Triest im 18. Jahrhundert*, in: « VSWG », Ser. 55, 4, March 1969, pp. 481-500 and Ser. 56, 1, June 1969, pp. 1-104.

very important transit routes through Austria existed: the Kremsbruck-Salzburg and Linz-Pustertal routes.

The chapter on shipping via Trieste is full of information; in it the author describes the different kinds of ships from all countries calling at Trieste. He compares export, import and transit cargoes by numbers of cases or bales.

Lastly the author states that in some years of the 18th century trade via Trieste accounted for one third of the whole of the Habsburg countries' foreign trade. Trieste was thus of outstanding importance to the Habsburg empire.

In his work on « Reichsmerkantilismus », ²⁴ Bog deals with economic conflicts between France and Germany. In the 5th chapter he refers to the imperial edict of 1676 forbidding imports of French manufactures in order to protect German manufactures. The object of this prohibition, however, was not only to defeat foreign competition, but also to oblige domestic manufactures to satisfy internal demands.

But the German towns engaged in free trade opposed the edict of 1676 and it soon ceased to have effect as the bureaucracy in Vienna stopped enforcing respect of the prohibition. In 1689 the edict of 1676 was renewed and reinforced by the strict prohibition of imports from France and exports to France and from 1693 onwards the same prohibition existed for imports of goods from Geneva which, however, was often amended. The prohibition was repeated in 1702, but many imperial towns protested.

In a memorial addressed to the Court of Vienna the Nuremburg Resident in this town stated that the German-French trade balance had begun to show a surplus for Germany from 1690. From that time on more and more highly specialized goods were exported to France. A prohibition would moreover give rise to retaliatory measures and prove detrimental, in particular, to the Huguenot manufacturers in the Empire. Interventions of this kind succeeded in obtaining a new and more liberal trade system in Vienna. ²⁵

Hedwig Pavelka deals with economic relations between Britain and Austria in a very extensive study. ²⁶ Foreign trade was of comparatively little importance to the Habsburg monarchy. Only the peoples along the Adriatic coast were really interested in trade relations at world level. Except for these

²⁴ See BOG, INCOMAR, *Der Reichsmerkantilismus. Studien zur Wirtschaftspolitik des Heiligen Römischen Reiches im 17. und 18. Jahrhundert*, « Forschungen zur Sozial- und Wirtschaftsgeschichte », edited by F. Lütge, Stuttgart, 1959.

²⁵ See M. ARNOULD, *De la balance du commerce et des relations commerciales de la France dans toutes les parties du globe, particulièrement à la fin du règne de Louis XVI, et au moment de la révolution, 1791*; see also ROMANO RUGGIERO, *Documenti e prime considerazioni intorno alla « Balance du commerce » della Francia dal 1716 al 1780*, in: « Studi in onore di Armando Saponi », II, Milano, 1957, n. 1265 ff.

²⁶ PAVELKA, HEDWIG, *Englisch-österreichische Wirtschaftsbeziehungen in der ersten Hälfte des 19. Jahrhunderts*, publisher Herman Böhlau Nachf., Graz-Wien-Köln, 1968.

Adriatic regions, the Austrian provinces were linked together by close domestic trade relations so that foreign trade was only of secondary importance. On the contrary Britain, a nation of seafarers, had always shown a preference for foreign trade in modern times. In the first half of the 19th century Britain was principally interested in trade with the countries of Western Europe (France Portugal, Belgium and the Netherlands) and the Hanseatic towns, as well as, after 1833, with the countries of the German customs union (« Deutscher Zollverein »). So far trade with the Mediterranean countries had only taken second place for Britain. But for Austria exports and imports were based principally on the Mediterranean ports, especially after the foundation of the « Zollverein » in 1833. Cut off from the continent by Napoleon and with growing economic and trade interests in the Eastern Mediterranean — also in order to prevent Russian expansion in that area — Britain established closer relations with Austria in the field of trade and trade policy. Following the Vienna Congress the Kingdom of Lombardy-Venetia, an economically highly developed region whose products were very popular with the British, had been handed over to Austria.

In 1829 the first trade and shipping treaty between Austria and Britain was signed. In this treaty British ships were accorded privileged treatment in the Austrian ports on the Adriatic coast and Austria's were accorded the same treatment in the ports of the United Kingdom, East India and British possessions in Europe (with the exception of Malta and Gibraltar). In 1835 the United Kingdom granted some privileges for Austrian ships calling at Malta. Under the 1838 treaty Austria was accorded privileged treatment for her ships bringing corn to Britain from the ports of the Danube, the Dniester, the Weichsel and the Elbe.

