

G. ENGEL / N. C. KARAFYLLIS (EDS.), *Technik in der Frühen Neuzeit – Schrittmacher der europäischen Moderne*, Frankfurt am Main 2004. Verlag Vittorio Klostermann, Zeitsprünge. Forschungen zur Frühen Neuzeit, Band 8 (2004), Heft 3/4, p. 237-484.

The journal *Zeitsprünge* generally presents research concerning the early modern period. The present double issue under review here, edited by Gisela Engel and Nicole C. Karafyllis, deals with early modern kinds of technical science, technical artifacts or technology respectively and their pace-maker-function for European modernity. In their introductory essay, however, the editors emphasise that the pace-maker function indicated should be discussed with a question mark because some fundamental questions have to be analysed first: What was and what is “Europe”, what kind of factors describe (European) “modernity” as a historical period, and, most importantly, what could the terms “technical artifacts”, “technicality”, “techniques” and “technology” really describe in the sense of the Greek word “techné”? A leading problem identified was an interpretation of historical developments as a linear process of modernization which was set in motion by pure technical science or technology. Therefore, the topic “modernization” has to be linked with “cultural” and “social” contexts, involving the (human) actors, their aims and motives. Additionally, knowledge about techniques and techniques to generate and accumulate knowledge were interpreted as a reciprocal process. Therefore, different requirements and degrees of importance concerning different kinds of “techné” for the early modern period are discussed in eleven essays written by authors from different academic disciplines.

In the first essay, Petra Schaper-Rinkel discusses the role of knowledge, learning, specific techniques and (social) technology in political utopias written by Thomas More (*Utopia*, 1516), Tommaso Campanella (*Civitas Solis*, 1602) and Francis Bacon (*Nova Atlantis*, 1627). From More’s work up to Bacon, Schaper-Rinkel identifies an intensification of thinking about “modernization” by generating and securing knowledge as well as in the process of transforming knowledge and methodical science into technology. This root of modernization was, however, linked with the aim to secure social continuity and stood in strong opposition to any ideas of political “modernization”. In the following essay, Martin Disselkamp discusses the assessment of the period of ancient Rome by

early-modern author Justus Lipsius. In Lipsius' model, "ancient Rome", Roman military technology and discipline above all, was seen as a guideline for political stability. Therefore, Lipsius argued that early-modern sovereigns should learn from ancient Rome. This technology-based model, however, could be interpreted as an authority for the sovereigns to act by setting their own agendas. Similar to Schaper-Rinkel's analysis of early-modern utopias, Disselkamp additionally identifies in Lipsius' treatises concerning Rome a wish which stood in opposition to any political or perhaps social "modernization".

The two following essays deal with some technologies and technical artefacts by analytical methods of the humanities. Ralf Haekel presents the evolution of theatre-technology in XVII<sup>th</sup> century Europe with new inventions such as mechanical devices to improve spectacular stage-effects of illusion, perspective, and so on. This evolution was, however, a consequence of changes in the metaphor of theatre which could be interpreted as a step towards emancipation from god to the sovereign. Nicole C. Karafyllis analyses the origins of early modern automata which seemed to be built to mimic nature by imitation, simulation and imagination. The construction of automata, powered by different sources of driving energy, should not be seen, however, as an origin of pure mechanistic kind of thinking: The construction of early modern automata is based on philosophical reflections about some characters of "life". Karafyllis concludes a fusion of an Aristotelian with a Cartesian interpretation of "techné", and, therefore, a shift in the understanding of "life", during the early-modern period. Finally, Karafyllis emphasises the relevance of these philosophical discussion for the current debate about the impacts of modern biotechnology.

In the next essay, Marcus Popplow discusses medieval and early modern "attitudes towards technology", or "understanding of technology" respectively, in the light of the fact that the generic term "technology" was not used until the XIX<sup>th</sup> century. Popplow identifies Renaissance engineers, looking to enhance their own reputation, as a new dimension of "technical intelligence" which gave some impetus for an explanation of the social role of "techné". This led to a new interpretation of the Latin term "machina". To justify new mechanical devices as inventions to receive privileges for their engineer, the novelty, usefulness and ingenuity of the machines had to be proven and the benefits had to be made clear, too. Daniela Lamberini's essay deepens this analysis by exploring the administrative evaluation-processes regarding inventions in Grand Ducal Tuscany

as a condition for granting (patent) privileges. In this context, Lamberini discusses the effects of network activities concerning the diffusion of technical knowledge in Europe as well as problems caused by plagiarism or a hidden-knowledge-policy. Evaluation of technical inventions to grant patent protection was also an aspect in the essay of Christian Mathieu: He discusses the institutional procedure of the "experientia" in the Republic of Venice which was identified as a procedure evaluating the function of new technologies and, additionally, assessing its impact, risks and consequences. Therefore, "experientia" was part of the social construction of knowledge and aimed to attract inventors and their knowledge to Venice in order to solve the problems of the Republic. The outstanding position of Italy in terms of technology was also subject of the essay of Matteo Burioni. He analyses how architecture was judged by the Accademia del Disegno in Florence and, finally, how architecture had been divided between different kinds of "architects", or engineers. Architects either put an emphasis on traditional arts or on the mechanical and technical aspects of architecture. Romano Nanni discusses the renaissance of machines in XV<sup>th</sup> and XVI<sup>th</sup> centuries as described in ancient Roman literature, for example in *De architectura* by Vitruvius. This view of machines was linked to purposes of war and (public) building activities, and not to "civil" machines which produce goods more commercially. Therefore, machines could be interpreted as an instrument able to demonstrate political power.

