

feminist scholarship and China studies than is 1991. And Ono's work finally reminds us that while the Chinese revolution did not create a women's utopia, its successes in remedying the condition of women in the century from 1850-1950 are manifold.

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John Komlos — *Nutrition and Economic Development in the Eighteenth-Century Habsburg Monarchy. An Anthropometric History*. Princeton: Princeton University Press, 1989. Pp. xv, 325.

Historians have worked long but inconclusively to distinguish cause from effect when explaining the onset of the Industrial Revolution. They generally agree that population growth, availability of capital, agricultural improvement and political environment played important roles in this most significant of all economic changes in the modern world. But just what relationship did these factors bear to one another? Were agricultural advances, for example, driven by demographic pressures or the other way around? What, precisely, was the role each of these conditions played in fostering the Industrial Revolution itself?

John Komlos's ambitious book will certainly not lower the intensity of debate. Nor, despite prodigious reading and great mathematical sophistication, has he answered these questions more satisfactorily than many of the scholars whose work he criticizes in his introduction. Author of a respected study of the Habsburg Empire as a customs union, he has undertaken, at least at first glance, a rather perverse enterprise. He seeks to apply to all of Europe a model based upon developments which he believes brought the Industrial Revolution into the lands of the house of Austria. Given the relative economic backwardness which marked the Habsburg state until its collapse in 1918, it seems an unlikely place for paradigm-generation of that sort.

However, in this case, the very eccentricity of the locale serves to illustrate his larger point. Thoughtfully repeated either wholly or in part throughout the densely constructed text, the argument runs as follows: the Empire faced a Malthusian crisis during the middle of the eighteenth century. Empress Maria Theresia and her son, Joseph II, forestalled this by opening up the economy through curbing aristocratic, guild, and ecclesiastical privilege. The effect of these measures was to bring the surplus population into the work force, thus setting the conditions for the Industrial Revolution in Austria. Similar developments are to be found in all of Europe.

At the very least, the analysis opens up interesting, and largely unexamined issues in Habsburg history. The prevailing view of the Theresian and Josephinian reforms is that they were a response to military challenges, primarily from Frederick II of Prussia. Komlos proposes that these changes were prompted equally, if not more so, by domestic unrest which stemmed from dwindling supplies of food. Only further research will tell. Indeed, here lies one of the problems with his work. A large part of it is dedicated to establishing the existence of a Malthusian crisis in the lands of the house of Austria. This, he does through close examination of height measurements taken from conscripts in the eighteenth-century Habsburg armies. These declined during much of the period, leading the author to conclude that dietary deficiencies

abounded. The impact of the Theresian reforms on industrialization in the Habsburg Empire, actually the crucial proof for his arguments, is passed over quite lightly.

However, his purpose goes far beyond elaborating a paradigm of economic development. It is to create, as his subtitle reveals, an anthropomorphic history, one where biology is at the center of the human experience rather than, for example, exogenous economic events. Having done this, at least to his own satisfaction, he moves to his most important conclusion about the place of the Industrial Revolution in history: that is part of demographic history rather than the product of circumstances peculiar to the eighteenth century.

The theory certainly has its attractive side. If true, its generality allows not only pan-European but diachronic application as well. Thus, we might be able to explain more succinctly than we do now why the Industrial Revolution occurred in different places at different times.

Unfortunately, it fails to persuade, at least this reader. Part of the difficulty lies in Komlos's development of his position. Though he rejects theorists of capital growth such as W.W. Rostow and more seriously, Simon Kuznets, in favor of demographically oriented historians such as Rondo Cameron, Douglass North and especially Ester Boserup, he moves ever closer to the side of the former as the book unfolds. He thereby relaxes the rigor of his theory to the point where it becomes doubtful on rhetorical grounds alone. Near the end of the text (222), he gives equal causal force to both population and capital stock in getting the Industrial Revolution underway. It is a position few would dispute, leaving one to wonder why Komlos bothered to fashion the elaborate presentation that he did.

His apparent uncertainty here undermines even the Austrian section of the book, the area of his primary research. He himself admits that the Habsburg government intervention which aborted the Malthusian cycle and set the stage for the local Industrial Revolution occurred only because the government had the intellectual and financial resources to address the crisis. Biology, capital and changing values, in this setting, stood, at the very least, on an equal relationship with one another. Similar flaws crop up when he extends his model to England. There, he argues, the market functioned as did the Austrian administration. By absorbing the growing population into the labor pool, it averted a similar crisis. Komlos believes that the economic expansion of the second half of the eighteenth century was "of little importance" (170) in promoting the Industrial Revolution. But surely, employers could take advantage of the expanded labor supply only because they were sufficiently capitalized and wished to improve their positions even more.

There are other reasons not to dismiss the relationship of eighteenth-century circumstance and the rise of the Industrial Revolution as Komlos seems prepared to do. Government intervention to avert nutritional catastrophe was hardly new to that age, even in the relatively backward Habsburg Empire. From 1569 to 1573, for example, a serious grain famine ravaged the Austrian lands, Bohemia and Bavaria. Authorities in all three principalities took active measures to keep the population from starvation which met with some, though not complete success. More than anything else, improvement in the weather intervened to bring the crisis to a halt. Natural phenomena had the same effect as did the Theresian reforms or the English market, yet the Industrial Revolution was a long way away from late-Reformation southern Germany. Even Komlos admits that Maria Theresia and Joseph II had different

resources at their command to deal with the situation they faced, implying that they enjoyed a position in their time that their predecessors did not.

Komlos goes to considerable length to anticipate all possible criticism of his ideas — so much so that the book often reads as if it were written to ward off the former rather than to demonstrate the latter. One should study the text patiently, reserving judgment to the end. Apparent lapses in the analysis are clarified or crucial assertions supported long after first mention — an organizational failing, to be sure, but not a scholarly one. Above all, he does not want to be seen as a biological mechanist. Sometimes, however, he falls into the trap. One such moment appears toward the end of the book as he speculates that the inventive geniuses of industrializing England — Arkwright, Cartwright and Watt — performed as they did because they ate better than did their forebears (200-201). Such absurdities at least serve to warn interdisciplinary historians of how careful they must be when they confront the complexity of human biology. Watt, it should be noted, was hardly robust — he had to leave his London apprenticeship at age nineteen for rest in his native Scotland. He lived, however, a long productive life. Was nutrition, generally superior for normal people, adequate for Watt? If so, how? Was it a question of raw calories, as Komlos seems to think throughout part the book? Or was it some more subtle combination of ingredients, as he remarks elsewhere? Might Watt have been simply the beneficiary of a genetic quirk, an approach Komlos rejects in other parts of his text, not altogether persuasively. In general, his command of nutritional history is less full than his mastery of demographics and quantitative techniques. His assertion, for example, that European upper classes were no better nourished than more lowly folk requires serious qualification, at least for the early modern period, to be acceptable. It is true postnatal and infant nutrition were about the same at all levels of society. However, adolescent eating patterns, not to mention those of pregnant women where fetal nutrition was also at issue, favored growth and survival among the well-to-do.

In the final analysis, Komlos's book must be evaluated by two standards in order to do it justice. He has certainly given Habsburg historians a useful presentation of physical statistics for a significant segment of the male population in the age of Maria Theresa and Joseph II. He has identified new types of questions to be put to such data and carefully constructed mathematical tools to analyze the problems it suggests. His application of these findings to industrial history of the empire, not to mention that of Europe as a whole, however, is partially tenable if at all. At best, Komlos has thrown down an interesting challenge to scholars of the Industrial Revolution. He has by no means driven them from the field.

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