From a geographical-political point of view relations between Britain and Austria in the field of trade policy were even more important in the Black Sea than in the Adriatic. Here Britain was anxious to keep Russian expansion in check. After 1845, when steam navigation had been introduced on the Black Sea, Britain's interest in the Danubian countries increased, particularly as regards Hungarian corn. In the 1838 treaty Britain and Austria agreed that Austrian ships should be allowed to sail from the ports of Galatz and Orsova (which belonged to Turkey) to British ports and that British ships should be allowed to sail to the ports of Galatz and Orsova (as well as to the Adriatic ports). From that time on Russia's hostile attitude increased. Art. 5 of the treaty granted Austrian ships permission to carry goods straight from the Levantine ports to Great Britain. But England did not succeed in obtaining a reduction of the high Austrian customs duties. From the middle of the 18th to the middle of the 19th century Austria had a very strong protectionist system which probably hampered its economic and social productivity considerably. But it must not be forgotten that the customs the United Kingdom levied on the products it imported from Austria (*e.g.* corn and wool) were

even higher than the customs Austria levied on Britain's principal exports to Austria in spite of the traditional British ideology of free trade.

For Austrian shipping in British ports reliable statistics are available from 1828. In 1832 more than 20 Austrian ships arrived in British ports (carrying mainly corn). A trade and transport crisis in Austria was probably responsible for a shrinkage in shipping trade with the United Kingdom. The period between 1840 and 1848, on the contrary, witnessed a continuous expansion of Austrian shipping traffic with the United Kingdom which reached a peak in 1847. Ships were now better built for such long distances and from this time on Austrian ships succeeded in obtaining more cargoes (especially of coal) for their return voyages. The relation between Austrian ships with cargoes and those without cargoes improved. The percentage of Austria's total movement of goods to foreign ports accounted for by indirect Austrian imports rose from 0.64% in 1844 to 0.9 in 1846 and 3.02% in 1847 and then fell to 0.52% in 1848, while direct Austrian imports rose from 7.40% of the total movement in 1844 to 20.38% in 1846 and then fell to 16.37% in 1847 and to 8.82% in 1848. Indirect exports rose from 2.23% in 1844 to 6.31% in 1846 and fell to 0.19% in 1848, while direct exports rose from 5.41% to 13.56% in 1846 and fell to 4.08 in 1848.²⁷ But on an average the share of Austria's total direct goods movement accounted for by trade with the United Kingdom was comparatively small (never exceeding ½%). *Direct* cargoes on Austrian ships accounted for most of the traffic between Austrian and British ports. The Austrian ships brought principally corn, copper and timber to the United Kingdom, taking in return mainly cotton products. In 1846 the amount (in conventional money florins = österreichischer «Konventionsgulden»)²⁸ of the goods directly imported to British ports (Malta and Gibraltar excepted) and exported from the latter by Austrian ships was 2,536,600 fl. C.M. (1,862,000 fl. C.M. in the port of London). Austrian ships also played a very important part with regard to British exports to Austria. The percentage of total British exports accounted for by Austria fell from 38.27% in 1842 to 8.98% in 1845, rising to 65.26% in 1846 and then falling back to 10.65% in 1848. On the whole, therefore, Austria's shipping traffic to and from British ports accounted for a comparatively modest share of total Austrian shipping traffic to and from foreign ports (on an average not more than 4% between 1828 and 1848).

British shipping traffic with Austrian ports, and especially with Venice, accounted for a larger share of total foreign shipping traffic and goods movements. In Trieste, Britain's share amounted to 9% for ships entering the port with cargoes and to 10-15% for ships sailing from Trieste to the United Kingdom. The percentage of Austria's total foreign goods movement

²⁷ PAVELKA, *Englisch-österreichische Wirtschaftsbeziehungen*, I. c., p. 110.

²⁸ fl. C.M. = florins in conventional money.

accounted for by goods imported to Trieste from the United Kingdom in the 'forties of the 19th century was fairly constant (15-20%). The percentage for exports was still higher. In absolute values, Trieste was the leading port for exports and imports.