The last two essays deal with XVIII<sup>th</sup> century aspects of modernization by technology: Torsten Meyer investigates the origins and the influence of the book *Anleitung zur Technologie*, first published in 1777 by the German professor Johann Beckmann. Meyer identified a natural-historical methodology in this book. Therefore, Beckmann's work could be interpreted as a kind of "modern" invention theory and, consequently, as understanding technology which incorporates social phenomena, for example political and economic aspects of the doctrine of mercantilism. In his essay, Norman Fuchsloch analyses the development of geology as a new and modern science, as well as the early development of modern chemistry and physics. Fundamentals of geology were derived by an emancipation from old German "Montanwesen" and mineralogy in an international discourse. Geology was identified as an useful discipline for the exploration and a more efficient exploitation of natural resources under the earth's surface. Linked with ideas of colonisation and with the economic aspects

of industrialisation, geology became more and more scientific and, therefore, took part in European modernization as well as in the development of social problems in the colonised regions of the world.

To sum up, the interdisciplinary approach guiding this publication offers many fascinating insights by unconventional intellectual routes in regard to some topics which have been neglected by the mainstream of the history of technology.

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E.M. GARCÍA GUERRA, *Moneda y arbitrios. Consideraciones del siglo XVII*. Consejo Superior de Investigaciones Científicas. Biblioteca de Historia, Madrid, 2003, 283 pp.

The course of Castilian economic history during the seventeenth century was marked serious monetary problems which have attracted the interest of researchers since then. This issue has been studied in the classic works of E.H. Hamilton and A.Domínguez Ortiz, among many others, and the proliferation of new books and articles on this question during the last decades is the best proof that the interest Castilian monetary history is still alive. It is not necessary to say that contemporaries were perfectly aware of the negative consequences of the frequent currency manipulations of the time, and this prompted an intense debate which can be followed, fortunately for historians, in the pages of the many pamphlets and projects written by the *arbitristas* and today filed in the Spanish archives and in the records of the *Cortes de Castilla*. These have been the documentary sources most frequently employed by the researchers, and in *Moneda y arbitrios* Elena M. García Guerra analyzes a selected group of the most influential projects debated by the *arbitristas* and the *Cortes* to describe how the Castilians interpreted the monetary problems they were suffering and their possible solutions.

The book is divided into five chapters. Chapters one and two place the question into a broader context. The *arbitristas* were neither members of the lunatic fringe of Castilian society (as Cervantes, perhaps with some unfairness,

portrayed them) nor shrewd economists playing the role of a Castilian Cassandra, distant from any personal and practical interest, but politicians who took part in the political process through their writings. It is undeniable that their pamphlets are an invaluable source for the study of the Castilian economy, but the author reminds us the existence of shortcomings and limitations in their works which should not be forgotten by historians (chapter one). Although the discussion about the monetary manipulations blossomed in the central years of the seventeenth century, the publication in 1609 of the famous *Tratado y discurso sobre la moneda de vellón que al presente se labra en Castilla*, written by the Jesuit Juan de Mariana, was one of the milestones in the history of the debate. The importance of this book lies in the fact that his author presented one of the best expositions of the problems caused by the monetary policy adopted the Crown, and exerted a heavy influence on all those interested in the question. Taking this into account, the inclusion of this basic participant in the book (chapter two) is completely appropriate, although it seems it would be open to question whether J.Mariana can be considered an *arbitrista* or not.

The main defects of the Castilian currency during the seventeenth century could be summed up as follows. First, after 1603 the Crown minted large quantities of copper coins (*vellón*). This was done in two ways. In some cases, the government coined pure copper coins, without any silver content. In others, the Castilians were compelled to take their copper currency to the mint. Once there, the authorities raised the legal value of the pieces (*resello*). The owners received the same amount of money they have previously taken to the mint, plus a sum to pay the transport costs, while the difference between the old and the new legal values of the currency was the benefit gained by the Crown. In both cases this caused a big increase in the money supply. If in the short run this increase helped the Castilian Crown to finance its ambitious foreign policy, in the medium and long run this harmed the Castilian economy through its inflationary effects.

Second, although Castile was the owner of the richest silver mines in the world, the famous Castilian *real* had virtually disappeared from the internal monetary circulation, being hoarded by the Castilians or used to finance the balance of payments deficits.

The problems of the *vellón* are analyzed in chapters three and five. These difficulties are well known: the *vellón* caused price rises, it eased the

disappearance of the *real* from monetary circulation and damaged the stability of public and private finances because all those who wanted to exchange the devaluated and unpopular low-value copper pieces in return for good quality *reales* had to pay a surplus (*premio*). It seems that these problems were aggravated in two ways: first, the *vellón* caused an increase in the currency supply of the Castilian economy, but, in view of the demographic and economic decline of the country, most *arbitristas* thought that such an increase had been unnecessary (pp 72). Second, the issue of pure copper coins and the *resellos* prompted the arrival in Castile of big amounts of foreign counterfeited pieces.

As all those interested in Castilian history will know, a continuous flow of *arbitrios* (chapter three) tried to find solutions to the above-mentioned problems during the whole century. There were all kind of schemes and projects, but the most influential insisted on the need to adopting deflationary measures (*baja del vellón*) and even to withdraw the pure copper coins minted after 1603 (*consumo del vellón*). There is little doubt that both measures were the correct cure for the maladies brought by the *vellón* into the Castilian economy, but their main weakness laid in the difficulty of finding a good way of putting them into practice.

