

Commentary on Richard Hatcher, “Understanding the Population History of England, 1450-1750,” in *Past and Present* 180 (August 2003, 83-130)

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The empirical content of this article is only marginally relevant to our forthcoming discussions in Santa Fe on Complex Macrosystems as Dynamic Networks. It is circulated to serve instead as an illustration of some of the difficult theoretical and methodological issues which confront us in any effort at abstraction and generalization employing a term like ‘macrosystems’. Manipulations of the definitions, scale and boundaries of analytical units, and attempts to prioritize and simplify causal processes, are our indispensable research tools. But they all involve deliberate departures from the complexities of ‘historical reality’, and hence almost inevitably invoke the presence or discovery of alternative models that rest on different, more successfully or comprehensively explanatory, structures of priority and assumptions. To make a compelling case for a set of long-term developmental processes, trends and cycles of growth and decline we necessarily depend in part on constructing a limited number of indices. The latter are often of irregular evidentiary quality and somewhat questionable attachment to the underlying processes they purport to reflect. All these steps invoke challenges and problems it is well to anticipate. And the case of English population is an impressively well-documented case that may help us do so.

At the time of its publication in 1981 the PHE was widely hailed as a major advance,. Noteworthy were the enormous volume of new data it had laboriously extracted from parish registers, its numerous innovations in methodologies for analyzing

them, and also its arrestingly simple, powerful explanatory hypothesis that it was argued – and for some years widely accepted -- flowed from them. The masses of new data it presented are indeed likely to stand indefinitely as a fundamental contribution. But many fundamental aspects of its larger impact on socioeconomic history that were confidently anticipated originally have more recently come under serious challenge. I claim no personal expertise in evaluating the claims and counter-claims that are likely to continue for some time, and that may never be entirely resolved due to the limitations of the evidence. But Richard Hatcher's discussion provides an excellent illustration of doubts and complexities with which we, too, must grapple.

The argument of the monumental, original volume by E.A. Wrigley and R.S. Schofield was that for three centuries or so a tight, self-regulating relationship, essentially Malthusian in principle, had remained in effect between economy and demography. As Hatcher writes, "the growth rate of England's population was regulated by prudence exercised through adjustments to fertility, and the motive power which drove the whole system was provided by changes in the age of marriage and the proportions who married, and thereby to the number of births" (p. 84; all pagination hereafter is to Hatcher). Here was said to have been found a discretionary "low-pressure" system in which the living population somehow stabilized a satisfactory relationship to land and resources as distinguished from the high-pressure effects of increasing or declining mortality. Very satisfying as an explanation for England's ascendancy in the centuries to follow, this was a perhaps unique exemplification of Malthus's "prudential or preventive check" hypothesis, "keeping numbers and available resources in rough balance and at standards of living substantially higher than was usual in pre-industrial times" (85-6).

The heavy challenges delivered to this attractive and sweeping reconstruction are important for their empirical underpinning as well as their interlocking synergies.

Participants are urged to consult his article themselves, but it would be unwise to deal with them at length in this brief statement. Briefly to summarize, “each of the leading quartet of interlinked propositions which support the Cambridge Group’s model [are] examined and found wanting”:

- (1) that a moderate prudential regime prevailed throughout the Early Modern period fails because markedly different characteristics were exhibited during the many sub-periods of this aggregate, with all the purportedly key variables deviating starkly from the required low-pressure behavior especially during the mid and later 17 century;
- (2) that the proposed regulation of demography by adjustments of fertility rests on a flawed analysis of causality, such that “the forces which determined the size and growth rate of population were manifold, complex and variable rather than singular, simple and mechanistic.” At times, mortality rather than fertility was clearly dominant. Moreover, the asserted predominance of fertility over mortality as a causal factor is somewhat inconsistently assumed and never seriously tested statistically (105-6, 110). In particular, it is that relatively brief but recurrent crises like epidemics not be excluded from the system as extraneous accidents; they are better understood as integral parts of it;
- (3) that the asserted close positive relationship between nuptiality and real wages can be undermined from many directions that are described in detail; and

(4) that population was successfully regulated in size in accordance with available resources can also be challenged. The simple reciprocity model is incapable of capturing sufficient historical reality” (88-89). Particularly for the later Middle Ages, the earliest century or so of the era covered, “one key pillar of their explicandum – that population growth was primarily driven by changes in fertility – is the demolition of another – that fertility is stimulated by high living standards” (95),

Disaggregating both temporally and spatially as a principal critical method, Hatcher repeatedly shows that “every one of the key demographic variables displays extreme volatility” (101). Particularly at times of crisis mortality like plagues when mortality was highly uneven in its incidence, the Wrigley-Schofield sample of parishes is small and potentially seriously unrepresentative (102). Similarly with fertility, “The flow of new results from local communities indicates that both the proximate and background causes of levels and changes in reproduction rates were far more complex and varied than the Cambridge authors have allowed” (120).

Carefully re-evaluating the statistics, Hatcher concludes that “The best assessment of the evidence currently available is that fertility and mortality exchanged leadership many times during the early modern period, and that overall they exerted a roughly equal influence over population growth rates....Manifestly, causality is not capable of being established unless improved methods of analyzing it are adopted” (116). The probability that the level and course of mortality was primarily derived from independent and random shifts in the virulence and incidence of disease poses a grave threat to the notion that early modern England was ruled by an endogenously driven regime (117).

“In fact, the validity of the whole overarching interpretation of the behavior of population and its relationship to economic resources, which constitutes the fourth and final pillar of the ...model, must be doubted....a number of plausible alternative views come into focus: including the contrary notion that the cycles of change in population, fertility and real wages...are simply too protracted and cumulatively too hefty to be fitted within such an optimistic and mechanistic schema.” One large, prolonged upswing and one not very large downswing make it simple but misleading to envision a consistent relationship (121). And left altogether outside the simplifying framework of Malthusian assumptions are ‘externalities’ like intensifying transport networks, a rising pace of industrialization and urban growth, and the patterns of internal as well as external migration (129).

At the level of overall synthesis, the “rough balance” that the authors assert was maintained between population and resources seems strained, to say the least, when it is realized that population rose continuously for almost two centuries while real wages plunged by 60 percent over virtually the same period (123). But still more generally, “Causality does not sum up in the same way as numbers, and any quest to establish relationships between aggregated ‘national’ demographic statistics and ‘national’ real-wage indices may fail to capture any particular reality” (128).

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I believe we would do well to keep these issues in mind as we construct macrosystems of our own involving entities like city and population size and areas of territorial control, all resting on incomparably weaker evidentiary foundations than those dealt with above.