In addition to trade history, which deals with the relations between Germany, Austria and the Latin countries and Great Britain, research concerning the history of the Hanseatic League has discovered some interesting international aspects. In his work *Die Hanse in europäischer Sicht*²⁹ H. Sproemberg endeavours to reach beyond the merely national aspect of the historiography of the Hanseatic League. Rörig had already tried to make the international function of the Hanseatics apparent in his work on them; in two great works he stressed the European aspect of the Hanseatics: *Mittelalterliche Weltwirtschaft* (1933) and *Das Meer und das europäische Mittelalter* (1951). Rörig realized that up to the 13th century the members of the Hanseatic League were very active and dynamic men who did not wish to be forced into guilds and therefore succeeded in setting up capital-intensive enterprises. In the 14th century this attitude was replaced by a preference for the security provided by wealth and an attachment to anti-liberal tendencies. According to Rörig the Hanseatic towns were probably founded by merchants from the Rhineland and Westphalia who had expanded their activities to the coast.

In 1952 the « Hansische Geschichtsverein » published a « Festschrift » which is the quintessence of European research in the field of urban history after World War II. In it the European aspects of the Hanseatics are described by A. von Brandt in *Die Hansestädte und die Freiheit der Meere*, in which he speaks of the policy adopted by the hanseatic towns to protect the freedom of the seas, and by Percy Ernst Schramm in *Der hansische Handel mit dem Mittelmeer um 1480*. Kellenbenz investigated the activities of the merchants of Southern Germany in Spain and Portugal in his contribution *Oberdeutsche Portugal- und Spanienhändler in Hamburg um 1600*.

In *Hansische Geschichtsblätter* Kjell Kumlien, a Swedish historian, examines the question as to whether the Hanseatic merchants found the countries of Northern Europe developed or underdeveloped. Rold Denker deals with the same problem with regard to Finland in *Finnlands Städte und hansisches Bürgertum bis 1471*.³⁰

Besides German, Norwegian, Danish, Swedish and Finnish historians, also researchers from Eastern countries contributed to the « Hansische Geschichtsblätter », among them Marian Malowist.³¹ The Polish historian shows that

²⁹ SPROEMBERG, H., *Die Hanse in europäischer Sicht*, in: « Dancwerc ». Opstellen aangeboden aan Prof. Dr. D. Th Enklaar, Groningen, 1959, pp. 127-151.

³⁰ DENKER, ROLF, *Finnlands Städte und hansisches Bürgertum bis 1471*, in: « Hansische Geschichtsblätter » 77, 1959, p. 13 ff.

³¹ MALOWIST, MARIAN, *Ueber die Frage der Handelspolitik des Adels in den Ostseeländern in 15. und 16. Jahrhunderte*, in: « Hansische Gesch.blätter » 75, 1957, p. 29 ff.

Hanseatic trade was a function of West European demand and of production relations in middle Eastern Europe.

Johansen places Hanseatic trade on a very broad basis. He believes that researchers working on Hanseatic history need to investigate linguistic, folkloristic, literary, historical, ecclesiastical, architectural, artistic and technical connections with Northern Europe.³²

No German historian doubts that Hanseatic research has to go beyond mere urban history and trade research since it is clear that urban and trade history alone are unable to provide the whole complex picture of Hanseatic life. In the future we shall also have to consider the history of the countryside, farming and the social structure of the villages and their effects on the towns, etc. We shall also have to complete the monographies of the Hanseatic towns, writing them, if necessary, according to the new international method and dealing also with the period of decline.³³

Nor must the importance of the « hinterland » be neglected in the treatment of Hanseatic history; Herman Aubin has shown this with regard to Westphalia.³⁴ The greatest expansion of Westphalian linen coincided with the rise of the Hanseatics and the penetration of the Baltic by the Westphalians. Westphalia's linen trade began to wane with the rise of Dutch and French production and the entry of east-central Germany into linen production with the help of the Nuremberg and Leipzig merchants. Then, in the 19th century, Westphalia succeeded in using machinery in industry, but at that time the Münsterland preferred cotton production and Osnabrück the production of woollen goods.³⁵

IV. MODERN SOCIAL AND ECONOMIC HISTORY IN THE 19TH AND 20TH CENTURIES.

Industrialization is a very important field of historical research to which much attention is devoted in modern German historical works. But most German historians deal almost exclusively with industrialization as a pheno-

³² See JOHANSEN, in « Hansische Gesch.blätter » 76, 1958, p. 143 ff.