Chapter five explains this basic aspect of the whole process. The convenience of restoring the Castilian currency to its former stability was not only an economic, but also a political problem. As the author stresses, it was not clear at all whether the king had the right to manipulate the currency and in the first decades of the century the Cortes decided to exploit this as a political tool, so the Assembly tried to extract from the Crown the compromise of solving the worst aspects of the *vellón* inflation as a prior step before the granting of new contributions and services. As a result of this, in 1627 the king presented an ambitious plan to guarantee the extinction of the *vellón* through a network of banks in the Court and in the main cities of the kingdom (*Diputaciones para el consumo del vellón*). In order to gather the funds needed to do this, the Crown was prepared to transfer the collection of some taxes to the *Diputaciones*, which, at the same time, would also allow deposits in copper coin. After four years, the owners of those deposits would recover the funds previously invested, but this time in silver pieces, so the possibility of achieving the extinction of the *vellón* in a smooth and relatively quiet way was one of the main advantages of the project.

Although this plan was sound, it had a fatal weakness because the king had

decided to hand over control of the *Diputaciones* to the hated Genoese bankers, and this awakened the strong opposition of the *Cortes*. For obvious reasons, the Castilian urban middle classes who controlled the Assembly did not have the slightest interest in letting the control of this ambitious operation pass to their Genoese rivals and, as the author emphasizes, this was one of the reasons for its failure. Yet it would be unjust to impute to the narrow-mindedness of the Castilian middle classes the only responsibility. As E.M. García Guerra correctly emphasizes, the main problem was that the public did not have confidence in the *Diputaciones*, and the fact that the king frequently decided to use their funds for purposes very different from those originally established merely strengthened the worst suspicions of the Castilians.

In any case, the failure of the *Diputaciones* had serious consequences because, from 1627 onwards, the Crown deployed in deflationary measures with serious social consequences to deal with the problems caused by the *vellón*. This was exacerbated because, after reading the convincing evidence provided by the author, it seems clear that the policy followed by the Castilian government was erratic and, in fact, it could be suspected that the existence of a real desire on the Crown's side of ending the *vellón* was doubtful. After all, as the Crown knew too well, the issue of *vellón* was a cheap and good way of financing the expensive Portuguese wars, obtaining funds desperately needed, and this seems to have been the main concern of the Castilian government in times of difficulty and financial disorder.

Chapter four analyzes the problems of silver currency. It should be emphasized that the castilian *real* with its high silver content was something of an exception in the European context, so many *arbitristas* thought that it was necessary to lower its silver content in order to avoid its flight away from Castile. Yet it would be wrong to think that this was the only reason for the problem. In one of the most interesting parts of the book, E.M. García Guerra describes the theories of one of the most remarkable *arbitristas* of the period: Tomás de Cardona, whose writings were followed by other influential projectors, such as A. Carranza. The importance of Cardona lies in the fact that he embodies better than anyone else the ideas of those who thought that the problems of the *real* were the result of a balance of payments deficit caused by structural flaws in the fabric of the Castilian economy. Taking this into account it would have been necessary to introduce basic changes in the foreign policy of the Castilian Crown,

simultaneously promoting the development of the Castilian industries and more protective trade policies, but, as Cardona and his followers should have probably known, it was difficult to think that the Castilian government was ready to adopt these proposals.

In *Moneda y arbitrios* the reader will find a clear and concise overview of the monetary problems suffered by the Castilian economy during the seventeenth century. The author has described the difficulties caused by the *vellón* inflation, and has also described the difficulties of the silver currency. After reading the convincing evidence provided by the author in the book, it is clear that many *arbitristas* had a clear knowledge of the causes of the monetary problems and their solutions. Many of these solutions were hotly discussed during the period in the projects of the *arbitristas* and in the meetings of the *Cortes* but they were doomed to failure. As the author emphasizes, the monetary problems had always a political side, and putting into practice a policy oriented towards monetary stabilization would have meant a direct threat to the well entrenched economic and political interests of too many groups and factions. Taking this into account, we would dare to suggest that the reading of this book will be a welcome help to all those interested in Spanish history of this period.

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BERNHARD LORENTZ – PAUL ERKER, *Chemie und Politik. Die Geschichte der Chemischen Werke Hüls 1938-1979. Eine Studie zum Problem der Corporate Governance*, Munich: C. H. Beck 2003, 461 pages.

Business history has been flourishing in Germany over the past few years. This trend has been driven by a series of international discussions focusing primarily on the involvement of German companies in the crimes committed during the Third Reich. Yielding to public pressure, many companies have opened their archives and commissioned special studies. The corporate history discussed here is based on such a research project and is one of three studies commissioned by the former Degussa-Hüls AG. Another one is Peter Hayes, *Die*

*Degussa im Dritten Reich. Von der Zusammenarbeit zur Mittäterschaft* (The Degussa Company in the Third Reich. From Collaboration to Complicity, C.H. Beck, Munich, 2004). In addition, Ralf Banken is working on a special report on the Degussa gold trading activities from 1933 to 1945. In contrast to these two studies, Bernhard Lorentz and Paul Erker focus more intensively on the Hüls factory in Marl and on the post-war period. Since Degussa and Hüls did not merge until 1998, it is important to look at their company histories separately.

The book's title, *Chemistry and Politics. The History of the Hüls Chemical Plants 1938-1979*, could leave the reader with the impression that this is just another case study of corporate history. This turns out to be unfounded, because Lorentz and Erker clearly take their subtitle, "A Study of the Problem of Corporate Governance," seriously and base their study on the corporate governance concept. In a narrower sense, the authors define corporate governance as a system of internal and external control, steering and monitoring mechanisms within an enterprise. Along these lines, they formulate the following assumptions: The system of corporate governance has a significant impact on the conditions that serve as a basis for management decisions. This is intended to reduce "agency costs." The financial balance between equity and outside capital results in significant implications in terms of who is in control of the company. It appears also important to the authors to delineate the corporate governance structures on the criteria of determining who the company's goals and policies are aimed at (shareholder/stakeholder perspective). From this point of view, Lorentz and Erker arrive at four key questions for their study: What was the decision-making process at Hüls Chemical Plants regarding the deployment of company resources within the framework of the changing corporate governance structures? To what extent did the steering and control mechanisms of the Nazi regime and the parent company IG-Farben determine corporate policies? What was the impact of the control measures enforced by the British military in the post-war period? What was the sequence of decision-making and business processes vis-à-vis the divergent and changing interests of the shareholders?