³³ See LINK, THEODOR, *Flensburgs Ueberseehandel von 1755-1807. Quellen und Forschungen zur Geschichte Schleswig-Holsteins Band 38*, Karl-Wachholtz-Verlag, Neumünster, 1959; POHL, HANS, *Die Beziehungen Hamburgs zu Spanien und dem spanischen Amerika in der Zeit von 1740-1806*, Wiesbaden, Publ. Steiner, « VSWG » Beiheft 45, 1963.

³⁴ AUBIN, HERMAN, *Das westfälische Leinengewerbe im Rahmen der deutschen und europäischen Leinwanderzeugung bis zum Anbruch des Industriezeitalters*, Dortmund, Publisher Ardey, 1964.

³⁵ KALTENSTADLER W., *Seconda Settimana di Studio: Produzione, Commercio e Consumo dei Panni di Lana XII-XVII Secolo*, Prato, 10-16 April 1970, in: « Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte (VSWG) », Wiesbaden, 1970, Heft 3, p. 436 ff. VITTORIO, ANTONIO DI, *Produzione e consumo dei panni di lana (XII-XVII secolo) in un recente convegno*, in: « Nuova Rivista Storica », anno LV, fasc. I-II, 1971, Milano, Roma, Napoli, p. 173 ff.

menon of national history. This is true of even one of the foremost specialists in this field.³⁶ However I have found two works that refer to industrialization at the European level. The first, which is a collection of sources of industrialization, is the work of several historians.³⁷ In the first place many sources referring to inventions are described, e.g. Watt's condensed steam engine patent (1769). The appendix contains tables of technical development (up to 1893). The book also contains useful sources referring to visits to England, the promotion of production, social questions, machinery and world exhibitions.

The second book³⁸ contains fifteen separate treatises on different aspects of industrialization in many European countries and in Japan. Unfortunately these treatises lack a general coordination. Gerschenkron deals with the prerequisites of European industrialization in the 19th century, A. Klima with early industrialization in Bohemia, H. Rubner with the correlations between forest economy and industrialization. David Landes writes about industrialization in Japan and Europe, B. F. Hoselitz about entrepreneurship and capital formation in France and England since 1700 and F. Redlich about early industrial entrepreneurs and their problems in the light of their own testimony. In addition to some other articles, I recommend H. Rosovsky's on Japan's transition to modern economic development between 1868 and 1885³⁹ and those by R. Bendix and R. Braun who deal with the social aspects of industrialization.

The articles by Landes, Hoselitz and Rubner lay particular stress on the socio-economic and socio-cultural aspects of industrial development. Obstacles hindering the process of industrialization seem often to have turned out to be advantages. Rubner shows for instance, in this treatise, that fact that France possessed both wood and iron works was responsible for a technical gap that prevented this country from introducing coke into iron production as Great Britain did at a certain point. On the other hand, large supplies of wood did not exclude progressive smelting procedures in Germany. This is the paradox of industrialization. But that question is easier to interpret or solve at European level.

Besides the works on industrialization, there are two very modern publications belonging to quantitative economic history. Josef Rosen,⁴⁰ assuming

³⁶ FISCHER, WOLFRAM, *Ansätze zur Industrialisierung in Baden 1770-1870*, in: « VSWG » 47 (1960), pp. 186-231. Fischer has published many articles on industrialization.

³⁷ See WILHELM TREUE, HERBERT PÖNICKE, KARL-HEINZ MANEGOLD, *Quellen zur Geschichte der industriellen Revolution, publisher Musterschmidt*, Göttingen, 1966.

³⁸ *Wirtschafts- und sozialgeschichtliche Probleme der frühen Industrialisierung*, Einzelveröffentlichungen der Historischen Kommission zu Berlin beim Friedrich-Meinecke-Institut der Freien Universität Berlin, Band 1: Publikation zur Geschichte der Industrialisierung, ed. by W. Fischer, Publisher Colloquium, Berlin, 1968.

³⁹ See OKADA, TOMOYOSHI, *Industrialization and Agriculture*, in « Annals of the Institute of Social Science », University of Tokyo, 1970, No. 11, p. 1-16.

⁴⁰ ROSEN, JOSEF, *Zahlungsumsatz und Sozialprodukt 1946-1968, Berechnungen für sieben Länder sowie für die Kantone der Schweiz*, Buchdruckerei VSK, Basel, 1967.

a strong statistical correlation to exist between the development of payments and of the social product in political economy, set out to find a significant series of payments. He decided that postal orders returns would suit his purpose. To test his hypothesis he then undertook a study of the development of the social product and of postal order returns in seven countries (Switzerland, Sweden, the Netherlands, Belgium, France, Austria and the German Federal Republic). He was able to prove that, for more than 20 years, there was a strong positive correlation between the two factors in all the countries considered. The ratio between postal order returns and social products (gross values) remained constant in all countries. From the development of postal order returns it is thus possible to obtain the value of the social product. Rosen succeeded in this way in determining the social products of the Swiss cantons because Switzerland's total social product was known.⁴¹

A very extensive work has been written by Fritz Voigt on the development of the transport system.⁴² Voigt is a political economist in Bonn. He believes that it is necessary, besides thinking in models and quantities, to respect also the autonomous development and special qualities of transport. He begins by dealing with transport in the classical era and medieval times and, after describing the different types of vehicles, he also speaks of sea and river navigation, stressing the great influence rivers have on the regional distribution of the population. Chapter IV deals with railways and their revolutionary effects on modern economy. In chapters V to VII city transport, air transport, communication and information systems and, last but not least, pipelines are dealt with.

In commercial life there is always uncertainty concerning human and social actions. Historical development is therefore not a law of nature, but only the materialization of one of several possible solutions. And its realization is influenced by many government, social and political variables; sometimes even without the men living at the time being conscious of the relevant development. Many often only see parts of a development process and are unaware of other parts. This narrow human horizon, which is more a function of impulses than of reason, may sometimes delay economic and social processes as well as the development of transport.

V. SPECIAL SECTORS OF ECONOMIC HISTORY.

1) *The History of Techniques.*

Wilhelm Treue and Friedrich Klemm started editing a review of technological history in Germany in 1964. It is entitled « Technikgeschichte »,

⁴¹ See ROSEN, J., *Oeffentliche Ausgaben und Sozialprodukt in den beiden Basel* (Wirtschaft und Verwaltung, Vierteljahreshefte, ed. by Statist. Amt des Kantons Basel-Stadt, 1968, Heft 2).

⁴² VOIGT, FRITZ, *Die Entwicklung des Verkehrssystems*, Duncker & Humblot, Berlin, 2. Band, 1965.

comes out 4 times a year and is published by the « Verein deutscher Ingenieure ». This review is the continuation of the former « Beiträge zur Geschichte der Technik und Industrie », Jahrbuch des VDI (from vol. 22 on « Technikgeschichte, Beiträge zur Geschichte der Technik und Industrie »).

In the review « Technikgeschichte » there are four contributions dealing with problems of technological history. In *Technikgeschichte und Technik in der Geschichte* (31/1965, No. 1, pp. 3-18) Wilhelm Treue describes the beginning of technological history as an achievement of great merit, but he also criticizes the « technique pour la technique » of technicians who often lacked knowledge of general history. According to Treue the only form of technological history that is useful is that which analyzes the influence of technology on the general historical process. But so far most historians have failed to notice the great importance of technological to general history, with the one great exception of Franz Schnabel.

In *Technikgeschichte als Beitrag zur Strukturgeschichte* (33/1966, No. 2, pp. 105-120) Karl-Heinz Ludwig complains that there are too many different names for this new subject. You may find the terms « special technical history », « history of engineering science » or « internal history of technology » in German literature; Ludwig prefers the term « technical history ». The problems of the sources of technical history are also dealt with by the author; an important source he mentions are the « industrial tables » from the early stage of industrialization.⁴³

In his work *Technikgeschichte im Lichte der Wirtschaftsgeschichte* (34/1967, No. 1, pp. 1-13) Borchardt states that the writing of technological history and of economic and social history methodically and objectively will alter the overall traditional historical picture in the coming decades far more than they were able to influence it in the last century. He criticizes the fact that writers of technological history have too often glorified the heroic pioneer, while neglecting to devote the attention they deserve to the realization and expansion of inventions. He consequently suggests the terms « history of inventions » and « history of the expansion of inventions ». Too many technological historians, moreover, have shown a disproportionate interest in the genesis and development of complicated inventions, underestimating the importance of inventions that are useful for the structure and development of society. I consider Borchardt's proposal that the social and economic importance of inventions be quantified most valuable.