The period under study begins with the founding of Hüls Chemical Plants in 1938 and ends with the takeover of the company by Veba in 1980. The authors (Lorentz was responsible for the Nazi era and Erker for the post-war period),

rejected a chronological presentation and opted instead for a thematic structure. The first chapter describes the relationship between state and company throughout the entire period. The main focus is on the NSDAP era, because the Nazi regime expressed significant interest in the founding of the company and the production of synthetic rubber (buna), while the German federal government consistently refused to provide new subsidies. The second chapter concentrates on the relationship between Hüls Chemical Plants and its shareholders, particularly IG-Farben and its successors Bayer, BASF, and Höchst. It includes an in-depth look at the "long path of disentanglement" (1945-1979). The last chapter is dedicated to the company's regional relationships. Topics include the recruiting of workers and cost-saving efforts as well as the company's influence on municipal development. Despite the chronological parallels between the chapters, redundancies are skilfully avoided.

From the perspective of the Hüls managers the authors conclude that close cooperation with government authorities within the framework of the four-year plan had a substantial impact on the firm's corporate governance. In this respect, state and company did not always follow the same objectives. This led to conflicting goals that had a significant influence on the situation until the end of the war. The joint efforts of the shareholders, IG Farben and the Hibernia mining company, were also problematic. However, IG Farben managed to assert its objectives in arranging the key points of the contractual system. At the same time, the IG Farben management tried to place tighter controls on Hüls in order to keep competitors from other industries, including Hibernia, from entering the chemical sector. Hüls Chemical was not allowed to operate its own research and development or sales departments and production facility managers were very limited in their scope of action. The company played a significant role only at the regional level, especially in terms of recruiting workers prior to 1945. Hüls not only became one of the German companies to take advantage of the opportunities offered by forced labour, it also helped develop the draconian system of sanctions. After 1945, when the structural difficulties inherent in founding the company were no longer obscured by the demands of wartime production, the problems broke out in full force. The Hüls managers were faced with the fact that the Nazi strategy of passing on business risks to the state no longer worked. The

Hüls management obviously had more difficulties than other German companies that operated under the same conditions, yet were able to gather managerial and organizational capabilities in a peacetime economy. This is demonstrated by the example of Radio AG D.S. Loewe. In the course of "Aryanizing" the German economy in 1938, this medium-sized company was taken over by a bank owned by the "Reichsluftfahrtministerium" (Aviation Ministry). But after the company was returned to its rightful owners in 1949, it did not experience any difficulty adapting to the new economic conditions. However at Hüls, the relationship between state-owned institutions and companies quickly faded in the 1950s and became less significant. At the same time, the company's shareholders (Hibernia along with the IG-Farben successors Bayer, BASF, and Höchst) became more important. Instead of seeking the best interest of the company, their policies were aimed at the competing shareholders. This was often detrimental to Hüls Chemicals, which was faced with the long and challenging process of emerging from the shadows of IG Farben and establishing its own corporate culture. The approach to traditional production operations gradually developed into a market-economy-based, competitive, and innovation-oriented strategy. The new divisional company structure introduced in the early 1970s represented an important step in which, according to Erker, the dominance of technicians and chemists was disrupted for the first time in the history of Hüls Chemicals and marketing specialists were placed on an equal footing in the management hierarchy.

Lorentz and Erker demonstrate how worthwhile it is to use economic concepts within the genre of business history. Along with other recent studies of German companies, their compelling analysis shows that the often legitimately criticized lack of theory in German business history has been gradually overcome. The discussion focusing on the involvement of German companies in Nazi crimes should not only increase our knowledge of the subject, but also lead to the formation of sustainable theories relating to the methods of business history in Germany. Lorentz and Erker have clearly made a contribution in this respect.

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J. J. McCUSKER – K. MORGAN (eds.), *The Early Modern Atlantic Economy*, Cambridge University Press, Cambridge, 2000, pp.xiii+369.

Perhaps the key words for a better understanding of the importance of the economy which developed as a result of overseas trade in modern times are to be found in this book's preface, edited by McCusker and Morgan: "As European countries began to expand overseas in the early modern period, transatlantic enterprise became an important conduit for business connections, international migration, the transfer of capital and the establishment of settler societies around the Atlantic littoral...". The transition from medieval times to the modern era was characterised by a transition from the Mediterranean trading area to the Atlantic trading area. The geographical context changed, the market broadened, but the "agents" who operated in it also changed. The Venetian Republic, the Kingdoms of Naples and Sicily, the Ottoman sultanates and the Catalan merchants who had been the traders of the late middle ages and the early modern period were replaced by English, Dutch, Portuguese, French and Spanish merchants. Navigation methods and techniques and ship-building techniques changed. Voyages became longer, because the distances to be covered increased notably, and vessels' freight capacity increased. The massive penetration of capital in the tertiary sector began, a sector which increasingly necessitated solid financial bases in order to survive. In short, as is easily understood, the entire commercial structure which had been established from the time of the fall of the Roman Empire disappeared once and for all, giving way to a new more dynamic structure which was vaster both geographically and economically, and which opened up to traders access to new products hitherto unknown in the European markets.

This fine book, edited by John McCusker and Kenneth Morgan, containing the contributions of the international team of scholars, aims to analyse the economic evolution which culminated in the American and the French Revolutions. The analysis follows a distinctive path, with four original perspectives in the book's four sections: the role of merchants and their connections; the development of trade; imperial economies; and societies based on colonial labour. The chapters in the book deal for the most part with the economic role France and England played in transatlantic trade in the seventeenth, eighteenth and nineteenth centuries, but they are so wide-ranging that they do contain precise references to the conduct of the other European powers in the Atlantic.