Albrecht Timm examines questions connected with the future historiography of technology in *Geschichte der Technik und Technologie - Grundsätz-*

⁴³ See Bayerische Staatsbibliothek Munich, Handschriftenabteilung, Cmg 6851, concerning the *Special Tabellen...*, « Fabriken und Manufakturen in Bayern 1809/10 ». Material for consumption of factors, sales, production per year, number of factories and workers in the different branches for all the provinces of Bavaria will be found here.

liches vom Standort des Historikers (35/1968, No. 1, pp. 1-13). He claims that the methods of technological history must be applied in addition to traditional methods in general history. Timm then devotes his attention to the problems of the sources of technological history and a clear methodology. In addition to descriptive sources and models of former times he takes material sources as a third category.

In *Was beschleunigte den technischen Fortschritt im westlichen Mittelalter* (32/1965, No. 3, pp. 201-220), White Jr. is interested in what accelerated technical progress in Western Europe in the Middle Ages. It was the West European mind that developed modern technique. As ancient history came to an end and medieval history began, old techniques were replaced by new and better ones. In Northern Europe a new agrarian technique developed in medieval times which increased economic productivity. The introduction of stirrups, which made the Franks superior in war, was very important. Watermills, although they had been known for a long time, were only applied to production in the beginning of the 11th century.⁴⁴ The mentality of Western monks, who were less contemplative and more practical than Eastern monks, contributed considerably to technical development. The Cistercians, who also introduced waterpower as a production factor, were pioneers in the application of new techniques from the 12th century on.

In his article *Poensgen in Amerika* Lutz Hatzfeld describes the visit to the United States of the entrepreneur Poensgen, who was an engineer in the «Düsseldorfer Röhren- und Eisenwalzwerke AG» (35/1968, No. 1, pp. 56-67). From the Americans Poensgen learnt techniques for the manufacture of pipes and he introduced these techniques and methods in Düsseldorf.

A contribution to a problem that is highly topical today is made by Iija Mieck in *Aeren corrumpere non licet - Luftverunreinigung und Immissionschutz in Preussen bis zur Gewerbeordnung 1869* (34/1967, No. 1, pp. 36-78). At the end of the 18th century, especially following the opening of chemical factories, official orders of a social and hygienic nature already existed. In 1831 a bill was drafted, the purpose of which was to introduce a comprehensive protective law for the whole territory of the kingdom of Prussia forbidding the progressive public nuisance caused by smoke, dust, unpleasant smells and water polluting substances. Unfortunately the bill was rejected, but it shows that already at that early date the protection of the surrounding world had become a problem.

Hans Teuteberg deals with early British industrialization in two very interesting articles: *Der Ausbau der englischen Binnen- und Küstenschifffahrt während der Frühindustrialisierung im Spiegel zeitgenössischer deutscher Rei-*

⁴⁴ See KALTENSTADLER, W., *Produktivität in historischer Sicht*, «Terza Settimana di Studio: Produttività e tecnologie nei secoli XII-XVII» (23-29 aprile 1971), in *Scripta Mercaturae* 1971, Heft 2, Munich, 1972 (editor: Th. G. Werner).

seberichte (34/1967, No. 2, pp. 115-145) and *Die Industrialisierung der britischen Seeschifffahrt in deutschen Augenzeugenberichten zwischen 1750 und 1850* (34/1967, No. 3, pp. 226-264). From the beginning of the 18th century transport was revolutionized in Britain by river and sea navigation. Many rivers were adjusted and channels built, especially for the transport of grain and coal. But these works were performed almost exclusively by private companies so that public wealth often suffered as these businessmen only considered the profits that they themselves could obtain from these adjustments and constructions. Sea traffic increased considerably between 1750 and 1850 and docks, loading equipment, wharves and so on were improved.

The importance of international exhibitions is discussed by Willi Schmidt in *Die frühen Weltausstellungen und ihre Bedeutung für die Entwicklung der Technik* (34/1967, No. 2, pp. 164-178). In 1851 more than 6 million people visited the World Exhibition in London. It was followed by not less than 10 other exhibitions before the end of the century, among them the Philadelphia exhibition of 1876. According to Schmidt these exhibitions had three functions that were of importance to economic development:

(a) special forms and instruments referring to buildings, time of construction, traffic and communication systems, etc.;

(b) the exchange of technical knowledge and achievements as well as of experts' experience concerning new procedures, machines, etc.;

(c) their indirect influence through the interest aroused by the technical questions asked, etc. and the comparison of the exhibiting countries' achievements.

Last but not least, Erwin Welte deals with agrarian technique in *Die Bedeutung der mineralischen Düngung und die Düngemittelindustrie in den letzten 100 Jahren* (35/1968, No. 1, pp. 37-55). When the population explosion began in the first half of the 19th century, regeneration of the soil with natural manure was no longer sufficient; mineral and artificial fertilizers became necessary. This new economy of mineral fertilizers is divided into three stages:

(a) the period from 1815 to 1913 is characterized by the production and processing of natural minerals (phosphates, alkali salts and nitrates);

(b) the second stage begins after World War I and ends in 1939. Fertilization is now made more efficient by calculating profitability and rationality and brings about a very marked increase in productivity;

(c) after World War II fertilization economy was stepped up again. Owing to the manpower shortage, multiple fertilizer is being used (=Mehrstoffdünger) and fertilizer machines are being manufactured.

2) Forest History.

In the field of forest history a work of European scope has been written by H. Rubner.⁴⁵ The author shows how important the forest and its effects still were in the 18th and 19th centuries.

Thanks to his deep knowledge of the subject and the wide scope of his research work, Rubner is an expert on ancient and medieval forest history in Germany. He also has an excellent knowledge of the forest history of Eastern Europe and France. I should like to mention in this connection his *Untersuchungen zur Forstverfassung des mittelalterlichen Frankreich* published by Steiner of Wiesbaden (1965).

Rubner succeeds in explaining 19th century forest history through the long development of European forest history in medieval times. As a learned geographer he does not neglect the influence of geographical and climatic conditions and facts, but he also applies economic theories wherever possible. He thus provides a global but detailed view of European forest industry in the era of industrialization, especially in Germany, Britain and France which were the leading countries in the «Industrial Revolution». Because mercantilism benefitted greatly forests and forest economy, the author deals at length with mercantilistic forest economy. In the third chapter the reader learns how early industrialization and the classical science of forest economy altered European forests and their economic exploitation.⁴⁶

Rubner brings his survey up to the beginning of the 20th century, which is interesting as it enables him to demonstrate the dependence of today's forest structure on continuous development, especially from the 18th century on. The last chapter contains a report on America and Russian forest history, which is a good introduction to a branch of research in which German literature is scarce.

VI. INTERPRETATION OF COMMEMORATIVE WRITINGS.

In this last chapter I shall review three famous commemorative books in honour of three outstanding figures in German economic history, with reference to their contents of European relevance.⁴⁷

⁴⁵ RUBNER, HEINRICH, *Forstgeschichte im Zeitalter der industriellen Revolution*, publisher Duncker & Humblot, Berlin, 1967.

⁴⁶ See KOLLER, ENGELBERT, *Forstgeschichte des Salzkammerguts, Eine forstliche Monographie*, Oesterreichischer Agrarverlag, Wien, 1970.

⁴⁷ *Beiträge zur Wirtschafts- und Stadtgeschichte, Festschrift für Hektor Ammann*, ed. by H. Aubin, Edith Ennen, H. Kellenbenz and others, publisher Steiner, Wiesbaden, 1965, (abbreviation = AM); *Festschrift Hermann Aubin zum 80. Geburtstag*, ed. by O. Brunner, H. Kellenbenz, E. Maschke, W. Zorn, publisher Steiner, Wiesbaden, 1965 (abbrev. = AU); *Wirtschaft, Geschichte und Wirtschaftsgeschichte, Festschrift zum 65. Geburtstag Friedrich Lütges*, ed. by W. Abel, K. Borhardt, H. Kellenbenz, W. Zorn, publisher G. Fischer, Stuttgart, 1966 (abbrev. = LU).

In the commemorative volume in honour of Ammann as well as in those in honour of Lütge and Aubin, most of the contributions deal with questions referring to towns and their citizens and to the history of traffic and trade. Social history, the history of production and industry, of agriculture, colonization and land ownership are neglected. Almost all the articles show a tendency to quantify social and economic facts.