The first chapter in the book, *Risk, credit and kinship in early modern enterprise*, by Peter Mathias, studies the role of family alliances in creating a "protection network" for the merchants who thus succeeded in procuring greater capital availability and business connections sealed by family connections. Mathias shows too how this *modus operandi* of the English merchants in the seventeenth and eighteenth centuries had problems because of the demographic decline (until then family ties had obviated this danger), revealing the necessity of having credit and insurance instruments which were commensurate with the changed volume and dynamism of transatlantic trade. In particular, Mathias points out the need which had arisen for North American merchants to create stable and guaranteed commercial ties with the ex-mother country, ties which went beyond mere family ties. Mathias believes that this aim was achieved by means of what we might term "training" trips, when a representative of the American trading firm lived abroad for a certain number of years in order to acquire comprehensive knowledge of the foreign country's planned economic policy which was aimed at increasing colonial production, as well as being the result of an increased demand on the part of European consumers. In another chapter Shammass shows how the colonies modified the economic policy structures of the nation states by improvements brought to agricultural production, principally with the use of cheap slave labour, new crop rotations and soil improvement. In an agricultural context which was not yet impoverished like that in Europe, which had been exploited for centuries, these innovations totally revolutionised agricultural production.

The last chapter in this section, *The Business of Distilling in the Old World and the New World during the XVII and XVIII Centuries: the Rise of a New Enterprise and its Connection with Colonial America*, is by one of the editors of the book, John J. McCusker, and is about the changes in distilling in Europe. McCusker starts from the premise that distilling was not carried out industrially until 1600: before then it had been a craft. He argues that the importation of cane sugar from the Atlantic colonies was partially responsible for the drop in prices of distilled liquor, which made it accessible to a large sector of European consumers. The text highlights the close connections between sugar production and distilling, connections which influenced the transatlantic sugar-cane trade.

The third section of the book, *The Imperial Economies*, begins with Stanley L. Engerman's chapter on *France, Britain and the Economic Growth of Colonial*

*North America.* Any discussion about the Atlantic economy in the modern age must contain references to the existing colonial empires, and Engerman's chapter aims to compare the economies and the settlements of two great North American empires, the French and the British. The comparison is made between the two empires' mercantilistic economic policy in the colonies. It is a well-known fact that the economic policy of nation states from the seventeenth century onwards was based on mercantilism because they had to face endemic war expenditure. Forbidding the entry of foreign products and a strict policy in favour of national products were deemed the most suitable solution to meet financial needs in Britain, France, Spain and the Netherlands. This resulted in a marked growth in the colonial empires, the French and the British empires *in primis* reaching their height in the mid-eighteenth century. Until then, the two colonial empires had performed similarly in the economic field, but, whereas the British West Indies' colonial structure survived a critical phase caused by the American Revolution and the spreading of the slaves' rebellion in Santo Domingo, the same rebellion was ruinous for France which suffered a distinct loss in the area given over to cane sugar, and lost an economic source of primary importance, just when political stabilization due to the founding of the Empire would have favoured the country's growth.

Patrick O'Brien's chapter, *Merchants and Bankers as Patriots or Speculators? Foreign commerce and Monetary Policy in Wartime, 1793-1815*, examines British economic and trading policy during the Napoleonic wars, breaking away from the rhetoric which has often accompanied this kind of analysis. O'Brien shows that British trade in the English Channel and in the Atlantic suddenly decreased because of French attacks on the merchant fleet. However, the distinctive feature of O'Brien's study lies in its refuting an argument which several historians have been advancing for years: the speculative nature of the financial and commercial activities of a fair-sized sector of the British bourgeoisie in a period of profound international political crisis. O'Brien shows that the differentiated demand for products during the war entailed an expansive and flexible monetary policy to sustain the British economy. Blocking the convertibility of bank-notes and using the Bank of England's gold reserves enabled the secondary and tertiary sectors to overcome the crisis caused by the French naval blockade and the United States' boycott of goods from the former mother-country.

François Crouzet's chapter, *America and the Crisis of the British Imperial*

*Economy, 1803-1807*, is the last in the section, and examines the role of British laissez-faire policy in the development of the North American economy. Crouzet pays particular attention to the dumping method the British used to export goods from the French, Dutch, Portuguese and Spanish colonial markets, using transit through United States' ports. This system, however, enabled the United States to enter into direct competition with Britain in the sugar trade, by exporting sugar directly to Europe, and forcing British sugar to rot in the ports. American competition spread to food supplies for the West Indies and trading in West Indian commodities to Europe, using commercial channels and routes systematically taken away from the British.

The section about societies with a colonial economy begins with a chapter by Lois Green Carr on *Emigration and the Standard of Living: the Eighteenth-Century Chesapeake*. The role of the colonial economy in the development of overseas trade is explained by the book's two editors: "... Transatlantic enterprise was possible only through the productive efforts of white and black settlers, free and unfree, in the Americas; without their labour, the rise in the volume and value of commodities sent eastwards across the Atlantic would not have occurred." Carr examines in particular the standards of living in a British settlement in the Chesapeake region of North America over a period of one hundred years. The analysis concerning the seventeenth century reveals a shorter life expectancy and fewer comforts than in Britain, but this situation gradually changed as cultivated land was purchased. In the eighteenth century, the situation in the same community was completely different: life expectancy increased significantly, also for the new arrivals from Britain, but there was less possibility of improving one's social status since there was less arable land for sale and because there was less possibility of entering the decision-making mechanisms of a local society, which by then had already been formed.