Through a study of English archives H. I. Bog deals with London as a centre of consumption (LU) and H. J. Habakkuk with the trend of ground prices in London (LU). Habakkuk stresses the influence of the rate of interest, while Bog shows how growing capital and social and economic processes proved stronger there than all the medieval regulations.

M. D. Lobel (AM) demonstrates the strong control over English towns exercised by English kings using Oxford as a model. He succeeds in following the development of the English town, from the middle ages on, with admirable precision, carefully studying relations between the citizens and the university.

The articles on trade offer the most European aspects. H. Ammann speaks of the Germans at Saint-Gilles in the 12th century; the miracle book of this town tells how the Germans first came to Saint-Gilles as pilgrims on their way to Santiago in Spain (AU).

E. v. Lehe (AU) describes Hamburg's trade with the Elbe and North Sea « marches » in the Hanseatic period, while H. v. Werveke examines the Hanseatic merchants' relations with Flemish cloth manufacturers. Hamburg sold mainly grain for the « march » countries, bringing them in return timber, Flemish woollen products and Hamburg beer. Werveke stresses the Hanseatic merchants' great influence on the markets, for instance how they were able to influence prices and manufacturers' conditions.

Philippe Dollinger (AM) deals with trade relations between Strasburg and Fribourg in Switzerland during the middle ages. As source he uses the unique « Freiburger Notariatsregister », the best of their kind north of the Alps, going back to the 14th century during which sales of English wool to Strasbourg increased.

Two articles (in addition to the one on Saint-Gilles) are devoted to South European countries. Kellenbenz examines international literature on the history of Portuguese trading companies, while Braudel and Tenenti devote their attention to the correspondence of the Venetian merchant Michiel da Tezze (1497-1514) (LU).

Kellenbenz (LU) also speaks of Juan de Segovia (AU), describing the « mesta », an association of Spanish merchants and members of the lower nobility, with whom the Fuggers had got in conflict. F. Redlich (AU) examines the biography of William Stout of Lancaster (1665-1752), as well as those of other merchants and tradesmen, gaining interesting information concerning capital accumulation by country merchants.

H. C. Peyer (AM), in his article *Zürich und Übersee um die Wende vom 18. zum 19. Jahrhundert* devotes his attention to relations between Zürich and overseas countries, especially in the field of trade. These relations were established by political exiles and failures and a very important role was played by the Calvinistic relations that made possible the boom in overseas trade between 1830 and 1850.

The European function of the three commemorative volumes is particularly recognizable in the contributions to the history of transport. H. Büttner (AM) deals with Alpine passes in the early middle ages, A. Joris (AM) with communications between the Rhineland and the Moselle area towards the end of the 12th century, F. Petri (AM) with the position occupied by the Eifel mountains and their surroundings in European trade between north and south up to the passage from the middle ages to modern times and H. Weiss (LU) deals with the alteration of routes for transit trade between South Germany and Upper Italy in the middle of the 18th century.

Referring to banking history, F. Huter (AM) deals with the economic expansion of the Florentines' activities in the Tyrol. Bankers farmed public revenues and provided the Duke of Tyrol with money.

Currency is a subject dealt with by B. Kirchgässner (AM) in his study *Zur Neuordnung der Währungsräume Süddeutschlands und der angrenzenden Eidgenossenschaft 1350-1500*. The author stresses the great importance of the « Rheinischer Münzverein » of 1385-86, which created a gold currency that lent considerable momentum to business in Southern and South-Western Germany.⁴⁸

The strong influence of sociology and political economy is recognizable in all three commemorative volumes. These trends — in addition to the quantitative history trend — are also to be found in other works on German economic history as well as on social history.⁴⁹ It seems to me that in the future an important part in economic and social history will also be played by comparative historical analysis, *i.e.* comparisons between structures, countries, attitudes, branches, etc. But it is also our duty to combine and coordinate all these different methods with the historical method which will never cease to exist; for we shall always be historians.

⁴⁸ See HOFFMANN, ALFRED, *Drei Festschriften*, in: « VSWG », Wiesbaden, 1968, p. 87-101.

⁴⁹ KALTENSTADLER, WILHELM, *Bildungsnotstand im 19. Jahrhundert, Lehrer, Schüler und Schule in Bayern in der Zeit der Frühindustrialisierung*, in « Regensburger Universitätszeitung (RUZ) », Ratisbona, publisher Held, August, 1971.