The fourth section ends with Richard Dunn's chapter on *After Tobacco: the Slave Labour Pattern on a Large Chesapeake Grain and Livestock Plantation in the Early Nineteenth Century*, which analyses the economic structure of a slave plantation, that of the Tayloe family at Mount Airy. Dunn describes the transformation of the enterprise through the use of the workforce, especially when labour was no longer used for the growing of tobacco which required a greater workforce than the livestock sector and the growing of cereals. These changes entailed a reorganization of the workforce, so as to increase productivity,

co-ordinating activities, synchronising manufactured articles with harvests, and distributing slave labour over all the production sites according to a scientific division of labour. This reorganization enabled the Taylors to use almost all the workforce at their disposal, selling only a few slaves who were not relocatable and saving the fixed invested capital.

This last paper in fact brings the reader back to the Atlantic economy, the book's underlying theme, which in the modern age linked indissolubly the destiny of the slaves employed in American production, which was resold on the European markets, to the growth of a great "common market" trade.

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STANLEY J. STEIN AND BARBARA H. STEIN, *Silver, Trade and War. Spain and America in the Making of Early Modern Europe*, Baltimore and London, the John Hopkins University Press, 2000, pp. 351.

The complex matter of the conquest of the Americas and their colonisation has often attracted scholars' attention. In particular, Stanley and Barbara Stein retrace the colonial policies of the sixteenth century which influenced the relationship between America and Spain and thus the relationship with the whole of Europe in a process which went on long after the sixteenth century.

The Spanish carried out an unexpected programme of conquest and colonisation which over the centuries led them to build an empire that stretched over most of the new continent. Spain, a country "on the margins" of Western Europe, in 1500 gained control of American silver which the Spanish convoys carried from Portobelo and Veracruz to Spain, in exchange for European goods shipped from Seville (and later Cadiz).

The Steins describe how American silver galvanized Europe and sparked off the development of a market economy and a nation-state. They suggest that Spanish colonisation was the "cutting edge" of the first global economy. The entire book is organised to prove this theory and, even more, to show how an old colonial empire survived intact in the Atlantic, despite the presence of two

European leaders, England and France. The volume reconstructs and re-evaluates the interaction between America, Spain and Europe between 1500 and 1750, focusing its interest on Spain's pilot role in transatlantic expansion. The authors develop two main themes: firstly, the attempt to adapt to the modern age the late-medieval Spanish structures, inherited from the Hapsburgs; and secondly, the regulation of transatlantic trade which Spain was obliged to control.

The authors believe that the time has come to reconsider the evolution of the Atlantic economy; starting with the Spanish economy, and also to examine the main elements of the legacy of two centuries of the Hapsburg dynasty and their continuation in the early Bourbon era, but from the Spanish point of view. Looking at the fundamental incompatibility between Spain's requirements as a colonial power and its associations with the Hapsburgs' Holy Roman Empire from a colonial rather than a mother-country point of view enables the authors to examine those government institutions which created Spanish absolutism and a system of government based on property. The authors maintain that both European institutions and norms were pragmatically adopted in order to develop the native societies in Central Mexico and the Central Andes, whilst the diffusion of New Spanish and Peruvian silver shaped the "colonial world", the mother-country Spain, Europe and Asia.

Through conquest, occupation and consolidation in the western Atlantic, Spain, in a way which is unique in history, contributed to the history, growth and development of commercial capitalism in its pre- and post-1650 phases. The inflow firstly of Caribbean gold and then of silver which was mined, worked and minted in the viceroyalty of Peru and New Spain accelerated production and trade in Western Europe. Trading spread to Europe and the Eastern Mediterranean and later to South-east Asia.

The mines, miners, merchants and craftsmen of Potosi, Ornero and Huancavelica, of Taxco, Zacatecas and Guanajuato fuelled the growth of institutions based and modelled on the market, spreading from local to provincial level and then to national and international levels. They created the first scenarios of what, on the threshold of the twenty-first century, we call a global market economy which penetrates everywhere. The effects of this economy differed in the colonies from those in the mother-country. The silver *pesos* and the precious metals made very few people rich and made a lot of people poor. In the colonies, the merchants preferred to import high-quality

European and Asian textile products. Instead of exporting finished products, the end-product of refined and original local crafts, they preferred to export textile fibres and precious metals (which the skilled local goldsmiths forged into remarkable shapes) in the form of bullion. The sugar plantations in the Caribbean islands of Hispaniola and Cuba shared the same fate: they were started in the first half of the sixteenth century but were not developed after that. The cocoa plant, which the Spaniards came across in New Spain and which was widely grown in Venezuela, was launched in Europe but by the Germans, not by the Spanish. Similarly, in Spain the exceptional resources of merino wool and raw silk which had formed the basis of the textile manufacture which made its mark in the sixteenth century were later exported to European mills, only to return to Spain as finished products. Although American silver enabled Spain to establish the first capitalist elements, it succeeded in giving Spain a mere illusion of wealth, security and supremacy. The Spanish government's economic manoeuvre concerning transatlantic trade did not manage to control the flow of silver which escaped government officials' notice. Silver was exchanged for products of Europe's leading industries: woollens, linens and silks from mills in the Netherlands, Flanders, England, France, Italy or Germany.

From 1550 until 1630 the arrival of American silver in Western Europe provoked serious inflation, the so-called "price revolution", which was followed by the "opposite routes", i.e. when western European trade was sent via lower Andalusia to the small but increasing mass of consumers in the Spanish colonies. The European populations who had emigrated to colonise the new lands began to create a demand for manufactured goods (textiles, arms, metal utensils, porcelain and other luxury goods) which helped to breathe new life into the factories of the old continent, struggling with a fall in domestic demand.

In this way, the Germans, the English and the French above all consolidated a channel of transatlantic intelligence in lower Andalusia, transforming the Spanish colonies into warehouses, from which smugglers could operate undisturbed. The Germans' subsequent transfer of sugar production techniques from north-east Brazil to the Caribbean islands gave them not only the control of west Africa, but also the control of the slave trade. The German-controlled colonies thus became remarkable engines of commercial agriculture, producing sugar, tobacco, indigo and coffee for an increasing mass of Western European consumers who, enriched by the flow of American silver, broadened their

consumption. Commercial capitalism came into being, and lasted at least until the early industrial age in Western Europe.

At the end of the seventeenth century, the Spanish were forced to face the problem of establishing a structured organisation the new dominions, and so created two viceroyalties with a ruling administrative class based on the model existing in Spain. The requisites for the development of the English and French mercantile bourgeoisie had to become in some way the model to be imitated in creating a nation-state. However, in Spain, small scattered bourgeois groups cherished a local or a regional outlook rather than a national outlook, and did not succeed in creating real opportunities of upward social mobility in Spanish society. Spain had to endure a long and painful search for an appropriate instrument of growth, always struggling against the burden of the Hapsburg legacy.

Meanwhile, with the development of England and France and the eclipse of the Netherlands, stagnation in imperial Spain became worse and the gap between Spanish involution and its principal European competitors widened. Large-scale transatlantic trade had inflicted enormous economic strains and lengthy immobilization of capital. Nations and the great capitalists tackled this problem differently. In the Iberian countries, it was the state which promoted organizations through which all trade with the new world had to pass, as, for example, the *Casa de la Contratación* in Seville. In England and Holland, similar organizations were almost all private, although the state granted them great privileges.

The strict control of trade with the Americas which Spain exercised through the *Casa de la Contratación* and the *Consejo de Indias* prevented a massive, indiscriminate influx of merchants by means of individual and temporary trading licences, granted to merchants from friendly nations, such as the Genoese and the Germans, who were essential for the Crown's financial requirements.

The control was exercised in the American ports (Veracruz, Portobelo and Cartagena), the only ones authorised to have relations with Seville. The Spanish wanted merchant shipping to and from America to follow the same routes and to sail in convoys which enjoyed warships' protection, even though they sailed at the owners' expense. But, as has been stated, smuggling and piracy reigned between the two Atlantic shores.

When the flow of American gold and silver began to thin out, there were

important economic consequences, especially in the monetary and financial sectors. A great deal of the American metals went to Spain, partly as a fiscal levy, but mainly as payment for imports, in that the colonists, at least in theory, could have trade dealings only with the mother country. The problem was that the mother country was not able to meet the colonies' demand, and so other nations took advantage of the situation, and American gold and silver soon found their way to Amsterdam, Florence, Lyons and Milan. The situation was worsened by the rebellion in the Netherlands, which had forced the Hapsburgs to increase their war expenses hugely: to fund the war, they did not hesitate to run up debts with Europe's most important bankers. German, Portuguese and Genoese bankers advanced monies to the King of Spain to pay his mercenary troops who were fighting in Flanders. In exchange, the Spanish Crown "transferred" to these bankers the proceeds of certain taxes, to the extent that, when Philip II acceded to the throne, all taxes were in the hands of foreign bankers. This administration of public finances in Spain, the result of an extremely costly foreign policy, could not last long. Periodically, the King of Spain was forced to declare bankruptcy, which, in fact, was a way of renegotiating the interest rates on his debts, but this practice had serious repercussions on the European financial system.

Despite being a society with complex aristocratic values, with a permeating, if not invading, ecclesiastical and bureaucratic set-up, and being heavily conditioned by the Hapsburg legacy, the first great colonial empire in modern Europe managed to survive because of its *ad hoc* reactions to unforeseen changes. It had to face the challenge of a premature colonial power limited by the budget and by the personnel the bureaucratic machinery had at its disposal, and it faced the challenge by channelling people and ancient cultural resources into the two vast viceroyalties of New Spain and Peru. There the great Castilian vassals steered the native civilizations towards a Spanish variation of Western European culture, which emphasised a combination of monotheism and polytheism in religion and an economy marked by a strong individualism.

This process influenced the type of people who emigrated from Spain and Europe, which meant that the Spanish sovereigns had to regulate carefully the flow of emigrants, anxious as they were to guarantee a development which was appropriate to their rule, without forgetting the requirements of the Roman Catholic Church which had had a part in promoting the discovery of the new continent and its settlement. The first Europeans who arrived with the Spanish

ships were men attracted by the hope of making a fortune easily. For the most part they came from Andalusia, from Estremadura and from the ruling classes of Castile, a region of Spain strongly characterised by large agricultural estates belonging to the Crown, to the great nobility and to the clergy. After the mirage of gold totally or partially vanished, these men preferred to take advantage of purchasing landed property, guaranteed by the concessions of the Spanish Crown which they considered the owner of the new lands. The still-feudal pattern of the great Castilian estates was partially reproduced in America, determining the ways of using manpower which was at first guaranteed by the natives and then by black slaves.

Philip V's bureaucratic staff (*projectistas*) believed that administrative changes could minimise and erode traditional mentality and structures. They were mistaken. The few innovations they introduced – isolated elements of a mercantilistic policy – soon disappeared, from the time of the dynastic changeover from the Hapsburgs to the Bourbons. And they proved incapable of dealing with the central structures of the system of values, the mentality – perhaps the key to the whole problem – and the personnel which Hapsburg order had guaranteed. The last planners aimed only to adapt the structures to the changing situation. In accepting the structure of the society of the time, they had to accept the logic of the old Spanish régime.

Stanley and Barbara Stein are of the opinion that the factor which fuelled the persistent decline of the Hapsburg structures has been played down for a long time, i.e. the silver which came from the American mines and, in the eighteenth century, from the minefields of Zacateras and Guanajato in New Spain. *Pesos* and silver ingots would leak out of the Caribbean and lower Andalusia illegally; such leakages were tolerated, although they became more substantial after 1715. The balance between the formal channels of the flow of silver and the informal leakages between 1660 and 1700, however, remained stable until London declared war on Spain in 1739, after Spain had declared that English smuggling in the Caribbean had increased. At that point, the equilibrium collapsed.

After years of *projectista* speculation, Spain's inability to identify the fundamental elements of a political development was seen in Ensenada's desperate efforts: for eight years, he tried to reform state finances, colonial policy and national defence. On the contrary, the increasing silver production in the

Spanish mines, the shakedown of the market in the colonies and uncontrollable smuggling intensified the competition between the expansionist interests of France and England. At the same time, the inability to rival the colonial competitors in supplying domestic products to the Spanish colonies increased Spain's sense of inferiority and widened the gap between north-western European development and Spanish underdevelopment. This was the result of Spain's not having gone down certain roads during the period of commercial capitalism, right from the age of the great discoveries.

The Spanish Hapsburgs did not protect trading interests either in Spain or in the colonies. From 1660, trading interests had contributed in England to the development of overseas trading companies, such as the British East India Company and its Dutch counterpart. On the contrary, at the beginning of the eighteenth century, the Spanish commercial bourgeoisie remained isolated in individual groups in Seville, Cadiz, Madrid and Barcelona. On the whole, they dealt only with supplying imported goods and with their market by means of brokers' trading, financed by the communities of foreign residents who were better informed and better connected at international level.

A more significant wave of reforms – though still too superficial – was seen when the Bourbon Charles III ascended the throne. He had to make a considerable effort to reform the Spanish ruling class. Reforms had been hindered for a long time by the persistent structures created over more than two hundred years by the previous Hapsburg domination, and then by more than fifty years of Bourbon "reform" projects which were never carried out. Stanley and Barbara Stein studied this issue in another book published three years after this volume.

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FRANS VON POPPEL, MICHAEL ORIS, JAMES LEE, *The Road to Independence – Leaving Home in Western and Eastern Societies, 16th-20th Century*, Peter Lang AG European Academic Publishers, Berne, 2004.

It is clear nowadays that the comparative method, i.e. an integrated and co-

ordinated analysis of several situations, each one different from the others, has affected historical and social-historical studies, crossing new frontiers and leading to results of scientific and academic interest. An example is to be found in the research published in *The Road to Independence*, a text which analyses the phenomenon of young people leaving home (either gradually or abruptly) in modern societies between the sixteenth and the twentieth centuries. By selecting several countries (Belgium, France, the Netherlands, Norway, Great Britain and the United States of America), the authors of the papers in the book succeed both in outlining the characteristics and the reasons that over the centuries have made and continue to make young people leave home and in identifying trends that are common to the case studies under study, despite seeming so different one from another. Up until the end of the nineteenth century, although the quality of life and social and working opportunities were more limited, the process of leaving home (and therefore the forming of new family units) happened much quicker and on a more widespread scale than in present-day society which came into being after the end of the Second World War and in which the economic possibilities for young peoples' independence and autonomy are without doubt greater than before. Despite this, leaving home not only seems more difficult but is in a certain sense "voluntary"; in fact it no longer appears to be the result of family conditioning. Today leaving home seems to be more closely connected to the young person's personal choice rather than to the sum of the reasons and situations that the authors of this book examine in the book's three main sections.

The first section analyses the phenomenon of leaving home in societies made up of "nuclear" families, in other words, societies in which the family forms the basic unit of the community. In this context, Great Britain, Belgium, Italy (Venice between 1850 and 1869) and Sweden are examined. The second section deals with societies made up of communities in which the family is the principal guide; nineteenth-century rural Italy, two villages in northern Japan between 1716 and 1870, and modern Japan are the cases examined. The third and last section deals with the causes and behaviour which determine the phenomenon of leaving home in three specific cases: working-class Europe, eighteenth-century Great Britain and the Netherlands between 1850 and 1940. Both individual and family strategies at the roots of young peoples' independence are also analysed. In the first case, it appears that the young person leaves home

in order to become independent, whereas in the second case he or she leaves home in order to form a new family.

On the surface, it seems that the choice of periods and the societies examined is limited to a few cases, excluding or paying scant attention to examples that are just as significant for the making of the modern family, such as Germany and the USA. Nevertheless, the examples examined are those in which the two principal family elements, characteristic of modern society, are formed: the nuclear family and the wider kinship group family. Furthermore, the analysis is carried out in the light of the most well-known demographic theories, and uses a great variety of statistical data.

The conclusion reached by the reader at the end of *A Road to Independence* is closely linked to the correlation between the cases examined. In fact, on the basis of the comparative analysis carried out in the book, leaving home in modern society seems to depend more on motivation than on the structure or the type of the family. As already stated, the authors believe that such motivation can be collective or individual. In the first case, it is the family unit that passes on to the young an ever-increasing inclination towards independence and autonomy, either to seek new and more advantageous living conditions by means of greater opportunities in professional and social areas or by attaining them in the light of the need to form a new family nucleus as soon as possible.

In the second case, it is the individual who wants to leave home, either to escape from a tense and difficult family situation, or to prove to himself that he can survive outside the family, without availing himself of the opportunities with which the family provides him.

Lastly, the analysis of the non-leavers, those who never leave home, is interesting. In these cases, too, the causes are collective or individual. Some people continue to live at home because they have not received any independence input in childhood or adolescence or because they have no possibility of becoming economically self-sufficient; some stay at home because they do not wish to form a new family or fail to do so. Other non-leavers consider their family as a refuge in order to avoid comparisons with their fellows in everyday life.

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